WorldCat Search API

Bruce Washburn
RLG Programs
The WorldCat Search API

- Used by applications, not by people
- Searches with familiar protocols: OpenSearch and SRU
- Returns results in XML
- Formats XML in expected ways: RSS, Atom, MARC21 XML, Dublin Core
For authenticated users, offers a broad range of indexes, including a way to limit searches by holding library

Other users search a smaller set of indexes, similar to those in the WorldCat.org advanced search
The WorldCat Search API

Provides many ways to sort results: relevancy, author, title, date, library count, and more

Includes library locations for individual records

Sorts library locations geographically (using a zip code, an IP address that is associated with a location, or a country)

Can reformat records as standard citations ... APA, Chicago, Harvard, MLA, and Turabian
RESTful

Even when it’s busy. REST in this case means “Representational State Transfer”. Everything is sent along in the HTTP request. It doesn’t call another protocol layer, like SOAP. It thinks in terms of resources (nouns) instead of commands (verbs).

Hackable

In a good way. Remove parts of the URL and get something useful in return. Guess at URL elements and discover new resources.
The Search API overview describes all of its features with working examples, links to other resources, and more.

Find the overview on the OCLC Developer’s Network site at http://www.worldcat.org/devnet/.
The URI Evaluator offers an easy way to test API requests and evaluate their responses.
WorldCat Local is hosted and maintained by OCLC and supports seamless integration with local circulation and resource sharing services.

WorldCat Local includes all of the WorldCat.org UI features (faceted search results, personalization, reviews and lists, cover art, publisher data, etc.).

WorldCat Local search results include article citation records, while the WorldCat Search API is limited to bibliographic records.
Anatomy of a Search API Request

http://worldcat.org/webservices/catalog/search/worldcat/opensearch?q=civil%20war&format=rss

Defaults allow for simpler URLs:
http://worldcat.org/webservices/catalog/search/?query=civil%20war

Start with the protocol
Add the host name
Name the type of service resource
Name the database to be searched
Choose the search protocol
Include search terms
Select the format of the response
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<rss xmlns:content="http://purl.org/rss/1.0/modules/content/"
xmlns:srw="http://www.loc.gov/zing/srw/" version="2.0">
  <channel>
    <title>OCLC Worldcat Search: civil war</title>
    <link>http://worldcat.org/webservices/catalog/search/worldcat/opensearch?q=civil+war&amp;start=1&amp;count=10&amp;format=r ... nsearch:totalResults>
      <opensearch:startIndex>1</opensearch:startIndex>
      <opensearch:itemsPerPage>10</opensearch:itemsPerPage>
      <atom:link rel="search" type="application/opensearchdescription+xml" href="http://worldcat.org/
webse ... esearch.description.xml"/>
      <opensearch:Query role="request" searchTerms="civil war" startPage="1"/>
    </link>
    <item>
      <title>The red badge of courage : an episode of the American Civil War</title>
      <author><name>Crane, Stephen, ... red badge of courage: an episode of the American Civil War&lt;/u&gt;.
New York: Norton, 1982.</content:encoded>
    </item>
    Here’s the result size:
    <opensearch:totalResults>253694</opensearch:totalResults>
    Here’s an MLA-formatted citation:
    Content:encoded
    Here’s a title of one record in the result:
    <title>
      The red badge of courage : an episode of the American Civil War
    </title>
    Here’s a link to the record in WorldCat.org:
    <link>http://worldcat.org/oclc/8114241</link>
  </channel>
</rss>
An SRU Response

Here’s the result size:
<numberOfRecords>267468</numberOfRecords>

Here are ISBNs:
<datafield tag="020" ind1="" ind2="">
    <subfield code="a">0393013456</subfield>
</datafield>
<datafield tag="020" ind1="" ind2="">
    <subfield code="a">9780393013450</subfield>
</datafield>
<datafield tag="020" ind1="" ind2="">
    <subfield code="a">0380641135 (pbk.)</subfield>
</datafield>
<datafield tag="020" ind1="" ind2="">
    <subfield code="a">9780380641130 (pbk.)</subfield>
</datafield>
Here’s the OCLC Symbol:

<institutionIdentifier><value>ORO</value></institutionIdentifier>

Here’s the library catalog URL:

<electronicAddress><text>http://www.worldcat.org/wcpa/oclc/15550774?page=frame&amp;url=http%3A%2F%2Flibrary.cityoforange.org%2Fuhhtbin%2Fcgisirsi.exe%2Fx%2F0%2F0%2F5%2F%3Fsearchdata1%3D0195038630&amp;title=Orange+Public+Library&amp;linktype=opac&amp;detail=ORO%3AOrange+Public+ Library%3APublic&amp;app=wcapim&amp;id=132.174.183.38</text></electronicAddress>
Demo: include WorldCat.org book links in a web site sidebar

AJAX is used to send an SRU search and parse the MARC XML response into an array. For each record, metadata fields are parsed to produce the brief citation, image link, and WorldCat.org link. JavaScript is used to step through the array, replacing the image, text, and links in the sidebar.
Demo: highlight citations, summaries, and local libraries

AJAX is used to send an OpenSearch request, and to parse the result for formatted citations. Record identifiers are used to get full records with bibliographic notes, and to locate nearby libraries.
The WorldCat Widget works with SRU Dublin Core results. From there, links lead to library locations in WorldCat.org.

The CiteMe Widget uses OpenSearch results, with each citation automatically formatted based on the user’s preference: APA, Chicago, Harvard, MLA, or Turabian.
David Walker’s code4lib demo

Web Design in a Nutshell: A Desktop Quick Reference

By: Jennifer Niederst Robbins
Format: Book
Year: 1999
Publisher: Sebastopol [Calif.]: O'Reilly, 1999

We can get it for you in 24 hours.
Just place a request.

Summary
Are you a print designer working on the Web? An HTML coder learning about server-side hosting for the first time? Web Design in a Nutshell has slim but whole chapters for those topics—and everything else you can imagine.

Written in the popular "Nutshell" format, this guide is full of helpful tables and lists, making it a perfect desktop reference. The book breaks down the huge topic of Web site development into understandable, readable segments: the Web environment (browsers, displays, design principles), an in-depth guide to HTML tags, graphics manipulation and display, multimedia possibilities, and technologies for larger site management (such as Cascading Style Sheets [CSS] and XML).

People who checked out this book also checked out:

- Learning Web Design: A Beginner’s Guide to HTML, Graphics, and Beyond
  Available in 1-2 days

  Available in 5-10 days

- Site-Seeing: A Visual Approach to Web Usability
  Available in 5-10 days
The Programmable WorldCat

Combine Search API results in novel ways with other OCLC Web Services, including Identities, xISBN, Registry services, etc.

Embed within other platforms, e.g., Facebook, WordPress, etc.

Mashup with data from other sources and other web services, for example Google Maps, Yahoo News, Local Catalog web services, reading lists, etc.
What’s Next for the API?

Implementation of an application key to control access
(instead of IP address authentication)

General availability to cataloging members

On-going evaluation and improvement, working with the
Developers’ Network and other communities
www.worldcat.org/devnet/