

On the Way to a Holding Ontology

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Holding ontology

Main purpose of a (holding) ontology:

- ▶ *clarify confusion by agreement on concepts*

Confusion about terms such as

- ▶ “holding”
- ▶ “document”
- ▶ “copy”
- ▶ “item”
- ▶ “piece”
- ▶ “copy”
- ▶ ... ?

What kind of holding data?

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?

Core Concepts (1/2)

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...)

Core Concepts (2/2)

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. the lending
of item X by patron Y during time Z)

ecpo:Chronology enumerations and chronology of a periodical or
series

Here “a service that” refers to **service:Service** defined in the
Service Ontology to describe services both abstract and as event.

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 does not imply services (see 3.)!*

2. What documents are included/exemplified by a holding?

- ▶ `$holding a frbr:Item;`
`holding:exemplar [a bibo:Document] .`
- ▶ `$holding a frbr:Item;`
`ecpo:hasChronolgy [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>