RDA vocabularies and concepts

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Overview

✧ History (when)
✧ Progress (what)
✧ Technology (how)
✧ Future
RDA and ONIX

✧ ONIX (Online Information Exchange)
  ✧ Publishing industry metadata standard
✧ 2 day workshop, March 2006, British Library, London
  ✧ RDA Editor, ONIX reps, facilitator
  ✧ Followed up via email and tele-con
✧ RDA/ONIX framework for resource categorization, August 2006
  ✧ Distinguishes content from carrier (at last!)
✧ Intention to extend framework
  ✧ Status: Resources permitting
RDA and DCMI

✧ DCMI (Dublin Core Metadata Initiative)
✧ 2 day meeting, April/May 2007, British Library, London
  ✧ RDA Editor, reps for RDA, DCMI and related Semantic Web communities
  ✧ Established the DCMI RDA Task Group
  ✧ Operates via wiki, email, tele-con, meetings at DC annual conferences
  ✧ Charter: To define components of the draft standard "RDA - Resource Description and Access" as an RDF vocabulary for use in developing a Dublin Core application profile.
  ✧ Status: Ongoing
RDA and FRBR

✧ FRBR Review Group, August 2007, WLIC (IFLA), Durban, South Africa
✧ New project: To define appropriate namespaces for FRBR (entity-relationship) in RDF and other appropriate syntaxes
   ✧ Status: Report and recommendations to be discussed at WLIC, Québec City, Canada (next week)
✧ FRBR recently extended to Object-oriented FRBR (FRBRRoo)
   ✧ Based on CIDOC Conceptual Reference Model (CRM)
RDA/ONIX framework

✧ An ontology developed by RDA and the publishing community to improve metadata interoperability
✧ Set of low-level attributes for describing the content and carrier of a bibliographic resource
✧ Controlled vocabularies for some attributes
✧ Attributes combined to form high-level content and carrier types for RDA
RDA/ONIX framework example

✧ RDA content type “spoken word”
  ✧ High-level label for a framework base content category

✧ Base category attributes
  ✧ Character: Language
  ✧ SensoryMode: Hearing
  ✧ ImageDimensionality: not applicable
  ✧ ImageMovement: not applicable

✧ User: what resources have content I can listen to?
  ✧ = OPAC: what content types have SensoryMode: Hearing?
    ✧ (“Spoken word”; “Performed music”; etc.)
  ✧ then OPAC: list bib records with these content types!
Another framework example

✧ **RDA carrier type “film reel”**
  ✧ High-level label for a framework *base carrier category*

✧ **Base category attributes**
  ✧ StorageMediumFormat: roll
  ✧ HousingFormat: reel
  ✧ IntermediationTool: projector

✧ **RDA media type “projected”**
  ✧ Based on IntermediationTool
    ✧ Therefore technically redundant
RDA vocabularies in RDF

✦ RDF: Resource description framework
  ✦ World-Wide Web Consortium (W3C) standard
  ✦ Basic building block of the Semantic Web

✦ Two types of RDA vocabulary in development by DCMI/RDA
  ✦ RDA metadata entities (elements, attributes)
    ✦ E.g. “Title”, “Content type”
    ✦ Represented as an RDF Schema (W3C)
  ✦ RDA value vocabularies (terms)
    ✦ E.g. “spoken word”, “microform” (media type)
    ✦ Represented in Simple Knowledge Organization System (SKOS) (W3C) using RDF
Semantic Web foundations

- **RDF**
  - Statements about Web resources in the form of subject-predicate-object expressions, called triples
  - E.g. “This presentation” – “has creator” – “Gordon Dunsire”

- **RDF Schema**
  - Vocabulary description language of RDF

- **SKOS**
  - Expresses the basic structure and content of concept schemes such as thesauri and other types of controlled vocabularies
  - An RDF application

- **OWL (Web Ontology Language)**
  - Explicitly represents the meaning of terms in vocabularies and the relationships between them
Semantic Web building blocks

✧ Each component of an RDF statement (triple) is a “resource”
✧ RDF is about making machine-processable statements, requiring
  ✧ A machine-processable language for representing RDF statements
    ✧ Extensible Markup Language (XML) ✓
  ✧ A system of machine-processable identifiers for resources (subjects, predicates, objects)
    ✧ Uniform Resource Identifier (URI) ✓
  ✧ For full machine-processing, an RDF statement is a set of three URIs
Identifiers

✧ Things requiring identification:
  ✧ Object “This presentation”
    ✧ e.g. its electronic location (URL):
      ✧ http://cdlr.strath.ac.uk/pubs/dunsireg/QuebecRDA.pps
  ✧ Predicate “has creator”
    ✧ e.g. http://purl.org/dc/terms/creator
  ✧ Object “Gordon Dunsire”
    ✧ e.g. URI of entry in Library of Congress Name Authority File (real soon now?)

✧ Declaring vocabularies/values in SKOS and OWL provides URIs
  ✧ Without such identifiers, the Web will never become Semantic
RDA RDF vocabularies

- Being added to the National Science Digital Library metadata registry
  - Stored in a database
  - Output as RDF(S)/SKOS
  - Automatic creation of a URI for each entry

- Base domain: http://RDVocab.info
  - First part of every RDA vocabulary URI
  - Identifies the “namespace” or collection/set of terms
DCMI/RDA progress

✧ 246 RDA elements
  ✧ http://metadataregistry.org/schema/show/id/1.html

✧ Carrier vocabularies
  ✧ Media type (8 entries)
  ✧ Font size (2)
  ✧ Reduction ratio (5)
  ✧ Etc.

✧ All provisional
  ✧ Awaiting final draft of RDA for terms, definitions, scope, etc.
RDA RDF vocabulary example (fake)

<?xml version="1.0" encoding="UTF-8"?>
<rdf:RDF
    xmlns="http://www.w3.org/2004/02/skos/core#"
    xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
    xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
    xmlns:skos="http://www.w3.org/2004/02/skos/core#"
    xmlns:dc="http://purl.org/dc/elements/1.1"/>
<!-- WARNING: This is a single-concept fragment -->
<!-- Scheme: RDA Content Type -->
<skos:ConceptScheme rdf:about="http://RDVocab.info/termList/RDACContentType">
  <dc:title>RDA Content Type</dc:title>
</skos:ConceptScheme>
<!-- Concept: spoken word -->
<skos:Concept rdf:about="http://RDVocab.info/termList/RDACContentType/1001">
  <skos:inScheme rdf:resource="http://RDVocab.info/termList/RDACContentType"/>
  <skos:prefLabel>spoken word</skos:prefLabel>
  <skos:definition>Content expressed through language in an audible form.
  Includes recorded readings, recitations, speeches, etc., computer-generated speech, etc.</skos:definition>
</skos:Concept>
</rdf:RDF>
RDA content type “spoken word”

The term “spoken word” can be referenced as the value of the field “content type” in any metadata record using RDF/XML (Semantic Web):

```xml
... xmlns:rdvct=
http://RDLVocab.info/termList/RDAContentype”
...
<... rdvct:1001 ...
...>
...

The field/attribute/element “content type” can be referenced in a similar way to the RDF Schema for RDA elements being developed by DCMI/RDA
Database/format scenarios

Author: Lee, T. B.
Title: Cataloguing has a future
Content type: Spoken word
Carrier type: Audio disc
Subject: Metadata
Provenance: Donated by the author

Name authority record
Name: Lee, T. B.
Biography: ...
Label: ...
Definition: ...

Subject authority record
Label: ...
Definition: ...

RDA content type record
Label: Spoken word
Definition: ...

ONIX
Linking communities

- ONIX ↔ RDA
- FRBR ← FRBRoo
- FRBR ← RDA
- CRM ← FRBRoo
- DC ← RDA
- FRBR ← ISBD
- MARC ← RDA
Everything is connected

... at the community (human) and technical (Semantic Web) levels
Thank you

✧ Another identifier:
  ✧ g.dunsire@strath.ac.uk

✧ See the handout for acronyms and links …