Enabling Choice in Discovery

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Josh Weisman | VP Development, Resources Management
Agenda

1. Background
2. Points of Integration
3. Reference Implementation
4. Resources and Next Steps
**Background**

- Alma works great with the Ex Libris discovery systems - Primo and Summon. This is the natural choice for most institutions.

- Ex Libris recognizes that some institutions want to implement their own discovery systems, applications, or repositories.

- Reasons might include:
  - A desire to have a completely tailored discovery experience
  - The need to expose collections and content other than that cataloged in the library system.
• Open Source discovery systems have been supported with Alma for several years.

• In the past 2 years, Ex Libris has worked with members of the community to ensure Alma is optimized to work with open source discovery systems.

• Even if you’re not interested in implementing your own discovery, there are plenty of use cases where these APIs can be helpful - request forms, etc.
Background

- Supports Blacklight, VuFind, homegrown systems
Points of Integration
Integration with Open Source Discovery Systems - Today

1. Search – data harvested from Alma using **General Publishing**
2. Real time availability - using the **Retrieve Bibs API**
3. Fulfillment services (i.e. requests, etc.)– using mash-up from Alma
4. My Library Card – using the **User related APIs**

https://developers.exlibrisgroup.com/alma/integrations/discovery
Real time availability
## Fulfillment Services

### 2. Multiparty elections in authoritarian regimes

- **Title:** Multiparty elections in authoritarian regimes
- **Author:** Michalik, Susanne
- **Format:** Book
- **Language:** English
- **Published:** Wiesbaden : Alma

### Request Types:
- Purchase request
- RS request
- Union Catalogue of Belgian Libraries
- ILL Books
- Link to Amazon

### Location

<table>
<thead>
<tr>
<th>Location</th>
<th>Main Library</th>
<th>Main</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>(2 copies, 1 available, 0 requests)</td>
<td></td>
</tr>
</tbody>
</table>

### barcode

<table>
<thead>
<tr>
<th>Barcode</th>
<th>Type</th>
<th>Policy</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEST8876</td>
<td>Book</td>
<td>1 Month</td>
<td></td>
<td>Item in place</td>
</tr>
<tr>
<td>NA27531</td>
<td>Book</td>
<td>1 Month</td>
<td></td>
<td>On order</td>
</tr>
</tbody>
</table>
## My Account / Patron Services

### Hi there Weisman, Josh

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Overdue fine</td>
<td>$8.80</td>
</tr>
<tr>
<td>2</td>
<td>Digitization fee</td>
<td>$3.44</td>
</tr>
<tr>
<td>3</td>
<td>Card renewal</td>
<td>$22.00</td>
</tr>
<tr>
<td>4</td>
<td>Card renewal</td>
<td>$5.00</td>
</tr>
<tr>
<td>5</td>
<td>University Shop</td>
<td>$18.41</td>
</tr>
<tr>
<td>6</td>
<td>Card renewal</td>
<td>$5.00</td>
</tr>
<tr>
<td>7</td>
<td>Overdue fine</td>
<td>$14.80</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL FINES &amp; FEES</strong></td>
<td><strong>$77.45</strong></td>
</tr>
</tbody>
</table>
Continuum of Customization

Primo
- Primo Studio
- Open Discovery Framework

Open Source Discovery
- Fulfillment Mashup
- APIs

Convenience

Flexibility
Fulfillment Mash-Up: Functionality

**General**
- Can be customized with CSS
- All text can be modified
- Updated with Alma new functionality monthly
- Continuous functionality and performance improvements
- Translated to many languages
- Authentication via Single Sign On

**Print**
- Locations and items with request options sensitive to the logged-in user
- Filtering and sorting of serials
- Booking and Digitization requests
- Purchase requests
- Forms data relevant to the logged-in user
- General Electronic Services

**Electronic**
- Link resolver
- Full text links
- Display Logic Rules
- Sorting rules

**Digital**
- Representations
- Thumbnails
- File extension grouping
- Remote Representations
- Special Representations filtering and sorting
- Viewer
# Fulfillment Mash-Up: Pros/Cons

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Fulfillment functionality provided by Alma</td>
<td>• Less control over user experience</td>
</tr>
<tr>
<td>• Rapid development and integration</td>
<td>• Limited design customization</td>
</tr>
<tr>
<td>• New Alma functionality available in discovery without additional development</td>
<td>• Uses iFrame</td>
</tr>
</tbody>
</table>
New Discovery Optimized APIs

• Ex Libris has released *discovery optimized APIs* which allow efficient access to information needed for discovery applications/tools

• These APIs can be used for other use cases related to delivering content to patrons
Discovery-Optimized APIs: Highlights

- Additional fields in print, electronic, and digital availability
- NEW Request Options API
- NEW Retrieve items for ALL holdings records
Additional fields in availability

GET /almaws/v1/bibs/{MMS_ID}?expand=p_avail,e_avail,d_avail

<datafield ind1=" " ind2=" " tag="AVA">
  <subfield code="a">TR_INTEGRATION_INST</subfield>
  <subfield code="b">MAIN</subfield>
  <subfield code="c">Reference Dept.</subfield>
  <subfield code="d">TEMP1234</subfield>
  <subfield code="e">available</subfield>
  <subfield code="f">1</subfield>
  <subfield code="g">0</subfield>
  <subfield code="j">reference</subfield>
  <subfield code="p">1</subfield>
  <subfield code="q">Main Library</subfield>
  <subfield code="r">215473880000541</subfield>
</datafield>
Additional fields in availability

To include physical inventory information use "expand=p_avail":
AVA field is added per holding record as following:
$$a$ - Institution code, $$b$ - Library code, $$c$ - Location display name, $$d$ - Camp;
$$d$ - Call number, $$e$ - Availability (such as available, unavailable, or check_hold
$$j$ - Location code, $$k$ - Call number type, $$f$ - total items, $$g$ - non available it
$$h$ - Calculated summary information,
$$p$ - priority, $$0$ - Bib record ID, $$8$ - Holdings ID, $$t$ - Holdings Information,
Note: When using the API against a NZ Institution AVA fields will be retrieved holdings.

To include electronic inventory information use: "expand=e_avail":
AVE field is added per portfolio, as following:
$$l$ - library code, $$m$ - Collection name, $$n$ - Public note, $$u$ - link to the bibliographic record’s services page,
$$s$ - coverage statement (as displayed in Primo’s ViewIt mashup), $$t$ - Interface name.
$$i$ - Available for institution, $$d$ - Available for library, $$b$ - Available for campus.
Note: $$u$ will be created based on a Customer Parameter in the "Customer Parameters" mapping table
(module: general): publishing_base_url.

To include digital inventory information use: "expand=d_avail":
AVD field is added per Representations, as following:
$$a$ - Institution code, $$b$ - Representations ID, $$c$ - REPRESENTATION/REMOTE_REPRESENTATION, $$d$ -
Repository Name, $$e$ - Label, $$f$ - Public Note, $$h$ - Full Text Link, $$r$ - IED.
Request Options API

GET /almaws/v1/bibs/{MMS_ID}/request-options?user_id={USER_ID}

{"request_option": [
  {
    "type": {
      "value": "HOLD",
      "desc": "Hold"
    },
    "request_url": "/almaws/v1/users/..."
  }
]}

## Request Options API

https://developers.exlibrisgroup.com/alma/apis/bibs

<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GET /almaws/v1/bibs/{mms_id}/holdings/ {holding_id}/items/{item_pid}/request-options</td>
<td>Retrieve item request options</td>
</tr>
<tr>
<td>GET /almaws/v1/bibs/{mms_id}/request-options</td>
<td>Retrieve BIB request options</td>
</tr>
</tbody>
</table>
Retrieve ALL Items

GET /almaws/v1/bibs/{MMS_ID}/holdings/ALL/items

<items total_record_count="6">
  <item link="/almaws/v1/bibs/991371230000541/holdings/22138269780000561/items/23138269760000561"/>
  <item link="/almaws/v1/bibs/991371230000541/holdings/22136295390000561/items/23878898500000561"/>
</items>
Retrieve ALL Items

Retrieve Item List API

Retrieve Items list

Resource URL

URL Parameters

Query string Parameters

Body Parameters

Output

Possible Error Codes

This web service returns a list of Items.

Note: It is possible to retrieve all the items under a bib record using 'ALL' in the holding_id path parameter.
Implementations

REQUEST OPTIONS:
Paley Library Stacks BR115.H5D4 1988
Hide Details
(1 copy, 1 available, 0 requests)

<table>
<thead>
<tr>
<th>Barcode</th>
<th>Type</th>
<th>Policy</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>39014008505663</td>
<td>Book</td>
<td>Login for Availability Options</td>
<td></td>
<td>Item in place</td>
</tr>
</tbody>
</table>

VuFind Alma ILS Driver

• VuFind 5 includes an ILS driver for Alma

• Based on work done by Damien Katz & Chris Hallberg @ Villanova and AK Vienna
Real time availability

[Image of a screenshot showing a search result for "present history"]

1. **The Present as History: Critical Perspectives on Global Power**
   - Author: Shaikh, Nermeen
   - Published: 2007
   - Call Number: 0-231-14299-4
   - Location: Electronic, Available

2. **History of the Present**
   - Subjects: "History, Periodicals..."
   - Call Number: Location: Electronic, Available

3. **Present History**
   - Author: Draper, Theodore, 1912-
   - Published: 1984
   - Call Number: 0394723716 (pbk.)
   - Location: Multiple Locations, Available
Item details

![Vufind interface showing item details]

- **Main Author:** Draper, Theodore, 1912-
- **Format:** Book
- **Language:** English
- **Edition:** 1st Vintage Books ed.
- **Tags:** No Tags, Be the first to tag this record!

**Similar Items**

**BOOKDISPLAY**

<table>
<thead>
<tr>
<th>Call Number</th>
<th>Status</th>
<th>Hold Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>D365 D73 1984</td>
<td>Available</td>
<td>Place a Hold</td>
</tr>
<tr>
<td>D365 H234</td>
<td>Available</td>
<td>Place a Hold</td>
</tr>
<tr>
<td>D365 H233</td>
<td>Available</td>
<td>Place a Hold</td>
</tr>
</tbody>
</table>

- Item not in place – Due requested
- Recall this
Place a hold request
# Patron Card Functionality

![Vufind Interface](image)

### Your Fines

<table>
<thead>
<tr>
<th>Title</th>
<th>Checked Out</th>
<th>Due Date</th>
<th>Fine</th>
<th>Fee</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARDRENEWAL</td>
<td>06-05-2018</td>
<td></td>
<td>Card renewal</td>
<td>$5.00</td>
<td>$5.00</td>
</tr>
<tr>
<td>Total Balance Due</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$5.00</td>
</tr>
</tbody>
</table>

### Your Account

- Saved Items
- Holds and Recalls
- Profile
- Saved Searches
DEMO:
Blacklight over Alma

https://blacklight-apis.exldevnetwork.net/

https://blacklight.exldevnetwork.net/
Resources and Next Steps
Discovery Optimized APIs - Summary

• Ex Libris is committed to facilitating integration with open source discovery systems and enabling institutions to implement custom discovery & delivery options

• Ex Libris supports customers at all points in the spectrum of technical capabilities

• Learning about the information available via the APIs can open up new possibilities for your own use cases
Next Steps

• If you’re interested, get involved or follow along at the Ex Libris Alma & Open Source Discovery Google Group - https://goo.gl/Wt5yNs

• Follow the Alma/Blacklight reference implementation on Github - https://github.com/jweisman/alma-blacklight

• Check out our blogs on open source discovery - https://developers.exlibrisgroup.com/blog/tag/Discovery
THANK YOU

josh.weisman@exlibrisgroup.com