



hbz

Wissen. Information. Innovation.

Linked Open Library Data @hbz

Bielefeld Conference, 26.04.2012

Silke Schomburg & Adrian Pohl

Agenda

1. LOD Basics
2. Why LOD?
3. hbz LOD activities
 - a) lobid.org
 - b) culturegraph
4. Perspectives

LOD Basics

<skip>
Linked Data Principles
</skip>

<skip>
Picture of LOD cloud
</skip>

A sustainable strategy of publishing and linking data on the web requires the data to be open*.

* <http://opendefinition.org/okd/>



<http://www.w3.org/DesignIssues/LinkedData.html> &
<http://lab.linkeddata.deri.ie/2010/star-scheme-by-example/>

Why LOD?

Motivation

- Use of international and cross-domain **web standards** leads to
 - Increased **discoverability**
 - **Multiple usability** of one dataset
 - Maximized **interoperability & re-usability**
 - **Flexible** data model

Expected ROI

- **Synergy effects** through standardization of technology stack:
 - **Quantitative**: saved resources
 - **Qualitative**: improved services

hbz LOD activities

- Since 2009 Annual [SWIB](#) conference (with ZBW)
- 03/2010 First [open data publication](#)
- Since 06/2010 Coordinating the OKFN [WG on Open Bibliographic Data](#)
- 07/2010 [lobid.org](#) launched
- 11/2010 [culturegraph.org](#) starts
- 01/2011 [Principles](#) on openbiblio data
- 09/2011 Igelu [Linked Open Data Special Interest Working Group](#) established
- 11/2011 [Legal open data guide](#) published
- DINI-KIM [recommendations](#) for opening up library data

lobid.org

Technology stack

- Triple Store/SPARQL endpoint: [4store](#)
- Search engine: [elasticsearch](#)
- RDF browser: [Phresnel](#)
- Data: exports from legacy systems & LOD dumps
- Read news on our [hbz LOD blog](#)

lobid-organisations

- RDF descriptions for more than 40k international organisations
- Data sources: German ISIL registry & MARC Organization Code database
- Not (yet) openly licensed

**DIENSTE**

SPARQL Endpoint

SPARQL Webform

RESSOURCEN

Suche

Downloadbereich Open Data

Exporte

ORGANISATIONEN

Suchschnittstelle

RESTful HTML-Beispiel

META

LOD-Wiki des hbz

Impressum

Kontakt

Credits

<http://lobid.org/organisation/DE-361>
Name **Universitätsbibliothek Bielefeld**

Geokoordinaten



Anschrift

Straße **Universitätsstr. 25**PLZ **33615**Ort **Bielefeld**Land **Germany**

Telefon

Rufnummer **(0521) 1 06-4036 und 4037**

Telefon

Rufnummer **(0521) 1 06-6451**

ISIL

DE-361

URL

<http://www.ub.uni-bielefeld.de>

Kontakt-QR



Weitere Information

<http://dispatch.opac.d-nb.de/DB=1.2/CMD?ACT=SRCHA&IKT=8529&TRM=DE-361>

Sitz

<http://sws.geonames.org/3209112/>

Wikipedia-Link

http://de.wikipedia.org/wiki/Universitätsbibliothek_Bielefeld

DBpedia-Link

http://de.dbpedia.org/resource/Universitätsbibliothek_Bielefeld[edit](#)

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Standards Compliant [XHTML](#)

lobid-resources

- LOD interface for open data from hbz union catalog
- Licensed with CC0
- Currently more than 10M records
- Links to other datasets (GND, ZDB, DBpedia, dewey.info, ...)
- See description on the Data Hub for more information

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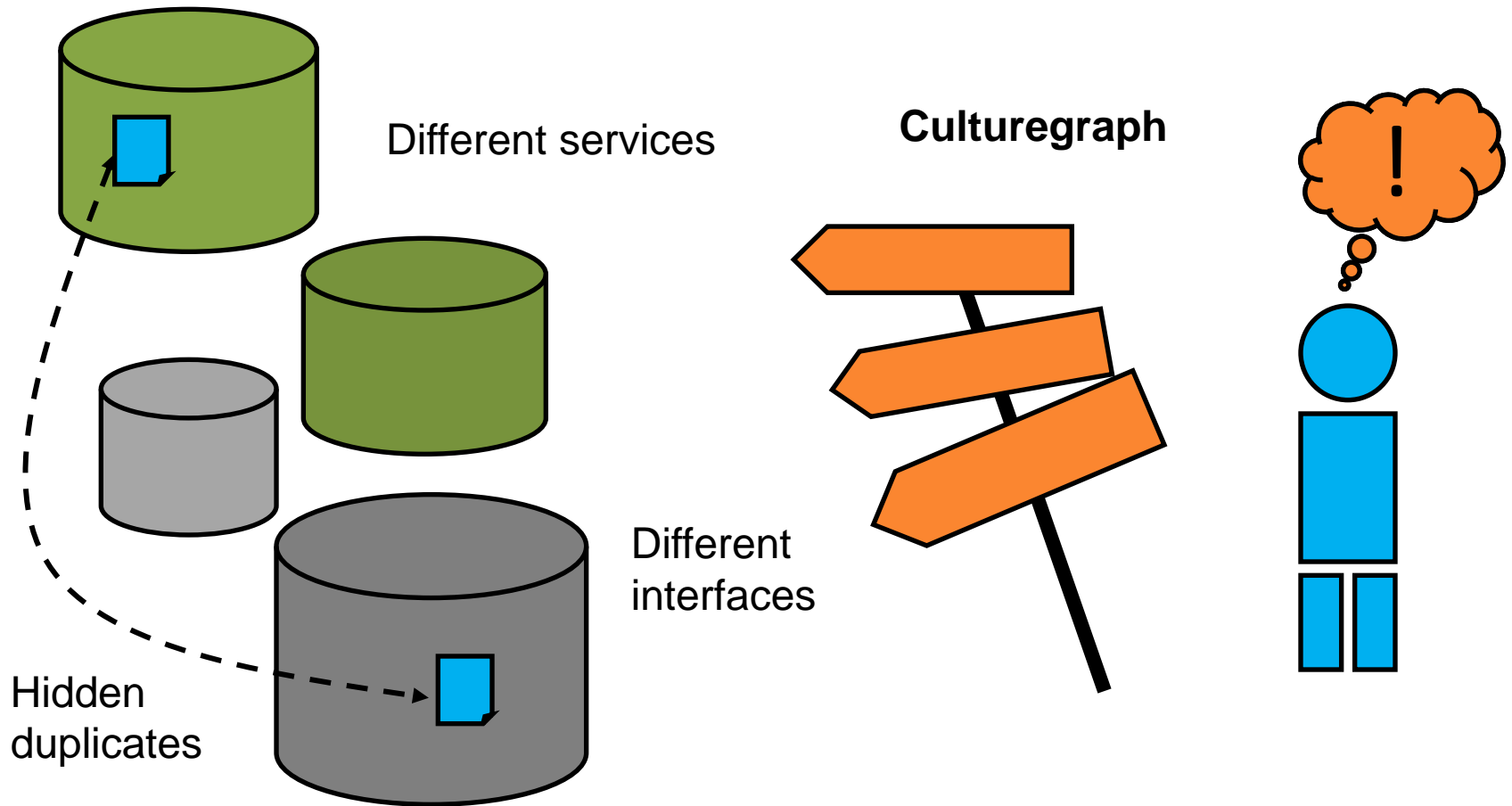
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Erscheinungsort	Indianapolis u.a.
Verlag	Hackett
Format	print
Umfang	VIII, 200 S.
Schlagwort	Referenz <Linguistik>
Schlagwort	Semantik
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ISBN-10	0915145537
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Besitzer	Rheinisch-Westfälische TH, Hochschulbibliothek
Signatur	AE1772
Exemplar	http://lobid.org/item/HT002948556%3A1948.ELG.E.1983
Besitzer	Institut für Philosophie der Universität, Bibliothek
Signatur	1948.ELG.E.1983
Exemplar	http://lobid.org/item/HT002948556%3AHLK260
Besitzer	Universitätsbibliothek Duisburg-Essen, Campus Essen
Signatur	HLK260
Exemplar	http://lobid.org/item/HT002948556%3A33+i+E+296
Besitzer	Institut für Ethik, Geschichte und Theorie der Medizin, Bibliothek

culturegraph

Open platform for interconnecting datasets

- Persistent identification of entities
- Computation of similarities and links
- Administration and publication of mappings
- Open Data / Free Software

culturegraph as signpost in the LOD cloud



First Project: Resolving & Lookup

- **Input:** 6 German union catalogs
- **Objective:** Bundling of manifestations
- **Service:**
 - Publication of bundles
 - Minting URNs for approved bundles
 - Search bundles using established identifiers
- Take a look at the Demonstrator

Perspectives

Exploring opportunities for future cataloging

Future web-based cataloging platforms...

- are based on Linked Data standards
- push changes in real time
- support versioning
- re-use data from/link to the Giant Global Graph

Building a service-oriented library infrastructure

- Based on free flow of open data
- Real-time communication
- Web Services:
 - Deduplication Service
 - Identifier Service
 - Holdings & Availability Service
 - ...
- Easy-to-use API

Professional Dimension



Services



Applications



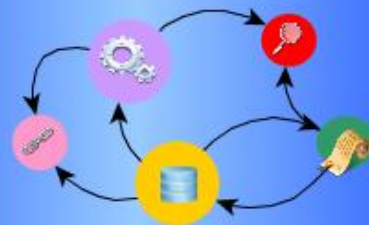
Technical Dimension



API



Web Services



Message Infrastructure



Technical Infrastructure



SWIB 2012

→ **"Semantic Web in Libraries"** (SWIB)

hosted by hbz and ZBW – Leibniz
Information Centre for Economics

→ Cologne, **27. - 29.11.2012**

→ <http://swib.org/>

Thanks.

Questions?

With pleasure now/here or also later to
semweb@hbz-nrw.de

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