



Linked Open Projects

Reuse of Project Results as Linked Data

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Projekte

**Big
Projects**

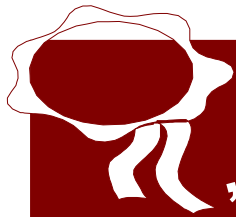
Small Projects

Students

Scientists

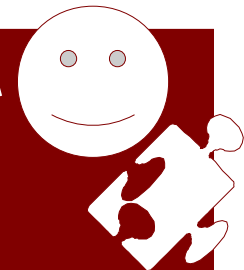
**Work-
groups**

**Funded
projects**



**„High
Quality“**

„Toy projects“





What happens to the data?

- Reuse of data is important
 - ... at least according to the funding proposals
- Reuse is difficult
 - „But the data is not representative...“
 - „But there is data missing...“
 - „But we can not use it with this quality...“
 - „But we have no spare field in our database...“
 - „But this is not in XYZ 4.3...“
 - „Where would we be if everyone did that?!“
 - ...



And they are right!

- Different requirements of producers and consumers.
- Specific applications can not be known before.
- Integration in existing databases is hard.
- But the data is valuable.
- Especially the sum of all the data of all the projects is valuable.



So where is the problem?

- The sum of the data is hard to use.
- Reuse requires
 - Aggregation of data,
 - Integration of data.
- And that's not easy.



Implementation **Before**

Before

Access

Access

Web Archives

Selection

Dataformat

Consistent Syntax

Machine readable

CSV, XML

Vocabulary

Reasonable Semantics

Column Headers

Comprehensive

Field Descriptions

Resources

Linked to

original data

Local/

inconsistent ID



Implementation **Before**

Before

Access

Access

Web Archives

← Bulky

Selection

← Coarse

Dataformat

Consistent Syntax

Machine readable

CSV, XML

← OK

Vocabulary

Reasonable Semantics

Comprehensive

Column Headers

Field Descriptions

← Inconsistent

Resources

Linked to

original data

Local/

inconsistent ID

← Inconsistent



Alternative: Linked Data

	Before	Linked Data
Access		
Access Selection	Web Archives	URI Dereferencing Sparql
Dataformat		
Consistent Syntax Machine readable	CSV, XML	RDF
Vocabulary		
Reasonable Semantics Comprehensive	Column Headers Field Descriptions	external vocabulary linkable
Resources		
Linked to original data	Local/ inconsistent ID	URI



Projects



Automatic Indexing

- Funded project (DFG) (2007-2009)
- Automatic subject indexing with Standard Thesaurus for Economic Sciences (STW)
- Coverage: > 10.000 Abstracts
- Goal: Qualitative Assessment of the Process
- Data in CSV-Format



Catalog Enrichment

- SWBPlus
- Cooperation in south-west library union
- Additional information:
 - Table of contents
 - Blurbs
 - Cover
- Coverage: all new titles in the union
- Data in XML
- Restricted access

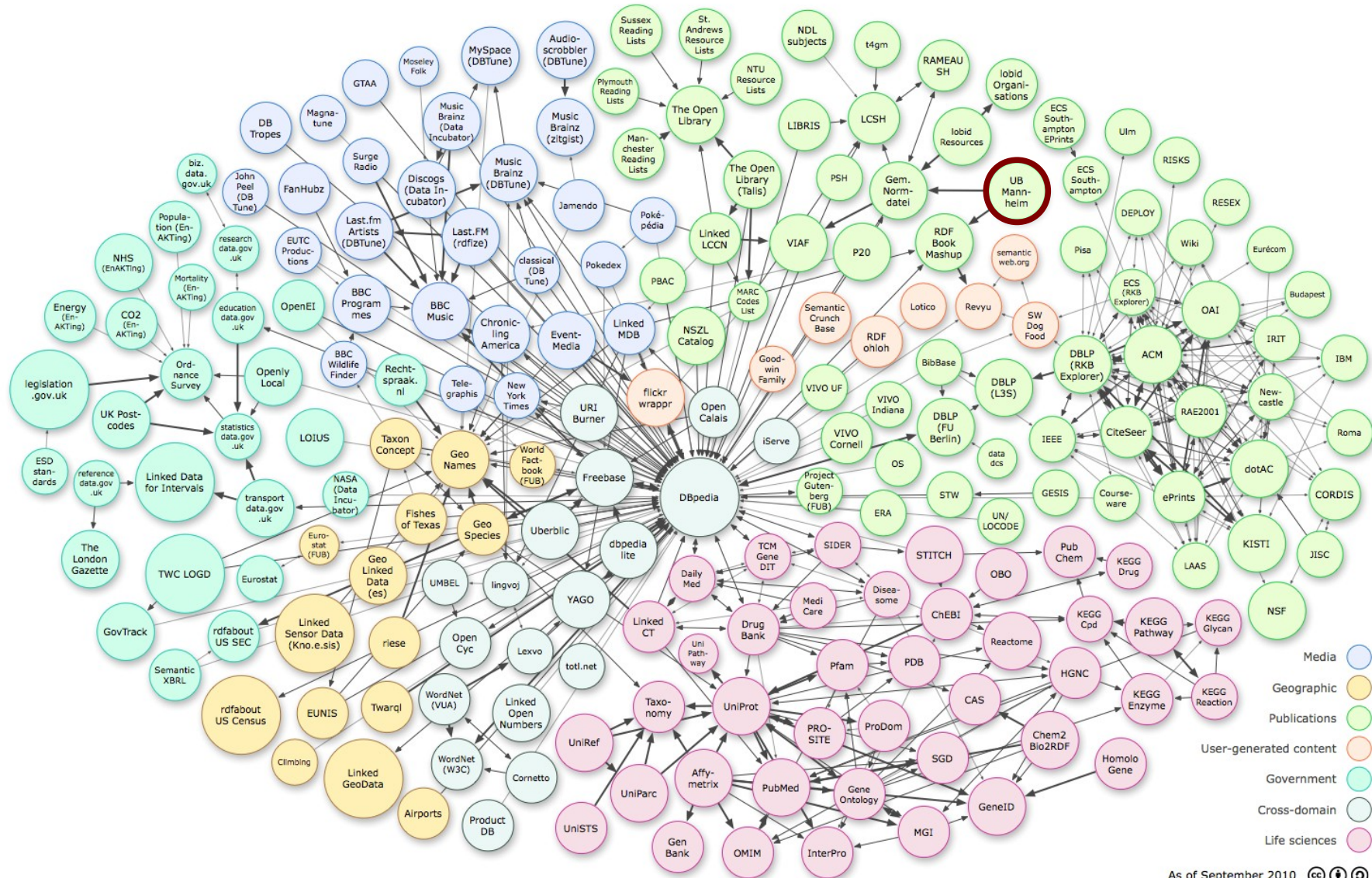


Concordances

- Between SWB/HeBIS (two library unions)
- Coverage: 22 million titles
- Goal: Transfer of indexing data
- Data in CSV-Format



Linked Data Service (LDS) Mannheim University Library



As of September 2010 © ⓘ



Linked Data Service

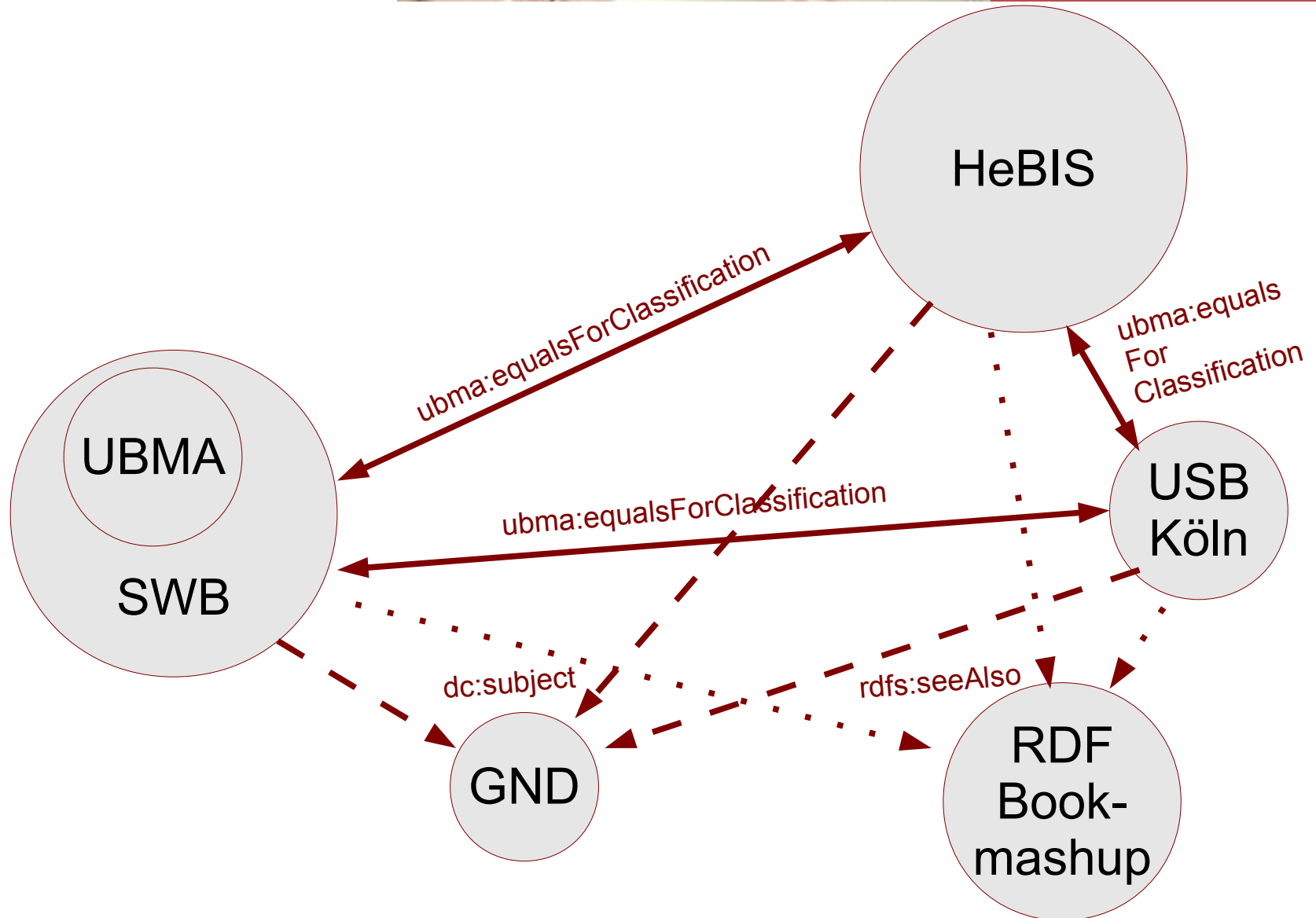
- Prototype and experimental
 - Evaluation of implementations
 - Ability to scale with large datasets
 - How to express the data within RDF
 -
- Showcase
 - HTML View and RDF/XML Download
 - Metadata and authority data as Linked Data
 - Linking to existing applications
 - Hosting for our project data



URI	Beschreibung
<a href="http://data.bib.uni-mannheim.de/data/swb/<PPN>">http://data.bib.uni-mannheim.de/data/swb/<PPN>	Titel aus dem Südwestdeutschen Bibliotheksverbund (SWB), <PPN> entspricht der internen Identifikationsnummer des SWB.
<a href="http://data.bib.uni-mannheim.de/data/hebis/<PPN>">http://data.bib.uni-mannheim.de/data/hebis/<PPN>	Titel aus dem Hessischen Bibliotheksinformationssystem (HeBIS), <PPN> entspricht der internen Identifikationsnummer des HeBIS.
<a href="http://data.bib.uni-mannheim.de/data/hbz/<PPN>">http://data.bib.uni-mannheim.de/data/hbz/<PPN>	Titel aus dem Hochschulbibliothekszentrum des Landes Nordrhein-Westfalen (HBZ), <PPN> entspricht der internen Identifikationsnummer des HBZ.
<a href="http://data.bib.uni-mannheim.de/data/rvk/<NOTATION>">http://data.bib.uni-mannheim.de/data/rvk/<NOTATION>	Klassifikationen nach der Regensburger Verbundklassifikation (RVK). <NOTATION> entspricht der RVK-Notation, das Leerzeichen wurde durch _ ersetzt (z.B. FB_1575).



URI	Bezeichnung	Hinweis
dc:title	Titel	Haupttitel in Vorlageform plus Zusatz
dc:creator	Urheber	Autoren in Ansetzungsform "Nachname, Vorname" oder Bezeichnung der Körperschaft.
dc:contributor	Mitwirkende/r	Weitere Beteiligte, wie Herausgeber o.ä., in Ansetzungform "Nachname, Vorname" oder Bezeichnung der Körperschaft.
dc:date	Zeitangabe	Erscheinungsjahr
dc:publisher	Verleger(in)	Verlag
isbd:P1008	has edition statement	Informationen zur Auflage
dc:identifizier	Identifikator	Die ISBN als URI: uri:ISBN:<ISBN>
dc:language	Sprache	Die Sprache, nach ISO 639-2 (B)
dc:subject	Thema	Schlagworte nach SWD mit URI der DNB, Klassifikationen nach RVK mit URI der UB Mannheim (s.o.).
rdfs:seeAlso	siehe auch	Links zu anderen Linked Data Angeboten, z.Z. zum Book Mashup Dienst der FU Berlin.
ubma:equals For Classification	Andere Ausgabe	Hierbei handelt es sich um das Ergebnis eines Projekts der UB Mannheim, das durch diesen Dienst leicht nachgenutzt werden kann.





Linked Data Service (Public Beta)

- Website / Documentation
 - <http://data.bib.uni-mannheim.de/>
- SparQL Endpoint
 - <http://data.bib.uni-mannheim.de/sparql/>
- URI-Dereferencing (httpRange-14)
 - 303 redirect to HTML or RDF Expression
- Technical Basis
 - As of now: Virtuoso Universal Server
 - Other systems under evaluation

An Entity of Type : [Bibliographic Resource](#), from Data Source : <http://data.bib.uni-mannheim.de/data/swb/305776088>, within Data Space : <data.bib.uni-mannheim.de>

[Forward Links](#)[Backward Links](#)

http://data.bib.uni-mannheim.de/data/terms/equalsForClassification	http://data.bib.uni-mannheim.de/data/hebis/214418405 http://data.bib.uni-mannheim.de/data/hebis/212760327
Creator	Stuckenschmidt, Heiner
Subject	http://d-nb.info/gnd/4072806-7 http://d-nb.info/gnd/4138762-4 http://d-nb.info/gnd/4049534-6 http://data.bib.uni-mannheim.de/data/rvk/ST_205 http://d-nb.info/gnd/4827894-4 http://d-nb.info/gnd/4242662-5 http://d-nb.info/gnd/4197730-0 http://d-nb.info/gnd/4480091-5
Publisher	Springer
Date	2009
Title	Ontologien Konzepte, Technologien und Anwendungen
type	dcterms:BibliographicResource

Raw Linked Data formats: [N3/Turtle](#) | [RDF/JSON](#) | [ODATAVATOM](#) | [ODATAJSON](#) | [RDF/XML](#)

[Linked](#) [Data](#) 

Trace ID: 7efc75f622cd



Simple Reuse

■ Standardized Interface:

```
select distinct ?titles where {  
  <http://data.bib.uni-mannheim.de/data/swb/305776088>  
  ubma:equalsForClassification ?titles.  
}
```

titles

```
http://data.bib.uni-mannheim.de/data/hebis/214418405  
http://data.bib.uni-mannheim.de/data/hebis/212760327
```



Student project

- Researchportal Information Systems
- Duration: 1 Year (HWS 2010, FSS 2011)
- 10 Students
- Enrichment of bibliographic data, Mashup
- Access to our library data via LDS
- Condition: Every enrichment has to be provided as RDF or via Sparql-Endpoint.



Ideas and future work

- More data!
 - Links to person authority files.
 - Complete implementation of RVK as Linked Data.
- Integration of project results:
 - Student project(s)
 - Automatic Indexing
 - Automatically generated concordances
- Provenance information.
- Know-How-Transfer.



Try it!

<http://data.bib.uni-mannheim.de/>

Thank you!

<http://slideshare.net/kaiec>

