Linked Data initiatives at OCLC
Status of Linked Data initiatives within OCLC and where we hope to be in the near future ...
OCLC Linked Data Research

There are quite many original OCLC research papers.

“We believe that linked data will become the de-facto standard for describing things on the internet, including bibliographic objects.”
Wait, but why?
Why Linked Data?

Better outcomes

New functionality

Cleaner data

- A better user experience
- Greater web visibility
- Connect library resources with other domains
- More ways for discovery of library resources
- Replicate existing library functions more efficiently
- Improve data integration across domains and regions
- Improve internal data management & quality
Clarify context vs. inventory control

https://upload.wikimedia.org/wikipedia/commons/8/8e/Documents_on_repository_shelving_at_The_National_Archives.jpg
Problem statement
The library community’s foundational bibliographic standard is no longer sufficient to take advantage of the tremendous opportunities offered by the web.
Areas of inquiry

• Searching across a wide pool of described ‘things’ (entities)
• Improving display of connections and context
• Improving connectivity of inbound data

Building a ”context layer”

https://commons.wikimedia.org/wiki/File:Big_Trinity_Lake.jpg
Aspirations: IFLA - LRM
What have we done?
Linked Data of OCLC

- **ISNI**: 10-50 million triples
- **VIAF**: 2 billion triples
- **Persons**: 500 million triples
- **Manifestations**: 15 billion triples
- **FAST**: 23 million triples
- **Works**: 5 billion triples

#OCLCLibraryFutures
Metadata refinery prototype
Transforming records to entities

- **ANALYZE**
  - View Fields & Values
  - Define Field Profiles

- **CLEANUP**
  - Batch updates for metadata strings

- **RECONCILE**
  - Match against controlled vocabbs
  - Get persistent identifiers
  - Add identifiers to Metadata

- **TRANSFORM**
  - Produce RDF Triples
  - Search a Triple Store using SPARQL

#OCLCLibraryFutures
IIIF prototype / separation of related concerns

Wikipedia

Wikidata

Wikimedia Commons

**COMMENTARY**

Narrative commentary

**CONTEXT**

Context through verifiable statements, entity properties and relationships

**CONTENT**

Digital content, rights, and technical metadata
WikiData Pilot Project “Passage”

Phase I Partners (Dec ’17 - Apr ‘18)
- Cornell University
- University of California, Davis

Phase II Partners (May ‘18 – Sep ‘18)
- American University
- Brigham Young University
- Cleveland Public Library
- Harvard University
- Michigan State University
- National Library of Medicine
- North Carolina State University
- Northwestern University
- Princeton University
- Smithsonian Library
- Temple University
- University of Minnesota
- University of New Hampshire
- Yale University

#OCLCLibraryFutures
What was “Passage” about

• Develop an **Entity Ecosystem** that facilitates:
  o Creation and editing of new entities
  o Connecting entities to the Web
• Build a **community of users** who can:
  o Create/Curate data in the ecosystem
  o Imagine/propose workflow uses
  o Communicate easily with each other and with OCLC to iteratively improve the prototype
• Provide services to:
  o **Reconcile data**
  o **Explore the data**

It was being built using open source technologies such as MediaWiki, WikiBase, and OpenRefine.

See [here](#) for more details
Results of “Passage”

- **Final Report** Aug 2019
- The simple prototype described at the beginning matured over time to a robust set of third-party tools based on WikiBase to manage over a million entities.
- Goals achieved:
  - Collaboration
  - Reconciliation
  - Editing
Create/Curate data

http://18.218.102.193/entity/Q664501

Jane Austen

English novelist
Austen, Jane

In more languages

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<tr>
<th>Language</th>
<th>Label</th>
<th>Description</th>
<th>Also known as</th>
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<td>Jane Austen</td>
<td>English novelist</td>
<td>Austen, Jane</td>
</tr>
<tr>
<td>German</td>
<td>Jane Austen</td>
<td>britische Schriftstellerin</td>
<td>Austen, Jane</td>
</tr>
<tr>
<td>French</td>
<td>Jane Austen</td>
<td>romancière anglaise</td>
<td>Austen, Jane</td>
</tr>
<tr>
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<td>Austen, Jane</td>
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</table>

All entered languages

Statements

place of death

Winchester

0 references

Instance of

person

0 references
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<tr>
<td>sourcing circumstances</td>
<td></td>
<td>misprint</td>
</tr>
</tbody>
</table>
Reconcile data

- Searching for vocabulary and entities as you type
## Explore the data

**Sein und Zeit (German)**

**Being and Time**

*About*

Being and Time (German: Sein und Zeit) is a 1927 book by the German philosopher Martin Heidegger, in which Heidegger seeks to analyse the concept of Being. This has fundamental importance for philosophy, he thought, because since the time of the Ancient Greeks, philosophy has avoided this question, turning instead to the analysis of particular beings. Heidegger seeks a more fundamental ontology through understanding being itself. He approached this through seeking understanding of beings to whom the question of being is important, i.e. 'Dasein', or the human being in the abstract. Although written quickly, and though Heidegger did not complete the project outlined in the introduction, Being and Time remains his most important work. Being and Time has profoundly influenced 20th-century philosophy, particularly existentialism, hermeneutics, deconstruction, and the existential approach to cognition. The book is dedicated to Edmund Husserl 'in friendship and admiration'.

**Publisher**

*Max Niemeyer Verlag*

**Language**

*German*

**Author**

*Martin Heidegger*

### Statements

- **Genre**
  - *philosophy*
- **Earliest known publication date**
  - 1927
- **Publisher**
  - *Max Niemeyer Verlag*
- **Title**
  - *Sein und Zeit*
- **Language**
  - *German*
- **Instance of**
  - *book*
Explore the data

Sein und Zeit (German)
Being and Time

About

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Translated

- Korean translation of Heidegger's Sein und Zeit (trans: Myǒng-o Chǒng: Sun-chǒl Chǒng)
- English translation of Heidegger's Sein und Zeit (translators: Macquarrie and Robinson)
- Italian translation of Heidegger's Sein und Zeit (translator: translators: Marini & Chioidi)
- Modern Greek translation of Heidegger's Sein und Zeit (translator: Tzavaras)
- Persian translation of Heidegger's Sein und Zeit (translator: Šamādī)
- Danish translation of Heidegger's Sein und Zeit (translator: Skovgaard)
- Spanish translation of Heidegger's Sein und Zeit (translator: Jose Gaos)
- Greek translation of Heidegger's Sein und Zeit (translated by Vegenas)
- Japanese translation of Heidegger's Sein und Zeit (translator: Tasuku Hara)
- Hungarian translation of Heidegger's Sein und Zeit (translator: Vajda)

#OCLCLibraryFutures
Explore the data

Sein und Zeit (German)

Being and Time

- Canonical URL: http://18.218.102.193/entity/Q1024094
- Wikidata item ID: http://www.wikidata.org/entity/Q404567
- Representative OCN: http://www.worldcat.org/oclc/180629775
- http://www.worldcat.org/oclc/4962810
- Worldcat work ID (may be unstable): http://worldcat.org/entity/work/id/3698820883
- http://worldcat.org/entity/work/id/2909502532
- http://worldcat.org/entity/work/id/2908578643

#OCLCLibraryFutures
WorldCat with Entity Backbone

Thank you

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