Interoperability Approaches in KOS Vocabulary Development

Observable Changes In the LOD-enabled mashup culture

Zeng, Marcia Lei, and Philipp Mayr. 2018. Knowledge Organization Systems (KOS) in the Semantic Web. *International Journal on Digital Libraries*. Online version 2018.05
https://rdcu.be/PgZW ||
https://doi.org/10.1007/s00799-018-0241-2

NKOS 2018, DCMI Conference, Porto, Portugal, 2018-09-13

Interoperability Approaches in KOS Vocabulary Development

Are the newly generated vocabularies **took similar ways** used prior to the 21st century?

Zeng, Marcia Lei. 2018. Interoperability *ISKO Encyclopedia of Knowledge Organization (IEKO)* 2018-08-08. http://www.isko.org/cyclo/interoperability

Zeng, Marcia Lei, and Philipp Mayr. 2018. Knowledge Organization Systems (KOS) in the Semantic Web. *International Journal on Digital Libraries*. Online version 2018.05 https://rdcu.be/PgZW || https://doi.org/10.1007/s00799-018-0241-2

1 Derivation:
- Derived vocabularies
- Microthesaurus

2 Expansion:
- Leaf nodes
- Satellite vocabularies
- Open umbrella structure

3 Integration/Combination:
- Metathesaurus
- Heterogeneous meta-vocabulary

4 Interoperation/Shared/Harmonization:
- Shared/bridge scheme
- Reference ontologies
- Virtual harmonization through linking

Interoperability Approaches in KOS Vocabulary Development

Observable Changes

In the LOD-enabled mashup culture

- The new functions and differences observed in current approaches are the results of applying semantic technologies.
  - Each *thing* is named with an URI + a domain name prefix (maintaining the original semantics and linguistic decisions while being reusable).
  - Machine-understandable, machine-processable data.
  - Benefit from semantic technologies and the available open tools.
- Communities grow quickly, spread widely, involving many contributors;
- The number of projects and vocabs increased dramatically;
- Reuse and connect, not in silos;
- No hero ‘master’;
- Vocabularies and Vocabulary Services are together.

Are they challenge us to think further regarding the KOS development?

Observable Changes

In the LOD-enabled mashup culture

Let's observe some real KOS products

1. A unified vocab for a domain
2. A shared concept scheme from only the most used entries of multiple vocabs
3. A heterogeneous meta-vocabulary
4. Connecting KOS concepts to real things
5. Shared, unconventional mashups

1. A unified scheme for a domain

TOP

TOP. 700+ plant characteristics: plant traits and environmental associations.

www.top-thesaurus.org/annotationInfo?viz=1&trait=Frost%20tolerance

Top — A Terminological Resource for Plant Functional Diversi

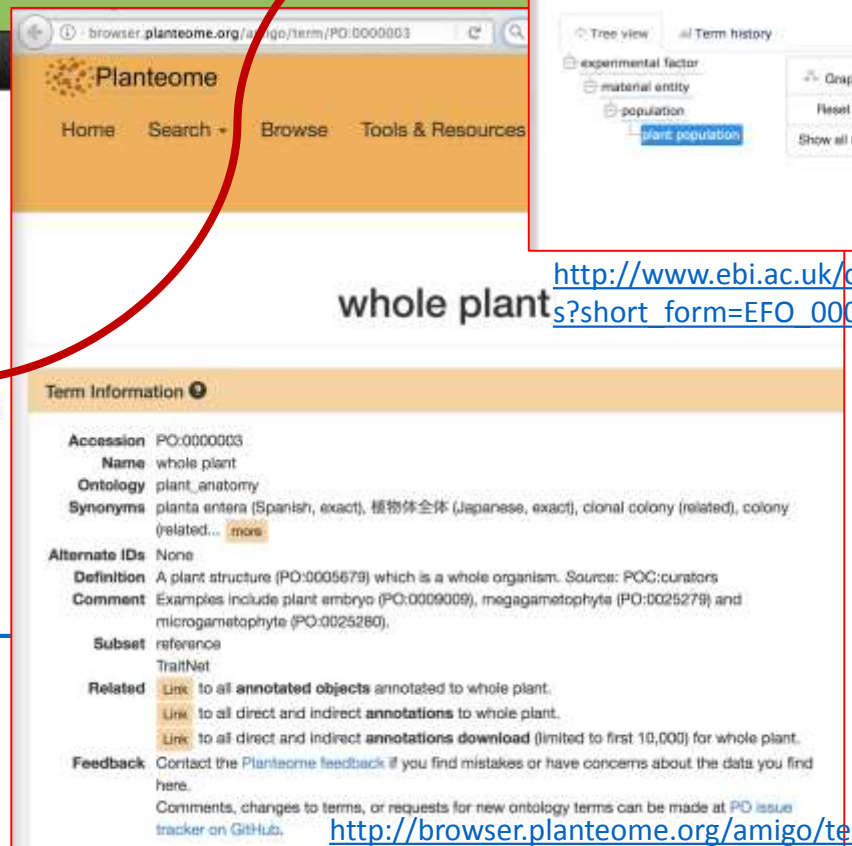
HOME | FACETED SEARCH | HIERARCHY SEARCH | INDEX SEARCH | REFERENCES

Frost tolerance

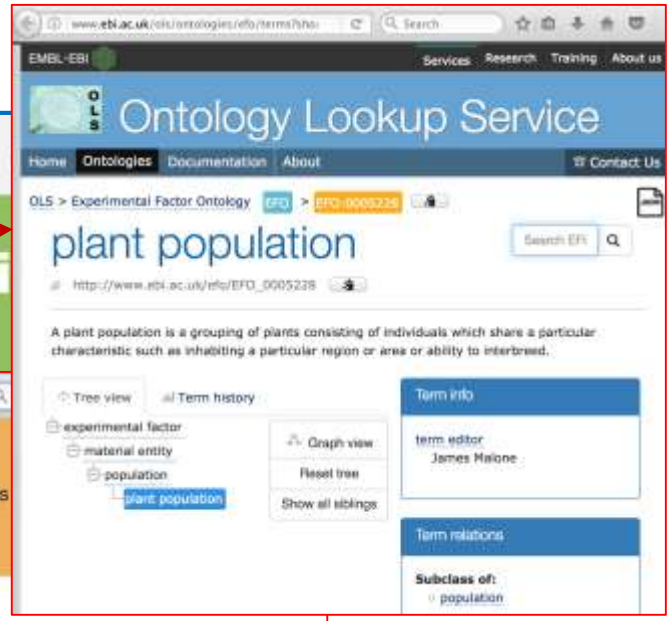
Formal name: plant frost tolerance
Local identifier: TOP768
Related Term: plant frost sensitivity
Related Term: plant frost hardiness
Definition: a feature of plant organs, whole plant (PO:whole plant), plant population (EFO:plant population) or plant species (Mayr:species) describing the ability to withstand frost
Formal Unit: unitless (ordinal)

Comment: tolerances can be derived fom species or population distribution ranges or by physiological experiments, agreed categories do not exist
Reference: Eric Garnier, Jens Kattge, Stefan Klotz, Ingolf Kühn, Ulrike Stahl

- Source: http://www.top-thesaurus.org/annotationInfo?viz=1&trait=Frost%20tolerance



http://browser.planteome.org/amigo/term/PO:0000003



http://www.ebi.ac.uk/ols/ontologies/efo/terms?short_form=EFO_0005228

2. A shared concept scheme

Global Agricultural Concept Scheme (GACS)

AGROVOC
32,000 concepts,
1.2M labels

CAB Thesaurus
140,000 concepts,
1.4M labels

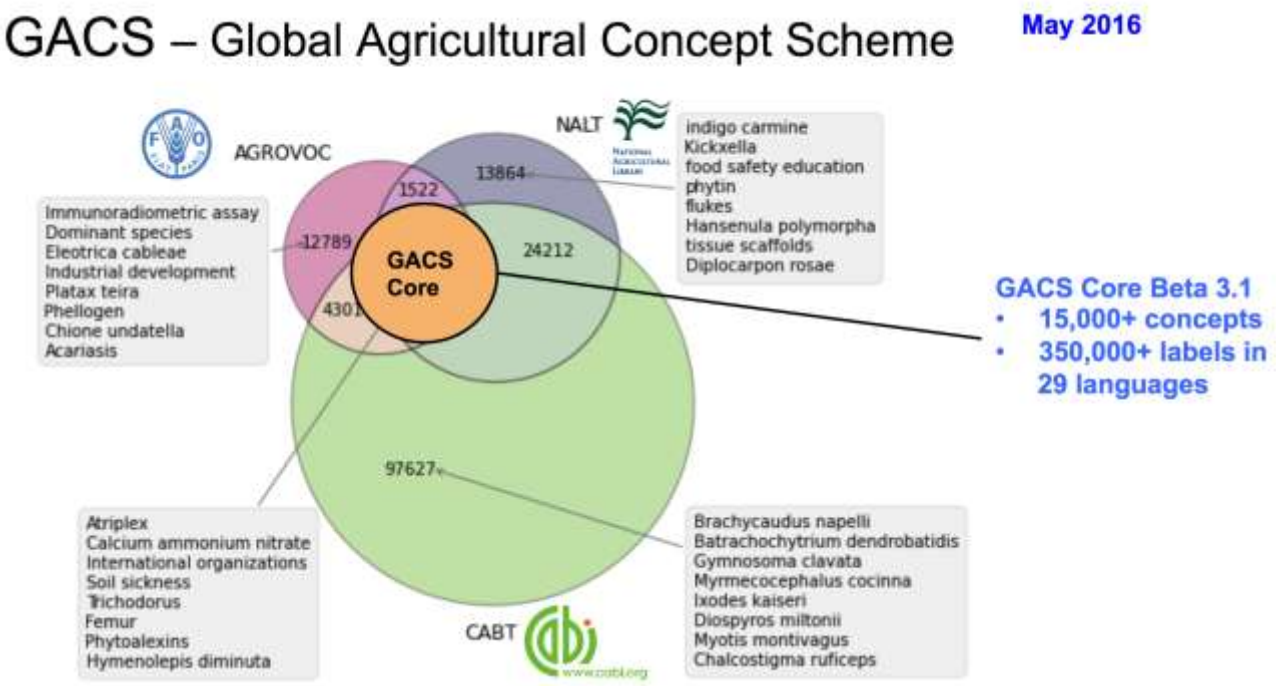
NAL Thesaurus
53,000 concepts,
200k labels

1. Take [only] the 10,000 most-used concepts from each, by 2014/10.

2. Automatically map them to each other, by 2015/03.

3. Verify mappings one by one, by 2015/10.

4. GACS Beta. 2016/05.

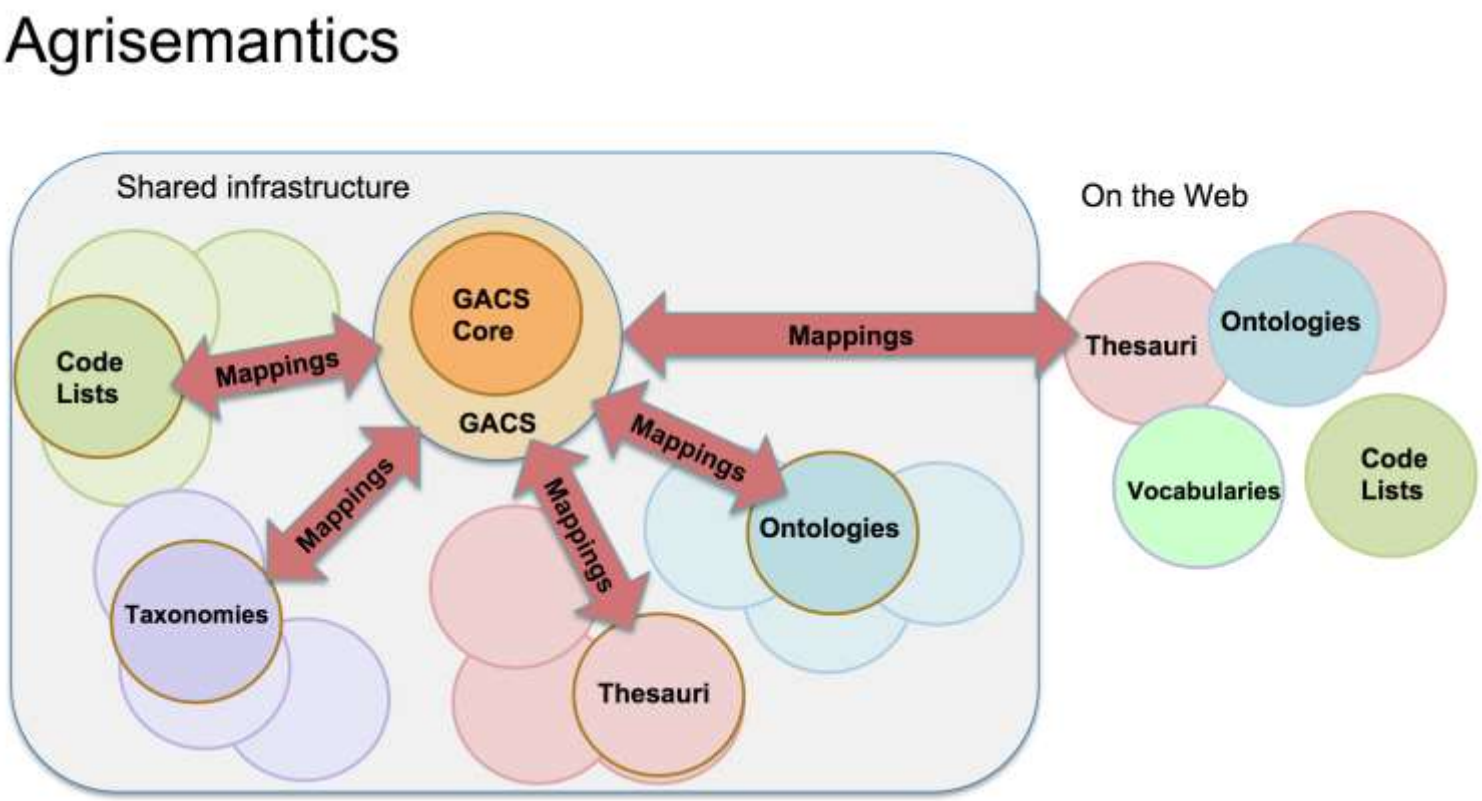


Source: Compiled based on Baker, Thomas et al. 2016.

GACS (Global Agricultural Concept Scheme) for Agrisemantics*

*Agrisemantics is an emerging community network of semantic assets relevant to agriculture and food security.

- GACS is seen as the first step towards improving the coherence and interoperability of agricultural data.
- GACS as a **hub** linking user-oriented thesauri with semantically more precise domain ontologies.
- Domain ontologies link to datasets about food and agriculture, in order to make that data more interoperable and reusable.



Source: Baker, Thomas et al. 2016.

GACS (Global Agricultural Concept Scheme)

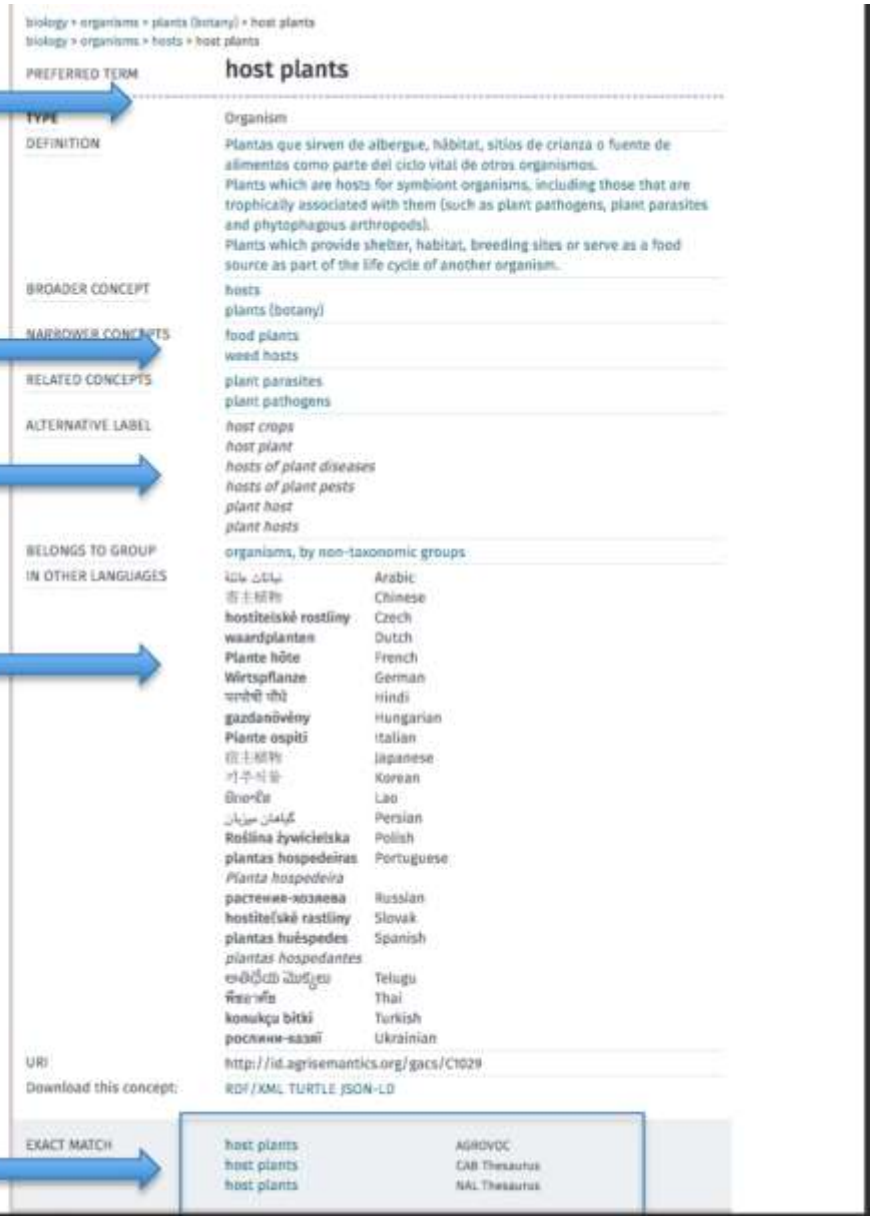
GACS concept

Broader, narrower, and related concepts

Alternative labels

Translated in up to 25 languages

Mapped to source thesauri



biology > organisms > plants (botany) > host plants
biology > organisms > hosts > host plants

PREFERRED TERM	host plants
TYPE	Organism
DEFINITION	Plantas que sirven de albergue, hábitat, sitios de crianza o fuente de alimentos como parte del ciclo vital de otros organismos. Plants which are hosts for symbiont organisms, including those that are trophically associated with them (such as plant pathogens, plant parasites and phytophagous arthropods). Plants which provide shelter, habitat, breeding sites or serve as a food source as part of the life cycle of another organism.
BROADER CONCEPT	hosts plants (botany)
NARROWER CONCEPTS	food plants weed hosts
RELATED CONCEPTS	plant parasites plant pathogens
ALTERNATIVE LABEL	*host crops* *host plant* *hosts of plant diseases* *hosts of plant pests* *plant host* *plant hosts*
BELONGS TO GROUP	organisms, by non-taxonomic groups
IN OTHER LANGUAGES	نباتات عائلة — Arabic 寄主植物 — Chinese **hostitelské rostliny** — Czech **waardplanten** — Dutch **Plante hôte** — French **Wirtspflanze** — German मनोनी पौधे — Hindi **gazdanövény** — Hungarian **Piante ospiti** — Italian 宿主植物 — Japanese 기주식물 — Korean ພືດເຈົ້າພາບ — Lao گیاهان میزبان — Persian **Roślina żywicielska** — Polish **plantas hospedeiras** *Planta hospedeira* — Portuguese **растения-хозяева** — Russian **hostiteľské rastliny** — Slovak **plantas huéspedes** *plantas hospedantes* — Spanish అతిథేయి మొక్కలు — Telugu พืชอาศัย — Thai **konukçu bitki** — Turkish **рослини-хазяї** — Ukrainian
URI	http://id.agrisemantics.org/gacs/C1029
Download this concept:	RDF/XML TURTLE JSON-LD
EXACT MATCH	host plants — AGROVOC host plants — CAB Thesaurus host plants — NAL Thesaurus

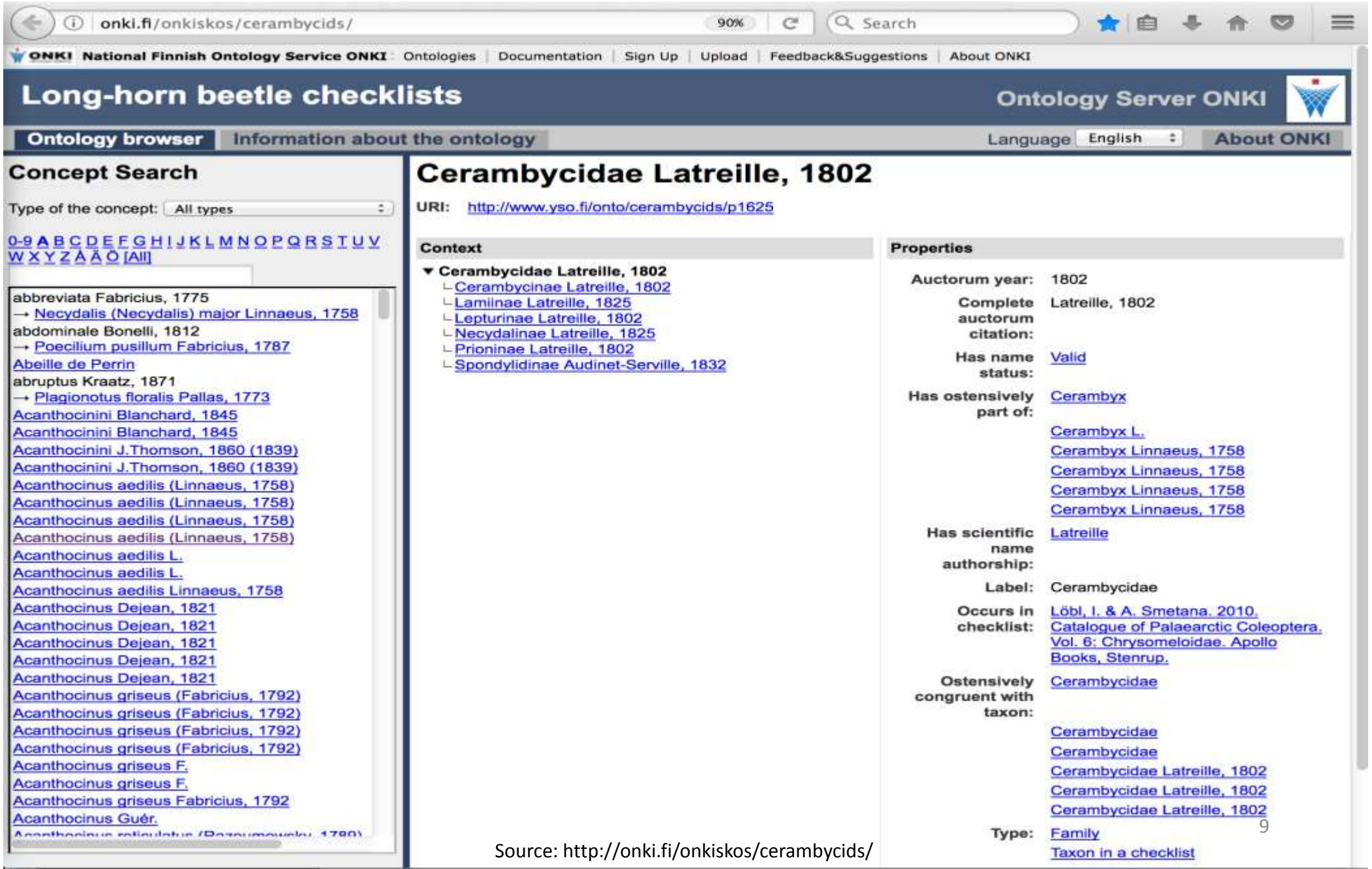
Source: Baker, Thomas et al. 2016.

3. A *heterogeneous* meta-vocabulary

TaxMeOn

Encompasses:
(1) the different conceptions of a taxon,
(2) the temporal order of the changes, and
(3) the references to scientific publications whose results justify these changes.

Allows multilingual, multi-opinions … in a unified view.



Source: http://onki.fi/onkiskos/cerambycids/

4. Enriching the KOS-at-hand and connecting to real things

<u>skos:Concept ←→ Real-World Things</u>

- **People are People and Places are Places**
  - in order to describe something accurately they need to be labeled as those specific types of Things
- *foaf:focus* allows FAST Controlled Vocabulary terms (skos:Concept) to be connected to URIs that identify real-world entities

O'Neill, Ed & Jeff Mixter. 2013.

FAST

SEARCH FAST

Keywords | Kennedy, John F. (John Fitzgerald), 1917-1963 | Search

FAST TERMS

Search results for: **"Kennedy, John F. (John Fitzgerald), 1917-1963"**

Limit Results by: All

Displaying **1 to 2 of 2** << Previous Next >>

1 Jump

Heading	Facet	Uses
Kennedy, John F. (John Fitzgerald), 1917-1963	person	13191
Kennedy, John F. (John Fitzgerald), 1917-1963 (Spirit)	person	1

TERM DETAILS

Kennedy, John F. (John Fitzgerald), 1917-1963 Find in WorldCat

USED FOR:

Gannaidi, 1917-1963
JFK (John Fitzgerald Kennedy), 1917-1963
Kan-nai-ti, 1917-1963
Kanadī, Jūn Fītz Jīrāld, 1917-1963
Kanīdī, Jūn F., 1917-1963
K'enedi, 1917-1963
Kenedi, Dzhon F., 1917-1963
Kenedi, Džon Fricdžerald, 1917-1963
Kenedi, G'on F., 1917-1963
Kenedijs, Džons F., 1917-1963
Kennedi, Dzhon Fitsdzherald, 1917-1963
Kennedy, Jack, 1917-1963
Kennedy, John Fitzgerald, 1917-1963
Kennedy, Ken, 1917-1963

USAGE:

LC (2017) Subject Usage: 1,530
WC (2017) Subject Usage: 13,191

RECORD ID:

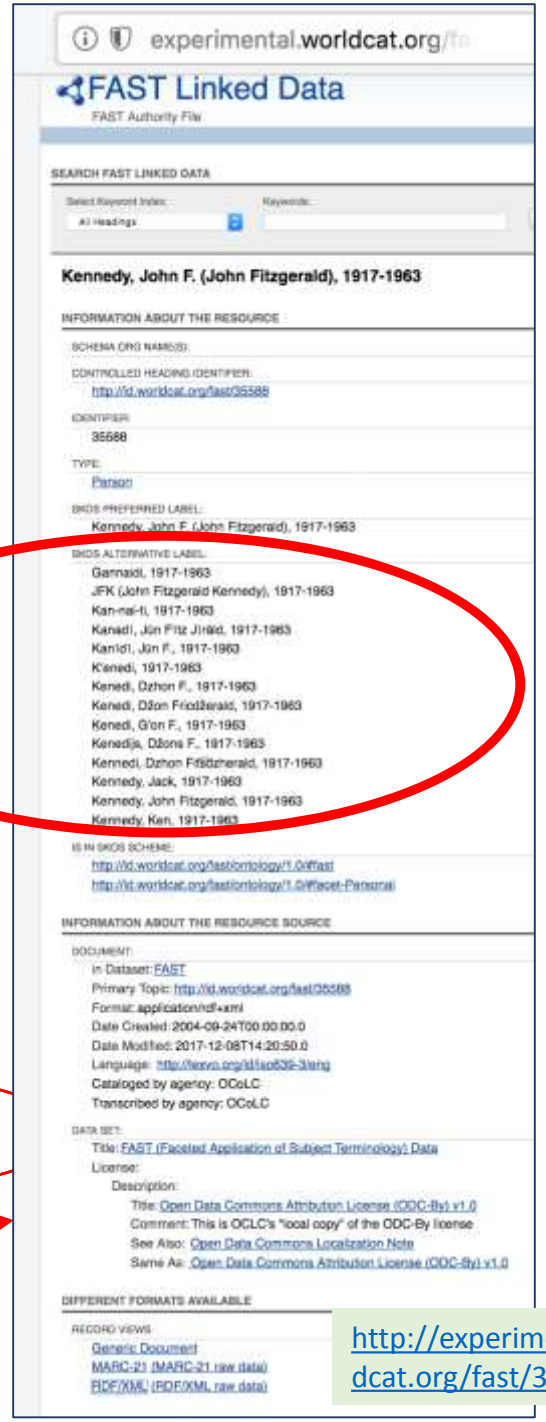
fst00035588

SOURCES AND OTHER LINKS:

Kennedy, John F. (John Fitzgerald), 1917-1963--(DLC)n 79055297
John F. Kennedy--(uri)http://en.wikipedia.org/wiki/John_F._Kennedy
Kennedy, John F. (John Fitzgerald), 1917-1963--(uri)https://viaf.org/viaf/68910251

LINKS TO FULL RECORD:

Permanent Link http://id.worldcat.org/fast/35588
MARC-21 record http://id.worldcat.org/fast/35588/marc21.xml
RDF record http://id.worldcat.org/fast/35588/rdf.xml



http://experimental.worldcat.org/fast/35588/

Source: extracted screenshots (2018-08-21)
From http://fast.oclc.org/searchfast/

FAST

John F. Kennedy's entry in FAST is enriched with other sources.

- The **DBpedia** identifiers allow FAST terms to include detailed information that is usually excluded in authority records.

- The enrichment allows FAST terms to take advantage of all of the various string values included in **VIAF** without having to manually include the values in the RDF triples for the specific term.


```
- <rdf:RDF xml:base="http://id.worldcat.org/fast/">
  - <rdf:Description rdf:about="35588">
      <dct:identifier>35588</dct:identifier>
      <skos:inScheme rdf:resource="ontology/1.0/#fast"/>
      <rdf:type rdf:resource="http://schema.org/Person"/>
      <skos:inScheme rdf:resource="ontology/1.0/#facet-Personal"/>
      <skos:prefLabel>Kennedy, John F. (John Fitzgerald), 1917-1963</skos:prefLabel>
      <schema:name>Kennedy, John F. (John Fitzgerald), 1917-1963</schema:name>
    - <schema:sameAs>
      - <rdf:Description rdf:about="http://id.loc.gov/authorities/names/n79055297">
          <rdfs:label>Kennedy, John F. (John Fitzgerald), 1917-1963</rdfs:label>
        </rdf:Description>
      </schema:sameAs>
    - <foaf:focus>
      - <rdf:Description rdf:about="http://en.wikipedia.org/wiki/John_F._Kennedy">
          <rdfs:label>John F. Kennedy</rdfs:label>
        </rdf:Description>
      </foaf:focus>
    - <schema:sameAs>
      - <rdf:Description rdf:about="https://viaf.org/viaf/68910251">
          <rdfs:label>Kennedy, John F. (John Fitzgerald), 1917-1963</rdfs:label>
        </rdf:Description>
      </schema:sameAs>
    </rdf:Description>
```


Source: Accessed 2018-08-21 at http://experimental.worldcat.org/fast/35588/rdf.ml → View Page Source

FAST

- The GeoNames data is used to power MapFAST, which is a Google Maps mash-up.

experimental.worldcat.org/mapfast/

mapFAST

Find library materials about world wide locations

Find FAST Geographic Subject Headings Near:

Portugal -- Porto -- Foz do Douro | Search

Radius: 30 km

Display: All

- Portugal -- Paranhos (Porto)
- Portugal -- Vila Nova de Gaia
- Portugal -- Vila Nova de Gaia Region
- Portugal -- Senhora da Hora
- Portugal -- Porto -- Foz do Douro
- Portugal -- Oliveira do Douro (Porto)
- Portugal -- Matosinhos
- Portugal -- Leixoes Harbor
- Portugal -- Maia (Porto)
- Portugal -- Leca da Palmeira
- Portugal -- Sao Pedro da Cova
- Portugal -- Gulpilhares
- Portugal -- Valongo (Porto)

Map | Satellite

-- Porto -- Foz do Douro

Type

Other

Alternative Subject Headings

Portugal -- Sao Joao da Foz do Douro;Portugal -- Sao Joao da Foz

Links

- Find Books in WorldCat
- Find in Google Books
- Display Authority Record

Share this Location: http://experimental.worldcat.org/mapfast/?geo=41.158541,-8.616665;crs=wgs84&mq=&sortby=distance&max-results=20&box=41.028789,-8.815832,41

Image source: Captured 2018-08-21. http://experimental.worldcat.org/mapfast/

FAST Linked Data

FAST Authority File

SEARCH FAST LINKED DATA

Select Keyword Index: All Headings | Keywords: | Search

Portugal--Porto--Foz do Douro

INFORMATION ABOUT THE AUTHORITY

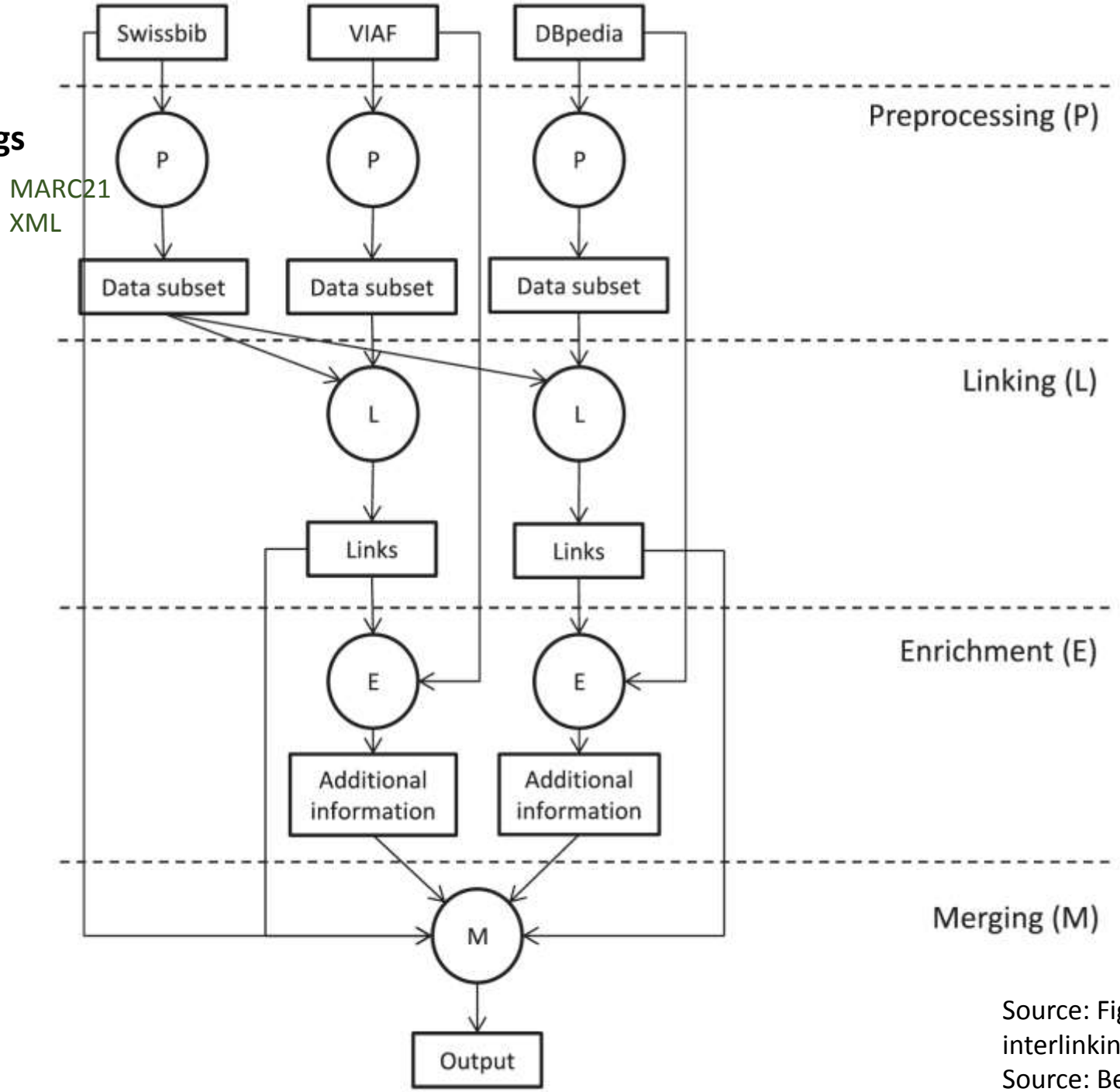
Leader		00000cz a2200037n 45 0
001		fst01320005
003		OCoLC
005		20180103163101.0
008		060620nn anznnbabn ll ana d
016	7	‡a fst01320005 ‡2 OCoLC
034		‡d W0084000 ‡e W0084000 ‡f N0410900 ‡g N0410900 ‡2 geonames
040		‡a OCoLC ‡b eng ‡c OCoLC ‡f fast
043		‡a e-po---
151		‡a Portugal ‡z Porto ‡z Foz do Douro
410	1	‡a Porto (Portugal). ‡b Foz do Douro
451		‡a Portugal ‡z São João da Foz
451		‡a Portugal ‡z São João da Foz do Douro
670		‡a GeoNames [algorithmically matched] ‡b unknown;41°09'00"N 008°40'00"W
688		‡a LC (2017) Subject Usage: 0
688		‡a WC (2017) Subject Usage: 1
751	0	‡a Foz do Douro (Porto, Portugal) ‡0 (DLC)n 92098926
751	7	‡a Foz do Douro ‡2 geonames ‡0 (GeoNames)2739336 ‡9 Jun2009
751	0	‡a Foz do Douro (Porto, Portugal) ‡0 (viaf)140865653 ‡0 (uri)https://viaf.org/vi

http://experimental.worldcat.org/fast/1320005/marc21.html

(cont.) 4. Enriching the KOS-at-hand and connecting to real things

Swissbib

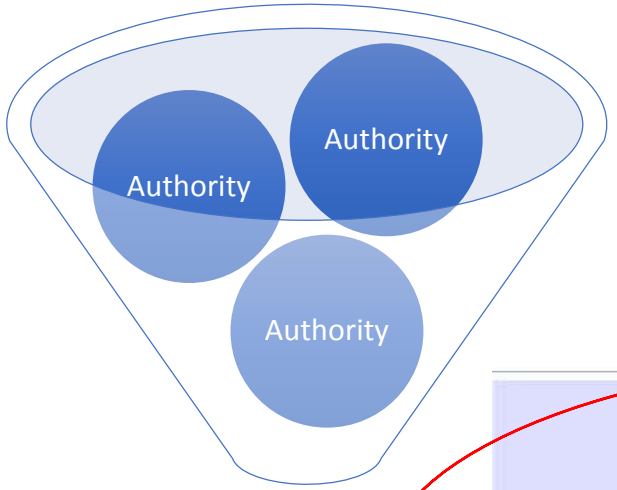
Swissbib, a provider for bibliographic data in Switzerland
http://linked.swissbib.ch



- 30,773 links to DBpedia
- 20,714 links to VIAF
- high precision values
- generated in reasonable expenditures of time

Source: Figure 8. Data flow diagram of the interlinking procedure in the Weissbib project
Source: Bensmann et al. (2017), p.8

5. Shared, unconventional mashups

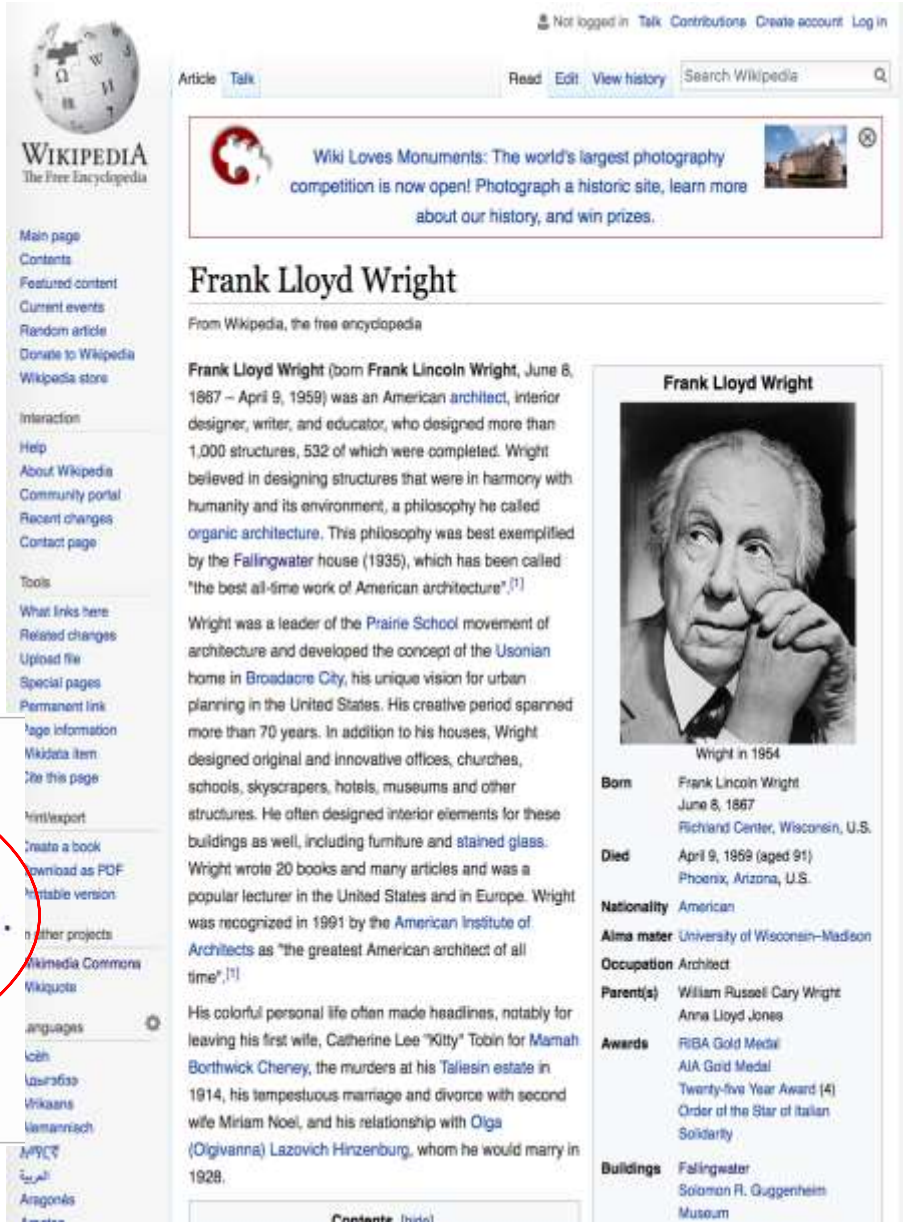


Wikipedia

Authority control

WorldCat Identities · BNE: XX1141709 ·
BNF: cb12388569w (data) · GND: 11863531X ·
ISNI: 0000 0001 2100 0710 ·
KulturNav: d84b36c1-fed3-49b3-89b4-4410972cd327 ·
LCCN: n79032932 · NARA: 10580379 · NDL: 00461480 ·
NKC: jn20000605667 · NLA: 36571140 · PIC: 15127 ·
RKD: 85705 · SELIBR: 222406 · SNAC: w6n87864 ·
SUDOC: 028638115 · ULAN: 500020307 ·
VIAF: 27148716

Image captured 2018-08-21, five more name authority than one year ago.



Wikipedia
The Free Encyclopedia

Article Talk Read Edit View history Search Wikipedia

Wiki Loves Monuments: The world's largest photography competition is now open! Photograph a historic site, learn more about our history, and win prizes.

Frank Lloyd Wright

From Wikipedia, the free encyclopedia

Frank Lloyd Wright (born **Frank Lincoln Wright**, June 8, 1867 – April 9, 1959) was an American architect, interior designer, writer, and educator, who designed more than 1,000 structures, 532 of which were completed. Wright believed in designing structures that were in harmony with humanity and its environment, a philosophy he called organic architecture. This philosophy was best exemplified by the Fallingwater house (1935), which has been called "the best all-time work of American architecture".[1]

Wright was a leader of the Prairie School movement of architecture and developed the concept of the Usonian home in Broadacre City, his unique vision for urban planning in the United States. His creative period spanned more than 70 years. In addition to his houses, Wright designed original and innovative offices, churches, schools, skyscrapers, hotels, museums and other structures. He often designed interior elements for these buildings as well, including furniture and stained glass. Wright wrote 20 books and many articles and was a popular lecturer in the United States and in Europe. Wright was recognized in 1991 by the American Institute of Architects as "the greatest American architect of all time".[1]

His colorful personal life often made headlines, notably for leaving his first wife, Catherine Lee "Kitty" Tobin for Mamah Borthwick Cheney, the murders at his Taliesin estate in 1914, his tempestuous marriage and divorce with second wife Miriam Noel, and his relationship with Olga (Olgivanna) Lazovich Hinzenburg, whom he would marry in 1928.

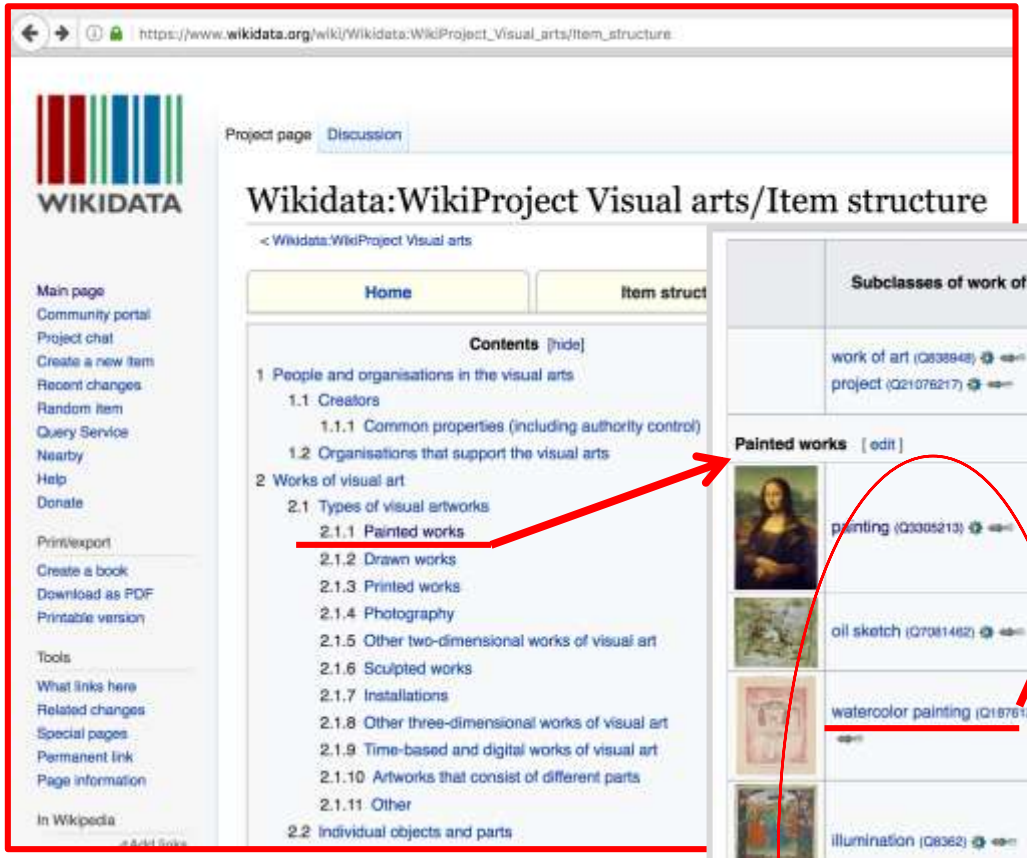
Frank Lloyd Wright

Wright in 1954

Born	Frank Lincoln Wright June 8, 1867 Richland Center, Wisconsin, U.S.
Died	April 9, 1959 (aged 91) Phoenix, Arizona, U.S.
Nationality	American
Alma mater	University of Wisconsin–Madison
Occupation	Architect
Parent(s)	William Russell Cary Wright Anna Lloyd Jones
Awards	RIBA Gold Medal AIA Gold Medal Twenty-five Year Award (4) Order of the Star of Italian Solidarity
Buildings	Fallingwater Solomon R. Guggenheim Museum

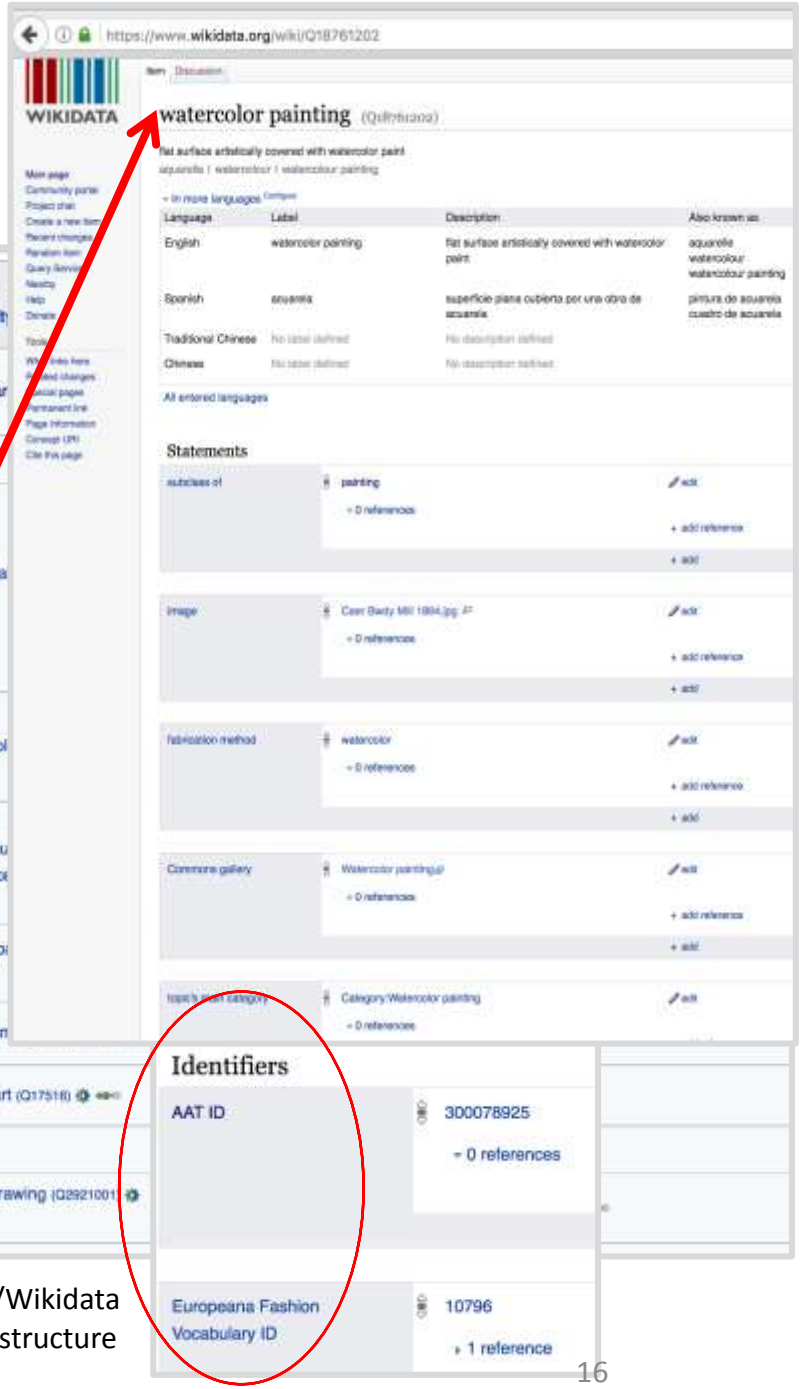
https://en.wikipedia.org/wiki/Frank_Lloyd_Wright

Wikidata – as an Authority base/ Knowledge Base



https://www.wikidata.org/wiki/Wikidata:WikiProject_Visual_arts/Item_structure

https://www.wikidata.org/wiki/Wikidata:WikiProject_Visual_arts/Item_structure#Painted_works



https://www.wikidata.org/wiki/Q18761202

- ✓ Defined and controlled
- ✓ Mapped to other Vocab IDs
- ✓ Linked to examples

b. (cont.) Wikidata – as an Authority base/ Knowledge Base

"cotton"

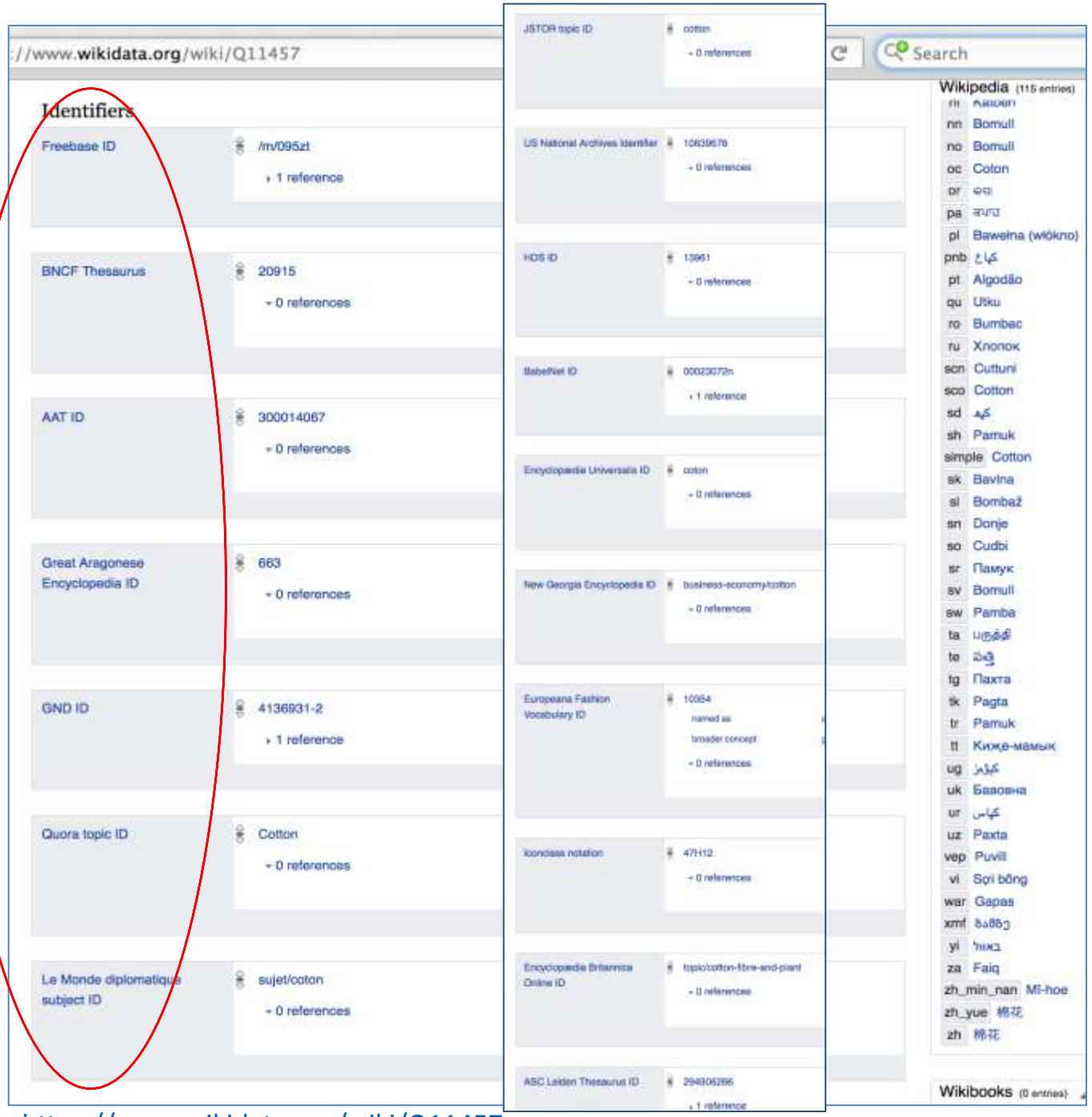
WIKIDATA

Defined and controlled

Wikidata entries

Mapped to other Vocab IDs

Linked to examples



https://www.wikidata.org/wiki/Q11457

(cont.) 5. Shared, unconventional mashups

c. Wikimedia --
Organizing using KOS

https://commons.wikimedia.org/wiki/Category:Dresses

WIKIMEDIA COMMONS

Main page
Welcome
Community portal
Village pump
Help center

Language select
English
Select

Participate
Upload file
Recent changes
Latest files
Random file
Contact us

Print/export
Create a book
Download as PDF
Printable version

In other projects
Wikimedia Commons
Wikipedia

Wikidata item

Category Discussion

Category:Dresses

From Wikimedia Commons, the free media repository

This is a **main category** requiring frequent **diffusion and maybe maintenance**. As many pictures and media files a

Subcategories

This category has the following 34 subcategories, out of 34 total.

- ▶ Dresses by century (6 C)
- ▶ Dresses by color (20 C)
- ▶ Dresses by decade (64 C)
- ▶ Dresses by detail (10 C)
- ▶ Dresses by function (26 C)
- ▶ Dresses by material (9 C)
- ▶ Collections of dresses by museum (4 C)
- ▼ Dresses by pattern (7 C)
  - ▶ Checkered dresses (12 F)
  - ▶ Dotted dresses (1 C, 37 F)
  - ▼ Flowered dresses (1 C, 163 F)
    - ▶ Females with flowered dresses in art (9 C, 79 F)
  - ▶ Leopard dresses (18 F)
  - ▶ Plaid dresses (7 F)
  - ▶ Print dresses (44 F)
  - ▼ Striped dresses (3 C, 78 F)
    - ▶ 1868-73 beach dress in black and white striped cotton, Metropolitan Museum of Art (10 F
    - ▶ Round gown of striped silk, Italian, 17
- ▼ Dresses by style (25 C)
  - ▼ Backless dresses (1 C, 9 F)
    - ▼ Choli (4 C, 114 F)
      - ▶ Anangsha Biswas in Kaalo premire (7 F)
      - ▶ Priyanka Chopra on Jhalak Dikhhla Jaa (11 F)
      - ▶ Esha Gupta at Jannat 2 audio release (8 F)
      - ▶ Sherlyn Chopra at Playboy press meet (8 F)
  - ▶ Ball gowns (17 F)
  - ▶ Bustle dresses (3 C, 1 P, 36 F)
  - ▶ Crinoline dresses (18 F)
  - ▼ Dance dresses (2 C, 4 F)
    - ▶ Ball dresses (86 F)
    - ▼ Ballet tutus (2 C, 73 F)
      - ▼ Ballet by Edgar Degas (1 C)
        - ▶ Ballet de l'Opéra de Paris by Edgar Degas (4 C)
      - ▶ Danseuse by Pierre-Auguste Renoir (4 F)
  - ▶ Female court dress of the United Kingdom (47 F)
  - ▶ Festive dresses (1 F)
  - ▶ Jumper dresses (10 F)
  - ▶ Mermaid dresses (1 C, 7 F)

The portion in the Wikimedia (linked with Wikidata) entry for category “Dresses” with subcategories organized by facets and hierarchies.

https://commons.wikimedia.org/wiki/Category:Dresses
2017-07-12

No hero ‘master’?

https://commons.wikimedia.org/wiki/Category:Dresses
2018-08-21 Note category notation changes

Category:Dresses

From Wikimedia Commons, the free media repository

This is a **main category** requiring frequent **diffus**
pictures and media files as possible should be mo

- ▶ Dresses by century (6 C)
- ▶ Dresses by color (22 C)
- ▶ Dresses by decade (64 C)
- ▶ Dresses by detail (13 C)
- ▶ Dresses by function (31 C)
- ▶ Dresses by material (10 C)
- ▶ Collections of dresses by museum (5 C)
- ▼ Dresses by pattern (7 C)
  - ▶ Checkered dresses (18 F)
  - ▶ Dotted dresses (1 C, 37 F)
  - ▶ Flowered dresses (1 C, 174 F)
  - ▶ Leopard dresses (19 F)
  - ▶ Plaid dresses (10 F)
  - ▶ Print dresses (47 F)
  - ▶ Striped dresses (3 C, 90 F)
- ▼ Dresses by style (30 C)
  - ▶ Robe à l'anglaise (4 C, 35 F)
  - ▼ Backless dresses (3 C, 38 F)
    - ▼ Choli (5 C, 181 F)
      - ▶ Anangsha Biswas in Kaalo premire (7 F)
      - ▶ Priyanka Chopra on Jhalak Dikhhla Jaa (12 F)
      - ▶ Gagra choli (1 C, 8 F)
      - ▶ Esha Gupta at Jannat 2 audio release (8 F)
      - ▶ Sherlyn Chopra at Playboy press meet (8 F)
  - ▶ Female human backs (4 C, 286 F)
  - ▶ Standing women seen from behind (3 C, 164 F)
  - ▶ Ball gowns (29 F)
  - ▶ Bustle dresses (3 C, 1 P, 43 F)

https://commons.wikimedia.org/wiki/Category:Dresses
2017-07-12

https://commons.wikimedia.org/wiki/Category:Dresses

WIKIMEDIA COMMONS

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Wikipedia

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What links here
Related changes
Special pages
Permanent link
Page information
Wikidata item

Category:Dresses

From Wikimedia Commons, the free media repository

This is a **main category** requiring frequent **diffusion and maybe maintenance**. As many pictures and media files a

Subcategories

This category has the following 34 subcategories, out of 34 total.

- ▶ Dresses by century (6 C)
- ▶ Dresses by color (20 C)
- ▶ Dresses by decade (64 C)
- ▶ Dresses by detail (10 C)
- ▶ Dresses by function (26 C)
- ▶ Dresses by material (9 C)
- ▶ Collections of dresses by museum (4 C)
- ▼ Dresses by pattern (7 C)
  - ▶ Checkered dresses (12 F)
  - ▶ Dotted dresses (1 C, 37 F)
  - ▼ Flowered dresses (1 C, 163 F)
    - ▶ Females with flowered dresses in art (9 C, 79 F)
  - ▶ Leopard dresses (18 F)
  - ▶ Plaid dresses (7 F)
  - ▶ Print dresses (44 F)
  - ▼ Striped dresses (3 C, 78 F)
    - ▶ 1868-73 beach dress in black and white striped cotton, Metropolitan Museum of Art (10 F)
    - ▶ Round gown of striped silk, Italian, 1795. (MET 1979.206b) (10 F)
- ▼ Dresses by style (25 C)
  - ▼ Backless dresses (1 C, 9 F)
    - ▼ Choli (4 C, 114 F)
      - ▶ Anangsha Biswas in Kaalo premire (7 F)
      - ▶ Priyanka Chopra on Jhalak Dikhhla Jaa (11 F)
      - ▶ Esha Gupta at Jannat 2 audio release (8 F)
      - ▶ Sherlyn Chopra at Playboy press meet (8 F)
  - ▶ Ball gowns (17 F)
  - ▶ Bustle dresses (3 C, 1 P, 36 F)
  - ▶ Crinoline dresses (18 F)
  - ▼ Dance dresses (2 C, 4 F)
    - ▶ Ball dresses (86 F)
    - ▼ Ballet tutus (2 C, 73 F)
      - ▼ Ballet by Edgar Degas (1 C)
        - ▶ Ballet de l'Opéra de Paris by Edgar Degas (4 C)
      - ▶ Danseuse by Pierre-Auguste Renoir (4 F)
  - ▶ Female court dress of the United Kingdom (47 F)
  - ▶ Festive dresses (1 F)
  - ▶ Jumper dresses (10 F)
  - ▶ Mermaid dresses (1 C, 7 F)
  - ▶ One-shoulder dresses (13 F)
  - ▶ One-piece dresses (2 C, 4 F)

(cont.) 5. Shared, unconventional mashups

https://tools.wmflabs.org/mix-n-match/#/

Tool: Mix'n'Match

This tool lists entries of some external databases (over 1000 catalogs), and allows users to match them against Wikidata items.

https://tools.wmflabs.org/mix-n-match/#/ Visited 2018-08-22

Mix'n'match | English | *log into WiDaR for actions* | Search

This tool can list entries of some external databases, and allows users to match them against Wikidata items. Think 'red link lists on steroids'. See the manual for a how-to. For an alternative, see OpenReconcile.

Catalog groups

Group	Catalogs
Wolfram Language entity	85
Archives	13
Art	67
Biography	536
Biology	31
Books	11
Encyclopedia	22
Entertainment	9
Food	9
General	43
Geography	62

Search catalogs

Start typing here

Latest catalogs

Württembergische Kirchengeschichte person identifier for a person in th Evangelic church in Württemberg

INE municipality code identifier for Spanish municipalities, by the Spanish S

BNP works Works at the BNP

BNP authors Authors at BNP

Library of Congress Genre/Form Terms ID i the Library of Congress cont genres and forms

PRELIB person identifier for a person on th Projet de recherche en littérature d website

Saskatchewan Sports Hall of Fame Sportspeople linked to Saskatchewan

Académie Technologies Membres d l'Académie des Technologies

VGMdb product product (game, fran hise, video) in the Video Game Music data

HAL CVs identifier of a researcher on AL, an open archive allowing to deposit s searchable

Catalogs by property class

Group	Catalogs

Catalogs by property class

Group	Catalogs
Authority control for people	426
Catalogs without Wikidata property	255
Identifier	153
Authority control	102
Software	93
Organisations	65
Films	54
Authority control for artists	53
Film industry	53
Authority control for works	49
Encyclopedias	48
Authority control for places	45
Sports hall of fame	44
Authority control for writers	42
Politics	35
Medicine	33
Video games	30
Taxa	29
Artworks	27
Music	25
Biology	24

Catalogs by property class

Group	Catalogs
Authority control for people	426
Catalogs without Wikidata property	255
Identifier	153
Authority control	102
Software	93
Organisations	65
Films	54
Authority control for artists	53
Film industry	53
Authority control for works	49
Encyclopedias	48
Authority control for places	45
Sports hall of fame	44
Authority control for writers	42
Politics	35
Medicine	33
Video games	30
Taxa	29
Artworks	27
Music	25
Biology	24

Authority control

[Top missing entries]

HMBID	identifier of a person or topic in the History of Modern Biomedicine da	98%	✓
ISO 4217	code de monnaie ISO 4217 (inclut le bitcoin)	96%	
GND Fictive Places	GND entries about fictive places	73%	3
INAO Label pages	Food quality standards for French AOC	99%	
EuFashion Thesaurus	Vocabulary of Europeana Fashion	93%	5%
FOIH styles and cultures	styles and cultures in Flemish organization for Immovable Heritage th	73%	
PM20 special subjects	Sondermappen Sacharchiv Pressemappe 20. Jahrhundert	41%	
ISO 15924 numeric code	numeric code for a writing system in ISO 15924	65%	14%
Calflora	item number for taxa in Calflora	98%	
MeSH Humanities	Medical Subject Headings for Humanities	64%	
FOIH periods	periods in Flemish organization for Immovable Heritage thesauri	40%	
MeSH Publication Characterist	Medical Subject Headings for Publication Characteristics	35%	
DoS Events	Dictionary of Sydney / events	50%	
FFW	Contains articles about software, file formats, file types, file extension	87%	7%
MeSH Named Groups	Medical Subject Headings for Named Groups	39%	
MeSH Psychiatry and Psychol	Medical Subject Headings for Psychiatry and Psychology	81%	
DoS Natural Features	Dictionary of Sydney / natural features	38%	
GeoNames	identifier for feature classes in GeoNames	68%	
NSW Flora ID	identifier for a plant taxon, in the NSW Flora Online	96%	
MeSH Disciplines and Occupa	Medical Subject Headings for Disciplines and Occupations	44%	
FOIH taxa	species in Flemish organization for Immovable Heritage thesauri	66%	3

https://tools.wmflabs.org/mix-n-match/#/group/ig_authority_control 2018-08-22

Match results on Mix’n’match, 2018-06-16

“rhyta”

https://tools.wmflabs.org/mix-n-match/#/search/rhyta

Mix'n'match | English | log into WiDaR for actions | Search | Search

rhyta | Search | Exclude catalogs from search

# AAT: dimidiating rhyta	rhyta, drinking vessels, [vessels for serving and consuming food], [containers for serving and consuming food], culinary containers, [containers by function or context], containers (receptacles), Containers (Hierarchy Name), Furnishings and Equipment (Hie	Not matched
Search Wikidata | Search en.wikipedia | Google-search Wikipedias | Google-search Wikidata		
# AAT: rhyta	drinking vessels, [vessels for serving and consuming food], [containers for serving and consuming food], culinary containers, [containers by function or context], containers (receptacles), Containers (Hierarchy Name), Furnishings and Equipment (Hierarchy	By Magnus Mansk
rhyton [Q828450]	Cup and pottery of ancient Greece; drinking horn or cup	Remove
# JSTOR books: Aegean Bronze Age Rhyta	book 2006	Not matched
Search Wikidata | Search en.wikipedia | Google-search Wikipedias | Google-search Wikidata		

“Dunhuang cave”

https://tools.wmflabs.org/mix-n-match/#/group/heritage

Mix'n'match | English | log into WiDaR for actions | Dunhuang cave | Search

By ID | By completeness | By name | Heritage

Heritage

[Top missing entries

EUTA theatres	theatre buildings in the EUTA database	98%	
Theatres Trust	British theatres in the Theatres Trust database	99%	
Monumentos de São Paulo	Monuments in São Paulo, Brazil	44%	54%
Palissy	French cultural heritage register for movable objects	99%	
UNESCO ICH	UNESCO lists of Intangible Cultural Heritage and the Register of gooc	94%	5%
FOIH styles and cultures	styles and cultures in Flemish organization for Immovable Heritage th	73%	
FOIH periods	periods in Flemish organization for Immovable Heritage thesauri	40%	
Argentinian Historic Heritage	identifier for historic heritage object included in the national index of A	23%	
Rakennusperintörekisteri	Items from the Protected Buildings Register in Finland	91%	
heritagefoundation.ca	identifier of Heritage Foundation of Newfoundland and Labrador	74%	
FOIH heritage types	Heritage types (erfgoedtypes) in the thesauri of the	13%	4%
Heritage of Portuguese Influen	identifier of an entity of Portuguese influence, including geographic/to	14%	
Patrimonio Web JCyL	identifier of a building or site in Patrimonio Web of Junta de Castilla y	36%	3%
NSWSHR	New South Wales State Heritage Register	11%	
World Heritage Tentative List	identifier for a site on the UNESCO World Heritage Tentative Lists	9%	
Victorian Heritage Register	identifier in Victorian Heritage Register, Australia	6%	6%
Infopatrimonio	Infopatrimonio database of cultural heritage in Brazil	14%	8%
Oorlogsmonumenten	Dutch war memorials	9%	

https://tools.wmflabs.org/mix-n-match/#/search/Dunhuang cave

Mix'n'match | English | log into WiDaR for actions | Search | Search

Dunhuang cave | Search | Exclude catalogs from search

# Iranica ID: DUNHUANG i. The cave sites; Manichean texts	The Mogao Caves are located some 25 km from Dunhuang at the edge of the Dunes of the Singing Sands (Mingshashan) of the Gobi desert. These contain over 45,000 square meters of predominantly Buddhist murals and more than 2,000 Buddhist painted stucco sculp	Not matched
Search Wikidata | Search ar.wikipedia | Google-search Wikipedias | Google-search Wikidata		
# JSTOR books: Art, Religion, and Politics in Medieval China: The Dunhuang Cave of the Zhai Family	book 2004	Not matched
Search Wikidata | Search en.wikipedia | Google-search Wikipedias | Google-search Wikidata		

Observable Changes In the LOD-enabled mashup culture

No significant change:

From conceptual and structural points of view, the newly generated vocabularies, derived from the existing ones, took similar approaches used prior to the 21st century.

Are they challenge us to think further regarding the KOS development?

How & Who to measure?

- Quality
- Sustainability
- Applicability
- Usability /Re-use-ability
- Being "authority"?
- Functional "requirements"?

Observable changes:

- The new functions and differences observed in current approaches are the results of applying semantic technologies.
  - Each *thing* is named with an URI + a domain name prefix (maintaining the original semantics and linguistic decisions while being reusable).
  - Machine-understandable, machine-processable data.
  - Benefit from semantic technologies and the available open tools.
- Communities grow quickly, spread widely, involving many contributors;
- The number of projects and vocabs increased dramatically;
- Reuse and connect, not in silos;
- No hero 'master';
- Vocabularies and Vocabulary Services are together.

As a community, we need to think about these.

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