Linked Data for Libraries (LD4L) and (Metadata) Production (LD4P)

Dean B. Krafft, Tom Cramer, and the LD4L/P Team

CNI Fall Member Meeting

December 12, 2017
Vision: Enable libraries and their users to easily create, use, and benefit from LD specifically designed for libraries and scholars, and from broader sources of LD on the web.
LD4L Labs and LD4P

• Beginning April 1, 2016, the Mellon Foundation funded two new linked data grants for two years at $1.5 million each
• LD4L Labs is a collaboration of Cornell, Harvard, Stanford, and Iowa focused on building new LD tools and services
• LD4P is a collaboration of Stanford and five partners piloting a range of projects on metadata production using linked data
LD4L Labs – Results so far

• Bibliotek-o: a model bibliographic ontology that extends and varies from BIBFRAME
• VitroLib: A prototype ontology-based instance editor for cataloging in BIBFRAME and extension ontologies
• Authority and identity lookup and reconciliation for URI-based authorities
Why bibliotek-o?

- Engage in BIBFRAME evaluation
- Provide an extension to BIBFRAME
- Demonstrate select alternative patterns
- Accommodate legacy data in real-world orientation
- Not a competitor to BIBFRAME, but a proposal for alternate modeling that could be folded into BIBFRAME as it evolves
Challenge: migrate existing, highly detailed and nuanced bibliographic metadata AND prepare for a future of original cataloging in RDF that captures data in meaningful and useful ways and that integrates with the broader web
What is bibliotek-o?

- Core concepts and models are **BIBFRAME** (e.g.: Work, Instance, Item, etc.)
- **bibliotek-o** ontology: which extends and supplements BIBFRAME, offering alternate models in some areas
- Defined fragments of **existing ontologies**, both within and outside the bibliographic domain
- An application profile specifying the recommended implementation of these ontologies in modeling data
Principles for bibliotek-o

- **Reuse and align** with existing external vocabularies to promote data exchange and interoperability.
- Conversely, **define terms broadly enough for reuse** by external data sources.
- Use **OWL axioms in moderation** to provide expressivity without overly constraining the ontology and the data it can model.
- Prefer **object properties, structured data, and controlled** over unstructured literals.
- Adopt **a single method of expressing a relationship or attribute** in order to minimize query paths.
Example: Activities in bibliotek-o
SHACL application profiles

• Want ontology driven applications, but the ontology definitions alone are not enough
• Current use case - Editor Form Specifications
  • Eventually we’ll want to address general data validation
• Current Work (in progress)
  • Hip Hop
    (https://github.com/LD4P/HipHop/tree/develop/application-profiles)
  • Moving Image (https://github.com/LD4P/moving-image/tree/develop/application_profiles)
  • Soon we will organize general shapes in the bibliotek-o github repo (e.g. Titles, Measurement, Subjects, for shared across Domains/Applications)
bibliotek-o - Documentation

Home page: http://bibliotek-o.org/ontology

OWL file: http://bibliotek-o.org/ontology.owl

Human-readable documentation: http://bibliotek-o.org/ontology.html

Visualization: https://bibliotek-o.org/overview/overview.html

GitHub repository: https://github.com/ld4l-labs/bibliotek-o/tree/v1.0.1

FAQ, pattern recommendations & RDA discussion: https://wiki.duraspace.org/x/H5TBB
Cataloging

- Traditional practices: Authority File
  - E.g. Name Authority Files, Subject Headings, Genre Forms from LOC
  - String as unique identifier, e.g. “Mark Twain”

- Tasks and workflows
  - Identification, “Aboutness”
  - Disambiguation
  - Context and original authority record
Creating a cataloging environment with effective authority linking

- **VitroLib**
  - Prototype cataloging editor
  - Creates/uses linked data
  - Enables lookup and use of authority URIs

- **Hyrax**
  - Samvera technology stack
  - Incorporate authority URIs into institutional repository records
VitroLib Demonstration

Catalog a new resource ©

Work +

Statistics

80 Works
65 Instances
17 Items
96 People
50 Organizations
191 Agents

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New Work

Title *
Made in America

Type *
Audio

Language *
English

Author or Other Role *
Performer

- blues brothers
  - Blues Brothers Band
  - Blues Brothers (Motion picture)
  - Wood Brothers (Blues group)
  - Soul Brothers (Blues group)
  - Blues Brothers Horns (Musical group)
  - Blues Eldorados
  - Blues, Thomas
  - Blues Rockers
  - Blues Brothers
  - Blues revue
Audio

Language *

English

Author or Other Role *

Perfomer

Selected: Blues Brothers (Verify this match or change selection)

LC Subject Heading

soul music

- Soul music--History and criticism
- Guitar music (Soul)
- Philadelphia soul (Music)
- Soul--Buddhism
- Soul worship
- Soul mates

Soul music

- Soul--Judaism
- Soul musicians
- Soul--Hinduism
- Soul in literature
- Soul--Christianity
- Soul--Jainism
- Soul in art
Title
Made in America

Statement of Responsibility
Blues Brothers

Type
Audio disc

Date of Publication
Issue Number
SD 16025

Publisher
Atlantic Recording Corporation
Atlantic Consultants
Atlantic jazzlore
Atlantic mystery
Atlantic Workshop
Atlantic series
Atlantic Institute
Atlantic jazz
Atlantic Manor
Atlantic Underwriters
Atlantic romance
Type: Audio disc

Issue Number: SD 16025

Matrix Number:

UPC:

EAN:

Selected: Atlantic Recording Corporation (Verify this match or change selection)

Date of Publication: 1980

* required fields
Made in America

authors and other roles
- Blues Brothers (Performer)

Instance of Work
- Made in America (Audio disc) 1980

subject
- Soul music

genre form
Manage Associated Genre Forms

Genre Form

<table>
<thead>
<tr>
<th>Video recordings</th>
<th>Remove</th>
</tr>
</thead>
</table>

Lookup and Add Genre Form

Search

Add Selected Term

Save  Cancel
Manage Associated Genre Forms

Genre Form

Video recordings

Remove

Lookup and Add Genre Form

animation

SEARCH

Add Selected Term

Save  Cancel
# Manage Associated Genre Forms

<table>
<thead>
<tr>
<th>Genre Form</th>
<th>Notes</th>
<th>Additional Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video recordings</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Remove</td>
</tr>
</tbody>
</table>

## Lookup and Add Genre Form

Enter your search term or label:

- **animation**

Search results:

<table>
<thead>
<tr>
<th>Genre Form</th>
<th>Notes</th>
<th>Additional Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clay animation television programs</td>
<td>No definition provided.</td>
<td>Broader:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Animated television programs</td>
</tr>
<tr>
<td>Alternate Labels:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Claymation television programs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sculptmation television programs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| Silhouette animation films | No definition provided. | Broader:               |
|                           |                            | • Animated films       |
| Alternate Labels:         |                            |                        |
| Semi-object animation films |                        |                        |
| Sand animation films      |                            |                        |
| Flat-figure animation films |                        |                        |</p>
<table>
<thead>
<tr>
<th>Label</th>
<th>Definition and Notes</th>
<th>narrower topics</th>
<th>broader topics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stop-motion animation films</strong></td>
<td>No definition provided.</td>
<td>-</td>
<td><strong>Clay animation films</strong></td>
</tr>
<tr>
<td>Alternate Labels:</td>
<td></td>
<td></td>
<td><strong>Stop-motion animation films</strong></td>
</tr>
<tr>
<td>- Object animation films</td>
<td></td>
<td></td>
<td><strong>Stop-motion animation films</strong></td>
</tr>
<tr>
<td>- Frame-by-frame animation films</td>
<td></td>
<td></td>
<td><strong>Stop-motion animation films</strong></td>
</tr>
<tr>
<td>- Stop-action animation films</td>
<td></td>
<td></td>
<td><strong>Stop-motion animation films</strong></td>
</tr>
<tr>
<td>- Stop-motion animated films</td>
<td></td>
<td></td>
<td><strong>Stop-motion animation films</strong></td>
</tr>
<tr>
<td><strong>Clay animation films</strong></td>
<td>No definition provided.</td>
<td></td>
<td><strong>Stop-motion animation films</strong></td>
</tr>
<tr>
<td>Alternate Labels:</td>
<td></td>
<td></td>
<td><strong>Stop-motion animation films</strong></td>
</tr>
<tr>
<td>- Claymation films</td>
<td></td>
<td></td>
<td><strong>Stop-motion animation films</strong></td>
</tr>
<tr>
<td>- Sculptamation films</td>
<td></td>
<td></td>
<td><strong>Stop-motion animation films</strong></td>
</tr>
<tr>
<td><strong>Computer animation television programs</strong></td>
<td>No definition provided.</td>
<td></td>
<td><strong>Animated television programs</strong></td>
</tr>
<tr>
<td>Alternate Labels:</td>
<td></td>
<td></td>
<td><strong>Animated television programs</strong></td>
</tr>
<tr>
<td>- CG television programs</td>
<td></td>
<td></td>
<td><strong>Animated television programs</strong></td>
</tr>
<tr>
<td>(Computer animation)</td>
<td></td>
<td></td>
<td><strong>Animated television programs</strong></td>
</tr>
<tr>
<td>- Computer animated television programs</td>
<td></td>
<td></td>
<td><strong>Animated television programs</strong></td>
</tr>
<tr>
<td>- CGI television programs</td>
<td></td>
<td></td>
<td><strong>Animated television programs</strong></td>
</tr>
<tr>
<td>(Computer animation)</td>
<td></td>
<td></td>
<td><strong>Animated television programs</strong></td>
</tr>
<tr>
<td><strong>Live-action/animation films</strong></td>
<td>This heading is used as a genre/form heading for films that feature interaction between live-action and animated elements.</td>
<td><strong>Animated films</strong></td>
<td><strong>Animated films</strong></td>
</tr>
<tr>
<td>Alternate Labels:</td>
<td></td>
<td></td>
<td><strong>Animated films</strong></td>
</tr>
<tr>
<td>- Animated/live-action films, Hybrid films</td>
<td></td>
<td></td>
<td><strong>Animated films</strong></td>
</tr>
<tr>
<td>(Live-action/animation films)</td>
<td></td>
<td></td>
<td><strong>Animated films</strong></td>
</tr>
<tr>
<td>- Animated/live-action films</td>
<td></td>
<td></td>
<td><strong>Animated films</strong></td>
</tr>
<tr>
<td>(Hybrid films)</td>
<td></td>
<td></td>
<td><strong>Animated films</strong></td>
</tr>
<tr>
<td>- Hybrid animation films</td>
<td></td>
<td></td>
<td><strong>Animated films</strong></td>
</tr>
</tbody>
</table>
Manage Associated Genre Forms

### Genre Form

<table>
<thead>
<tr>
<th>Genre Form</th>
<th>Notes</th>
<th>Additional Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video recordings</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lookup and Add Genre Form**

Search for: **animation**

<table>
<thead>
<tr>
<th>Genre Form</th>
<th>Notes</th>
<th>Additional Info</th>
</tr>
</thead>
</table>
| Clay animation television programs | No definition provided. | Broader:  
- Animated television programs |

Alternate Labels:
- Claymation television programs
- Sculptimation television programs

<table>
<thead>
<tr>
<th>Genre Form</th>
<th>Notes</th>
<th>Additional Info</th>
</tr>
</thead>
</table>
| Silhouette animation films | No definition provided. | Broader:  
- Animated films |

Alternate Labels:
- Semi-object animation films
- Sand animation films
- Flat-figure animation films
Clay animation television programs

From Library of Congress Genre/Form Terms

Clay animation television programs

URI(s)
http://id.loc.gov/authorities/genreForms/gr2011026141

Instance Of
MADS/RDF GenreForm
MADS/RDF Authority
SKOS Concept

Scheme Membership(s)
Library of Congress Genre/Form Terms

Collection Membership(s)
http://id.loc.gov/authorities/genreForms/collection_LCGFT_General

Form
Clay animation television programs

Variants
Claymation television programs
Sculptmation television programs

Use For
sh2008025507

Broader Terms
Animated television programs

Sources
found: Moving image genre-form guide online. January 14, 2008 (Clay animation: type of animation which generally uses plasticine or clay, such as the "Clayimation" work of Will Vinton or the Wallace and Gromit series)
What just happened?

Query = animation

Translate to QA Service Request

Search LOC Genre Form data

VitroLib Search Service

Questioning Authority

LOC Genre Forms
Demonstration: Hyrax, Questioning Authority Gem, QA Cache Server, LD Authorities (LoC, OCLC FAST, GeoNames, AGROVOC, NALT, and DBpedia)
Autocomplete Saving String and URI

Authority: OCLC FAST    Subauthority: PersonName

Oclc person required

Benson, Ezra Taft
Cornell, Ezra, 1807-1874
Ezra (Biblical figure)
Gannett, Ezra S. (Ezra Stiles), 1801-1871
Ibn Ezra, Abraham ben Meïr, 1089-1164
Ibn Ezra, Moses, approximately 1060-approximately 1139
Meeker, Ezra, 1830-1928
Pound, Ezra, 1885-1972
Sims, Ezra, 1928-2015
Stiles, Ezra, 1727-1795

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- Institution: Restrict access to only users and/or groups from Institution
- Embargo: Only users and/or groups that have been given specific access in the "Share With" section.
- Lease:
- Private:

☐ I have read and agree to the Deposit Agreement
Selected String and URI

Saves both string and URI

OCLC organization required
Cornell University

Add another OCLC organization

OCLC person required
Cornell, Ezra, 1807-1874
http://id.worldcat.org/fast/409667

Add another OCLC person

Agrovoc keyword required
hive products
http://aims.fao.org/aos/agrovoc/c_3655

Add another Agrovoc keyword

Agrovoc keyword fr required
Selecting a Term using Lookup with Context

Library of Congress Lookup

1. twain
2. Authority: Library of Congress
3. Cancel
4. Twain, Shoria
5. Twain, Mark, 1835-1910
6. Twain, Charles
7. Not found?

<table>
<thead>
<tr>
<th>Authoritative Label</th>
<th>Variant Labels</th>
<th>Field of Activity</th>
<th>Occupation</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twain, Shoria</td>
<td>Twain, Eileen</td>
<td>Country Music</td>
<td>Singer</td>
<td>Birth: 19650828</td>
</tr>
<tr>
<td>Twain, Mark, 1835-1910</td>
<td>T'wain, Mark, 1835-1910</td>
<td>Literature</td>
<td>Authors</td>
<td>Birth: (est.) 1835-11-30</td>
</tr>
<tr>
<td>Twain, Jane</td>
<td>T'wun, Mark, 1835-1910 more...</td>
<td>Humor</td>
<td>Lecturers</td>
<td>Death: (est.) 1910-04-21</td>
</tr>
<tr>
<td>Luu, Twain</td>
<td></td>
<td>Wit and humor</td>
<td>Humorists</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Writing</td>
<td>Author</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Editing</td>
<td>Editor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Internet Industry</td>
<td>Business Woman</td>
<td></td>
</tr>
</tbody>
</table>
Selecting a Term using Lookup with Context

![Agrovoc Lookup interface](http://localhost:3000/oa/lookup/linked_data/agrovoc)

<table>
<thead>
<tr>
<th>Broader</th>
<th>Found</th>
<th>Narrower</th>
<th>Some As</th>
</tr>
</thead>
<tbody>
<tr>
<td>body fluids</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>collection</td>
<td>milk collection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>containers</td>
<td>milk containers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>animal fats</td>
<td>milk fats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>proteases</td>
<td></td>
<td>chymosin</td>
<td></td>
</tr>
</tbody>
</table>
Getting more from the same authority?

<table>
<thead>
<tr>
<th>Agrovoc Keyword</th>
<th>hive products <a href="http://aims.fao.org/aos/agrovoc/c_3655">1</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Narrower:</td>
<td>propolis <a href="http://aims.fao.org/aos/agrovoc/c_15919">1</a></td>
</tr>
<tr>
<td>Narrower:</td>
<td>royal jelly <a href="http://aims.fao.org/aos/agrovoc/c_26817">1</a></td>
</tr>
<tr>
<td>Narrower:</td>
<td>honey <a href="http://aims.fao.org/aos/agrovoc/c_3652">1</a></td>
</tr>
<tr>
<td>Narrower:</td>
<td>beeswax <a href="http://aims.fao.org/aos/agrovoc/c_866">1</a></td>
</tr>
<tr>
<td>Narrower:</td>
<td>honeycomb extracts <a href="http://aims.fao.org/aos/agrovoc/c_29026">1</a></td>
</tr>
<tr>
<td>Broader:</td>
<td>animal products <a href="http://aims.fao.org/aos/agrovoc/c_438">1</a></td>
</tr>
<tr>
<td>SameAs:</td>
<td><a href="http://d-nb.info/gnd/4006529-7">2</a></td>
</tr>
<tr>
<td>SameAs:</td>
<td><a href="http://cat.aii.caas.cn/concept/c_12939">2</a></td>
</tr>
</tbody>
</table>
Getting more from other authorities?

<table>
<thead>
<tr>
<th>Oclc person</th>
<th>Cornell, Ezra, 1807-1874</th>
</tr>
</thead>
<tbody>
<tr>
<td>(source: <a href="http://dbpedia.org/resource/Ezra_Cornell">http://dbpedia.org/resource/Ezra_Cornell</a>)</td>
<td></td>
</tr>
<tr>
<td>Birth: 1807-01-11</td>
<td></td>
</tr>
<tr>
<td>Death: 1874-12-09</td>
<td></td>
</tr>
<tr>
<td>Ezra Cornell (January 11, 1807 – December 9, 1874) was an American businessman, politician, philanthropist and educational administrator. He was the founder of Western Union and a co-founder of Cornell University. He also served as President of the New York Agriculture Society and as a New York state Senator.</td>
<td></td>
</tr>
</tbody>
</table>

| Oclc person | [http://id.worldcat.org/fast/409667](http://id.worldcat.org/fast/409667) |
Links to Code & More

• **QA Server** - Code for a small app that provides the Questioning Authority normalization layer (https://github.com/ld4l-labs/qa_server)

• **Linked Data Authorities** - Configurations that can be used with QA Server (https://github.com/ld4l-labs/linked_data_authorities)

• **LD4L Services** - UI access to Cache Server (http://services.ld4l.org/ld4l_services/)

• **VitroLib** - Code for the VitroLib cataloging tool (https://github.com/ld4l-labs/vitrolib)
LD4P

- LD4P = Linked Data for (Metadata) Production
- Question: How do we move from converting description to linked data to **producing** linked data?
  - What descriptive standards are needed?
  - What tools are needed?
  - How must cataloging workflows change?
  - How does it all work together?
LD4P Objectives

• Enable libraries to work in an open, networked environment in the construction of their metadata
• Season & extend the BIBFRAME ontology
• Spur tool development
• Engage with other strategic linked-data projects
• Engender community engagement among libraries, standards groups, software devs, commercial players
LD4P Partners

- Stanford
- Cornell
- Harvard
- Princeton
- Library of Congress
- Columbia
Collections

- Stanford
- Cornell
- Columbia
- Princeton
- Harvard
- Library of Congress
Princeton: Jacques Derrida’s personal library
Models

LD4P

Stanford

Cornell

Columbia

Princeton

Library of Congress

Harvard

BIBFRAME 2
Models

- Stanford
- Cornell
- Harvard
- Library of Congress
- Princeton
- Columbia

- ArtFrame
- PMO: Performed Music Ontology
- BIBFRAME 2
- Moving Image
- Cartographic
- RareMats
- Bibliotek-o

Annotations
Tools

LD4P

Stanford
Cornell
Columbia
Princeton
Harvard

CEDAR
VitroLib

Plus...
Aliada
Kafka-Spark
Karma
Fedora 4
RML Editor
SHARE-VDE
Triple stores
(various)

Library of Congress

BIBFRAME 2 Editor and Converter
## Tool Registry

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>This is a shared, open sheet of tools for working with Linked Open Data in GLAM - Galleries, Libraries, Archives, Museums, and Other Articulate Entities.</td>
<td>Put whatever tools you find helpful for the above. Link to this open spreadsheet (feel free to share out wherever): <a href="http://bit.ly/GLAMLODToolsRegistry">http://bit.ly/GLAMLODToolsRegistry</a></td>
<td>These will be collated/tidied up/moved to [<a href="https://wiki.duraspace.org/display/LD4P/Registry+of+Tools">https://wiki.duraspace.org/display/LD4P/Registry+of+Tools</a> - Open to anyone to add (feel free to share out wherever)](<a href="https://wiki.duraspace.org/display/LD4P/Registry+of+Tools">https://wiki.duraspace.org/display/LD4P/Registry+of+Tools</a> - Open to anyone to add (feel free to share out wherever))</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td><strong>Tool</strong></td>
<td><strong>Type (Whatever makes sense to you as a tool type)</strong></td>
<td><strong>Function</strong></td>
<td><strong>Language</strong></td>
</tr>
<tr>
<td>3</td>
<td>ALIADA</td>
<td>Converter, publisher, linker</td>
<td>Convert MARC to customizable RDF, save to store and link with other datasets</td>
<td>Java</td>
</tr>
<tr>
<td>4</td>
<td>Annif</td>
<td></td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>5</td>
<td>Arc2 PHP Sparql and Triplestore</td>
<td></td>
<td>SPARQL endpoint and triplestore</td>
<td>PHP</td>
</tr>
<tr>
<td>6</td>
<td>bib-rdf-pipeline</td>
<td>Conversion</td>
<td>Framework for converting MARC via BIBFRAME to Schema.org, with reconciliation, work clustering etc.</td>
<td>Mixed (Makefile, marc2bibframe2, Python, shell scripts, Unix tools, Jena, SPARQL...)</td>
</tr>
<tr>
<td>7</td>
<td>Blazegraph</td>
<td>Triplestore</td>
<td>Storage/query</td>
<td>Java</td>
</tr>
<tr>
<td>8</td>
<td>CEDAR</td>
<td>Editor</td>
<td>Produce/edit RDF based on ontology-driven forms</td>
<td>Java, JS</td>
</tr>
<tr>
<td>9</td>
<td>Controlled Vocabulary Manager</td>
<td>Vocabulary Manager</td>
<td></td>
<td>Ruby/Rails</td>
</tr>
<tr>
<td>10</td>
<td>CTSASearch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>data.world</td>
<td>Publishing</td>
<td>Collaborative platform for finding and sharing data that uses the Semantic Web as its framework</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Fuseki</td>
<td>Triplestore</td>
<td>Storage/query</td>
<td>Java</td>
</tr>
<tr>
<td>13</td>
<td>KARMA</td>
<td>Multi-format Converter</td>
<td>Enables users to quickly and easily integrate data from a variety of data sources including databases, spreadsheets, delimited text files, XML, JSON, KML and Web APIs.</td>
<td>Java</td>
</tr>
</tbody>
</table>

4 “Tracer Bullets” for descriptive workflows

1. Acquired (MARC) data
2. Original (MARC) cataloging
3. Singleton items in digital repository
4. Bulk digital collections
LD4 Community Meeting
2nd international meeting, 24-25 Apr 2017

• Ontologies: We live in a multi-ontology world; give up on building the perfect or universal ontology.

• Workflows: 1.) MARC and RDF will co-exist for a loooong time, and 2.) It is not yet clear how we will use each other’s data.

• Tools: We need more tools, smaller tools, and more dev.

• Community: We have critical interest (and mass?) in LOD, but not yet the organizing structures, interoperability or opportunities for concrete contributions.

http://meeting.ld4p.org
Biblioporal

For ontology...

- Discovery
- Visualization
- Maintenance
- Mappings
- Assessment
- Re-use

http://biblio.ontoportal.org/
What Have We Learned?

• Ontology work is time consuming
  – The process as important as the product
• More work is needed on tools
• Creating URIs is easy; linking data is harder
• Growing activity in this space
  – European adoption
  – Local authority stores
Looking Ahead

- More automation & integration
- Broad training in a cloud-based sandbox
- Focus on discovery
- Community development
More Info:

http://ld4l.org
http://ld4p.org
http://meeting.ld4p.org