

# Smart Libraries

Formerly Library Systems Newsletter™

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



# Smarter Libraries through Technology:

# Providing Support for Reference Services

By Marshall Breeding

The current information and technology landscape has had a profound impact on the nature of reference services in libraries. In times when almost any factual question can be handled by a quick search on Google or by "asking Siri," these types of questions, once a signification portion of questions directed reference librarians, have largely disappeared. This trend has been in effect for quite some time, sparking many libraries to refocus the activities of their reference librarians as well as to turn to various technology and content products to reach out to patrons to ensure that they have access to high-quality information sources.

Although many answers to the questions that arise in scholarly research, coursework, or in the course of daily life can be found through Web searches, libraries aren't necessarily relieved from the responsibility of offering resources that provide accurate, current, and nuanced information. While the physical reference collections may largely sit idle gathering dust, demand for online reference resources continues. Students and scholars still appreciate quality information sources from their library that can be cited with more authority and certainty than snippets found on a Web site of inconsistent reliability or a Wikipedia article.

The decline of fact-oriented reference questions has not necessarily been a negative development for reference librarians. In many cases, this shift has opened opportunities to re-shape reference services around more in-depth consultations with students and scholars and to develop more targeted outreach efforts. Of course, reference librarians will remain the experts on where to find any given piece of information, but they now engage in more interactions with patrons that tap their deeper knowledge within their chosen areas of specialization.

The advent of new-generation online catalogs and discovery services also has potential impact on reference librarians and other personnel that interact with patrons. Reference librarians have helped patrons use traditional online catalog inter-

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faces or navigate through a very complex assortment of databases and other resources containing journal articles, e-books, and other online content. Some portion of bibliographic or information literacy instruction as well as general reference queries involves helping library users understand how to use the interfaces and to become familiar with subscription product.

Discovery interfaces promise to greatly simplify the way that library patrons perform library research, providing a single and simplified search interface that spans the entire corpus of the information resources available to them. These discovery services may not fully achieve the ideal, and some gaps in coverage remain. Yet, they do seem well along a course to make patrons more self-sufficient as they access ever expanding collections of digital content provided by their libraries. I'm aware that many reference librarians have concerns about whether these new discovery services can ever guide users to the best and most appropriate resources for their research needs. I certainly agree that the need for expert reference assistance will never be entirely displaced by discovery services, even as they become more comprehensive, reliable, and sophisticated.

These broad-based discovery services seem well positioned to help library patrons gain access to the articles, book chapters, or other scholarly resources, but may not necessarily be optimized to help users find a particular fact. Libraries are also investing in other tools designed to help users that need authoritative resources for facts, statistics, and other information that once was the domain of the library's reference collection. In this issue, we'll look at some of the recent developments with Credo Reference, which began as a searchable online collection of reference works. It has steadily extended its capabilities to become a full-featured structured discovery tool with an integrated suite of channels for interacting with library patrons. While Smart Libraries Newsletter does not normally cover content products, the Literati by Credo product is delivered through a technology platform that overlaps considerably with discovery services, which have been a key area of coverage in recent issues.

I consider it foundational that libraries should have technology infrastructure that supports all their areas of activity. The integrated library system addresses areas such as technical services (cataloging, acquisitions, and serials management) and circulation. Online catalogs and discovery services make the library's collections and related services available to its patrons. This strategic technical infrastructure, however, does not provide systematic support for many strategic library activities, including reference services. Even in libraries well equipped with technology, I've seen reference personnel track their activity with tick marks on paper. Without adding onerous overhead, it seems to me that reference services could benefit from technology services specifically designed to facilitate their work,



especially as they become increasingly distributed between inperson and virtual interactions.

It seems reasonable to expect that the proportion of reference inquiries that come through a remote or virtual transaction will continue to increase. Librarians need to be well-prepared to handle questions and service requests that come in from an ever expanding array of media. Most libraries can handle e-mail, phone, and in-person requests, but can they serve people who more conveniently communicate through a text message from their mobile phone or through Twitter or Facebook? I see many libraries well in tune with the need to provide deeper support through social media and mobile devices, but I also see a need for better technology infrastructure designed to support these channels in addition to the traditional forms of patron inquiries.

I also hope that as the new genre of library services platforms mature, that they will also extend their functionality to include better support for reference services and other niches of library operations that have been neglected throughout the reign of integrated library systems. I've long seen the need for a more systematic approach to how a library provides its reference or information services. Many organizations outside the library arena make use of customer relationship management systems that provide automation support, tracking, and analysis for all its interactions with those that buy its products or make use of its services. These CRM products help an organization more efficiently target its resources and to measure performance in terms of speed and quality. They provide a comprehensive platform in support of all of the ways that the organization interacts with its customers and provide tools to help provide support more efficiently, with built-in analytics to assess performance.

### Credo Reference Introduces and Expands Literati Platform

n addition to the discovery services, which have been covered frequently in *SLN*, other products provide a more structured approach to guiding library users to the library's electronic collections. Credo Reference, for example, offers a suite of products that provide access not only to its own collections of reference resources, but also serves as a discovery interface into a library's broader collections according to specialized topic areas.

Credo Reference traditionally has specialized in creating Web-based products centered on providing access to reference information sources. In recent years, the company has steadily evolved its product offerings, addressing an ever-expanded body of content resources and offering new capabilities for search and exploration. In addition to the core Credo Reference collections, the company has developed a new-generation product called Literati, which has recently been enhanced with new communications and collaboration capabilities.

Credo Reference is a content and technology platform that provides information to patrons drawing from its collection of digitized reference works and other content resources to which the library subscribes. At the core of Credo Reference lies an ever expanding set of electronically available reference titles. The complete collection currently includes more than 600 titles from some 80 publishers. Libraries that subscribe to Credo Reference can select specific titles, subject collections, or the entire body.

Credo Reference, from its very earliest days as xrefer, was an early adopter of XML technologies, originally encoding the documents in its collection using a DTD it developed called Reference Markup Language. Today all of its content is converted into DocBook5 XML. Each reference title is structured in such a way that many separately accessible entries, encoded with subject headings or other metadata, can be presented in search results.

### **Topic Pages**

Beginning in March 2010, Credo Reference introduced a new structure called Topic Pages, which present and organize resources, both internal and external, within specific subjects or categories. In addition to a general introduction narrative, Topic Pages pull together content from a wide variety of sources, including Credo's own reference titles, selected subscription-based resources, and text, video, or images from the open Web, as well as related news feeds and books from sources such as Google Books. Each Topic Page also contains a word cloud of recommendations of related topics. In response to a

search in Credo Reference or Literati, the appropriate Topic Page will always be presented first in search results. More than 10,000 Topic Pages have been created.

It's well known that students and scholars rarely begin their research at their library's website or discovery tools, but almost always start with Google or another search engine. To help bring Credo's authoritative library-oriented content to library users who begin this way, Topic Pages can be accessed from the general Web and will appear in search results. When encountered by an unauthenticated user from the general Web, the Topic Page will be populated with selected free content. The page also presents a panel that invites users to find more information through their library. When pressed, geo-location of the user's IP address presents a list of nearby libraries subscribing to Credo Reference or Literati. Users associated with one of those libraries, can log in using their authentication credentials to view the full version of the Topic Page populated with additional content drawn from the library's licensed electronic resources.

The Topic Pages can also include results from external subscription-based resources. Subscription resources supported include article databases from ProQuest, EBSCO, Gale, or CQ Press and JSTOR and e-book resources ebrary or Books 24x7 as well as content from Encyclopædia Britannica. Only those resources to which the library already subscribes can be activated and configured for access through Topic Pages. Libraries can also have Topic Pages configured to present content from their online catalog.

Through a partnership with OCLC, Credo Reference Topic Pages can also include relevant books and other material from WorldCat. Using the WorldCat Search API accessed through that library's specific authentication credentials, WorldCat results can be presented that also highlight materials held in the library.

### Other Channels for Accessing Credo Reference Content

In addition to access of this content through Credo Reference's own dedicated interface, the company provides a variety of additional mechanisms for access, including the library's online catalog as well as federated search or index-based discovery services.

Credo Reference titles can be added to a library's online catalog using the same methods as other e-book collections. The company can provide MARC records with the appropriate URLs in the 856 tags that can be loaded into the local ILS or indexed in a local discovery service.

Content from Credo Reference can be accessed from a variety of methods in addition to its own interface. For libraries that use federated search tools such as Ex Libris MetaLib, Serials Solutions 360, OCLC's Zportal, or any of those based on Muse-Global's Muse Metasearch technology, Credo Reference can be accessed as a search target.

Credo Reference has also partnered with each of the major discovery service providers. Credo Reference is indexed in Primo Central from Ex Libris, Summon from Serials Solutions, EBSCO Discovery Service, and OCLC's WorldCat Local.

### Literati: Taking Credo Reference to the Next Level

For the last year, Credo Reference has been focusing on its new flagship product, Literati by Credo, a platform that combines the company's aggregation of digitized reference resources with a variety of tools and services, providing not only new functionality discovery and exploration, but also assessment, course integration, and library outreach and promotion.

Credo Reference conducted a beta test program for Literati between October 2011 and January 2012, after which it was released as a subscription product. Some of the institutions collaborating with Credo Reference in the beta program included Columbia University, Marshall University, Lancashire Libraries in the United Kingdom, and the American University of Paris.

A version of the product optimized for public libraries, called Literati Public, was launched in June 2012. Literati Public helps these libraries address such issues as community outreach, collaboration with local schools, and funding awareness in addition to the product's core capabilities.

## **Librarian Connect: New Communications Tools for Literati**

Credo Reference has recently added a new feature, called Librarian Connect, to its Literati service. Librarian Connect aims to further increase the impact of Literati through by making connections between users and librarians, using a set of integrated communications technologies, including Web-based live chat, text messages, and e-mail. Librarian Connect also includes a response management utility to help manage the speed, quality, and consistency of answers to incoming questions.

The Librarian Connect feature, released in October 2012, relies on technology that Credo Reference licenses from Mosio. The initial partnership with Mosio that led to the development was formed in June 2012. Mosio specializes in technologies that connect organizations with clients through mobile technologies. Mosio has

### The Influence of Béla Hatvany

Béla Hatvany ranks as one of the pioneers of the information industry. He played a major role in the history of library automation, founding Computer Library Systems, Inc. in 1971, which became one of the dominant companies through the 1970's and 80's. CLSI's flagship product Libs100, began as a circulation system and steadily evolved to become a full-featured integrated library system. Innovative Interfaces, Inc., incidentally, got its start by creating a utility to connect CLSI's LIBS100 circulation system to OCLC's cataloging system. CLSI was sold to Thyssen Bornemisa in 1985 and was later acquired by Geac in 1992. The company's second generation Libs100PLUS became the basis of Geac's PLUS ILS. Geac itself was acquired by Golden Gate Capitol and folded into its Infor division

Hatvany also founded SilverPlatter Information in 1983, which become one of the major providers of information products delivered on CD-ROM. SilverPlatter was one of the first companies to become involved in distributing library information resources on CD-ROM and developed the MultiPlatter suite of products to help libraries provide access to these resources through their local area networks. SilverPlatter also developed the ERL platform that followed the client/server architecture, transferring the content from the CD-ROMs to a central server. SilverPlatter was sold to Walters Kluwer in 2001 and has been consolidated into Ovid Technologies.

developed Web-based messaging that has been adapted to many different business sectors, including medical research, hotline or helpline services, conferences and other events, as well as general customer service and workforce messaging. The company's Text a Librarian package falls within its offerings for the educational sector, which also includes specialized services for anti-bullying and campus safety alerts. (For more information about Mosio, see: http://www.mosio.com/; information on its library-specific products: http://www.textalibrarian.com/

Librarian Connect helps libraries fill the service niche of communicating with their patrons and providing reference and related services through the wide range of media library patrons can potentially use to engage these services. Many libraries had previously implemented chat-based reference or inquiry services based on a utility from Meebo. Google acquired Meebo in June 2012 for around \$100 million and abruptly discontinued many of its services including the Meebo Messenger, which many libraries used to support their chat-based services. The withdrawal of Meebo opened opportunities for new products as libraries scrambled for alternatives.

OCLC has been using Mosio's communications technology for its QuestionPoint reference service since January 2010.

### Corporate Background of Credo Reference

Originally known as xrefer, the company was founded in Oxford, UK near the peak of the Internet boom in 1999 by a team led by Adam Hodgkin, with the general strategy of creating a searchable database of digitized reference resources available on the Web to the general public that would be supported through advertising. Some of the early investors in the company included the UK cable operator Telewest and Flextech Interactive. The key concept of xrefer involved not only building an aggregation of reference content, but to create a "framework of navigation and links that permits smarter browsing" [Adam Hodgkin. "Reference Books on the Web". January 2002, Ariadne Issue 30 http:// www.ariadne.ac.uk/issue30/ref-books.

Following the burst of the Internet bubble, xrefer found a new direction, primarily through the involvement of Béla Hatvany. Supported by Hatvany's investments beginning in October 2001, the product was redeveloped, initially called xreferplus, as a subscription-based reference database for libraries. In June 2007, the company changed its name to Credo Reference.

In November 2003, John G. Dove became the Chief Executive Officer of xrefer. Dove has previously served as the Chief Operating Officer of SilverPlatter. In August 2008, Mike Sweet became CEO of Credo Reference, with Dove remaining with the company as its President.

Credo Reference maintains office in Oxford in the UK and in Boston, Massachusetts. For more information about Credo Reference see: http://corp. credoreference.com/

-Marshall Breeding

### ChiliFresh Goes Social and Offers Text-Based Chat Services

ChiliFresh, a company that provides Review Engine that can be integrated into any online catalog or discovery interface, has added a new optional component to its product that layers on a full social network centered on reading and library activities. It has introduced a Facebook app and offers a free Reference Desk Chat utility.

The ChiliFresh core Review Engine relies on library users to set up an account and compose reviews of books and other materials, which are then available to other users. Aggregating across all the patrons associated with the libraries that subscribe, ChiliFresh is able to achieve a critical mass of engagement beyond what any individual library might generate. The ChiliFresh Connections service enables patrons to extend their accounts with profiles that reflect their interests and reading activities. Once a patron has

established a profile, she or he can follow others with related interests, participate in chat rooms, book clubs, or discussion groups. Connections also allows participants to create lists of items in virtual bookshelves that can be shared within the applications and from external blogs or social networks. ChiliFresh Connections bears some conceptual resemblance to BiblioCommons, but layers these social features onto the library's existing online catalog.

In February 2012, ChiliFresh released an app that provides libraries with the ability to offer their online catalog from within Facebook. The ChiliFresh Facebook app supports many different ILS online catalog products, including Polaris, SirsiDynix Enterprise, Koha, and Evergreen. The app provide basic catalog search features, naturally including display of ChiliFresh reviews and other enhanced

content, as well as the ability for patrons to sign in to their personal library account and request holds, renew items, view lists of currently charged items, and other self-service tasks. Patrons can also share any item viewed from the catalog on their Facebook Timeline.

ChiliFresh has also taken advantage of libraries ongoing interest in chatbased services and the sudden absence of Meebo. Beginning in June 2012, shortly after Google's announcement of its plans to discontinue Meebo, ChileFresh announced that it would offer a free Reference Desk Chat utility. A library that subscribes to the ChiliFresh Connections can activate the Reference Desk Chat service by placing the supplied code snippet on its website, online catalog, or other components within its Web presence.

-Marshall Breeding

# Serials Solutions Launches Summon Suggestions for Enhanced Research Assistance

Serials Solutions has added a new cluster of features to its Summon discovery service, announced in November 2012, designed to provide additional research assistance to library patrons beyond the presentation of search results. These features, based on the context provided by the user's search query, provide automated tools that can be customized by the library as well as real-time assistance capabilities.

Summon has previously included a Database Recommender feature that suggests specific databases that a user might want to explore directly, based on the context of the search query. The Database Recommender has been updated and enhanced to give libraries local control over the recommendations. The library can now control which subscription databases are subject for recommendations, can set its own tags to trigger recommendations, and can create its own database descriptions. A "Best Bets" feature allows the library to include local content pages or resources, such as research guides, course reserves, help pages, schedules of opening hours, or library Web pages in response to specific query terms.

Summon will also generates related search terms presented as suggestions automatically generated based on associations calculated from aggregate usage data of the service. Auto-complete suggestions offered as users enter queries also help users Together, these tools help to improve the ways that users perform their research from within the Summon interface . . .

through the presentation of valid search term expansions or refinements.

A new embedded chat and reference widget allows the library to activate live assistance from within Summon. Summon currently supports the LibraryH3lp widget from Nub Games (http://libraryh3lp.com/) and the LibChat widget from Springshare. The library can select the location on the Summon search and result pages to present the widget and the image to use to brand the service.

Together, these tools help to improve the ways that users perform their research from within the Summon interface, prodding them to explore topics or collection areas that they might not otherwise be apparent and to provide the means to conveniently reach out to the library reference personnel when further assistance is needed.

—Marshall Breeding

### Library Technology News in Brief

# ProQuest enhances strategic acquisition and discovery of e-books

November 7, 2012 (ANN ARBOR, Mich.) — ProQuest is boosting the visibility of e-books in library collections by providing for the full text of an additional 400,000 e-books to be discovered and accessed as part of a broad search of library holdings. The initiative to improve e-book visibility began in early 2011 when Serials Solutions pioneered indexing of the contents of the HathiTrust collection in its Summon discovery service. Just months later, the first full-text indexing of ebrary's popular collection of e-books debuted. Now, ProQuest expands that effort with virtually every title in ebrary's collection richly indexed in the Summon service and discoverable from the "front door" of the library.

"Our 2011 Global Student E-book Survey identified discovery as an area of the e-book experience that could be substantially improved," said Kurt Sanford, ProQuest CEO. "More than 47 percent of respondents reported that they aren't using e-books because they don't know where to find them. With all of ebrary's titles indexed within Summon, researchers and faculty can now more efficiently discover them, enabling the library to earn more value from its e-book collection."

Summon searches across all of a library's ebrary products, encompassing titles acquired through subscription, patron driven acquisition, short-term loan, and perpetual archive models. As a result, strategic acquisition can occur within the ebrary platform but can start from the library's point of discovery,

dramatically streamlining ordering and precisely tuning the library's holdings to users' needs.

# Scottsdale Public Library (AZ) promotes local history with online StoryTour Collection

Emeryville, CA. The Scottsdale Public Library recently debuted its online Papago Salado StoryTour Collection. The collection includes historical images and stories that connect the authentic history of the Scottsdale, Phoenix, and Tempe regions in Arizona with specific buildings and places. Audio clips of first-person narrative stories provide short accounts about the people and events that shaped the community over time. Visitors to the Library's website have access to the collection through Content Pro, Innovative's digital collection management solution. Audio clips of the stories can also be accessed at the physical locations of the historical sites via a mobile device.

Says Aimee Fifarek, Library Technologies and Content Senior Manager: "A tremendous amount of research and care went into creating the StoryTour content, and the Library is delighted to be able to connect our community to this unique material. These wonderful stories are now available to a diverse audience and will not be lost to future generations."

The StoryTour project is sponsored by the Papago Salado Association, Inc. in its efforts to support cultural heritage tourism within the regions. It has been funded, in part, by an Arizona Humanities Council grant for the scholarly research and development of the project's content.

# Gartner Identifies the Top 10 Strategic Technology Trends for 2013

ORLANDO, Fla., October 23, 2012. Gartner, Inc. today highlighted the top 10 technologies and trends that will be strategic for most organizations in 2013. Gartner defines a strategic technology as one with the potential for significant impact on the enterprise in the next three years. Factors that denote significant impact include a high potential for disruption to IT or the business, the need for a major dollar investment, or the risk of being late to adopt.

A strategic technology may be an existing technology that has matured and/or become suitable for a wider range of uses. It may also be an emerging technology that offers an opportunity for strategic business advantage for early adopters or with potential for significant market disruption in the next five years. These technologies impact the organization's long-term

plans, programs and initiatives.

The top 10 strategic technology trends for 2013 include:

- · Mobile Device Battles
- Mobile Applications and HTML5
- Personal Cloud
- Enterprise App Stores
- The Internet of Things
- Hybrid IT and Cloud Computing
- · Strategic Big Data
- Actionable Analytics
- In Memory Computing
- · Integrated Ecosystems

# Over seventy schools join beta for cloud-based learning object repository from Blackboard

Washington — Nov. 5, 2012. Seventy two institutions have joined Blackboard in a beta program for xpLor, a cloud-based learning object repository. The beta is the largest ever offered by Blackboard, and includes the participation of institutions using Blackboard Learn, ANGEL, joule from Moodlerooms and Sakai.

By supporting multiple LMS systems, xpLor aims to make it easier for educators to manage and share rich content regardless of what system they are using or their institutional affiliation. xpLor would also make it easier for educators to collaborate in — or crowdsource — the development of course materials.

"Just as learners need to collaborate to be successful, so do content authors and course builders," said Stacey Fontenot, Vice President of Product Marketing at Blackboard. "xpLor plans to let users create, share, and deliver content in an utterly new way, and to collaborate regardless of what learning platform is being used."

Content in xpLor could include materials created by individual instructors or shared by institutions and foundations. Users would be able to create or import any type of content supported by the IMS Common Cartridge standard, including rich documents, discussion boards and assessments. Content could be tagged and rated, making it easy for users to find items that their peers found to be valuable. Using the IMS LTI (Learning Tools Interoperability) specification, grades could be synchronized with the LMS gradebook and activity is recorded when items are used in a course.

xpLor also plans to offer content authors a variety of choices to apply rights and permissions, from All Rights Reserved to Creative Commons open sharing to enable crowdsourcing collaboration and remixing of content.



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