

Semweb LLC

- Founded 2007 in Küsnacht ZH

- Owner: *Fabio Ricci*

- + Network

- Several projects in Semantic Search
RDF Thesaurus Processing
Linked Data Processing

- Aggregating heterogeneous data sources (RDF)
- Modeling and generating RDF out of non RDF sources
- Refining Search via Semantics
- Entity Linking from free text
- Innovative web applications around RDF
- Deep experience in Document Management
- Development of RDF online Services



Linked Data and **Semantic Web** are our focus and passion. Benefit from our qualified and independent consultancy for the digital optimization of your enterprise.

Consulting
Proof of Concept
SKOS (Entity) Tagging
ETL
Ontology search
Linked Data
Text analytics
PDF (Entity) Tagging
Semantic databases

go!
Semantic Web
LOD
Records Management
Big Data
Assisted Search
RDF stores
Semantic Databases
Entity Linking
Semantic Search
Ontologies
Thesauri
Knowledge Graphs
RDF
SKOS
Search Expansion
Search Reduction
Semantic Relations
Semantic Facets
NLP

- **Thesaurus Management as a Service,**
Develop, operate and maintain SKOS Thesauri –
online / on site <https://skosshuttle.ch/>
- **Generation of Linked Data as a service,**
Mapping xml/SQL data to RDF – online / on site
<http://rdflink.ch/>



Semantic Web Technologies · Records Management
Software Development · ICT Consulting · Project Management

SKOS Shuttle

[https://en.wikipedia.org/wiki/Skos_Shuttle_\(software\)](https://en.wikipedia.org/wiki/Skos_Shuttle_(software))
Thesaurus Management System (TMS) as a Web Service

The screenshot displays the SKOS Shuttle interface for the GETTY_AAT thesaurus. The top navigation bar includes a language dropdown set to 'en', a 'details' button, and a 'Welcome Meetup!' message. Below the header, the thesaurus name 'GETTY_AAT' is shown with its URI and a link to the 'Online consultant'. The main content area features a 'Top View' section with a 'Set browser on this topview' link. A sidebar on the left lists various categories under 'Arts and Architecture', including 'Abstract Expressionist', 'Abstract Impressionist', 'African (general, continental cultures)', 'Afro-Asiatic', 'Antarctic', 'Antique, the', 'Arctic', 'Art Informel', 'Arte Povera', 'Asian', 'Bad Painting', 'Brutalist', 'Chicago Imagist', and 'Direct art'. The central part of the interface shows a 'Thesaurus Profile' with statistics: 40,578 Concepts, 0 Documents, 44,199 Broaders, 44,355 Narrowers, and 16,357 Related. It also displays a 'Concepts' donut chart and 'Preferred Labels' and 'Alternative Labels' donut charts. The bottom right corner indicates 'Auto logout in 1780 secs'.

The screenshot displays the SKOS Shuttle interface for the 'Piston' concept. The top navigation bar includes a language dropdown set to 'en', a 'label or :descriptor' input field, and a 'Welcome Yout' message. Below the header, the concept name 'Piston' is shown with its URI and a link to 'Drop a message'. The main content area features a 'Piston' section with a 'Piston' and 'Piston2' image. A sidebar on the left lists various categories under 'Arts and Architecture', including 'Abstract Expressionist', 'Abstract Impressionist', 'African (general, continental cultures)', 'Afro-Asiatic', 'Antarctic', 'Antique, the', 'Arctic', 'Art Informel', 'Arte Povera', 'Asian', 'Bad Painting', 'Brutalist', 'Chicago Imagist', and 'Direct art'. The central part of the interface shows a 'Concept Details' section with a 'Piston' image and a 'Piston2' image. It also displays a 'Definitions' section with a 'Diameter' attribute set to '3.095' and a 'Height' attribute set to '1.008'. The bottom right corner indicates 'Auto logout in 1780 secs'.

SKOS Shuttle

- ❑ Hosted in Switzerland
- ❑ **Enhanced Thesaurus Management** (documents)
- ❑ **RDF triple editing** in short and full mode
- ❑ Operates on **remote RDF repositories**
- ❑ Quick **concept deorphanization**
- ❑ **Systematics assistant** to cope with **different** systematics
- ❑ RDF Synchronization of **thesauri** (**Taxonomy Governance**)
- ❑ Complete **project management**

SKOS Shuttle

- ☐ Custom relations
 - ☐ Custom attributes
 - ☐ Units of measure
- } “SKOS++”
- ☐ **OWL** extension - “SKOSOWL”
- ☐ Works with 7 major RDF stores: **AllegroGraph, Blazegraph, GraphDB, Jena-Fuseki, MarkLogic, Stardog, Virtuoso**



RDFLINK

RDFLINK is a Web-Service
for mapping legacy data into RDF

➔ Generate your Knowledge Graph with RDFLINK

Legacy Data:

XML-Daten
CSV-Daten
LOG-Daten
SQL-Daten

RDFLINK

Swiss projects with RDFLINK

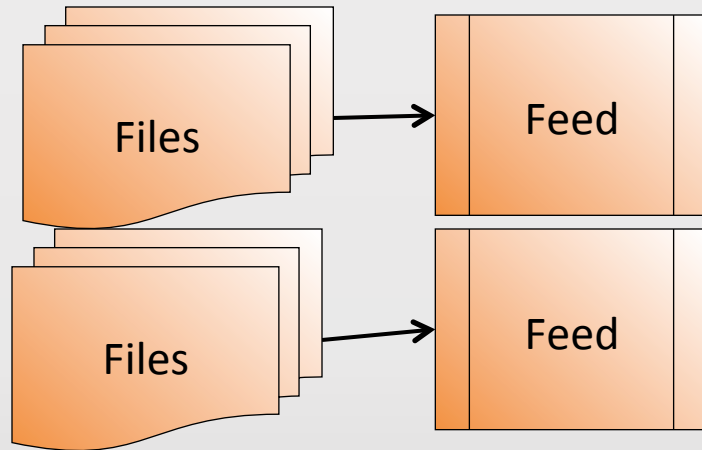


1. LODZH - <https://www.zhdk.ch/lodz> - Data from 4 Zurich culture institutes RDFised
2. Hackathon Basel - <http://make.opendata.ch/wiki/project:glamsearchportal> Data from 4 heterogeneous data sources RDFised.

For both projects an appropriate RDF search engine was developed.

RDFLINK

Process structure

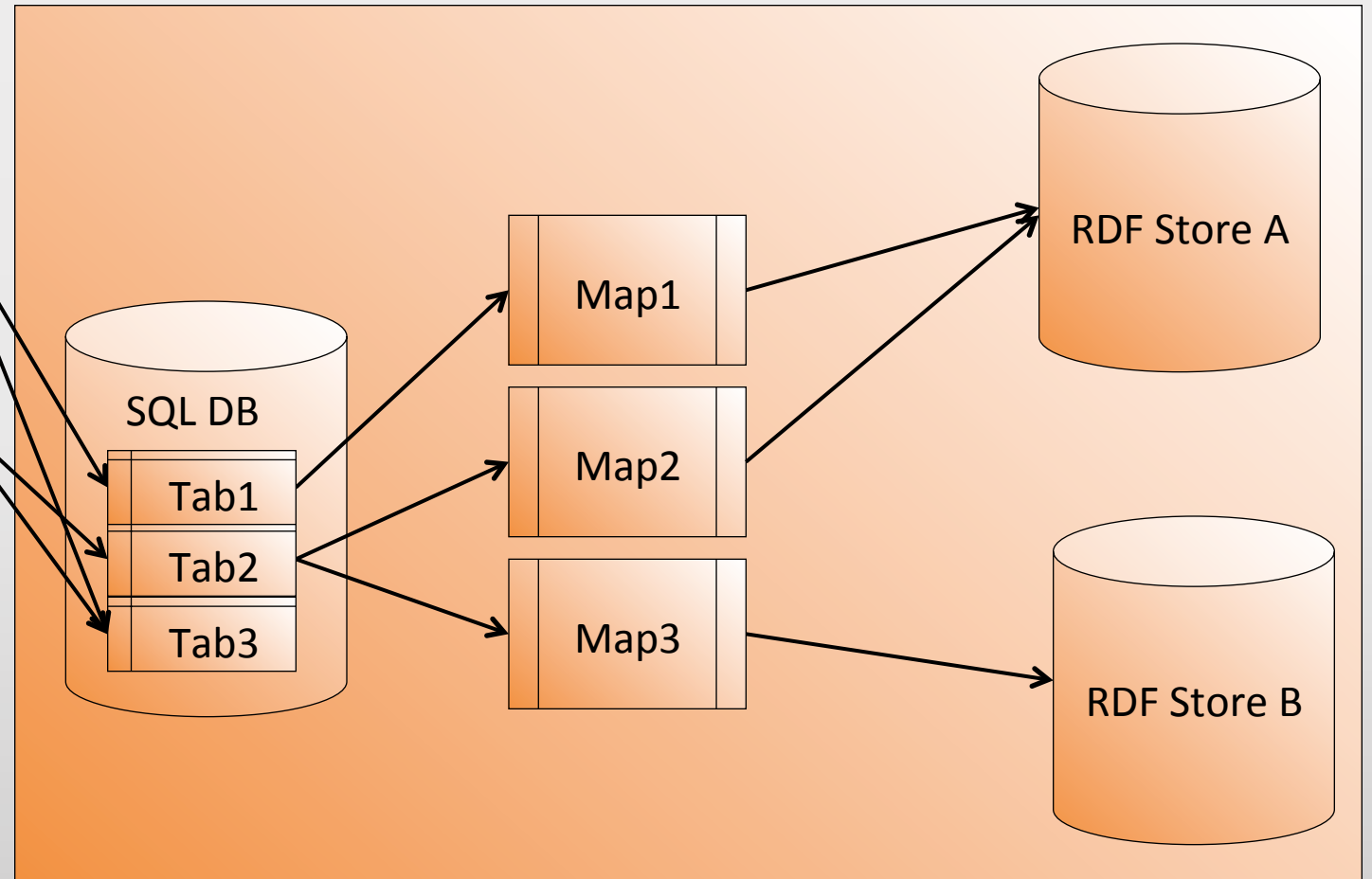


Support for **Process Mining**:

e.g. application logs are streamed into a Knowledge Graph.

Process Mining:

<http://oro.open.ac.uk/23397/1/TowardsSemanticProcessMiningTool-ECIS2008.pdf>



RDFLINK

- The nucleus of RDFLINK consists of SQL tables.
- Each table one of more RDF mapping in **TURTLE** can be defined.
- Each mapping sends RDF data into RDF stores.
- Mappings can be checked-in/out.

semweb Semantic Web Technologies · Records Management · Software Development · ICT Consulting · Project Management **Schulung @ Semweb LLC** **SQL*RDFLINK 1.6.0** Welcome Htwa! **Online consultant**

SQL*RDFLINK Version 1.6.0

silver: #Tables #MaxRs /Tariff starts /Tariff expires /Days left
Currently used: 0 0 /2017-09-15 21:32:41.0 /2017-11-15 20:32:41.0 /60
Percent used: 0% 0%
Limits: 10 50.000

Table(s) to be mapped

	Exec	Rev	RDF Map
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> APPL0G1	MAP	EDIT	
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> AUT15	MAP	EDIT	
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> SQLTABLEEXAMPLE	MAP	EDIT	

Data sections

(RE)MAP - ALL RECORDS

(RE)MAP 0 till 0 ☐ N ☐ M ☐ R ☐ G ☐

(RE)TEST

(STOP)

RDF Map

```
#####  
1 #  
2 # Define one or more map models for table "SQLTABLEEXAMPLE"  
3 #  
4 @prefix map_select: <http://swlde.org/selectfield#> .  
5 @prefix eval_intlit: <http://swlde.org/eval_intlit#> .  
6 @prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .  
7 @prefix swonto: <https://semweb.linkeddata.ch/ontology/> .  
8 @prefix eval_yearlit: <http://swlde.org/eval_yearlit#> .  
9 @prefix dc: <http://purl.org/dc/elements/1.1/> .  
10 @prefix eval_uri: <http://swlde.org/eval_uri#> .  
11 @prefix eval_textlit: <http://swlde.org/eval_textlit#> .  
12 @prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .  
13 @prefix map_tableid: <http://swlde.org/usetableid#> .  
14 @prefix owl: <http://www.w3.org/2002/07/owl#> .  
15 @prefix eval_datelit: <http://swlde.org/eval_datelit#> .  
16 @prefix swlde: <https://semweb.linkeddata.ch/example/> .  
17  
18  
19  
20 # Example Map for table "SQLTABLEEXAMPLE":  
21  
22 #####  
23 #  
24 # DEFINE FIRST MODEL FOR TABLE "SQLTABLEEXAMPLE":  
25 #  
26 swlde:SQLTABLEEXAMPLE rdf:type swlde:sqlrdfmap ;  
27 swlde:use_repository "http://ch.semweb.ch:7200/repositories/SWEXAMPLE";  
28 swlde:use_repository_update "http://ch.semweb.ch:7200/repositories/SWEXAMPLE/statements";  
29 swlde:use_repository_workbench "http://ch.semweb.ch:7200/sparql";  
30 swlde:repository_type "graphdb"; #choose between {blazegraph,graphdb}  
31 swlde:repository_authmethod "Basic"; #if needed  
32 swlde:repository_auth "swtest1:demo1"; #if needed  
33  
34 #####
```


RDFLINK

- Mappings are versioned at each check-in.
- Versions are comparable via mergely diff.
- Version processing allows to merge old modifications into the current version.

The screenshot displays the SQL*RDFLINK 1.6.0 web interface. The main header includes the 'semweb' logo, the version 'SQL*RDFLINK 1.6.0', and a 'Welcome Htwal' message. Below the header, there's a section for 'Table(s) to be mapped' with a table listing 'APPROG1', 'AUT15', and 'SQLTABLEEXAMPLE'. To the right of this table is a 'Exec Rev' column with icons for execution and revision. Below the table, there's a '(RE)MAP - ALL RECORDS' button and a '(STOP)' button. A modal window titled 'RDF Maps revision comparison' is open, showing a diff between 'Revision 2' and 'Revision 1'. The diff highlights changes in the RDF map definition for 'APPROG1', specifically in the 'DEFINE FIRST MODEL FOR TABLE "APPROG1"' section. The diff shows changes in the 'swide:use_repository' and 'swide:use_repository_update' properties.

Thank you!



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