Lars G. Svensson

Unified Access: A SemanticWeb Based Model for Subject Access in Heterogeneously Indexed Repositories
Patrons want to search for resources no matter how they are indexed.
We all know that it’s difficult to search across multiple vocabularies.

I’m looking for books about violas.
Through Google et al users have grown used to verbal search
Libraries must offer verbal search across multiple vocabularies

Altfiol

Bratsche

Viola

787.3

LR 11490a
Semantic web technologies offer the possibility to search using multiple interlinked datasets.
RDF offers a generic way to describe those datasets

"RDF offers a generic way [...]"

"application/vnd.ms-powerpoint"

"Unified Access: [...]"

"Lars G. Svensson"
With URIs we can link pre-defined datasets together

World-wide computer

http://purl.org/dc/terms/title

http://portal.acm.org/citation.cfm?id=253704&coll=GUIDE&dl=GUIDE&CFID=13991775&CFTOKEN=52899240&ret=1#Fulltext

http://purl.org/dc/terms/creator

http://www.w3.org/People/Berners-Lee/card#i
With Ontologies and SPARQL we can structure and query the datasets

- Dublin Core
- FOAF
- OWL
- SKOS
- GeoNames
- MusicOntology
- FRBR

```sql
SELECT ?x
WHERE {
  ?x dc:title "Unified Access: A SemanticWeb Based Model for Subject Access in Heterogeneously Indexed Repositories"
}
```
Through rules, reasoning and inferencing we can extract implicit knowledge.

Caesar, Gaius Iulius

http://d-nb.info/118518275

name

Brutus, Marcus Iunius

http://d-nb.info/118516361

name

sex

male

son

A father is a male person with at least one child
We built a prototype for subject search in ETDs
With DC and SKOS we modelled bibliographic and thesaurus data

“Kulturgut, das der Krieg erschuf”

dc:title

http://d-nb.info/97441428X

dc:creator

http://d-nb.info/114762708

dc:subject

http://d-nb.info/041375432

rdfs:type

skos:Subject

skos:prefLabel

“Saar-Lor-Lux”

skos:altLabel

“Grenzland Saarland-Lothringen-Luxemburg”

http://dewey.info/T2--4342

skos:semanticRelation
We used the CrissCross mappings to search DDC and SWD simultaneously.
We queried the graph with SPARQL and inferencing

“Landhaus <Villa>”

skos:altLabel

http://d-nb.info/040635325

“Villa”

skos:prefLabel

http://dewey.info/728.8

skos:broadMatch

http://d-nb.info/984538100

dc:title

“Saalbauten auf Pfalzen und Burgen im Reich der Staufer”

dc:subject
This model can be extended to convey generic library data

- Things
- People
- Places
- Documents

RDF
SemanticMarc and DDC Identifiers are a good start
Can libraries compete with general-purpose search engines?
It’s still difficult to perform subject search in heterogeneous repositories

I’ll see what I can do.
With SemanticWeb technologies we can query large datasets for semantically interlinked data
We can offer our patrons a high-quality library search
After all: Information is worthless without people

Source: Michael Porter (http://www.flickr.com/photos/libraryman/390354895)