Open Source ILS Add-ons

Lori Bowen Ayre
http://galecia.com
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Traditional ILS

• manages acquisitions, cataloging, circulation, and reporting
• provides a discovery interface (commonly known as the Online Public Access Catalog or "OPAC") which enables library users to search for resources

User Expectations

• expect to see resources available beyond traditional library holdings. Want books, CDs, DVDs, plus
  – journals
  – newspapers
  – magazines
  – other libraries’ holdings
• want search options beyond traditional author/title/subject searching or generic keyword searches.
• when they find something, they want to easily obtain it

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The ILS needs to become a platform that supports appropriate interfaces for discovery and metasearch applications living on top of it instead of trying to do everything on its own.

The Decoupling of the ILS

The public interfaces provided by many ILS's cannot by themselves meet the demands of users in a world where the availability and sophistication of digital resources and web applications has increased significantly.

Current Options for Accessing ILS Data Are Limited

1. Application Programming Interface (API) provided by vendor
2. Inconsistently implemented library-centric protocols
   - Z39.50
   - SIP/SIP2
   - NCIP/NCIP2
3. Screen-scraping
4. Direct SQL queries against the ILS's database tables
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DLF ILS Discovery API
An API For Effective Interoperation Between Integrated Library Systems And External Discovery Applications

(DLF ILS Discovery Interface Task Group Technical Recommendation)

Available from:
http://www.diglib.org/architectures/ledi/DLF_ILS_Discovery_1.1.pdf

Key Web Technologies:
OAI, SOA, and Web Services

• OAI: Open Archives Initiative
  – develops and promotes interoperability standards
  – OAI-PMH: protocol for exposing data for harvesting

• SOA: Service Oriented Architecture
  – modular programs that perform a single task

• Web Services
  – applications talking directly to applications over the Web
  – use standards such as XML, SOAP, and/or WSDL

Metasearch

• Definition: a technology that sends a user’s query off to multiple databases and catalogs and then collects and presents the results in a single interface

• Issues:
  – user interface seems sluggish because work happens after user initiates query
  – connections to the databases and catalogs can break, leading to inconsistent and incomplete result sets.
  – sometimes arbitrary decisions are made about how to aggregate and order search results.
Libraries are beginning to develop their own tools for searching multiple data repositories with a single search box and to present understandable search results to their users

SOPAC2

- Developed by John Blyberg. Currently supported by the John Blyberg and Darien Library
- Goal: Enhances ILS by adding social functionalities including: tags, reviews, ratings, RSS.
- Using it:
  - Darien Library
  - Ann Arbor District Library
  - Palos Verdes (CA)
- Running on Innovative and Koha
- More info: http://www.thesocialopac.net

SOPAC2 Modules

- Support for shared/no email address
- RSS everything
- Wish lists
- Twitter broadcasting
- Saved searches as a separate module
- Summer Reading module
- Checkout History
- Recommendation engine
- Search statistics
- SMS notifications / support
- “Recommend to a friend”
- Auto-renew items

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Allowing Customers to Add Reviews Can Be Dangerous

“This book was very thrilling and the ending took me by surprise when I’ve learned that Sirius Black was actually innocent and Ron Weasley’s rat, Scabbers, was actually a servant of He-Who-Must-Not-Be-Name.

Voldemort dies in the 7th book.”
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Blacklight

- Developed by University of Virginia Library
- Goal: can index, search, and provide faceted browsing for MARC records and EAD XML files, and support is planned for Dublin Core and MODS as well
- Using it:
  - University of Virginia
  - Running on Unicorn
  - Other libraries involved in development:
    - Stanford
- More info: http://www2.lib.virginia.edu/press/virgobeta/

VirgoBETA (Blacklight) Features

- search items the Library has catalogued, including books, journal titles, DVDs, CDs, sheet music, websites, and microfilm, and also, in the same search for the first time, digital collections of images and texts;
- filter your results by format, dates, and keywords;
- sort your results by relevancy ranking, date received, author, title or call number;
- save and share your searches and results in Delicious, and, in a future release of VIRGObeta, RefWorks and Zotero;
- generate an RSS feed for your search, so you can be notified when the Library acquires materials in your subject area.

Virgo: Classic

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The idea is that libraries, which know their local needs, should control the technology that patrons use to gain access to their collections. That's a change from the one-size-is-good-enough-for-everybody, commercially managed model that has prevailed in the industry.

(Source: Library Hi Tech article by Bess Sadler, chief architect of the online library environment at the University of Virginia)
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Also from U-V: Collex

- Developed by Dr. Bethany Nowviskie
- Goal: collect, tag, analyze, and annotate trusted objects (digital texts and images vetted for scholarly integrity); produce interlinked online exhibits

Nines (Collex)

Aggregates 412,747 peer-reviewed digital objects from 63 federated sites

More info: [http://nines.org](http://nines.org)

Scriblio

- Developed by Casey Bisson.
- Currently supported by Casey Bisson and Plymouth State University
- Goal: merge the concept of a "blog entry" and "catalog record" using WordPress
- Also involved in development: Cook Memorial Library
- Running on Innovative (at least)
- Libraries currently using it:
  - Lamson Library, Plymouth State University
  - Cook Memorial Library (NH) and others
- More info at [http://about.scriblio.net](http://about.scriblio.net)
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Lamson Library (classic)

Lamson Library (Scriblio)

VuFind

• Developed at Villanova University.
• Goal: enable library users to search and browse through all of the library’s resources by replacing the traditional OPAC to include
  – Catalog Records, Digital Library Items
  – Institutional Repository, Institutional Bibliography
  – Other Library Collections and Resources
• Running on Innovative, Voyager, Aleph, VTLS Virtua
• Other libraries involved in development:
  – CARLI “I-share”
  – CSU Libraries “Discovery”
• More info at http://www.vufind.org/

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VuFind Features

- A single simple search box
- Ability to refine search by subject, title, topic, language, format, and more
- Ability to either search the UIUC library catalog or all I-Share libraries at once, including item status and location information
- Ability to request UIUC and I-Share items
- Patron-created usernames and passwords
- Links to patron’s library account with the ability to save, organize and retrieve records from any computer (using login information the patron creates).
- Zotero compliant for saving and tagging records and uses a feature like Delicious to bookmark and tag records.
- One-click link to reviews, including author reviews (through Wikipedia)
- Social networking tools, such as leaving comments and tagging
- Previews in Google Book Search

I-Share (WebVoyager)

I-Share (VuFind)

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Discovery (VuFind)

Colorado State University Libraries

• Hosted at the University of Rochester, supported by the Andrew W. Mellon Foundation
• Goal: provide easy access to all resources (both digital and physical collections) across a variety of databases, metadata schemas and standards, and enable library content to be revealed through search engines and other services that libraries may be using (e.g. CMS)
• Has connectors for Innovative, Voyager, Aleph, Koha, Evergreen, Scriblio
• Other organizations involved in development:
  – Notre Dame, Oregon State, University of Buffalo
  – Georgia PINES, LiLIime, Casey Bisson,
  – Rochester Institute of Technology, CARLI

XC – eXtensible Catalog

• Hosted at the University of Rochester, supported by the Andrew W. Mellon Foundation
• Goal: provide easy access to all resources (both digital and physical collections) across a variety of databases, metadata schemas and standards, and enable library content to be revealed through search engines and other services that libraries may be using (e.g. CMS)
• Has connectors for Innovative, Voyager, Aleph, Koha, Evergreen, Scriblio
• Other organizations involved in development:
  – Notre Dame, Oregon State, University of Buffalo
  – Georgia PINES, LiLIime, Casey Bisson,
  – Rochester Institute of Technology, CARLI

XC Modules

Released
• OAI Toolkit – synchronization of digital repositories (DSpace, ContentDM)
• NCIP Toolkit –ILS integration with bibliographic, holding, item and authority data. Supports live access to circulation status, authentication mechanisms, and native ILS circulation requests

In Development
• Metadata Services Toolkit - normalization, transformation, authority control, FRBRization, aggregation, user-generated metadata distribution, and terminology services.
• Drupal Toolkit - user interface embedded into Drupal CMS
• LMS Toolkit - user interface embedded in Blackboard

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### LibraryFind

- Developed by: Oregon State University Libraries with funding from State Library
- Goal: contribute to the support of scholarly workflow, remove barriers between the library and web information, and establish the digital library as platform.
- Guiding Principles: two clicks—one to find, one to get; a goal of getting results in four seconds; and known and adjustable results ranking
- Development Partners: Ross Singer (Georgia Tech), Ed Summers (LC)
- Two current releases: 0.8.5.2 and 0.90
- More info: [http://libraryfind.org](http://libraryfind.org)

### LibraryFind Features

- 2-click user workflow (one click to find, one click to get)
- facets for browsing / limiting
- ability to sort by relevance or date
- ability to harvest OAI and MARC data repositories
- integrated OpenURL resolver (with support for OpenURL tools that return XML)
- Web-based administration
- 3-tiered caching system to improve search response time
- customizable user interface
- ability to locally index collections
- "Look-ahead" OpenURL resolution
- smart ILL link display
- dynamic, on-the-fly facet creation
- extensible, customizable XML backend

### OSU LibraryFind Demo

[http://search2.library.oregonstate.edu](http://search2.library.oregonstate.edu)
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Paspar2

- Developed by: Index Data
- Goal: high-performance, user interface-independent, data model-independent metasearching middleware web service featuring merging, relevance ranking, record sorting, and faceted results.
- Released under GPL license and commercially released as part of MasterKey platform
- Features:
  - performs record merging, relevance-ranking and sorting by arbitrary data content, and facet analysis for browsing purposes
  - works with MARC, DublinCore, or any other XML-structured data
  - can be used against servers supporting Z39.50 and SRU/SRW protocols
  - user interface independent (uses web-service API)
- More info: http://www.indexdata.com/pazpar2

dbWiz → PKP Software

- Developed by Simon Frazer University as part of a larger suite of software tools called ReSearcher Goal: federated search engine that allows users to select their own starting point for research
- ReSearcher suite has morphed into PKP Software suite:
  - Open Journal Systems
  - Open Conference Systems
  - PKP Open Archives Harvester
- Public Knowledge Project partners: Simon Fraser, Univ. of British Columbia, and Stanford
- Information available from: http://pkp.sfu.ca/

Open Source software belongs in libraries!

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Additional References

• Code4lib
  http://code4lib.org/

• Oss4lib
  http://oss4lib.org/

• Library Best Practices Wiki: OS Software

• Parry, Marc, "After Losing Users in Catalogs, Libraries Find Better Search Software"
  http://chronicle.com/article/After-Losing-Users-in/

• My Delicious tags on this topic
  http://delicious.com/lbayre/ils_addon