THE STATE OF LIBRARY SEARCH AND DISCOVERY

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July 19, 2011
Marshall Breeding surveys the progress of next-generation library catalogs, discovery interfaces, and Web-scale discovery systems. He will provide some context of why they emerged, the technology and data models involved, and what we can expect in upcoming developments.
¿Actúan los sonidos sobre la vida celular?
Buenos Aires, 1941.

¿Actúan los sonidos sobre la vida celular? Estudio sobre la acción de las ondas sonoras audibles sobre las células en tejido interno.
Online Card Catalog

You searched TITLE for: harry potter

<table>
<thead>
<tr>
<th></th>
<th>TITLES</th>
<th>SEARCH RESULTS</th>
<th>BROWSING</th>
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<td>3</td>
<td>[1] Harry Potter and the goblet of fire.</td>
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Type a number for more information, or press NEXT or PREV for other selections. Press RETURN to search the database.
Computerized card catalog
Result List from Search Entire Catalogue

Search: '"harry potter"'
50 record(s) found
Sorted by Title

Records 1 - 10

   Description: 1 videocassette (VHS ca. 45 min.) : sd., col. ; 1/2 in.
   Author: Carefoote, Raee J. 196-
   Description: 143 p. ; ill. ; 21 cm.
2. Forbidden fruit : banned, censored, and challenged books from Dante to Harry Potter / Pearce J. Carefoote ; with an introduction by Alberto Manugel.
   Description: 143 p. ; ill. ; 21 cm.
3. Harry, a history : the true story of a boy wizard, his fans, and life inside the Harry Potter phenomenon / Melissa Anelli ; [with a foreword by J.K. Rowling].
   Description: xi, 358 p. ; [8] p. of plates ; ill. ; 21 cm.
   Description: 6 sound cassettes (640 min.) : Dolby system.
   Description: 261 p. ; 21 cm.
6. Harry Potter and the chamber of secrets [videorecording].
   Description: 1 videocassette (VHS) (161 min.) : sd., col. ; 1/2 in.
7. Harry Potter and the chamber of secrets [videorecording].
   Description: 2 discs (161 min.) : sd., col. ; 4 3/4 in.
8. Harry Potter and the chamber of secrets [videorecording].
   Description: 2 discs (161 min.) : sd., col. ; 4 3/4 in.
   Description: 2 discs (659 min.) : stereo, digital ; 4 3/4 in.
10. Harry Potter and the chamber of secrets [videorecording].
    Description: 1 videodisc (161 min.) : sd., col. ; 4 3/4 in.
Disjointed approach to information and service delivery

- **Silos Prevail**
  - Books: Library Online Catalog (ILS module)
  - eBook collections (such as Overdrive)
  - Local digital collections
    - ETDs, photos, rich media collections
  - Articles: Aggregated content products, e-journal collections
  - OpenURL linking services
  - E-journal finding aids (Often managed by link resolver)
  - Subject guides (e.g. Springshare LibGuides)
  - Metasearch engines

- All searched separately
Federated Search

- Simultaneous search of library catalog and selected remote resources of electronic content
- Based on live, dynamic queries cast to multiple targets
- Limited result sets, slow performance
- Search and retrieval protocols: Z39.50, XML gateways
Federated Search products

- IndexData: Pazpar2 / MasterKey
- Ex Libris: MetaLib
- WebFeat
- Serials Solutions: 360 Search
- Innovative Interfaces: Research Pro
Federated Search

Search:

Search Results

Real-time query and responses

- ILS Data
- Digital Collections
- ProQuest
- EBSCOhost
- MLA Bibliography
- ABC-CLIO
Modernized Interface

- Single search box
- Query tools
  - Did you mean
  - Type-ahead
- Relevance ranked results
- Faceted navigation
- Enhanced visual displays
  - Cover art
  - Summaries, reviews,
- Recommendation services
Discovery Products

http://www.librarytechnology.org/discovery.pl
Decoupled from ILS

<table>
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<tr>
<th>Discovery Product</th>
<th>Integrated Library Systems</th>
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</table>
Discovery Interface

MetaSearch Engine

Local Index

Search: 

Search Results

Real-time query and responses

ILS Data
Digital Collections
ProQuest
EBSCOhost
MLA Bibliography
ABC-CLIO
Legacy ILS Model / Extended Discovery

Discovery Service

Search:

Consolidated index

LMS

API Layer

Search Engine

Digital Collections

ProQuest

EBSCOhost

JSTOR

Other Resources
Differentiation in Discovery

- Products increasingly specialized between public and academic libraries
- Public libraries: emphasis on engagement with physical collection
- Academic libraries: concern for discovery of heterogeneous material types, especially books + articles + digital objects
Discovery from Local to Web-scale

- Initial products focused on technology
  - AquaBrowser, Endeca, Primo, Encore, VuFind
  - Mostly locally-installed software
- Current phase focused on pre-populated indexes that aim to deliver Web-scale discovery
  - Summon (Serials Solutions)
  - WorldCat Local (OCLC)
  - EBSCO Discovery Service (EBSCO)
  - Primo Central
  - Encore with Article Integration
Web-scale Discovery

Search:  

Consolidated Index

Pre-built harvesting and indexing

- ILS Data
- Digital Collections
- ProQuest
- EBSCOhost
- MLA Bibliography
- HathiTrust
Web-scale Search + Federated

Search: [ ]

Search Results

Consolidated Index

Fed Search

Pre-built harvesting and indexing

Non-harvestable Resources

ILS Data

Digital Collections

ProQuest

MLA Bibliography

ABC-CLIO

Interim model to deal with resources not possible to harvest into consolidated index
Encore Synergy

Search:  

Local Index

Local Index Results

Remote Search Results

Local Index Results

Web Services

ILS Data

Digital Collections

ProQuest

EBSCOhost

MLA Bibliography

ABC-CLIO
Pre-populated discovery services

- New-generation interface
- Harvested local content
  - ILS metadata
  - Institutional repositories, ETDs, Digital Collection platforms
- Vendor-supplied indexes of library content
  - E-journals, databases, e-books
    - Full-text and metadata corresponding to e-content subscriptions
  - Book collections beyond local library collections
The Lost Symbol [Mass Market Paperback]
Dan Brown (Author)

Price: $9.99 & eligible for FREE Super Saver Shipping on orders over $25. Details

In Stock.
Ships from and sold by Amazon.com. Gift-wrap available.

Want it delivered Friday, April 15? Order it in the next 18 hours and 57 minutes, and choose One-Day Shipping at checkout. Details

71 new from $2.99  189 used from $0.01  1 collectible from $16.98

Formats

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<td>or Free with Audible 30 day free trial</td>
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</table>
Integration with e-book lending services

- Library catalog populated with MARC records representing e-book collection
- Library users linked into e-book vendor site
- Uses ILS patron authentication for patron validation and authorization
Diminished role of the ILS for e-books

- Little of the infrastructure provided by the ILS or discovery system applies to e-books:
  - Ability to view items charged through the user’s library account
  - Perform services as with other library content — renewals, holds, etc.
  - The transition to increased proportions of e-books will present significant challenges for how the ILS delivers comprehensive management and access
Major Library e-Book providers

- Overdrive
- 3M Cloud Library
- NetLibrary
  - Independent > OCLC > EBSCO
- eBrary > ProQuest
- Competition to provide e-book content in aggregation packages and discovery services
Recent announcement:

- 3M will offer a cloud library e-book service
- Discovery stations placed in the library
- Ability to access materials remotely?
- Full announcement to come at ALA Annual Conference in June.
Social Discovery

- Builds on modernized library catalog interfaces
- Strong emphasis on Web 2.0 concepts
- Users invited to contribute reviews, ratings, preferences, reading lists, etc.
- User-supplied data becomes part of the discovery process
- Users help each other to find interesting library materials
- Example: Leverage use data for a recommendation service of scholarly content based on link resolver data: Ex Libris bX service
Social Discovery

Search: 

Local Index

- ILS Data
- Digital Collections
- Web site data
- User Contributed Content
New Library Management Model

- Self-Check / Automated Return
- Stock Management
- Enterprise Resource Planning
- Learning Management
- Authentication Service
- API Layer

Discovery Service
- Search Engine
- Consolidated Index
- Digital Coll
- ProQuest
- EBSCO
- JSTOR
- Other Resources
- Smart Cad / Payment systems
Re-coupled Discovery?

- Decoupled interfaces emerged from broken online catalogs
  - Poor interfaces, inadequate scope
- Inefficient integration between automation and discovery platforms
- New wave of more tightly integrated suites:
  - Alma > Primo
  - Web-scale Management Services > WorldCat Local
  - Serials Solutions Web-scale Management Solution > Summon
- Still possible to decouple, but more effort, worse results
Delivering library services to mobile devices

- Increased expectation for access to services through mobile
- Library services:
  - Mobile web
  - Apps
- Transmit library notices through SMS
- Carefully select functionality appropriate for mobile
Tablet computing

- Tablet computers have been around for a while, but the introduction of Apple’s iPad increases popularity.
- High-quality device for content consumption.
- Access to library services and content.