On the way to a Holding Ontology
DINI KIM WG Holdings

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Cow path is paved

- More & more RDF data from libraries and related organizations
- Good guidelines (W3C LLD, Working Group Titles best practice guide, LLD Book)
- ..but no descriptions of holding
Why holdings?

⇒ Use cases

⇒ Final Report 25 October 2011 (W3C LLD Incubator Group)
⇒ Open Bibliographic Data Guide (JISC / UK RDTF)
Use case 1 & 2

The supply of records containing holdings data to a shared service
1. in order to support collection management.
2. in order to enhance discovery, location and delivery services.
Use case 3 & 4

3. Expose bibliographic data including holdings and potentially availability
   → that can be used to provide a closest copy location service.

4. Creating the opportunity for third parties
   → to develop local and wider services of value
   → some of which may potentially drive increased attention and traffic back to the library and its holdings.
Use case 5

5. Search engines having greater knowledge of institutional holdings
Working Group Holdings

- founded in April 2013
- Mailinglist dini-ag-kim-bestandsdaten@lists.dnb.de
- Wiki https://wiki.dnb.de/x/johZB
- GitHub
  https://github.com/organizations/dini-ag-kim/teams/448741
- Discussion in English
What are our goals?

☞ Best Practice Guide
   • how to publish holding data in RDF
   • reuse of existing vocabularies
   • examples and mappings based on existing data and formats (MARC, PICA)
Analysis of Standards/Formats related to holdings

- **Standards/Formats**
  - ISO 20775
  - ISO 18626 Interlibrary Loan Transactions
  - Holdings Statements for Bibliographic Items Z39.71-2006
  - MARC21 Holdings
  - ZETA
Analysis of Ontologies and Vocabularies related to holdings

**Ontologies/Vocabularies**
- Document Availability Information API (DAIA)
- Document Service Ontology (DSO)
- Simple Service Status Ontology (SSSO)
- Enumeration and Chronology of Periodicals Ontology (ECPO)
- Bibframe Holding Vocabulary
- ONIX-SOH Serials Online Holdings
- ONIX for Serials Coverage Statement
- Interlibrary loan code
- GLAM Item Ontology
- Library Holdings RDF Vocabulary
- Erlangen CRM
- DC Terms, FOAF, Good Relations etc.
What hinders you from contributing to the holdings group?

- Github is a hurdle
- Discussion level too high
- Within discussion I don't feel addressed
- Unprofessional group management
- Other reasons
- Working status unknown/unclear
- I intended to be a passive reader
- English is a hurdle

Votes

- 90 postings by 9 of 36 subscribers since April
And now?

You are welcome to contribute to the group!

via

http://lists.dnb.de/mailman/listinfo/dini-ag-kim-bestandsdaten

or

https://github.com/dini-ag-kim/holding-ontology

- is your data covered by the Holding Ontology?
  - provide RDF examples

https://github.com/dini-ag-kim/holding-ontology-examples
What kind of holding data?

Holding Ontology should enable to clearly answer:

1. What holdings does a library have?
2. What documents are included in or exemplified by a holding?
3. What can patrons do with a holding?
4. Where is a holding located?
5. What are unique properties of a holding?
6. What is a patron doing with a holding?

- Clarify fuzzy terms terms such as holding, document, copy, item, piece, copy, ...
Why create new RDF classes? Reuse existing ones!

**frbr:Item**  an exemplar/copy of a document  
(aka *holding*)

**bibo:Document** = **foaf:Document**  an abstract or concrete  
work which an frbr:Item is exemplar of

**foaf:Agent**  a person or organization  
(a library, a patron...)

**schema:Place** = **gr:Location**  a place or location  
(a library building, a floor, a stack...)

Why put everything in one ontology? Create micro-ontologies!

dso:DocumentService a service that includes a document (lending, accessing, copying. . . )

ssso:ServiceEvent a service that is also an event (e.g. lending of item X by patron Y during time Z)

ecpo:Chronology enumerations and chronology of a periodical or series (e.g. volume 5, issue 3 till now)

Here “a service that” refers to service:Service defined in the Service Ontology to describe services both abstract and concrete.
Micro-Ontologies (classes/properties/individuals)

- **Service Ontology** (4/8/0)
  http://dini-ag-kim.github.io/service-ontology/

- **Document Service Ontology (DSO)** (5/2/0)
  http://purl.org/ontology/dso

- **Simple Service Status Ontology (SSSO)** (8/2/0)
  http://purl.org/ontology/ssso

- **Holding Ontology** (0/10/0)
  http://dini-ag-kim.github.io/holding-ontology/

- **Enumeration and Chronology of Periodicals Ontology (ECPO)** (3/29/2)
  http://purl.org/ontology/ecpo

- **DAIA Ontology (DAIA)** (0/4/0)
  http://gbv.github.io/daiaspec

- **PAIA Ontology (PAIA)** (2/1/2)
  http://purl.org/ontology/paia
What kind of holding data? (1/2)

1. What holdings does a library have?
   - $library a foaf:Agent ;
     holding:holds [ a frbr:Item ] .
   - *This alone does not imply services (see 3.)*

2. What documents are included/exemplified by a holding?
   - $holding a frbr:Item;
   - $holding a frbr:Item;
     ecpo:hasChronology [ a ecpo:Chronology ].
   - Part/whole relationships:
     dcterms:hasPart, holding:narrowerExemplar...

3. What can patrons do with a holding?
   Services and Offerings that include holding items
   (daia:availableFor, service:providedBy... )
What kind of holding data? (1/2)

4. Where is a holding located?
   - $holding a frbr:Item ;
     schema:location $place ;
     holding:inCollection $col .
   - $o a schema:Offer ;
     gr:includesObject $holding ;
     schema:availableAtOrFrom $place .
   - ...

5. What are unique properties of a holding?
   holding:label (aka call number, shelf mark...)

6. What is a patron doing with a holding?
   holdings currently on loan or reserved expressible with
   PAIA ontology and Simple Service Status Ontology.
Summary

The holding ontology combines

- existing ontologies (BibO, FOAF, GoodRelations, Schema.org)
- new micro-ontologies (DSO, SSSO, ECPO, DAIA, Service)
- and a couple of holding ontology properties

to all RDF terms required to describe holding information.

*work in progress, feedback welcome!*

https://github.com/dini-ag-kim/holding-ontology