Relationship with Discovery

L ibrary services platforms address the management of library resources, but they may optionally be packaged with a discovery interface. In general terms, discovery services and library services platforms belong to separate product genres, but the lines between the genres may not be absolute. These two types of products do not operate entirely independently. Content components and functionality that reside in a library services platform have a direct or indirect role in the search or presentation of resources in patron-facing discovery interfaces.

Discovery services facilitate access to resources for library patrons. These products include a discovery interface that presents a variety of features related to the search and retrieval of materials from library collections, patron self-service requests, and a variety of other capabilities. Index-based discovery services will also provide a large central index populated with citations and full text representing the general body of library-oriented content. Discovery interfaces are available as commercial products and as open-source software. Index-based discovery services are currently offered only as commercial services. Many other resources are available that describe the genre of discovery services.

Resource management products such as integrated library systems or library services platforms ultimately facilitate access to library materials by patrons but are operated by library personnel. The richness of description, detailed profiling of active subscriptions, and current status of whether any given item might be available for lending are examples of some of the support functions relevant to discovery services.

Some—but not all—of the organizations that have created a library services platform also offer a discovery service. The following section discusses the matrix of options possible between discovery services and each of the library services platforms.

Ex Libris: Alma + Primo

As a company engaged in providing technology products for academic, research, and national libraries, Ex Libris began shaping a new product strategy as early as 2006 based on a more unified approach for both resource discovery and management. The company began its development of a new patron interface, called Primo, in 2006. The initial versions of Primo provided a more modern end-user interface that could be used with its own Aleph and Voyager ILS products as well as with those created by other organizations.[1] Primo included a relevancy-based search and retrieval component that could be populated by the library's ILS and any other local or remote repositories of interest and from which the library would have the technical ability and rights to harvest its metadata. In July 2009, Ex Libris announced Primo Central, an article-level index that could be integrated with any existing Primo installation or set as a target for MetaLib, the company's federated search utility. When Ex Libris created Alma as its new resource management product, the company positioned Primo as its patron interface and discovery service. Additional functionality was created for Alma to allow it to deliver all the functionality expected from an online catalog (OPAC via Primo).

Since Alma exposes a broad set of APIs, it is technically feasible to use discovery products other than the one offered by Ex Libris. The library can export bibliographic records to populate a third-party discovery interface and make use of protocols such as Z30.50 and SIP2 to implement real-time availability

and patron account functionality. Information related to e-resource holdings can likewise be exported to facilitate linking to full text and other services related to access to electronic materials.

Ex Libris positions Primo as the primary interface for Alma. No implementations are known to use some interface other than Primo with Alma.

Innovative: Sierra + Encore

Innovative Interfaces launched Encore as a discovery interface in 2006. Encore can be used with either Millennium or Sierra. Encore offers an interface with faceted navigation and relevancy-based search and retrieval. Innovative also continues to support Web-PAC Pro as an online catalog module that functions with Millennium and Sierra. Libraries implementing Sierra have multiple options regarding patron interfaces. They can offer WebPAC Pro or Encore, and some have integrated open-source discovery interfaces.

Encore has been developed as a discovery interface, but Innovative has not created its own index-based discovery service. Instead, Innovative has partnered with EBSCO Information Services to take advantage of the API of EBSCO Discovery Service to present search results through Encore. This option is available to libraries that subscribe to EBSCO Discovery Service and have purchased Encore in a package marketed as Encore Duet.

Libraries using Sierra with open-source discovery interfaces include the Marmot Library Network in Colorado. This consortium created a highly customized discovery environment based on VuFind that it uses with Sierra with special attention to the integration of e-book lending. Along with the Douglas County Libraries, Marmot Library Network has developed a platform that enables libraries to manage their own e-book collections in addition to those offered via commercial e-book vendors such as OverDrive, 3M Library Services, and Baker & Taylor. The Nashville Public Library in Tennessee, eiNetwork of public libraries in the Pittsburgh, Pennsylvania, area, the Upper Hudson Library System, and Grinnell College are other examples of libraries using Sierra that have implemented VuFind as their discovery interface.

The bond between Sierra and Encore can be seen to be somewhat looser than some of the other combinations of discovery services and library services platforms.

OCLC: WorldShare Management Services and WorldCat Discovery Service

OCLC positions a close integration between WorldShare Management Services and its discovery products. The organization is currently in transition from the World-Cat Local discovery service, which was initially offered as early as 2007, to the WorldCat Discovery Services announced in January 2014.

WorldCat Discovery Services, as does World-Cat Local, includes an article-level discovery index. OCLC offers multiple options on the configuration of WorldCat Discovery Services relative to the indexing available.

Since June 2012, OCLC and EBSCO Information Services have had a partnership that would enable libraries to use EBSCO Discovery Service with World-Share Management Services. The University of Massachusetts–Lowell has implemented WorldShare Management Services, using WorldCat Local as its catalog search, and offers EBSCO Discovery Service for searching articles. Few, if any, libraries are using EBSCO Discovery Service as the full patron interface replacement for WorldCat Local.

ProQuest: Intota + Summon

ProQuest positions Summon as the patron interface and discovery service designed to work with Intota. The conceptual design of the product is based on a tight integration of the knowledge bases across the product components, spanning the electronic resource management, link resolver, and Summon discovery service.

Intota will expose the APIs that will conceivably support other discovery interfaces. None of the libraries on track to implement Intota have announced plans to use a discovery service other than Summon with Intota.

Kuali OLE: No Discovery Component

From its initial design phase, the Kuali OLE project has considered the discovery layer out of scope. The Kuali OLE project, which focused its efforts on supporting staff functions, chose not to create functionality for discovery or direct patron services. Rather than directly provide a discovery layer, Kuali OLE was designed to integrate with any of the other major products available, including both open-source and commercial versions. To facilitate integration with discovery interfaces, Kuali OLE exposed APIs to service requests related to communicating the status of materials and patron account details. Metadata records managed in OLE can be exported to populate the indexes associated with a discovery service.

The design of Kuali OLE also does not support a traditional online catalog. The functionality associated with this ILS module must be incorporated into the discovery interface that the library chooses to implement along with Kuali OLE.

Table 3.1. Matrix of library services platforms and discovery options

Product	Bundled Discovery Product	Open-Source Discovery Implementations	EBSCO Discovery Service Partnership?
WorldShare Management Services	WorldShare Discovery Service		yes
Alma	Primo with Primo Central		no
Kuali OLE	none	VuFind, Blacklight	yes
Intota	Summon		
Sierra	Encore	VuFind	yes

The institutions implementing Kuali OLE have followed diverse strategies for discovery interfaces. Both the University of Chicago and Lehigh University have developed patron interfaces based on VuFind. Indiana University, slated to move to Kuali OLE in 2015, has developed a custom interface with Blacklight.

EBSCO has joined the Kuali Foundation as a Kuali Commercial Affiliate to facilitate the integration of its EBSCO Discovery Service either to provide its index for article-level discovery or to provide a comprehensive patron interface. The University of Chicago integrated EBSCO Discovery Service into its VuFind discovery interface along with Kuali OLE.

EBSCO Discovery Service: Integrated with All Resource Management Systems

EBSCO Information Services has not developed a library services platform, but has instead formed partnerships with many vendors and projects. EBSCO Discovery Service ranks as the dominant index-based discovery service and has considerable overlap in its customer base with academic libraries that have implemented one of the library services platforms. EBSCO has publicly announced partnerships with Innovative Interfaces and OCLC and has joined the Kuali Foundation as a Kuali Commercial Affiliate. EBSCO does not currently have a partnership with Ex Libris. Many libraries using Aleph and Voyager use EBSCO Discovery Service, including some that have announced plans to move to Alma.

Table 3.1 summarizes the matrix of options possible between discovery services and each of the library services platforms.

Discovery Strategy Issues

One of the major issues in the development of the technology infrastructure for a library relates to whether the resource management and the discovery components should be acquired as an integrated suite from a single provider or as separate products selected independently. Some of the reasons for implementing a discovery interface offered by same provider as the resource management system include these:

- Pricing and packaging. A vendor will usually offer significant discounts to library organizations as incentives for them to purchase a resource management product and discovery product together. These discounts can result in savings to the library relative to purchasing products from separate vendors. In some cases, the library may have long-term agreements in place for a discovery service that extend through the implementation of a library services platform.
- Support. Acquiring both resource management and discovery from a single vendor simplifies problem resolution. When multiple strategic products are acquired from different providers, it may be more difficult to identify and resolve problems since there is no single entity for support.
- Installation and integration. When acquired as an integrated product suite, the discovery and management components come fully integrated, taking advantage of either proprietary internal communication mechanisms or predefined programming of the respective APIs. In the absence of this preconfigured integration, the providers of the discovery service and the library services platform and the library will need to collaborate and cooperate to implement the needed integration tasks, including:
  - exporting and synchronizing collection metadata and holdings with index of a discovery service
  - responding to requests for status of items and service requests
  - managing patron records in tandem with discovery interface
- When the library selects products from two vendors, the points of responsibility for ensuring that these two products work together properly becomes more complex.
- Consistent conceptual design. When both products are produced by the same vendor, it can be expected that they would follow the same general

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set of assumptions and concepts relative to the management and access to resources. How the library services platform organizes functionality has at least some impact on resource discovery. Knowledge bases or bibliographic services handled in the resource management system, for example, may lead to some operational tension when used with a discovery service based on a different set of assumptions.

Some advantages to selecting discovery and management components independently include these:

- Addressing needs of library users independently from those of library personnel. Some libraries may determine that the product that best addresses its expectations for discovery and other patron-oriented functionality differs from the product that best meets their requirements for internal automation and managing their resources. A library might determine that a given discovery service provides better coverage for its collection of resources, which may take preference over other options, including the one integrated into its resource management system.
- Customization. Some libraries may prefer to develop a highly customized environment for their patrons based on a diverse set of components, including those provided by multiple vendors as well as open-source software. A library might, for example, use an open-source discovery interface, such as VuFind or Blacklight, that operates with a resource management product from one vendor and an index-based discovery service from another. While this approach requires considerable technical development capacity, it may be well suited for large libraries that have complex patron and staff requirements that may not be entirely fulfilled by any given off-the-shelf product suite.
- Reducing dependence. Some libraries may prefer not to be entirely dependent on the performance of a single vendor but to work with multiple providers. A library may also prefer to make use of

open-source software that it can support independently or through multiple support or development firms.

Acquiring discovery and resource management products from the same vendor in some cases may cost less and be easier to install and operate. But rather than following the path of least resistance, many libraries will find it worthwhile to address other concerns with these product implementations. In some scenarios, a discovery service provider may offer financial incentives and be able to manage integration in a way that approaches the degree of integration associated with a single-vendor solution.

Both the discovery service and the resource management system need to offer a robust set of APIs in order to make it possible for libraries to operate outside of the constraints of a product suite. Libraries that implement discovery and management products from the same vendor may have some scenarios that involve integration with additional services.

Libraries appreciate the possibility of multiple options in their automation strategies. Some may eventually decide to acquire their management and discovery components as a package due to easier integration, cost incentives, and better functionality. A vendor that forces the issue by not allowing other options may find itself working against the grain in this era of technology where libraries expect openness and flexibility.

Looking at the patterns seen in the implementations to date, however, we observe that the ties between library services platforms and discovery services from vendors that offer them are quite strong. Very few libraries opt to unbundle Alma/Primo, WorldShare Management Service/WorldCat Local, or Intota/Summon. Only a minority of libraries use third-party discovery services with Sierra.

Note

1. Marshall Breeding, "OPAC Sustenance: Ex Libris to Serve Up Primo," *Smart Libraries Newsletter* 26, no. 3 (March 2006): 1, accessed May 6, 2015, http://journals.ala.org/sln/issue/view/370.