

TIB

TECHNISCHE
INFORMATIONSBIBLIOTHEK

SCIENTIFIC AUDIOVISUAL MATERIALS AND LINKED OPEN DATA: THE TIB PERSPECTIVE

Paloma Marín Arraiza

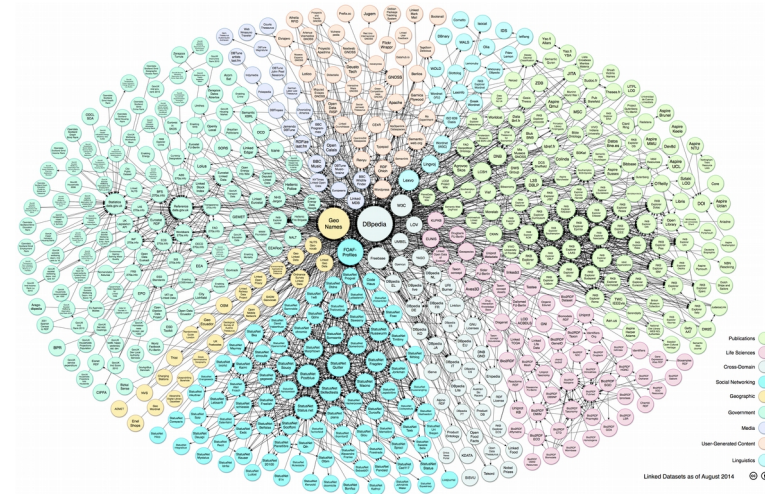
17th International Conference on Grey Literature
1st and 2nd December 2015, Amsterdam (Netherlands)



What is Linked Open Data?

Linked Data Principles

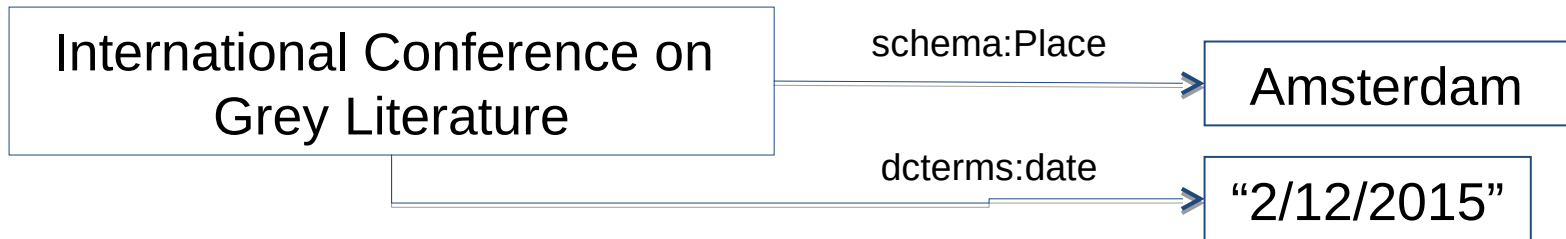
- Use URIs as names for things
- Use HTTP URIs so that people can look up those names
- When someone looks up a URI, provide useful information, using the standards (RDF*, SPARQL)
- Include links to other URIs. so that they can discover more things



**Linked Data Principles + a public domain license =
Linked Open Data (LOD)**

Knowledge organisation

RDF structure: subject + predicate + object



How to cope with complexity? → Ontologies

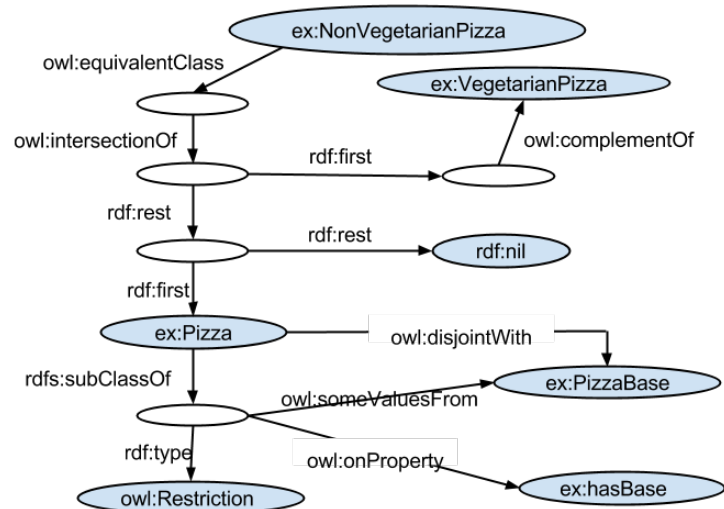


Figure: Pizza Ontology (Source: Obitko)

Standards

There is no standardised way to publish Linked Open Data (Zuiderwijk et al., 2012).

Common best practices:

- a local RDF store,
- an ontology/vocabularies that relates data items (internally and externally),
- data reuse.



Figure: <https://xkcd.com/927/>

New types of scientific information = grey scientific information

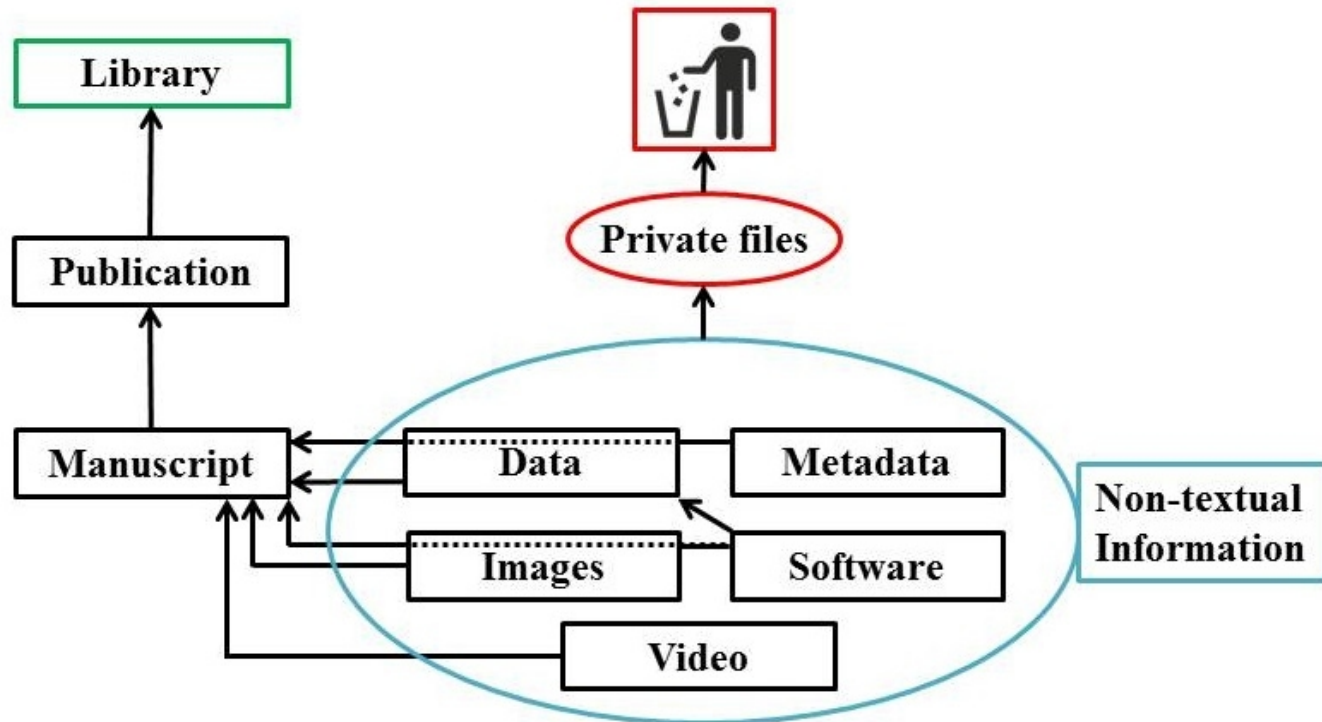
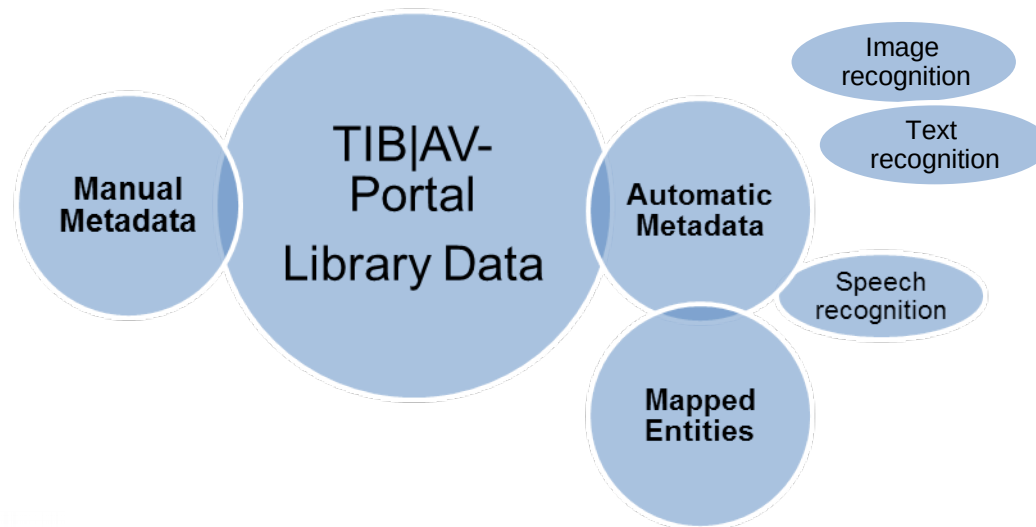


Figure. Flow of scientific information from research to publication (modified after Klump et al., Data Publication in the Open Access Initiative. Data Science Journal, Volume 5, 15 June, 2006, pag: 80).

Library Data

‘Library data refers to any type of digital information produced or curated by libraries that describes resources or aids their discovery’. (Library Data Incubator Group Final Report).





Startpage



Recently added videos

The TIB|AV-Portal provides access to high grade scientific films from the fields of engineering, architecture, chemistry, computer science, mathematics and physics.

Searching:

Innovative searching and analysis tools assist your search.

Citing:

A Digital Object Identifier (DOI) enables you to cite scientific films and film segments as easily as you would cite text.

Uploading:

Through the TIB|AV-Portal you make your films and additional material available in the long-term for Education and Research.

Physics (1447 Videos)



Basic Physic III
Lecture 16

Mathematics (741 Videos)



Random Sampling

Architecture (734 Videos)



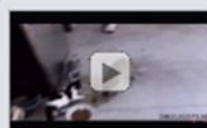
Pineapple Award

Technology/Engineeri... (625 Videos)



An introduction to
PlanOS (Planar)

Information technology (607 Videos)



Mapping for Good

Chemistry (52 Videos)



Technik-Salon:
"Lecture on Science"

Multilingual functionalities

The screenshot displays the TIB AV-Portal website. At the top, the logo 'TIB | AV-PORTAL' is visible alongside the TIB German National Library of Science and Technology logo. A search bar contains the query 'foam'. Below the search bar, the video detail page for 'Wie kann **Schaum** beim Filtern helfen?' is shown. The video player features a thumbnail of Dr. Sascha Skorupka. To the right, the 'Automated Media Analysis (BETA)' interface is active, displaying a list of recognized entities. A red arrow points from the search bar to the 'foam' entity in the analysis results. Another red arrow points from the 'foam' entity to the explanatory text on the right.

TIB | AV-PORTAL

Deutsch TIB GERMAN NATIONAL LIBRARY OF SCIENCE AND TECHNOLOGY

Home Subjects Publisher About AV-Portal Watchlist Upload Login Register

foam

Back to shortlist Video detail page

Wie kann **Schaum** beim Filtern helfen?

Automated Media Analysis (BETA)

Recognized Entities Full Audio-Transcript

Search ...

☒ Speech ☒ Text in the video ☒ Image content

00:00 Foam Computer animation Hannover

00:21 Stress (mechanics) Nutrient Food Nuklearfaktor a Molecular and Cellular Biology Solution Cheese Experiment indoor Nitrogen fixation Pharmaceutical industry Filtration Pulmonary surfactant Enzyme Process (computing)

01:22 Experiment indoor Foam Enzyme Solution

02:46 Experiment indoor Setzen <Verfahrenstechnik> Meeting/Interview Solution

03:13 Lightning Killer-cell immunoglobulin-like receptor

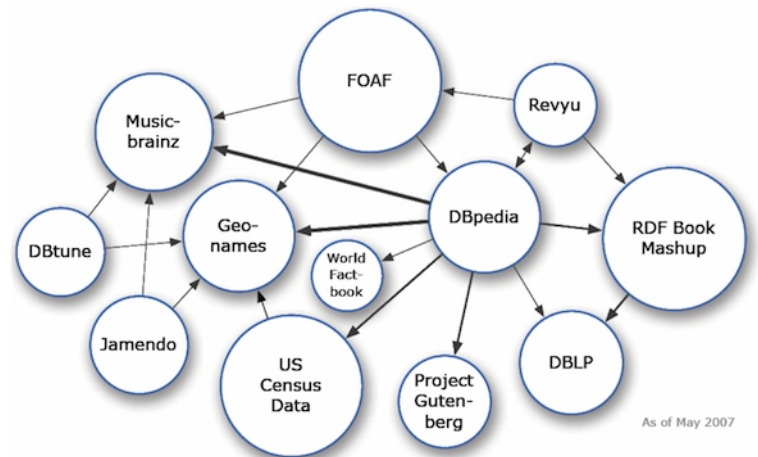
Query in English, results in German.

Entities from the GND and DBpedia (in German and English).

GND and DBpedia offer their data as linked data sets.

Semantic applications

- Improved semantic search
- Recommendation system
- Author's information and publications
- Related topics



As of May 2007

VOCABULARIES FOR OUR PURPOSES

- Dublin Core Types
- Dublin Core Terms
- Schema.org
- RDF Schema
- RDF Syntax
- Ontology for Media Resources
- Friend of a Friend (FOAF)
- Open Annotation Model
- Bibliographic Framework Initiative (Bibframe)
- The Bibliographic Ontology (BIBO)

Summary

- Research libraries manage textual and non-textual digital information
- The management generates library data
- Linking library data using standards increases the interoperability of the data
- Linked Open Data promotes multilingual facilities, data reuse and semantic applications
- TIB|AV-Portal is weaving step by step into a linked data environment

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Thank you very much for your attention



paloma.marin@tib.uni-hannover.de



orcid.org/0000-0001-7460-7794



<https://de.linkedin.com/in/palomamarinarraiza89>

