European Conference on Data Analysis
Gfkl Workshop
3. September 2015, University of Essex

Cocoda "Colibri Concordance Database" – A mapping tool for library classification schemes

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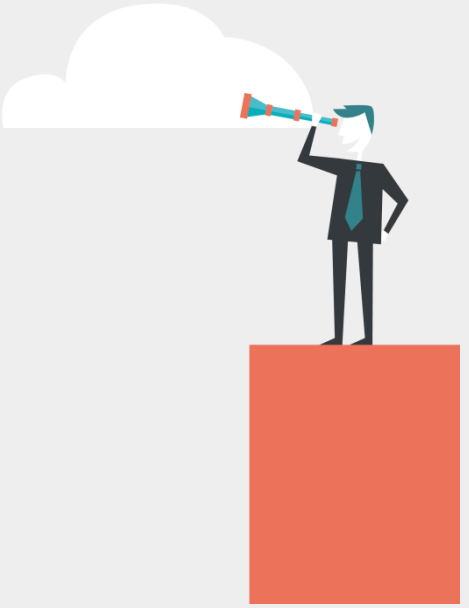
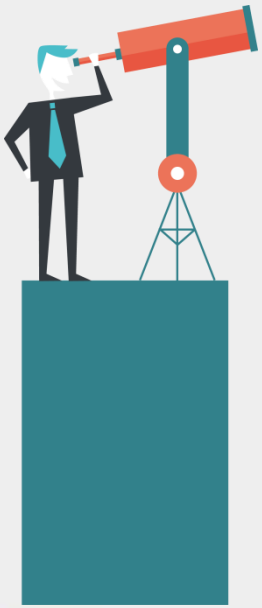
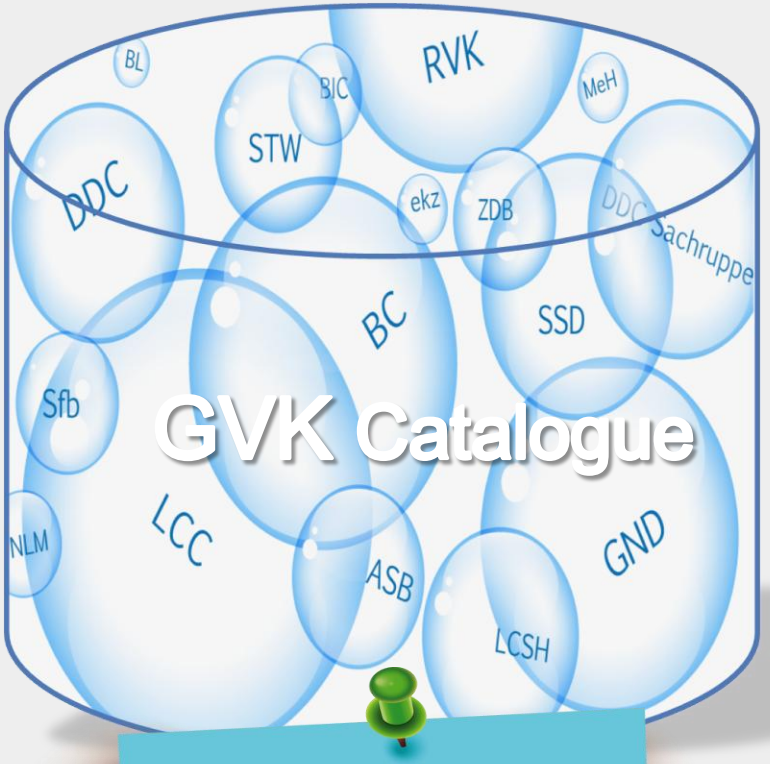
Overview



- Background of the Project coli-conc
- Methods of Mapping
- Course Correction
- Introduction to the Software
  - Demands on the Tool
  - Web Layout
  - Software Concept



Project coli-conc



Aim

Creation of exhaustive concordances between Dewey and other library classification schemes

Classification systems in German speaking regions	
Universal Classification Systems	**No. of classes**
UDC (Universal Decimal Classification)	ca. 65.000 classes (English version)
DDC (Dewey Decimal Classification)	over 44.000 classes with 10 main classes
RVK (Regensburg Classification)	850.000 classes with 33 main classes
BC (Basic Classification)	2100 classes with 89 main classess
LCC (Library of Congress Classification)	21 main classes
Subject classification	**No. of classes**
DDC-Sachgruppen der DNB	10 main classes with 94 subclasses
MSC (Mathematics Subject Classification)	87 main classes
PACS (Physics and Astronomy Classification Scheme)	10 main classes
FKDigBib (Subject classification for digital library)	10 main classes
KfM (Classification for music library)	ca. 800 classes
Subject Classification at the Universities	**No. of classes**
TUM-classification (Science and technologyl classification of the TU Munic)	52 classes each with 999 notations
Subject classification of the University library Duesseldorf	45 classes
Bremer classification of the State and University library Bremen	ca. 57 main classes
GOK (Goettingen Online Classification)	ca. 33 main classes
Standard-Thesaurus Wirtschaft von der ZWB	6.000 Terms and notations
Subject classification University library Trier	36 main classes
Technical University Dortmund	28 main classes
University library Paderborn	26 main classes
University library Marburg	35 main classes
University library Bonn	24 main classes
University library Heidelberg	22 main classes
Subject classification and nomenclature of individual languages Library of the Institute of General Linguistics at the Uni Münster	23 main classes
Subject Classification at the public libraries	**No. of classes**
SEB (Scheme for protestant libraries)	
SKB-E (Scheme for catholic public libraries)	
KfKJ (Scheme for children and youth libraries)	Less than 1.000 classes
ASB (General classification for public libraries)	ca. 2.200 classes with 23 main classes
ÖSÖB (Austrian classification for public libarries)	
SfB (Classification for libraries)	ca 14.400 classes with 30 main classes
KAB (Classification for general libraries)	ca. 2.700 classes
SSD (Classfication of the city library Duisburg)	
ESSB (Single classfication for South Tyrolean)	16 main classes

Primary Source and Target Schemes : DDC and RVK

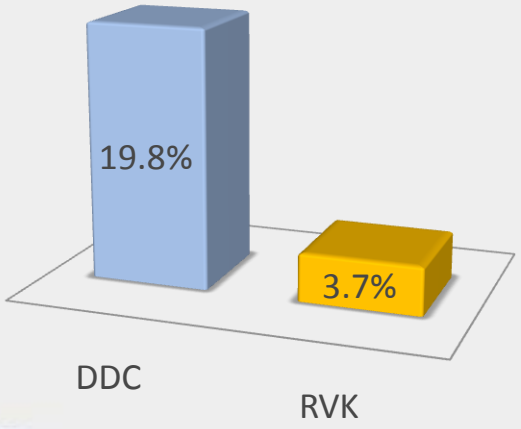
Why RVK?
- wide-spread in Germany
- Local needs are better covered
- Legacy data transfer
- DDC is subject to licence

RVK
- 850.000 classes
- 33 main classes
- Granularity varies in different subject fields
- Synthesized notations are prebuilt and integrated into the online system

DDC
- ca. 46.000 classes
- 10 main classes
- not all synthesized notations/numbers are represented in the online system

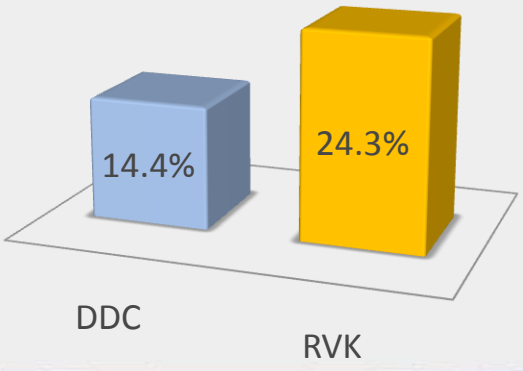
GVK

ca. 40 Mio. Title data records (2013)



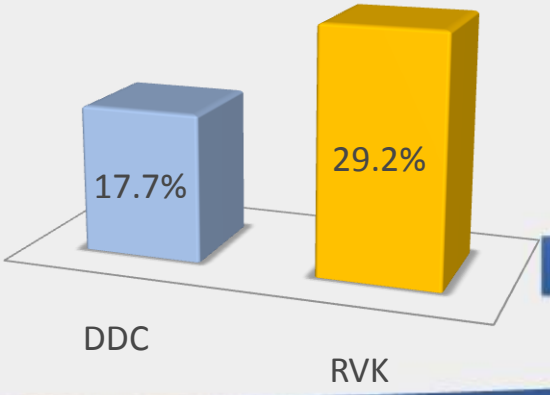
SWB

ca. 17 Mio. Title data records (2013)



BVB

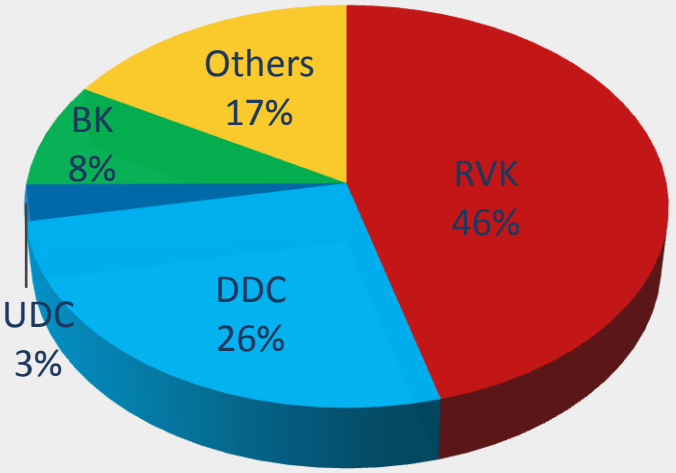
ca. 20 Mio. Title data records (2013)



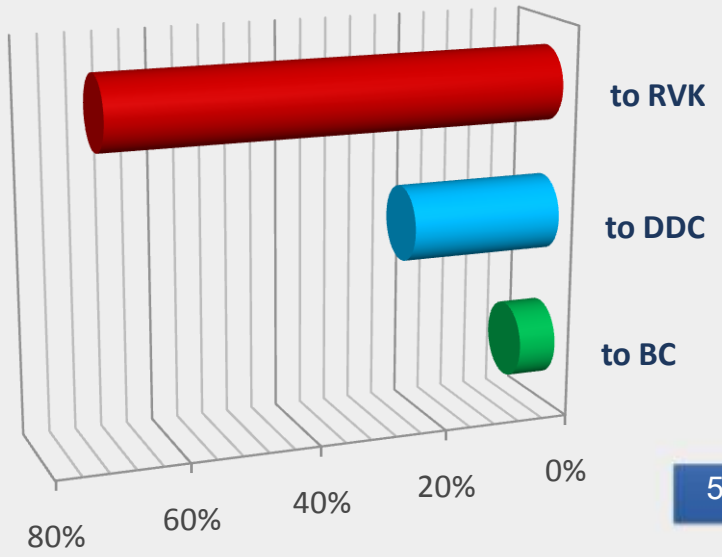
Survey

- Current status of DDC-X-concordance
- Field of application and the reasons for the use of the DDC
- Methods & Problems in building a DDC-X concorcance
- Interest in a DDC - RVK concordance

Existin g Maping works		
Concordance	**Subject area**	**Contact**
DDC – BK	Chemistry	TUB TUHH
	Politics	SUB Hamburg
	The thousand classes of the third summary	VZG
DDC – EZB	41 EZB-Fachgruppen	VZG
DDC – RVK	Library- and Information science	HdM Stuttgart
	Social science	UB Greifswald
	Medicine & Health, Law, the thousand classes of the third summary level	VZG
RVK – DDC	Biology, Chemistry, Geology, Paleontology, Phisics, Mathematics	GESIS
	Psychology	SLUB Dresden
RVK – BK	German literature, Politics, Law	UB Wien
RVK – MSC	Mathematics	UB Regensburg
RVK – PACS	Physics	UB Regensburg
SWD – DDC		DNB
	Library- and Information science	HdM Stuttgart
SWD-RVK	Library- and Information science	HdM Stuttgart
RVK-BK-MSC-PACS	Mathematics, Physics	ULB Tirol
DDC-MSC-BKL	Mathematics	TIB Hannover



Classification schemes in the libraries that participated in the survey



Shift to other classification schemes

Mapping Methods

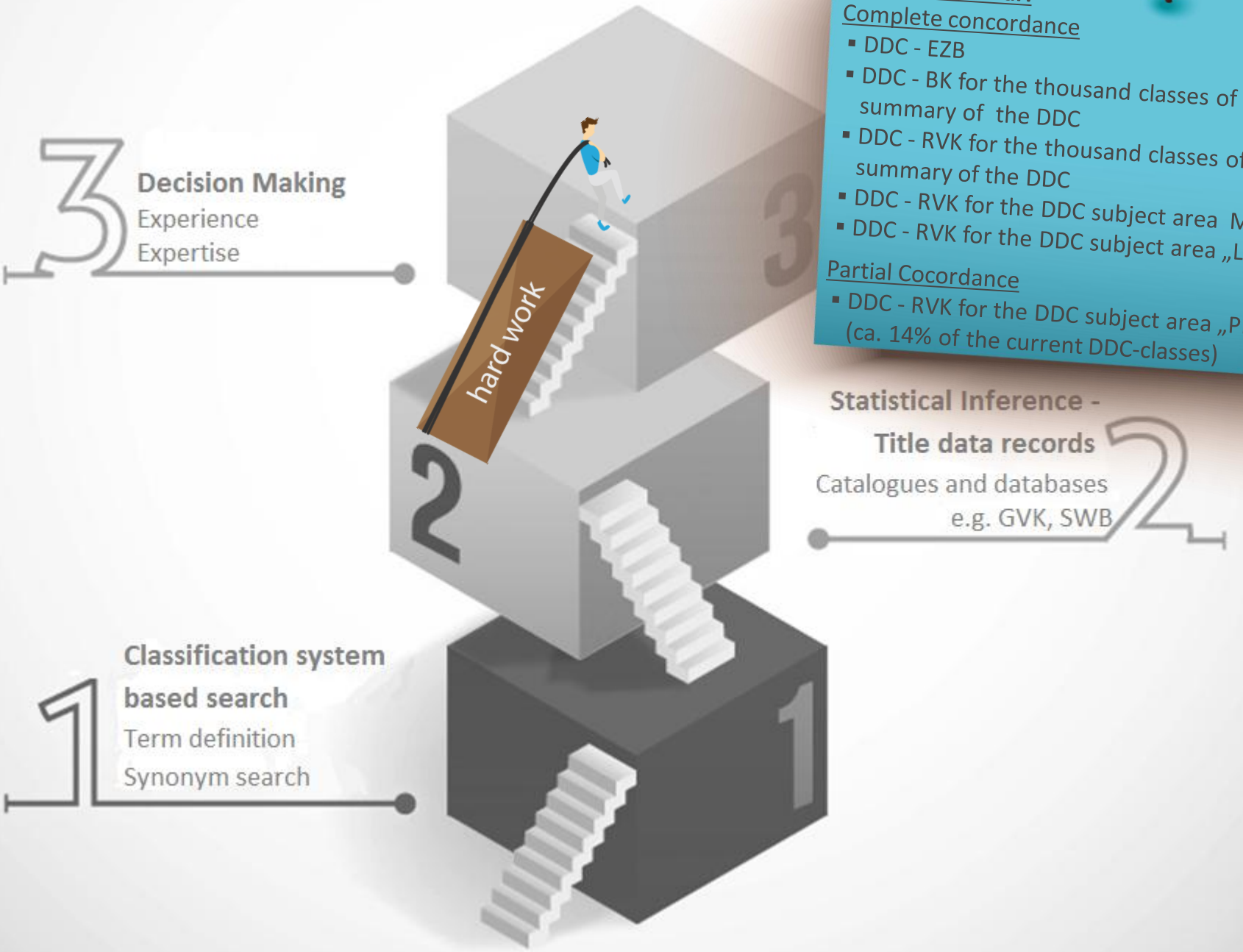
Work done so far:

Complete concordance

- DDC - EZB
- DDC - BK for the thousand classes of the third summary of the DDC
- DDC - RVK for the thousand classes of the third summary of the DDC
- DDC - RVK for the DDC subject area Medicine & Health
- DDC - RVK for the DDC subject area „Law“

Partial Cocordance

- DDC - RVK for the DDC subject area „Philosophy“ (ca. 14% of the current DDC-classes)



Course Correction

Facilitate exchange and use of concordances and KOS

- Collection of exisiting mappings and KOS
- Provision of the above

Enhance the speed of building concordances between library KOS and ease their management

- Develop a mapping tool
- Make the concordances and KOS easily accessible
- Draft algorithms for automatic generation of mapping candidates

Improve the Quality of the concordances

- Develop and implement measures for quality control
- Involve and expand the user groups

Demands on the tool

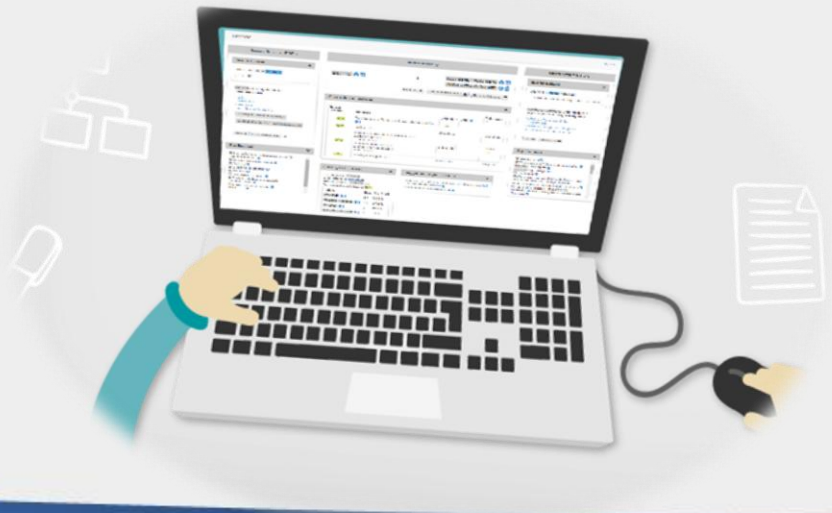
Integration of Data from different sources

Allow validation and storage of data

Presentation of Data and mapping candidates on a single screen

Multi-user web based open source tool

Easy access to and exchange of information
Serve as colloboration plattform



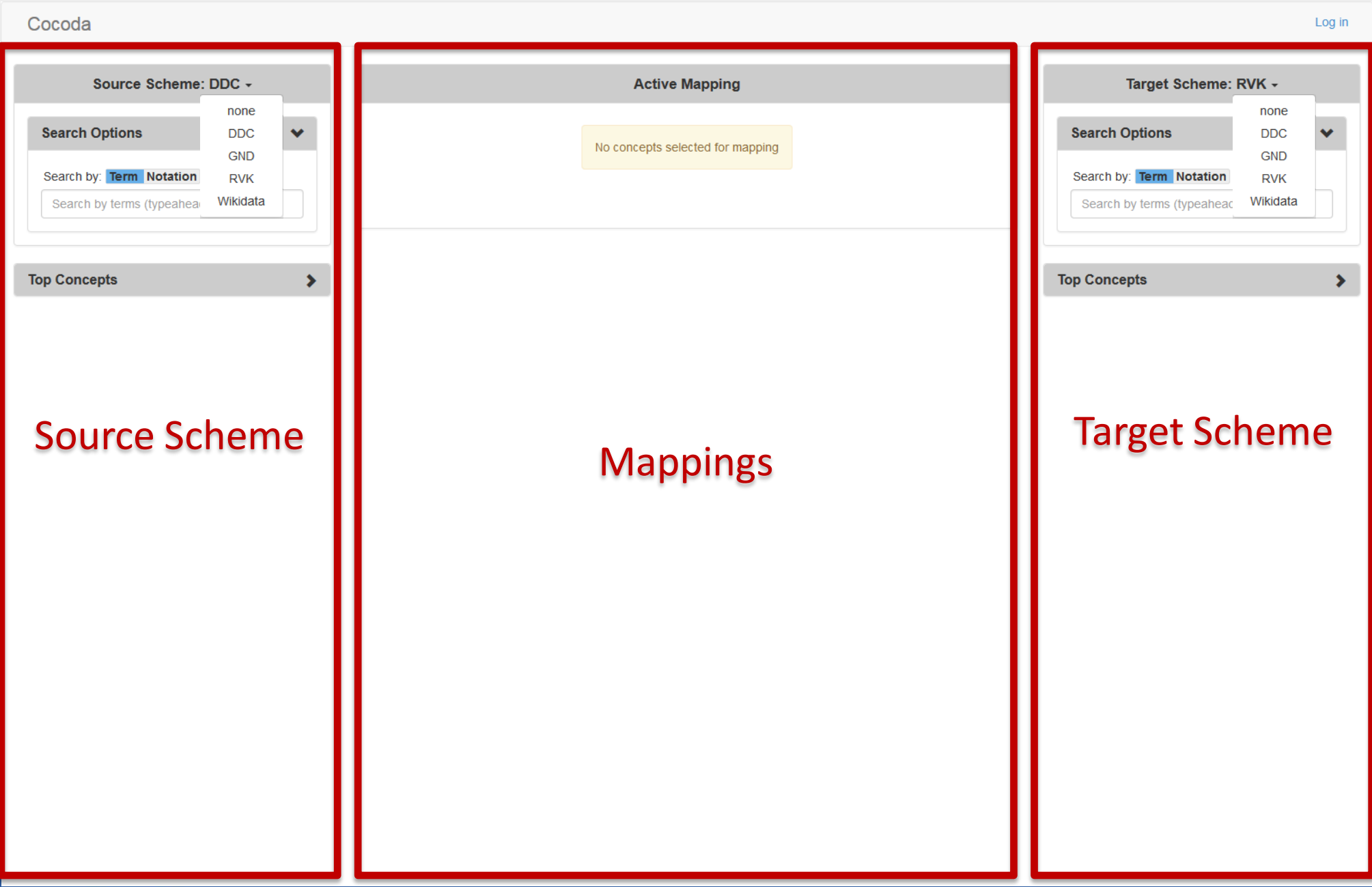
Clear overview of the context of the selected term through display of

- the hiearchical structure of the classes
- scope notes
- Register Index Entries
- linked vocabularies and
- synonym suggestions

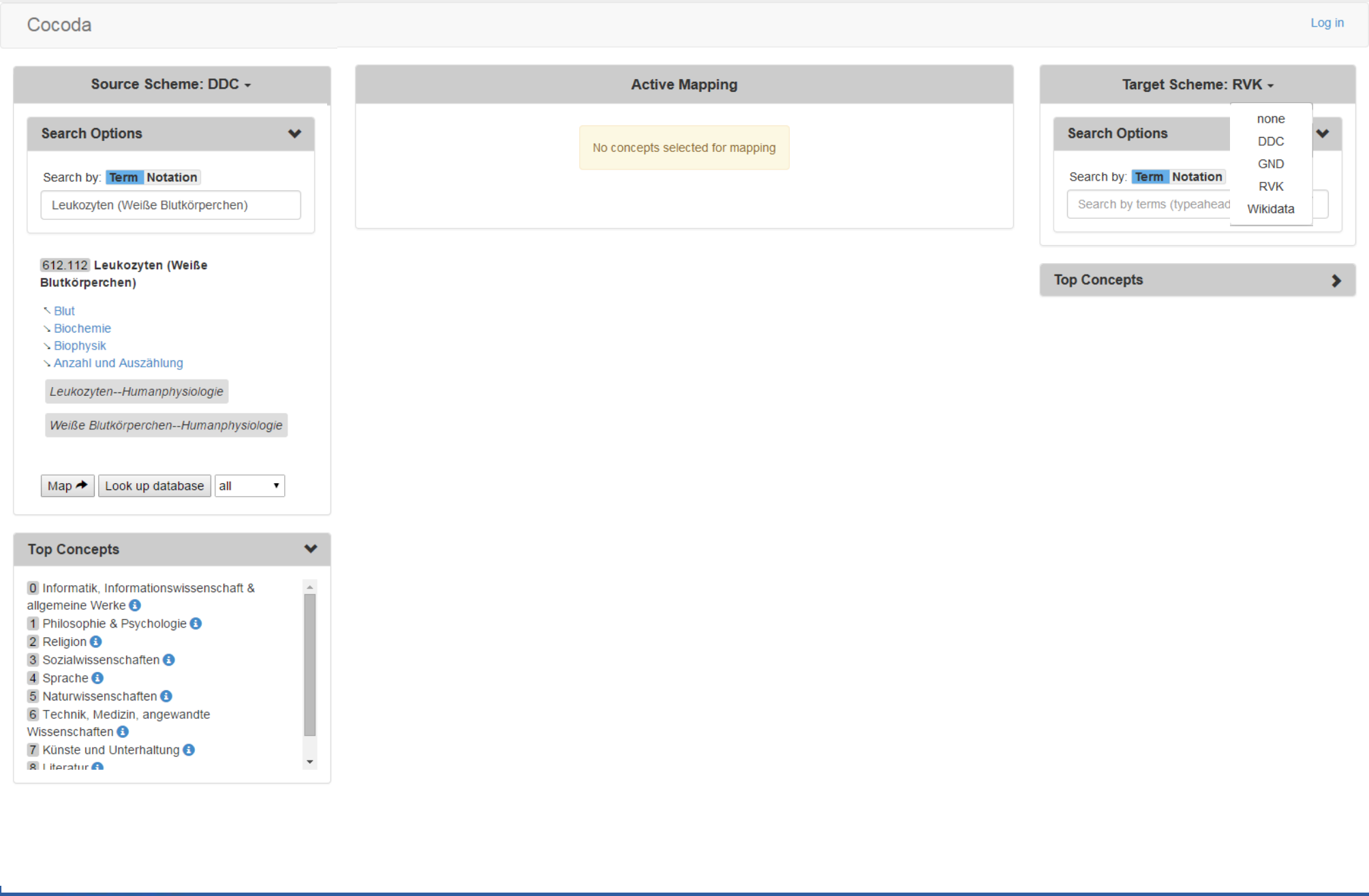
Mapping suggestions through

- evaluation of the co-occurrences of assigned notations/terms in the title data records
- automatic generation of mappings
- integration of the concordance database
- inclusion of the results of a manual mapping

Web Interface Cocoda Prototype



Web Interface Cocoda Prototype



Web Interface Cocoda Prototype

Cocoda

Log out

Source Scheme: DDC

Search Options

Search by: **Term** Notation

Leukozyten (Weiße Blutkörperchen)

612.112 **Leukozyten (Weiße Blutkörperchen)**

↖ Blut
↘ Biochemie
↘ Biophysik
↘ Anzahl und Auszählung

Leukozyten--Humanphysiologie

Weiße Blutkörperchen--Humanphysiologie

Map ➚ | Look up database | all

Top Concepts

0 Informatik, Informationswissenschaft & allgemeine Werke
1 Philosophie & Psychologie
2 Religion
3 Sozialwissenschaften
4 Sprache
5 Naturwissenschaften
6 Technik, Medizin, angewandte Wissenschaften
7 Künste und Unterhaltung
8 Literatur

Active Mapping

No concepts selected for mapping

Target Scheme: RVK

Search Options

Search by: **Term** Notation

Blutkörperchen (Erythrozyt, Leukozyt), Häm

WW 8840 - WW 8879 **Blutkörperchen (Erythrozyt, Leukozyt), Hämoglobin**

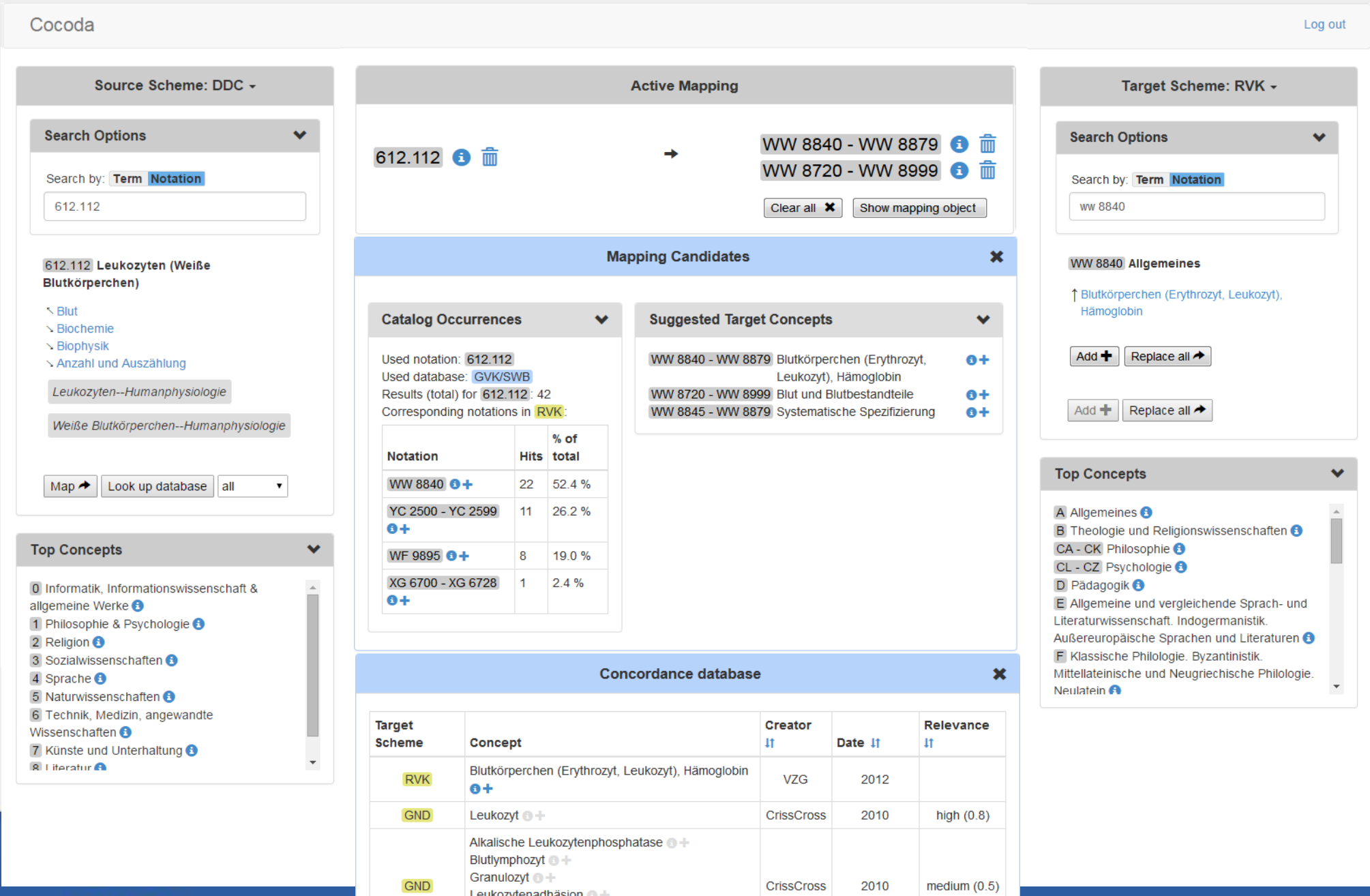
↖ Blut und Blutbestandteile
↘ Allgemeines
↘ Einzelne biologische Disziplinen
↘ Systematische Spezifizierung

Add ✚ | Replace all ➚

Top Concepts

A Allgemeines
B Theologie und Religionswissenschaften
CA - CK Philosophie
CL - CZ Psychologie
D Pädagogik
E Allgemeine und vergleichende Sprach- und Literaturwissenschaft. Indogermanistik. Außereuropäische Sprachen und Literaturen
F Klassische Philologie. Byzantinistik. Mittellateinische und Neugriechische Philologie. Neulatein

Web Interface Cocoda Prototype



Web Interface Cocoda Prototype

Cocoda

Log out

Source Scheme: DDC

Search Options

Search by: **Term** **Notation**

612.112

612.112 Leukozyten (Weiße Blutkörperchen)

- ↖ Blut
- ↘ Biochemie
- ↘ Biophysik
- ↘ Anzahl und Auszählung

Leukozyten--Humanphysiologie

Weiße Blutkörperchen--Humanphysiologie

Map | Look up database | all

Top Concepts

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7 Künste und Unterhaltung
8 Literatur

Active Mapping

612.112 → WW 8840 - WW 8879, WW 8720 - WW 8999

Clear all | Create download link | Save to Database

Mapping Candidates

Catalog Occurrences

Used notation: 612.112
Used database: GVK/SWB
Results (total) for 612.112: 42
Corresponding notations in RVK:

Notation	Hits	% of total
WW 8840	22	52.4 %
YC 2500 - YC 2599	11	26.2 %
WF 9895	8	19.0 %
XG 6700 - XG 6728	1	2.4 %

Suggested Target Concepts

WW 8840 - WW 8879 Blutkörperchen (Erythrozyt, Leukozyt), Hämoglobin
WW 8720 - WW 8999 Blut und Blutbestandteile
WW 8845 - WW 8879 Systematische Spezifizierung

Concordance database

Target Scheme	Concept	Creator	Date	Relevance
RVK	Blutkörperchen (Erythrozyt, Leukozyt), Hämoglobin	VZG	2012	
GND	Leukozyt	CrissCross	2010	high (0.8)
GND	Alkalische Leukozytenphosphatase Blutlymphozyt Granulozyt Leukozytenadhäsion	CrissCross	2010	medium (0.5)

Target Scheme: RVK

Search Options

Search by: **Term** **Notation**

ww 8840

WW 8840 Allgemeines

↑ Blutkörperchen (Erythrozyt, Leukozyt), Hämoglobin

Add | Replace all

Add | Replace all

Top Concepts

A Allgemeines
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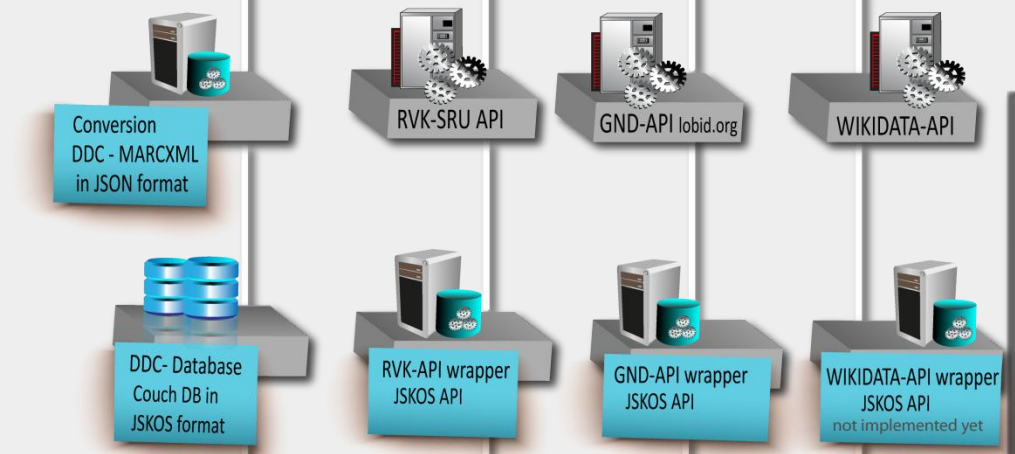
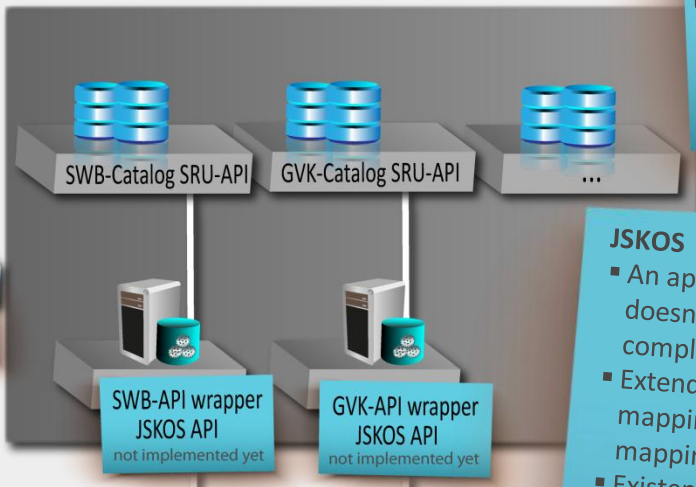
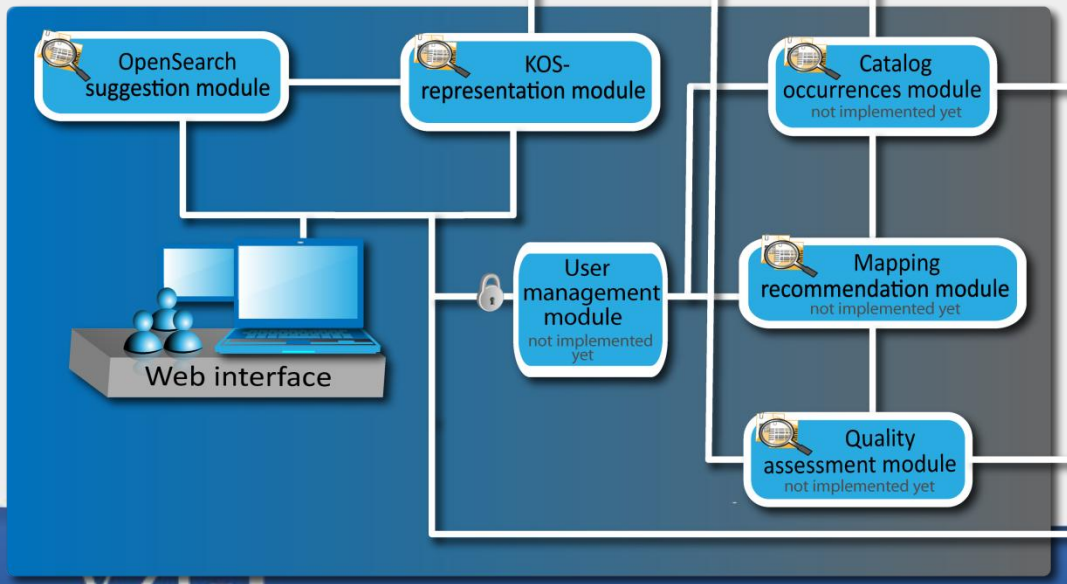
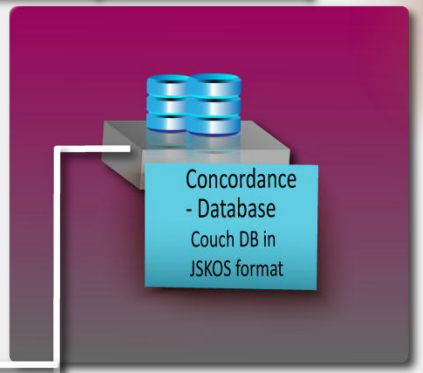
Cocoda – Software Concept









Format requirements
- Compatible with SKOS
- Represent both KOS and its mappings
- Simple and easy to use in web application

JSKOS Format
- An application of JSON-LD doesn't contain the full complexity of RDF
- Extended statements on mappings , e.g. creator, mapping methods
- Existence statements to express negation or completion of a KOS, e.g. no narrow concept exists or a broader terms exist

Thank You!

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