Linked Data Radical Change?

Richard Wallis
Technology Evangelist
@rjw
Hmmm...

Linked Data?
Where did it come from?

Linked Data?

What is it?

How is it used?

What will it lead to?
Linked Data? The Web... of data
Linked Data Is Not a Standard
Linked Data Principles

1. Use URIs as names for things
2. Use HTTP URIs so people can look up those names
3. When someone looks up a URI, provide useful information, using the standards - RDF
4. Include links to other URIs, so that they can discover more

Tim Berners-Lee - 2006
Linked Data

Built on Semantic Web Standards
Linked Data

Built on a Foundation of Standards

Scientific American

Get the Idea?
(Tomorrow's Web Will)

Plus:
Antibiotics' Dim Future
Rorschach: A Waste of Ink
The Oldest Stars
Linked Data
Built on Semantic Web Standards
All about identifying and linking things
Identifying things with URIs

1969-059A

spacecraft/1969-059A

nasa.dataincubator.org/spacecraft/1969-059A

http://nasa.dataincubator.org/spacecraft/1969-059A
Things have attributes

http://nasa.dataincubator.org/spacecraft/1969-059A

28801.0kg
Columbia
Apollo 11 CSM
CSM-107
United States
Cape Canaveral
Saturn 5
<./1969-059A> mass 28801.0 .
<./1969-059A> name "Apollo 11 CSM" .
<./1969-059A> name "Columbia" .
<./1969-059A> prefName "Columbia" .
<./launch/1969-059> site <./site/capecanaveral> .
<./site/capecanaveral> lat "N 28° 27' 31"" .
<./site/capecanaveral> long "W 80° 31' 59"" .
# Apollo 11 Command and Service Module (CSM)

**Name**
Apollo 11 Command and Service Module (CSM)

**Description**
Apollo 11 was the first mission in which humans walked on the lunar surface and returned to Earth. On 20 July 1969 two astronauts (Apollo 11 Commander Neil A. Armstrong and LM pilot Edwin E. "Buzz" Aldrin Jr.) landed in Mare Tranquilitatis (the Sea of Tranquility) on the Moon in the Lunar Module (LM) while the Command and Service Module (CSM) (with CM pilot Michael Collins) continued in lunar orbit. During their stay on the Moon, the astronauts set up scientific experiments, took photographs, and collected lunar samples. The LM took off from the Moon on 21 July and the astronauts returned to Earth on 24 July.

**Type**
space:Spacecraft

---

**Alternate names**
- 04039
- Apollo 11 CSM
- CSM-107
- Columbia

**Disciplines**
- Human Crew
- Planetary Science

**space:internationalDesignator**
1969-059A

**Mass**
2880.0

**Homepage**
http://nssdc.gsfc.nasa.gov/database/MasterCatalog?c=1969-059A
Planning For Automation

A How-To-Do-It Manual for Librarians

Second Edition

John M. Cohn
Ann L. Kelsey
Keith Michael Fiels

RDF
American guerrilla / Roger Hilsman

bnb: GBA3V1071

description: Includes index.

extent: 312 p.

isbn 10: 1574866916

subject: 940.548673092
- Burma
- Burma--History--Japanese occupation, 1942-1945
- Guerrillas--Burma--Biography
- Guerrillas--United States--Biography
- Hilsman, Roger
- United States. Office of Strategic Services--Biography
- United States. Office of Strategic Services
- United States. Office of Strategic Services,
- World War, 1939-1945--Personal narratives, American
- World War, 1939-1945--Underground movements--Burma

title: American guerrilla : my war behind Japanese lines

type: BibliographicResource
Data Open and/or Linked

1. Data can be open, while not being linked
2. Data can be linked, while not being open
3. Data which is both open and linked is increasingly viable
4. The Semantic Web can only function with data which is both open and linked

Paul Walk - UKOLN
Mallard

Mallards are the archetypal and most recognisable ducks. They are found wherever there is water, from rivers and lakes to remote ponds and coastal marshes. It is their adaptability to all kinds of environment that has brought mallards to towns and parks. The males sport a glossy green head and white neck ring, and what the females lack in colour they make up for in noise. The familiar ‘quack’ is the call of the female summoning her ducklings. Mallards are the ancestors of many breeds of domestic duck and readily interbreed with them.

Scientific name: Anas platyrhynchos
Rank: Species
Wild duck
Distribution

Species range provided by WWF's Wildfinder.

The Mallard can be found in a number of locations including: Africa, Asia, China, Europe, Indian subcontinent, Mediterranean, North America, United Kingdom. Find out more about these places and what else lives there.

Classification

Life
Animals
Vertebrates
Birds
Anseriformes
Ducks, geese and swans
Anas
Mallard

Sounds

Calling mallard ducks (01:22)

Find wildlife

Search for your favourite wildlife

Elsewhere on the BBC

- Wild fowl
- BBC - TANDY - The World Around Us - February
- Find out about mallards moulting

Elsewhere on the web

- Animal Diversity Web (animaldiversity.ummz.umich.edu)
- Facts on the UK population (b1x1.bto.org)
- ARKive: Images of Life on Earth (arkive.org)
- Mallard identification (birdguides.com)
- Introduction to the mallard (nhftp.org)
- Advice on nesting mallards (rspb.org.uk)
- Mallard (wikipedia.org)
Species range provided by WWF’s Wildfinder.

The Mallard can be found in a number of locations including: Africa, Asia, China, Europe, Indian subcontinent, Mediterranean, North America, United Kingdom. Find out more about these places and what else lives there.

Habitats

The following habitats are found across the Mallard distribution range. Find out more about these environments, what it takes to live there and what else inhabits them.

- Farmland
- Coastal
- Estuaries
- Flooded grassland
- Lakes and ponds
- Marsh
- Rivers and streams
- Swamp
- Taiga
- Broadleaf forest
- Coniferous forest
- Temperate grassland

Elsewhere on the web

- Animal Diversity Web (animaldiversity.ummz.umich.edu)
- Facts on the UK population (b1x1.bto.org)
- ARKive: Images of Life on Earth (arkive.org)
- Mallard identification (birdguides.com)
- Introduction to the mallard (nhptv.org)
- Advice on nesting mallards (rspb.org.uk)
- Mallard (wikipedia.org)
Rivers and streams

Rivers and streams, burns, brooks and springs – the names are varied but the flora and fauna all have to cope with the same thing: water that flows continuously in one direction. If you live here you need a way to avoid being washed downstream and ultimately into the sea. Plants and animals have to be able to cling on, hide away from the flow or swim against the current.
Amazonian manatee

Amazonian manatees live in freshwater and are found, as their name suggests, in the Amazon River and its tributaries. They eat prodigious amounts of aquatic plants, consuming up to 8% of their own body weight every day. In the dry season, when manatees are forced to leave smaller watercourses as they shrink, they may fast for several weeks, surviving on fat reserves.

Scientific name: Trichechus inunguis
Rank: Species
Common names: South American manatee
Distribution

The Amazonian manatee can be found in a number of locations including: Amazon Rainforest, South America. Find out more about these places and what else lives there.

Habitats

The following habitats are found across the Amazonian manatee distribution range. Find out more about these environments, what it takes to live there and what else inhabits them.

- Lakes and ponds
- Marsh
- Shallow seas
- Rivers and streams
- Swamp

Behaviours

Discover what these behaviours are and how different plants and animals use them.

- Adapted to swimming
- Herbivorous
- Nocturnal
- Social

BBC News about Amazonian manatee

Manatee migration mystery solved

Amazonian manatees migrate during low water season to avoid being hunted, solving a mystery about why the secretive animals make such a perilous journey.

Elsewhere on the web

- Animal Diversity Web (animaldiversity.ummz.umich.edu)
- ARKive: Images of Life on Earth (arkive.org)
- Last chance to see (bbc.co.uk)
- Encyclopedia of Life entry (eol.org)
- IUCN Red List Information (iucnredlist.org)
- Manatee fact file (sirenian.org)
- Amazonian Manatee (wikipedia.org)
Social

Social animals like hanging out with members of their own species. But to be truly social, the group of animals isn't just a random collection of individuals. Instead the members recognise each other (by scent or sight) and co-operate with each other in some way - for instance getting together to defend a communal territory.
Mallard

Mallards are the archetypal and most recognisable ducks. They are found wherever there is water, from rivers and lakes to remote ponds and coastal marshes. It is their adaptability to all kinds of environment that has brought mallards to towns and parks. The males sport a glossy green head and white neck ring, and what the females lack in colour they make up for in noise. The familiar ‘quack’ is the call of the female summoning her ducklings. Mallards are the ancestors of many breeds of domestic duck and readily interbreed with them.

Scientific name: Anas platyrhynchos
Rank: Species
Common names: Wild duck
curl -H 'Accept: text/turtle' http://graph.facebook.com/richardwallis

@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
@prefix api: <tag:graph.facebook.com,2011/> .
@prefix og: <http://ogp.me/ns#> .
@prefix fb: <http://ogp.me/ns/fb#> .
@prefix : <http://graph.facebook.com/schema/> .
@prefix user: <http://graph.facebook.com/schema/user#> .

<684466405#>
  user:id "684466405";
  user:name "Richard Wallis";
  user:firstname "Richard";
  user:lastname "Wallis";
  user:username "richard.wallis";
  user:gender "male";
  user:locale "en_US" .
Birmingham Libraries Co-operative Mechanisation Project
Birmingham libraries co-operative mechanisation project GB
Birmingham Libraries Co-operative Mechanization Project
VIAF ID: 137834616 (Corporate)
Permalink: http://viaf.org/viaf/137834616

Preferred Forms

110 2  ta_Birmingham Libraries Co-operative Mechanisation Project
110 2  ta_Birmingham Libraries Co-operative Mechanisation Project
110 2  ta_Birmingham Libraries Co-operative Mechanisation Project
110 2  ta_Birmingham Libraries Co-operative Mechanisation Project
210 || ta_Birmingham libraries co-operative mechanisation project tb ao GB
110 2  ta_Birmingham Libraries Co-operative Mechanization Project

4xx's: Alternate Name Forms (7)
5xx's: Related Names (3)
Birmingham Libraries Co-operative Mechanisation Project

INFORMATION ABOUT THE CONCEPT

PREFERRED LABEL:
Birmingham Libraries Co-operative Mechanisation Project

LINKED DATA IDENTIFIER:
http://id.worldcat.org/fast/518805

IDENTIFIER:
518805

ALTERNATIVE LABEL:
BLCMP
B.L.C.M.P.

HAS EXACT MATCH:
Birmingham Libraries Co-operative Mechanisation Project

IS IN SCHEME:
http://id.worldcat.org/fast/ontology/1.0/#fast
http://id.worldcat.org/fast/ontology/1.0/#facet-Corporate

HISTORY NOTE:
LC (2011) Subject Usage: 3 (en)
WC (2011) Subject Usage: 14 (en)

CHANGE NOTE:
Cataloged by agency: OCoLC (en)
<table>
<thead>
<tr>
<th>Dewey Decimal Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>840</td>
<td>Kos &amp; drank</td>
</tr>
<tr>
<td>641</td>
<td>Kas &amp; drank</td>
</tr>
<tr>
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</tr>
<tr>
<td>641</td>
<td>الأهداف والمسار.</td>
</tr>
<tr>
<td>840</td>
<td>Food &amp; drink</td>
</tr>
<tr>
<td>641</td>
<td>Essen und Trinken</td>
</tr>
<tr>
<td>840</td>
<td>Home &amp; family management</td>
</tr>
<tr>
<td>641</td>
<td>Food &amp; Trinken</td>
</tr>
<tr>
<td>840</td>
<td>Food and drink</td>
</tr>
</tbody>
</table>

OCLC
The world's libraries. Connected."
OCLC Linked Data

VIAF
http://viaf.org
HTML, RDF/XML
License: ODC-BY

Dewey
http://dewey.info
HTML/RDFa, RDF/XML, Turtle, JSON - SPARQL
License: CC BY-NC-ND

FAST
http://id.worldcat.org/fast
HTML, RDF/XML - Download
License: ODC-BY
Linked Data

- 271+ Million resources
- Schema.org + Library
- Embedded RDFa
- Links to: Dewey, LCSH, LCNAF, DOI, VIAF, FAST
- License: ODC-BY
- Experimental - June 2012
<table>
<thead>
<tr>
<th>Property</th>
<th>Type</th>
<th>Description</th>
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<tr>
<td>description</td>
<td>Text</td>
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</tr>
<tr>
<td>image</td>
<td>URL</td>
<td>URL of an image of the item.</td>
</tr>
<tr>
<td>name</td>
<td>Text</td>
<td>The name of the item.</td>
</tr>
<tr>
<td>url</td>
<td>URL</td>
<td>URL of the item.</td>
</tr>
</tbody>
</table>

Properties from `CreativeWork`:

- about
- accountablePerson
- aggregateRating
- alternativeHeadline
- associatedMedia
- audio
- author
- award
- awards
- comment
- contentLocation
- contentRating
- contributor
World War I

Author: H P Willmot
Summary: A visual guide to the causes, battles, and forces of World War I.
Rating: (not yet rated)

More like this
Subjects: World War, 1914-1918 -- Pictorial works.

Find a copy in the library

Buy it
### Linked Data

More info about Linked Data

```
<http://www.worldcat.org/oclc/52541937>
```

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
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</tr>
<tr>
<td>library:oclcnum</td>
<td>&quot;52541937&quot;</td>
</tr>
<tr>
<td>library:placeOfPublication</td>
<td>rdf:type: schema:Place</td>
</tr>
<tr>
<td></td>
<td>schema:name: &quot;New York :&quot;</td>
</tr>
<tr>
<td>rdf:type</td>
<td>schema:Book</td>
</tr>
<tr>
<td>schema:about</td>
<td>rdf:type: schema:Organization</td>
</tr>
<tr>
<td></td>
<td>schema:name: &quot;World War (1914-1918)&quot;</td>
</tr>
<tr>
<td>schema:about</td>
<td>rdf:type: skos:Concept</td>
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<tr>
<td></td>
<td>skos:inScheme: <a href="http://dewey.info/scheme/e22/%3E">http://dewey.info/scheme/e22/&gt;</a></td>
</tr>
<tr>
<td>schema:about</td>
<td>rdf:type: skos:Concept</td>
</tr>
<tr>
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<td>skos:inScheme: <a href="http://dewey.info/scheme/e21/%3E">http://dewey.info/scheme/e21/&gt;</a></td>
</tr>
<tr>
<td>schema:about</td>
<td>madsrdf:identifiedByAuthority</td>
</tr>
<tr>
<td></td>
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<tr>
<td>schema:about</td>
<td>rdf:type</td>
</tr>
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<td></td>
<td>schema:name: &quot;World War, 1914-1918&quot;</td>
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</tbody>
</table>
### Linked Data

**More info about Linked Data**

```xml
<http://www.worldcat.org/oclc/52541937>  
library:holdingsCount "682"  
library:oclcnum "52541937"  
library:placeOfPublication  
  rdf:type schema:Place  
  schema:name "New York :"  
  schema:about  
    rdf:type schema:Organization  
    schema:name "World War (1914-1918)"  
  schema:about  
    http://dewey.info/class/940/e22/  
      rdf:type skos:Concept  
      skos:inScheme http://dewey.info/scheme/e22/  
  schema:about  
    http://dewey.info/class/940/e21/  
      rdf:type skos:Concept  
      skos:inScheme http://dewey.info/scheme/e21/  
  schema:about  
    madsrdf:isIdentifiedByAuthority http://id.loc.gov/authorities/subjects/sh85148236  
      rdf:type skos:Concept  
      skos:inScheme http://dewey.info/scheme/e21/  
  schema:about  
    madsrdf:isIdentifiedByAuthority http://id.loc.gov/authorities/subjects/sh85148236  
      rdf:type schema:Book
```
Personality characteristics of crack cocaine addicts

Author: Gabriel Edward Denes
Rating: (not yet rated)

More like this
Subjects
- Crack (Drug)
- Cocaine abuse -- Treatment
- Drug abuse
- View all subjects

Services for this item:
- Get IT from ILLiad
- Check for Electronic Resources
- OCLC ILLiad test server
- Check for Electronic Resources
- ILL Request
- Check for Electronic Resources
- Check for Electronic Resources
- RTM Request
- Check 360-Link for full text

Find a copy in the library

Enter your location: birmingham uk

Displaying libraries 1-1 out of 1

1. Auburn University

or select a location:

B100 Birmingham, GB

Distance: 4200 miles

Library Held formats Distance

Auburn University Book

Library info
Search for an item in libraries near you

Enter title, subject or author

goblet of fire

Search WorldCat

Harry Potter and the goblet of fire
by J.K. Rowling - Published 2000

1st American ed. “Year 4”--Spine. Sequel to: Harry Potter and the prisoner of Azkaban. Sequel: Harry Potter and the Order of the Phoenix. Awards: ALA Notable Children's Book, 2001. ALA Notable Children’s Book, 2001. Fourteen-year-old Harry Potter joins the Weasleys at the Quidditch World Cup, then enters his fourth year at Hogwarts Academy where he is mysteriously entered in an unusual contest the ...
Harry Potter and the goblet of fire
1st American ed.

Fourteen-year-old Harry Potter joins the Weasleys at the Quidditch World Cup, then enters his fourth year at Hogwarts Academy where he is mysteriously entered in an unusual contest that challenges his wizarding skills, friendships and character, amid signs that an old enemy is growing stronger.

People

Grandpré, Mary
Wikipedia page for Mary GrandPré

J. K. Rowling
Joanne "Jo" Rowling, OBE (born 31 July 1965), better known as J. K. Rowling, is a British author best known as the creator of the Harry Potter fantasy series, the idea for which was conceived on a train trip from Manchester to London in 1990. The Potter books have gained worldwide attention, won multiple awards, sold more than 400 million copies and been the basis for a popular series of films, in which Rowling had overall

Topics

Some of the topics shown below may not be relevant for this title. That is due to the matching algorithm used in the WorldCat Facebook app, not caused by the underlying WorldCat Linked Data. Matches are found by searching Wikipedia with an OCLC FAST subject heading, and the keyword-matched results can sometimes be off topic.

Wizard
WorldCat books and more about Wizards
Wikipedia page for Wizard
British author best known as the creator of the Harry Potter fantasy series, the idea for which was conceived on a train trip from Manchester to London in 1990. The Potter books have gained worldwide attention, won multiple awards, sold more than 400 million copies and been the basis for a popular series of films, in which Rowling had overall approval on the scripts as well as maintaining creative control by serving as a producer on the final instalment. Rowling is perhaps equally famous for her "rags to riches" life story, in which she progressed from living on benefits to multi-millionaire status within five years. As of March 2011, when its latest world billionaires list was published, Forbes estimated Rowling's net worth to be US$1 billion. The 2008 Sunday Times Rich List estimated Rowling's fortune at £560 million ($798 million), ranking her as the twelfth richest woman in the United Kingdom. Forbes ranked Rowling as the forty-eighth most powerful celebrity of 2007, and Time magazine named her as a runner-up for its 2007 Person of the Year, noting the social, moral, and political inspiration she has given her fandom. In October 2010, J. K. Rowling was named 'Most Influential Woman in Britain' by leading magazine editors. She has become a notable philanthropist, supporting such charities as Comic Relief, One Parent Families, Multiple Sclerosis Society of Great Britain, and Lumos (formerly the Children's High Level Group).

Wizard
WorldCat books and more about Wizards
Wikipedia page for Wizard

Magical objects in Harry Potter
The following is a list of magical objects used in Harry Potter. These objects exist for the use of the characters in the series by J. K. Rowling.
WorldCat books and more about Weasley, Ron (Fictitious character)
Wikipedia page for Magical_objects_in_Harry_Potter

Magical objects in Harry Potter
The following is a list of magical objects used in Harry Potter. These objects exist for the use of the characters in the series by J. K. Rowling.
WorldCat books and more about Granger, Hermione (Fictitious character)
Wikipedia page for Magical_objects_in_Harry_Potter

Magic
WorldCat books and more about Magic
Wikipedia page for Magic

School
A school is an institution designed for the teaching of students (or "pupils") under the direction of teachers. Most countries
OCLC WorldCat® Linked Data

- 271+ Million resources
- Schema.org + Library
- Embedded RDFa
- Links to: Dewey, LCSH, LCNAF, DOI, VIAF, FAST
- License: ODC-BY
- Experimental - June 2012

Download file
- Most widely held works (250+ holdings)
- 1.2 Million resources (80 million triples)
- Schema.org + Library
- License: ODC-BY
- August 2012

http://worldcat.org
http://purl.oclc.org/dataset/WorldCat
Open Data Commons
Legal tools for Open Data

ODC Attribution Summary

This is a human-readable summary of the ODC-BY 1.0 license. Please see the disclaimer below.

You are free:

To Share: To copy, distribute and use the database.

To Create: To produce works from the database.

To Adapt: To modify, transform and build upon the database.

As long as you:

Attribute: You must attribute any public use of the database, or works produced from the database, in the manner specified in the license. For any use or redistribution of the database, or works produced from it, you must make clear to others the license of the database and keep intact any notices on the original database.
OCLC linked data attribution guidelines

Linked Data provided as output from OCLC services, or in downloadable files, will be available under various license terms as described on the Web pages and in the documentation associated with each service. In cases where OCLC is specifically publishing linked datasets, OCLC will provide a Vocabulary of Interlinked Datasets (VoID) description of each dataset. The VoID will reference the specific license applicable to the dataset and provide guidance on how to satisfy the attribution requirements, if any.

In anticipation that more specific guidance will be sought in some cases, these guidelines provide advice and examples of how to satisfy the attribution requirements under the Open Data Commons Attribution License (ODC-BY) in a variety of real world situations. To give a context, this guide assumes use of the WorldCat dataset for its examples.

Unless specifically stated in dataset-specific documentation, these guidelines and examples can be applied to other OCLC, ODC-BY licensed datasets by appropriately changing the dataset name and attribution links.

Basic requirements

Attribution requirements derived from section 4.3 of the ODC-BY License.

- Adherence to ODC Attribution instructions for the correct assertion of attribution is encouraged. The preferred form of attribution for WorldCat is:

  "This [title of report or article or dataset or service] contains OCLC WorldCat information made available under the ODC Attribution License. The OCLC Cooperative requests that uses of WorldCat derived data contained in this work conform with the WorldCat Community Norms"

- Special cases: In circumstances where providing the full attribution statement above is not technically feasible, the use of canonical WorldCat URIs is adequate to satisfy Section 4.3 of the ODC Attribution License.
Web sites/applications

If WorldCat data is core to the functioning of the site, the same statement should be inserted into "About" pages and/or in static areas of the site pages such as the header or footer. This is also applicable when WorldCat information is used as part of the functioning of the site/application but is not displayed to the user:

“This [name of site/application] contains OCLC WorldCat information made available under the ODC Attribution License. The OCLC Cooperative requests that uses of WorldCat derived data contained in this work conform with the WorldCat Community Norms.”

Web pages

On pages where WorldCat data is displayed, here are five example options:

1. Insert a statement in the site's "About" page

2. Insert a statement into the page, in the footer or similar area:

   This [name of site/application] contains information from WorldCat which is made available under the ODC Attribution License.

3. Insert a license reference in the page or element that is visually associated with WorldCat information. For example:


   Data from WorldCat Licensed under ODC-BY

4. Insert a link to the source in the page or element that is visually associated with WorldCat information. For example:


   http://www.worldcat.org/oclc/37975719

5. Make the WorldCat sourced text a hyperlink to the source in WorldCat. For example:


   http://www.worldcat.org/oclc/37975719
Dataset publishing

If you are publishing a dataset containing data from WorldCat in addition to WorldCat URIs, you can define the WorldCat data as a source contributing to the dataset using the VoID vocabulary. For example:

```owl
:MyData a void:Dataset;
  dcterms:title "My Data set";
  dcterms:source <http://purl.oclc.org/dataset/WorldCat> .
```

URI referencing

When referencing a WorldCat URI in your data, the URI is considered sufficient attribution in itself. For example:

```owl
<http://bnb.data.bl.uk/id/resource/012943214> a bibo:Book;
  dcterms:title "Harry Potter and the philosopher's stone";
  owl:sameAs <http://www.worldcat.org/oclc/56803707> .
```

This would require no further attribution.

RDF data formats

All the above examples are applicable in all of the common RDF encoding formats: n3, ttl, RDF/XML, RDFa.

Display font guidelines

When textual attribution is applied, there are no recommendations as to font style, size or color. The text should be legible to a normal user without aids, and when associated with other licensing information, it should be of equal prominence.

General questions about attribution

Why attribution?

For datasets licensed under ODC-By, the license makes attribution a specific condition of reuse. Guidance is provided in Section 4.3 which reads:

4.3 Notice for using output (Contents). Creating and Using a Produced Work does not require the notice in Section 4.2. However, if you Publicly Use a Produced Work, You must include a notice associated with the Produced Work reasonably calculated to make any Person that uses, views, accesses, interacts with, or is otherwise exposed to the Produced Work aware that Content was obtained from the Database, Derivative Database, or the Database as part of a Collective Database, and that it is available under this License.

a. Example notice. The following text will satisfy notice under Section 4.3:

"Contains information from DATABASE NAME which is made available under the ODC Attribution License."

b. Information from a DATABASE NAME may be included in a Produced Work if an Author disclaims any responsibility or liability for the content or accuracy thereof, and indicates that:

- the database of which the information is taken is not responsible for content of the Produced Work;
- the database of which the information is taken is not responsible for content of the Produced Work;
- the database of which the information is taken is not responsible for content of the Produced Work;
- the database of which the information is taken is not responsible for content of the Produced Work;
OCLC Linked Data

VIAF: http://viaf.org
Dewey: http://dewey.info
FAST: http://id.worldcat.org/fast
WorldCat: http://www.worldcat.org
WorldCat Most Widely Held Download: http://purl.oclc.org/dataset/WorldCatMostHighlyHeld
ODC-BY Attribution Guidelines: http://www.oclc.org/data/attribution.html
Bibliographic Framework Transition Initiative

About the Initiative

The Library of Congress has launched a review of the bibliographic framework to better accommodate future needs. A major focus of the initiative will be to determine a transition path for the MARC 21 exchange format in order to reap the benefits of newer technology while preserving a robust data exchange that has supported resource sharing and cataloging cost savings in recent decades. This work will be carried out in consultation with the format’s formal partners -- Library and Archives Canada, the British Library, the Deutsche Nationalbibliothek and other national libraries, the agencies that provide library services and products, the many MARC user institutions, and the MARC advisory committees.

This web site is the official location for information, announcements, and resources related to this initiative.

News & Announcements

- Webcast of Update Forum (July 16, 2012)
- Minutes from the Library of Congress Bibliographic Framework Initiative Update Forum at ALA Midwinter Meeting, Dallas, Texas (January 22, 2012)
- The Library of Congress issues its initial plan for its Bibliographic Framework Transition Initiative for dissemination, sharing, and feedback (October 31, 2011)

More news & announcements »
Fall 2011 - Report
- Moving on from Marc21 as an exchange format

Spring 2012
- Zepheria engaged to propose a data model

Now
- Technical experimentation with few partners
- Workshops in October - December

Next
- Wider dialogue with wider community

Results will reflect
- Linked Data environment
- Need to share on the web
What is Schema.org?

This site provides a collection of schemas, i.e., html tags, that webmasters can use to markup their pages in ways recognized by major search providers. Search engines including Bing, Google, Yahoo! and Yandex rely on this markup to improve the display of search results, making it easier for people to find the right web pages.

Many sites are generated from structured data, which is often stored in databases. When this data is formatted into HTML, it becomes very difficult to recover the original structured data. Many applications, especially search engines, can benefit greatly from direct access to this structured data. On-page markup enables search engines to understand the information on web pages and provide richer search results in order to make it easier for users to find relevant information on the web. Markup can also enable new tools and applications that make use of the structure.

A shared markup vocabulary makes it easier for webmasters to decide on a markup schema and get the maximum benefit for their efforts. So, in the spirit of sitemaps.org, search engines have come together to provide a shared collection of schemas that webmasters can use.

We invite you to get started!

View our blog at blog.schema.org.
Schema Bib Extend Community Group

The mission of this group is to discuss and prepare proposal(s) for extending Schema.org schemas for the improved representation of bibliographic information markup and sharing. The group will seek consensus around, and support for, proposal(s) to the W3C WebSchemas Group. This Community Group will not, itself, produce technical specifications.

http://www.w3.org/community/schemabibex

• Short lived group
• Libraries, Publishers, Consumers, System Vendors, Linked Data, Standards Bodies
• Library is only one focus
Future Gazing Ahead
Library Linked Data Potential
Library Linked Data Potential
Library Linked Data Potential
Turning an Oil Tanker

Millennia of endeavor
Centuries of practice
Decades of systems
Years of cooperation
Loads of standards

Huge heritage to build upon
In an exponentially changing environment
Stop Copying
Start Linking
Be of the Web!
RDF
just another output format?
initially - yes
<http://lib.org/res/1234> name "Planning for Automation".
RDF
Identifying & Linking Resources to Concepts

Planning for Automation

name

loc.gov/auth/sh8507

name

Libraries

about

name

../res/12345

type

schema:Book

author

viaf.org/abc

name

John M Cohn
RDF
Identifying & Linking Resources to Concepts

<http://lib.org/res/1234> name "Planning for Automation".

Where has the record gone?
RDF

Where has the record gone?

What next for cataloguing?
Cataloging Spotlight

Manifestation

Marc
Linked Data

Radical Change?
Linked Data

Radical Change?

Radical Evolution!