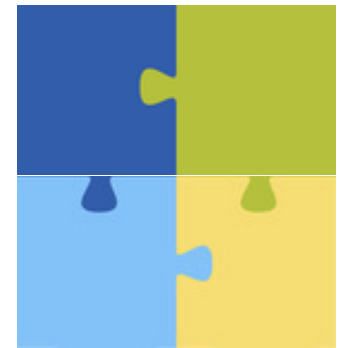


# From Authority Control to Linked Authority Data

## the "Gemeinsame Normdatei" in German Speaking Countries



Reinhold Heuvelmann, German National Library

LITA/ALCTS MARC Formats Interest Group

June 23, 2012

## Overview

- Internationalization
- Project GND
- Format design
- Relationships
- Catalog view
- GND Ontology
- Next steps & future developments
- Outview

# Internationalization

- DDC German
- MARC 21
- Gemeinsame Normdatei GND
- RDA
- Bibliographic Framework Transition Initiative

## The situation so far

### Rules

RAK-WB  
RAK-ÖB  
RAK Musik  
  
RSWK

### Files

PND  
GKD  
DMA-EST  
  
SWD

### Formats

MAB PND  
MAB GKD  
MAB SWD  
MARC 21  
PICA3, PICA+

## Partners

- Deutsche Nationalbibliothek (DNB)
- Bibliotheksservicezentrum Baden-Württemberg (BSZ)
- BibliotheksVerbund Bayern (BVB)
- Gemeinsamer Bibliotheksverbund (GBV)
- Hessisches Bibliotheks- und Informationssystem (HeBIS)
- Hochschulbibliothekszentrum des Landes Nordrhein-Westfalen (hbz)
- Kooperativer Bibliotheksverbund Berlin-Brandenburg
- Österreichische Bibliothekenverbund und Service GmbH (OBVSG)
- Zeitschriftendatenbank (ZDB)

## Principles and basic decisions

- keep existing data intact
- keep existing functionalities intact
- integrate
- FRBR, FRAD
- functional differentiation => object-based approach
- RDA
- internal format: MARC 21 based
- external format: MARC 21
- Semantic Web

## Working packages 2009-2012

- Modeling of the format
- Rules
- Training
- Migration of the data
- Mappings and interfaces
- Relating
- Tests
- Switch to new data base
- Updating links in bibliographic records

# Integration

**Rules**

RAK-WB  
RSWK,  
Preliminary  
Rules,  
=>  
RDA

**FRBR  
FRAD**

**Authority File**

GND

**Format**

MARC 21  
Authority



## Entities and record types

Tp Person

Tn Name

Tb Corporate Body

Tu Work

Tg Geographic entity

Ts Topical term

Tf Meeting



see  
MARC 21  
field 079 \$b

## Field structure

0XX	Numbers, codes, notations
1XX	Preferred name
2XX	Complex see references
3XX	RDA attributes
4XX	Variant names
5XX	Relationships
6XX	Notes
7XX	Preferred names in / Relationships to other authority files
9XX	Local fields

Person	X00
Name	X00
Family	X00
Corporate body	X10
Meeting	X11
Work	X30
Topical term	X50
Geographic entity	X51
Time	548

## Specific solution for works: from entry to entity

130 Die @Räuber

500 [!118607626!](#)Schiller, Friedrich\$4aut1

130 I @masnadieri

500 [!118626523!](#)Verdi, Giuseppe\$4kom1

530 [!040993396!](#)Schiller, Friedrich\$aDie @Räuber

550 [!040632695!](#)Vertonung\$4obin

-- internal format only --

# Relationships

110 2#

\$a Gesellschaft für Hafen- und Standortentwicklung  
\$9g:Hamburg

410 2#

\$aGHS  
\$94:abku  
\$wr  
\$iAbkuerzung  
\$eAbkuerzung

510 2#

\$0(DE-101)973758333  
\$0(DE-588)6034283-3  
\$aHafenCity Hamburg GmbH  
\$94:nach  
\$wr  
\$iNachfolger  
\$eNachfolger

551 ##

\$0(DE-101)040231186  
\$0(DE-588)4023118-5  
\$aHamburg  
\$94:orta  
\$wr  
\$iOrt

## Relationships !

Link from / to	Tp	Tn	Tb	Tf	Tu	Ts	Tg
Tp	147.644	-	1.223	17	153.708	1.816	4.245
Tn	33	-	1	-	83	20	-
Tb	119.986	-	470.693	3.184	2.756	2.474	632
Tf	86	-	531	32.808	10	7	2
Tu	2	-	13	3	2.758	104	9
Ts	1.423.754	418	143.998	12.372	25.094	186.344	86.508
Tg	429.270	16	867.977	518.126	14.073	8.908	97.492

# Catalog view (1)

- [Datenshop](#)
- [Mein Konto](#)
- [Ablieferung von Netzpublikationen](#)
- [Informationsvermittlung](#)

[Login](#) →

→ [Über die Deutsche Nationalbibliothek](#)

<http://d-nb.info/gnd/118634313>

← Zurück zu: [Ludwig Wittgenstein \[Elektronische Ressource\]](#)  
Buchholz, Kai. - Frankfurt am Main : Campus Verlag, 2006, 1. Aufl.

<small>GND</small>	
<b>Link zu diesem Datensatz</b>	<a href="http://d-nb.info/gnd/118634313">http://d-nb.info/gnd/118634313</a>
<b>Typ</b>	Person (piz)
<b>Person</b>	Wittgenstein, Ludwig
<b>Geschlecht</b>	männlich
<b>Andere Namen</b>	Wittgenstein, Ludwig Josef Johann (B 1966) Wittgenstein, Ludvig Wittgenstein, Ludovicus Wittgenstein, L. Wittgenstein, ... Wītgenštain, Lūdwig Vitgenštajn, Ljudvig Vitgenštajn, Ludvig Vitgenšteinas, Liudvigas vitgenštejn, Ljudvig Uitogenshutain, Rūtovihi Uitogenshutain, ... Witgenšteyn, Lūdwig Vitogenshutain, Rūtovihi Wītginšitāyn, Lūdwig Vitgenšteins, Ludvigs

- Aktionen**
- [In meine Auswahl übernehmen](#)
  - [Druckansicht](#)
  - [MARC21-XML-Repräsentation dieses Datensatzes](#)
  - [RDF/XML-Repräsentation dieses Datensatzes](#)
  - [Dokumentation Linked Data](#)
  - @ [Korrekturanfrage](#)
  - [Nachweis der Quelle](#)
  - [Zugehöriger Artikel in Wikipedia](#)

## Catalog view (2)

<b>Quelle</b>	M; LoC-NA
<b>Zeit</b>	Lebensdaten: 1889-1951
<b>Land</b>	Österreich (XA-AT); Großbritannien (XA-GB)
<b>Geografischer Bezug</b>	Geburtsort: <a href="#">Wien</a> Sterbeort: <a href="#">Cambridge</a>
<b>Beruf(e)</b>	<a href="#">Philosoph</a> <a href="#">Pädagoge</a> <a href="#">Architekt</a>
<b>Weitere Angaben</b>	<a href="#">Wien, Cambridge (Wirkungsorte)</a> ; <a href="#">Österr. Philosoph</a> , lebte ab 1929 (mit Unterbrechungen) in <a href="#">England</a> ; <a href="#">Pädagoge</a> <a href="#">Abschlussdiplom als Ingenieur 1908</a> ; <a href="#">Österr. Philosoph</a>
<b>Beziehungen zu Personen</b>	<a href="#">Stonborough-Wittgenstein, Margarethe (Schwester)</a> <a href="#">Wittgenstein, Paul (Bruder)</a> <a href="#">Respinger, Marguerite (Bekannte)</a>
<b>Systematik</b>	4.7p Personen zu Philosophie ; 31.3p Personen zu Architektur, Bautechnik

## Catalog view (3)

<b>Autor von</b>	<p>325 Publikationen</p> <ol style="list-style-type: none"> <li>1. <i>Diarios, conferencias</i> Wittgenstein, Ludwig. - Madrid : Gredos, 2009</li> <li>2. <i>Ajatusliikkeitä</i> Wittgenstein, Ludwig. - Tampere : Niin &amp; Näin, 2011</li> <li>3. ...</li> </ol>
<b>Beteiligt an</b>	<p>68 Publikationen</p> <ol style="list-style-type: none"> <li>1. <i>Ajatusliikkeitä</i> Wittgenstein, Ludwig. - Tampere : Niin &amp; Näin, 2011</li> <li>2. <i>Ludwig Wittgenstein, there where you are not</i> London : Black Dog Publ., 2005</li> <li>3. ...</li> </ol>
<b>Thema in</b>	<p>790 Publikationen</p> <ol style="list-style-type: none"> <li>1. <i>Ludwig Wittgenstein [Elektronische Ressource]</i> Buchholz, Kai. - Frankfurt am Main : Campus Verlag, 2006, 1. Aufl.</li> <li>2. <i>Wittgenstein und die Antike</i> Berlin : Parerga, 2012, 1. Aufl.</li> <li>3. ...</li> </ol>





# GND Ontology: Classes ...

Sub-Class of (Alignment) | <http://rdvocab.info/uri/schema/FRBkEntitiesKUA/CorporateBody>

## Corporate Body

URI	<a href="http://d-nb.info/standards/elementset/gnd#CorporateBody">http://d-nb.info/standards/elementset/gnd#CorporateBody</a>
Label (english)	Corporate Body
Label (german)	Körperschaft
MARC 21 equivalent	079 \$b=b
MARC 21 equivalent	079 \$v=kiz
Sub-Class of	<a href="#">Authority Resource</a>
Sub-Class of (Alignment)	<a href="http://rdvocab.info/uri/schema/FRBkEntitiesRDA/CorporateBody">http://rdvocab.info/uri/schema/FRBkEntitiesRDA/CorporateBody</a>
Equivalent class (Alignment)	<a href="http://xmlns.com/foaf/0.1/Organization">http://xmlns.com/foaf/0.1/Organization</a>

## Country

URI	<a href="http://d-nb.info/standards/elementset/gnd#Country">http://d-nb.info/standards/elementset/gnd#Country</a>
Label (english)	Country
Label (german)	Land oder Staat
MARC 21 equivalent	079 \$v=gil
Sub-Class of	<a href="#">Place or geographic name</a>

## Differentiated person

URI | <http://d-nb.info/standards/elementset/gnd#DifferentiatedPerson>

# GND Ontology: ... and object properties

|Label (german) | vorganger |

## Printer

URI	<a href="http://d-nb.info/standards/elementset/gnd#printer">http://d-nb.info/standards/elementset/gnd#printer</a>
Label (english)	Printer
Label (german)	Drucker
MARC 21 equivalent	500 \$0 \$9=4:druc
MARC 21 equivalent	510 \$0 \$9=4:druc
Domain	<a href="#">Work</a>
Range	<a href="#">Corporate Body</a>
Range	<a href="#">Differentiated person</a>
Sub-Property of (Alignment)	<a href="http://rdvocab.info/roles/printer">http://rdvocab.info/roles/printer</a>

## Profession or occupation

URI	<a href="http://d-nb.info/standards/elementset/gnd#professionOrOccupation">http://d-nb.info/standards/elementset/gnd#professionOrOccupation</a>
Label (english)	Profession or occupation
Label (german)	Beruf oder Beschäftigung
MARC 21 equivalent	550 \$0 \$9=4:berc
MARC 21 equivalent	550 \$0 \$9=4:beru
Domain	<a href="#">Differentiated person</a>
Domain	<a href="#">Family</a>
Range	<a href="#">Subject heading</a>
Sub-Property of (Alignment)	<a href="http://rdvocab.info/ElementsGr2/professionOrOccupation">http://rdvocab.info/ElementsGr2/professionOrOccupation</a>

## Professional relationship

## Next steps

- Manual corrections
- Matching and Merging
- Populate "Medium of performance" field
- Original script cataloging
- MARC relator codes
- MARC elements
- MADS ?

## Future developments

- Work / expression / item records
- Genre and form
- Time
- Mappings between thesauri  
(cf. ISO 25964 part 2)
- Machine created authority data
- Provenance
- Visualization

## Summing up



Thank you.

Questions?

Comments?

[r.heuvelmann@dnb.de](mailto:r.heuvelmann@dnb.de)

## Links

- GND  
[http://www.dnb.de/EN/Standardisierung/Normdaten/GND/gnd\\_node.html](http://www.dnb.de/EN/Standardisierung/Normdaten/GND/gnd_node.html)
- Ludwig Wittgenstein @ DNB Catalog  
<http://d-nb.info/gnd/118634313>
- The Linking Open Data cloud diagram  
<http://richard.cyganiak.de/2007/10/lod/>
- GND Ontology  
<https://wiki.d-nb.de/download/attachments/44532423/gnd-owl-doc.html>
- Bulk download of the GND in RDF  
<http://datendienst.d-nb.de/cgi-bin/mabit.pl?userID=opendata&pass=opendata&cmd=login>
- Picture of man throwing a javelin  
<http://de.wikipedia.org/wiki/Speerwurf>