

Chapter 3. Schemas - Structure and Semantics

Exercises

Developing a Metadata Element Set (a multi-part project)

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version (PDF)

General instruction: This exercise is designed with the intent of having individuals collaborate by working together in groups. All group work should be conducted after the related section in this chapter is both taught and studied.

Download work template (PDF file) (~~Older version~~)

A "collection" of works should be identified by the instructor or students. An example would be a collection of unused postcards or bookmarks made of different materials, sizes, shapes, and published in different languages, places, and times for different purposes. Treat the items of the collection as the resource, i.e., the postcards themselves, and not the images on the postcards.

Group Work I

Group Work I. Decision for metadata elements

Step 1. Communicating about the functional requirements

Ask questions: What do we want to do with this collection?

-- E.g., be able to: search by, browse by, sort by, link to, etc.

Step 2. Design a domain model

Ask questions: What kinds of things (entities) our metadata will describe?

-- E.g., bibliographic resources, topics of the publications, responsible bodies, etc.

- Consult: Scholarly Works Application Profile (SWAP)

Eprint Model

<http://www.ukoln.ac.uk/repositories/digirep/index/Model>

Step 3. Identify desired metadata elements for the collection. List in a table (use the template) all of the following:

1. Desired Element
2. Explanation and Description of the Element
(This will be the element definition and will be included in the final schema.)
3. Example
(The examples may be included in the best practice guide, either in the schema or in a separate guide.)
4. Implementation—M, O, R

(Mandatory /Optional? Repeatable?)

Group Work II

Group Work II. Decision for value spaces: content and value specifications, vocabularies.

Step 4. Consider the requirements for values associated with each element. List in the table all of the following:

1. Element Name
(The element defined by the last task)
2. Value controlled?
(Yes, No, and How)
3. Values
(a pre-defined list of terms, name of an existing scheme, or rules)

Group Work III

Group Work III. Find existing elements and re-use them in an Application Profile

Step 5. Assume your own namespace (e.g., "*ksu*" or any other word).

Select the namespace you want to reuse (e.g., *dc*., *dct*., or *vra*.).

List in a table all of the following:

1. Element Name
(The element defined by the last task)
2. Matched SCHEMA A Element and Qualifier
(Schema A is the preliminary source schema, e.g., *vra.agent*)
3. Matched SCHEMA B Element and Qualifier
(Schema B is the secondary source schema, e.g., *dc.languauge*)
4. Unmatched Element
(This element will be claimed under *ksu* Namespace, e.g., *ksu.collectionType*)

References:

- For the selection of elements from different standards, consult the AVEL METADATA ELEMENT LIST:
<http://avel.library.uq.edu.au/technical.html>
- For the presentation format of your application profile, consult: the DC Government Application Profile:
<http://dublincore.org/documents/2001/09/17/gov-application-profile/>
or:
Scholarly Works Application Profile (SWAP)
http://www.ukoln.ac.uk/repositories/digirep/index/Scholarly_Works_Application_Profile
- For the presentation of an application profile based on an existing application profile, consult the National Library of Medicine (NLM) Metadata Schema:
<http://www.nlm.nih.gov/tsd/cataloging/metafilenew.html>

Group Work IV

Group Work IV. Create crosswalks

Step 6. Mapping and crosswalking

1. Create a crosswalk by mapping your element set to another group's element set.
2. Create crosswalks using the new element set just created as the source schema, mapping it to another schema, e.g., MODS, DC, Schema.org.

Examples:

http://www.getty.edu/research/publications/electronic_publications/intrometadata/crosswalks.h

<http://aims.fao.org/lode/bd-2/schema-org-crosswalk>

Group Work V

Group Work V. Write a specification for the complete element set.

Step 7. Follow the examples of specifications from the original element sets; write your specification for the element set for postcards

- Examples of original element sets:
DC: <http://dublincore.org/documents/dces/>
- Examples of original Application Profiles:
NLM: <http://www.nlm.nih.gov/tsd/cataloging/metafilenew.html>
- Scholarly Works Application Profile (SWAP)
http://www.ukoln.ac.uk/repositories/digirep/index/Eprints_Application_Profile#Scholarly_Works_Application_Profile

Step 8. Prepare guidelines for use.

- Consult: Using Dublin Core
<http://dublincore.org/documents/usageguide/>
- http://wiki.dublincore.org/index.php/User_Guide
 - Creating Metadata | Publishing Metadata