Title: Usage Board meeting - Barcelona - 16-17 March 2007
Identifier: http://stage.dublincore.org/usage/meetings/2007/03/barcelona/html/index.html
Source: http://stage.dublincore.org/usage/meetings/2007/03/barcelona/index.txt
Directory: http://stage.dublincore.org/usage/meetings/2007/03/barcelona/
Created: 2007-03-13

Friday, 16 March 10:00-14:00, 15:00-19:00

-- Outstanding actions (Tom)
http://stage.dublincore.org/usage/meetings/2007/03/barcelona/2007-03-12.outstanding-actions.txt

-- Domains and Ranges (Andy)

-- Summary of issues raised in Public Comment (Andy)
http://stage.dublincore.org/usage/meetings/2007/03/barcelona/domain-range-comments.txt

-- Proposed Vocabulary of Domains and Ranges
http://dublincore.org/documents/2007/02/05/domain-range/

-- Digest of postings about range during Public Comment
http://stage.dublincore.org/usage/meetings/2007/03/barcelona/2007-02-26.ranges-digest.txt

-- DCTERMS definitions and comments (Tom)

-- Proposal for changes to DCTERMS
http://stage.dublincore.org/usage/meetings/2007/03/barcelona/DCTermsChanges.pdf

-- Undeclared legacy DCTERMS classes
http://stage.dublincore.org/usage/meetings/2007/03/barcelona/SubjectScheme.txt

-- Term type of existing encoding schemes
http://stage.dublincore.org/usage/meetings/2007/03/barcelona/Encoding-schemes.txt

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Saturday, 17 March 10:00-14:00, 15:00-18:00

-- DCMES finalization (Akira)

-- Topic page
http://stage.dublincore.org/usage/meetings/2007/03/barcelona/Topic-nisoballot.txt

-- Summary of NISO ballot comments
http://stage.dublincore.org/usage/meetings/2007/03/barcelona/Z39-85_Ballot_comment_responses.pdf

-- Collection Description Application Profile (Joe)

-- Topic page
http://stage.dublincore.org/usage/meetings/2007/03/barcelona/Topic-cdap.txt

-- Revised CDAP
see separate meeting packet 2007-03-17.barcelona-cdap.pdf

-- Usage Board feedback, December 2006
http://stage.dublincore.org/usage/meetings/2007/03/barcelona/CdapFeedback.pdf

-- Table showing response to feedback
http://stage.dublincore.org/usage/meetings/2007/03/barcelona/ComparisonRubric.pdf

-- Usage Board review - draft
http://stage.dublincore.org/usage/meetings/2007/03/barcelona/CdapReview.pdf

-- Review of Application Profiles

-- DCAM Profile Model (Andy, Tom)
Report and discussion on formal model for Application Profiles under
discussion as an extension of DCAM

-- Review guidelines (Stuart)

http://stage.dublincore.org/usage/meetings/2007/03/barcelona/ProfileReviewCriteria.pdf

-- Registration of application profiles - NSDL approach (Diane)

-- Usage Board process

-- Current process document
http://dublincore.org/usage/documents/process/

-- Notes from Stuart
http://stage.dublincore.org/usage/meetings/2007/03/barcelona/Process_Doc_Revisions.txt

-- Proposal from Makx
http://stage.dublincore.org/usage/meetings/2007/03/barcelona/2007-02-14.dcdir-process-makx.txt

-- Work Plan
http://stage.dublincore.org/usage/meetings/2007/03/barcelona/FrontPage.pdf

-- RDA (Diane)

-- Discussion paper by Diane et al
http://stage.dublincore.org/usage/meetings/2007/03/barcelona/Framework_20070311.pdf

-- AOB

-- Next meeting: Sat-Sun 25-26 August 2007 in Singapore

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2007-03-13 Outstanding actions from Manzanillo and various telecons

ACTION 2006-10-01: Tom to replace the Principles document at http://dublincore.org/usage/documents/principles/ with a page that copies the definitions of elements etc from DCAM and includes a short text stating: that the document which used to live here has been superseded by the DCAM. Update UB page to say we do things in light of the DCAM.

ACTION 2006-10-01: Tom to look through DCMI site and note those pages where a reference to the principles document needs to be changed to a reference to the DCAM as appropriate.

2007-03-12 Subject: Range issue (Andy)

Feedback during the comment period about the DCAM and our proposed assignment of ranges to properties in the DCTERMS namepsace has highlighted the issue that it is problematic in RDF (most notably in OWL DL) for properties to have a range that allows both literals and non-literals as values.

In short, it is important in the context of RDF for us to be clear about whether a property has a 'string' or a 'thing' as a value. (Note that the use of 'thing' here includes physical, digital and conceptual things).

A case in point is dcterms:description, for which we've proposed a range of rdf:Resource. This range allows dcterms:description to be used with a value that is a literal (a textual abstract for example) and a non-literal (a thumbnail image for example). Ditto for dcterms:title.

In discussion between Andy, Mikael, Pete and Tom we agreed that it would be sensible to revise our proposed assignments of ranges to make it absolutely clear whether the value is a string or a thing.

Therefore, when we discuss this issue in Barcelona, we need to run through each of the properties in the DCTERMS namespace (including the new 15 properties) and decide:

1) whether the value is a thing or a string

2) whether we want to narrow the range of the property further by using a subclass of 'thing' or 'string'

It may be there there are a few problematic cases (such as dcterms:description above) where the wording of our definitions is such that we really do allow both things and strings as values, in which case we will need to adopt an alternative approach, such as defining two properties, one with a string as the range and one with a thing as the range. I would hope that there will not be many such cases!

In the context of this dicussion the rdf:Resource and owl:Thing classes may be of use to us.

http://www.w3.org/2000/01/rdf-schema#Resource

http://www.w3.org/2002/07/owl#Thing

It is also worth noting that this discussion is premised on the notion that OWL-DL compatability, i.e. clearly separating values as strings from values as things, is a good idea. However, recent discussion on one of the semantic Web mailing lists seems to imply that this issue is not clear cut, even within the SW community.

> So, this means that if one queries for the the skos:prefLabel of a concept, one either gets a literal or a resource with a label equal to this literal. This prevents the use of construction rules and keeps the SKOS vocabulary simple. The only extension to the current SKOS vocabulary would a a class skos:Term. [1]

[1] http://lists.w3.org/Archives/Public/public-swd-wg/2007Mar/0004

This is essentially an architectural issue. We can usefully have a discussion about semantics in Barcelona, and doing so will help clarify our own understanding of how our properties should be used. But there may have to be a separate architectural discussion (on dc-architecture or elsewhere) about whether DCMI should aim for OWL-DL compatability or not.

Domains and Ranges for DCMI Properties

Creator: Andy Powell
Eduserv Foundation, UK

Date Issued: 2007-02-05
Identifier: http://dublincore.org/documents/2007/02/05/domain-range/
Replaces: Not applicable
Is Replaced By: Not applicable
Latest Version: http://dublincore.org/documents/domain-range/

Description of Document: This document describes a set of classes and specifies how those classes are used as domains and ranges of DCMI properties.

Table of contents

1. Introduction

This document uses the terminology of the DCMI Abstract Model [DCAM]. The relationship types with which this document is principally concerned are described by the DCAM as follows:

- Each *property* may be related to one or more *classes* by a *has domain* relationship. Where it is stated that a *property* has such a relationship with a *class* and a *described resource* is related to a *value* by that *property*, it follows that the *described resource* is an instance of that *class*.
- Each *property* may be related to one or more *classes* by a *has range* relationship. Where it is stated that a *property* has such a relationship with a *class* and a *described resource* is related to a *value* by that *property*, it follows that the *value* is an instance of that *class*.

In practice, this means that the *domain* indicates the *class* of *resources* that the *property* should be used to describe, while the *range* indicates the *class* of *resources* that should be used as *values* for that *property*.

The DCAM relationship types *has domain* and *has range* are the same as the RDF Schema [RDFS] properties, `rdfs:range` and `rdfs:domain`.

2. Classes

This section describes a set of *classes* that are needed in order to describe *has domain* and *has range* relationships for DCMI *properties*.

The relationships between the classes are summarized in the UML class diagram in Figure 1:

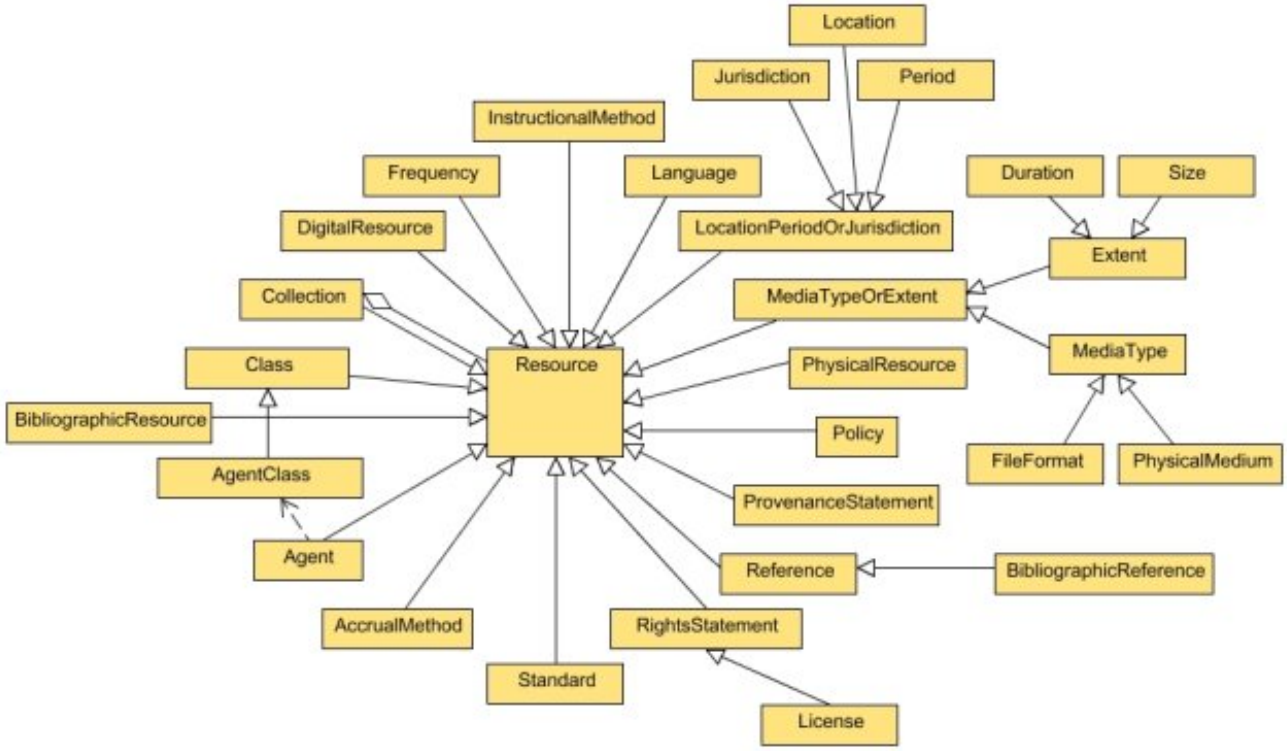

Figure 1 - the Classes

The relationships between the classes associated with the Format property and its subproperties are particularly complex and are shown in more detail in Figure 2:

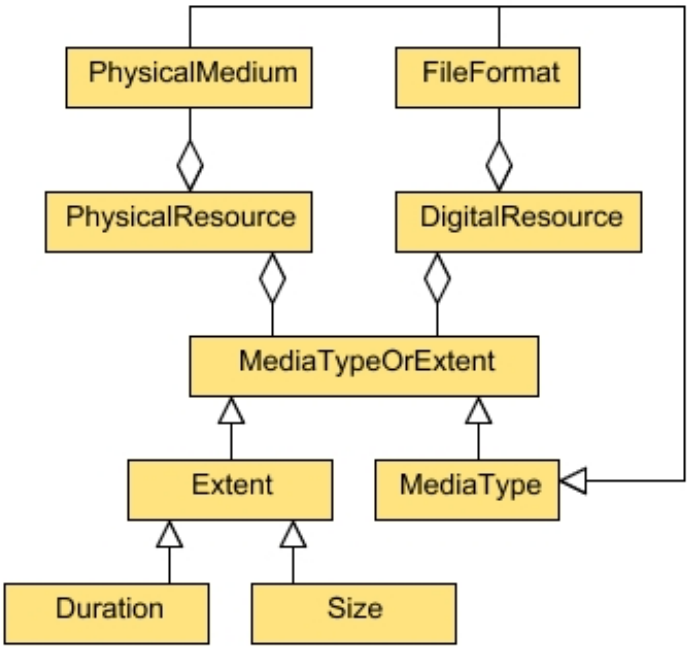

Figure 2 - the Classes associated with the Format property

2.1. Existing Classes Referenced in this Document

The terms described in this section are **existing** *classes* that have already been assigned URIs owned by DCMI or by other agencies, and for which term declarations are already made available by their owners. **No changes** to those term declarations are required or proposed.

Term Name: Resource	
URI:	http://www.w3.org/2000/01/rdf-schema#Resource [rdfs:Resource]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Resource

Term Name: Class	
URI:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Class

Term Name: Collection	
URI:	http://purl.org/dc/dcmitype/Collection [dcmitype:Collection]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Collection

2.2. Proposed Classes

The terms described in this section are **new** *classes* that are to be assigned URIs owned by DCMI, and for which **new** term declarations will be made available. Those **new** term declarations are summarized in this section.

The final decision on the form of the URI, i.e. on the DCMI namespace to be used for these DCMI term URIs, is still to be taken by the DCMI Usage Board, so the terms are described here with temporary example.org URIs.

Term Name: AccrualMethod	
URI:	http://example.org/dc/terms/AccrualMethod [ex:AccrualMethod]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Accrual Method
Definition:	A method by which resources are added to a collection.

Term Name: Agent	
URI:	http://example.org/dc/terms/Agent [ex:Agent]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Agent
Definition:	A resource that acts or has the power to act.
Comment:	Examples of an agent include a person, organization or software agent.
Instance Of:	http://example.org/dc/terms/AgentClass [ex:AgentClass]

Term Name: AgentClass	
URI:	http://example.org/dc/terms/AgentClass [ex:AgentClass]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Agent Class
Definition:	A class of agents.
Comment:	Examples of an agent class include students, women, charities, lecturers.
Sub-Class Of:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]

Term Name: BibliographicResource	
URI:	http://example.org/dc/terms/BibliographicResource [ex:BibliographicResource]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Bibliographic Resource
Definition:	A book, article or other published resource.

Term Name: BibliographicReference

URI:	http://example.org/dc/terms/BibliographicReference [ex:BibliographicReference]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Bibliographic Reference
Definition:	Information which identifies a bibliographic resource.

Term Name: DigitalResource	
URI:	http://example.org/dc/terms/DigitalResource [ex:DigitalResource]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Digital Resource
Definition:	Something that is stored or transmitted as a sequence of discrete symbols from a finite set, usually binary data, represented using electronic or electromagnetic signals.

Term Name: Duration	
URI:	http://example.org/dc/terms/Duration [ex:Duration]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Duration
Definition:	The time taken to view, play, execute, or interact with a digital resource or physical resource.
Comment:	For example, a duration might be a period in hours, minutes and seconds.
Sub-Class Of:	http://example.org/dc/terms/Extent [ex:Extent]

Term Name: Extent	
URI:	http://example.org/dc/terms/Extent [ex:Extent]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Extent
Definition:	A size or duration.
Sub-Class Of:	http://example.org/dc/terms/MediaTypeOrExtent [ex:MediaTypeOrExtent]

Term Name: FileFormat	
URI:	http://example.org/dc/terms/FileFormat [ex:FileFormat]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	File Format
Definition:	A digital resource format.
Comment:	Examples include the formats defined by the the list of Internet Media Types.
Sub-Class Of:	http://example.org/dc/terms/MediaType [ex:MediaType]

Term Name: Frequency	
URI:	http://example.org/dc/terms/Frequency [ex:Frequency]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Frequency
Definition:	A rate at which something recurs.

Term Name: InstructionalMethod	
URI:	http://example.org/dc/terms/InstructionalMethod [ex:InstructionalMethod]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Instructional Method
Definition:	A process that is used to engender knowledge, attitudes and skills.

Term Name: Jurisdiction	
URI:	http://example.org/dc/terms/Jurisdiction [ex:Jurisdiction]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Jurisdiction
Definition:	The extent or range of judicial, law enforcement, or other authority.

Sub-Class Of:	http://example.org/dc/terms/LocationPeriodOrJurisdiction [ex:LocationPeriodOrJurisdiction]

Term Name: Language	
URI:	http://example.org/dc/terms/Language [ex:Language]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Language
Definition:	A human language.

Term Name: License	
URI:	http://example.org/dc/terms/License [ex:License]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	License
Definition:	A legal document giving official permission to do something with a Resource.
Sub-Class Of:	http://example.org/dc/terms/RightsStatement [ex:RightsStatement]

Term Name: Location	
URI:	http://example.org/dc/terms/Location [ex:Location]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Location
Definition:	A place or geographical region.
Sub-Class Of:	http://example.org/dc/terms/LocationPeriodOrJurisdiction [ex:LocationPeriodOrJurisdiction]

Term Name: LocationPeriodOrJurisdiction	
URI:	http://example.org/dc/terms/LocationPeriodOrJurisdiction [ex:LocationPeriodOrJurisdiction]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Location, Period or Jurisdiction
Definition:	A location, period or jurisdiction.

Term Name: MediaType	
URI:	http://example.org/dc/terms/MediaType [ex:MediaType]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Media Type
Definition:	A file format or physical medium.
Sub-Class Of:	http://example.org/dc/terms/MediaTypeOrExtent [ex:MediaTypeOrExtent]

Term Name: MediaTypeOrExtent	
URI:	http://example.org/dc/terms/MediaTypeOrExtent [ex:MediaTypeOrExtent]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Media Type or Extent
Definition:	A media type or extent.

Term Name: Period	
URI:	http://example.org/dc/terms/Period [ex:Period]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Period
Definition:	A date or date range.
Sub-Class Of:	http://example.org/dc/terms/LocationPeriodOrJurisdiction [ex:LocationPeriodOrJurisdiction]

Term Name: PhysicalMedium	
URI:	http://example.org/dc/terms/PhysicalMedium [ex:PhysicalMedium]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]

Label:	Physical Medium
Definition:	A material or physical carrier of a physical resource.
Comment:	Examples include paper, canvas, etc.
Sub-Class Of:	http://example.org/dc/terms/MediaType [ex:MediaType]

Term Name: PhysicalResource	
URI:	http://example.org/dc/terms/PhysicalResource [ex:PhysicalResource]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Physical Resource
Definition:	A material thing.

Term Name: Policy	
URI:	http://example.org/dc/terms/Policy [ex:Policy]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Policy
Definition:	A plan or course of action, as of a government, political party, or business, intended to influence and determine decisions, actions, and other matters.

Term Name: ProvenanceStatement	
URI:	http://example.org/dc/terms/ProvenanceStatement [ex:ProvenanceStatement]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Provenance Statement
Definition:	A statement of any changes in ownership and custody of a resource since its creation that are significant for its authenticity, integrity and interpretation.

Term Name: Reference	
URI:	http://example.org/dc/terms/Reference [ex:Reference]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Reference
Definition:	A Resource identifier that is unambiguous in a given context.
Comment:	Examples include URIs.

Term Name: RightsStatement	
URI:	http://example.org/dc/terms/RightsStatement [ex:RightsStatement]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Rights Statement
Definition:	A statement about the intellectual property rights (IPR) held in or over a Resource, or a statement about access rights.

Term Name: Size	
URI:	http://example.org/dc/terms/Size [ex:Size]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Definition:	The size of a digital resource or physical resource.
Comment:	For example, a size might be a number of pages or a specification of length, width and breadth.
Sub-Class Of:	http://example.org/dc/terms/Extent [ex:Extent]

Term Name: Standard	
URI:	http://example.org/dc/terms/Standard [ex:Standard]
Type of Term:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]
Label:	Standard
Definition:	A basis for comparison; a reference point against which other things can be evaluated.

3. Domain and Range assertions for DCMI Properties

This section summarizes the assertions to be made for *has domain* and *has range* relationships for existing DCMI properties.

3.1. Properties of the Dublin Core Metadata Element Set, Version 1.1.

The terms described in this section are **existing** *properties* that have already been assigned URIs owned by DCMI, and for which term declarations are already made available by DCMI. **No changes** to those term declarations are required or proposed. No assertions of *has domain* or *has range* relationships will be made for the properties of the Dublin Core Metadata Element Set, Version 1.1. (This is equivalent to saying that for each of these properties there exists a *has domain* relationship with the class rdfs:Resource and a *has range* relationship with the class rdfs:Resource.)

Term Name: contributor	
URI:	http://purl.org/dc/elements/1.1/contributor [dc:contributor]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]

Term Name: coverage	
URI:	http://purl.org/dc/elements/1.1/coverage [dc:coverage]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]

Term Name: creator	
URI:	http://purl.org/dc/elements/1.1/creator [dc:creator]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]

Term Name: date	
URI:	http://purl.org/dc/elements/1.1/date [dc:date]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]

Term Name: description	
URI:	http://purl.org/dc/elements/1.1/description [dc:description]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]

Term Name: format	
URI:	http://purl.org/dc/elements/1.1/format [dc:format]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]

Term Name: identifier	
URI:	http://purl.org/dc/elements/1.1/identifier [dc:identifier]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]

Term Name: language	
URI:	http://purl.org/dc/elements/1.1/language [dc:language]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]

Term Name: publisher	
URI:	http://purl.org/dc/elements/1.1/publisher [dc:publisher]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]

Term Name: relation	
URI:	http://purl.org/dc/elements/1.1/relation [dc:relation]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]

Term Name: rights	
URI:	http://purl.org/dc/elements/1.1/rights [dc:rights]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]

Term Name: source	
URI:	http://purl.org/dc/elements/1.1/source [dc:source]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]

Term Name: subject	
URI:	http://purl.org/dc/elements/1.1/subject [dc:subject]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]

Term Name: title	
URI:	http://purl.org/dc/elements/1.1/title [dc:title]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]

Term Name: type	
URI:	http://purl.org/dc/elements/1.1/type [dc:type]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]

3.2. Domain and Range assertions for the proposed new Properties of the Dublin Core Terms.

The terms described in this section are **new** *properties* that are to be assigned URIs owned by DCMI, and for which **new** term declarations will be made available. Those **new** term declarations are summarized in this section. Those term declarations include:

- assertions of *sub-property of* relationships with other existing *properties*, and
- assertions of *has domain* and/or *has range* relationships with one or more of the *classes* specified above

The human-readable label, definition, comment etc for these new *properties* will be the same as for the corresponding existing *property* of the Dulin Core Metadata Element Set, Version 1.1.

Note: for completeness, the tables below include *has domain* and/or *has range* relationships with the class rdfs:Resource (italicised in the tables). Such a relationship is implicit even in the absence of an explicit *has domain* or *has range* assertion, so those assertions will not be present in the term declarations.

Term Name: contributor	
URI:	http://purl.org/dc/terms/contributor [dcterms:contributor]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/elements/1.1/contributor [dc:contributor]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/Agent [ex:Agent]

Term Name: coverage	
URI:	http://purl.org/dc/terms/coverage [dcterms:coverage]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/elements/1.1/coverage [dc:coverage]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/LocationPeriodOrJurisdiction [ex:LocationPeriodOrJurisdiction]

Term Name: creator	
URI:	http://purl.org/dc/terms/creator [dcterms:creator]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/elements/1.1/creator [dc:creator]

Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/Agent [ex:Agent]

Term Name: date	
URI:	http://purl.org/dc/terms/date [dcterms:date]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/elements/1.1/date [dc:date]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/Period [ex:Period]

Term Name: description	
URI:	http://purl.org/dc/terms/description [dcterms:description]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/elements/1.1/description [dc:description]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: format	
URI:	http://purl.org/dc/terms/format [dcterms:format]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/elements/1.1/format [dc:format]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/MediaTypeOrExtent [ex:MediaTypeOrExtent]

Term Name: identifier	
URI:	http://purl.org/dc/terms/identifier [dcterms:identifier]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/elements/1.1/identifier [dc:identifier]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/Reference [ex:Reference]

Term Name: language	
URI:	http://purl.org/dc/terms/language [dcterms:language]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/elements/1.1/language [dc:language]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/Language [ex:Language]

Term Name: publisher	
URI:	http://purl.org/dc/terms/publisher [dcterms:publisher]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/elements/1.1/publisher [dc:publisher]

Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/Agent [ex:Agent]

Term Name: relation	
URI:	http://purl.org/dc/terms/relation [dcterms:relation]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/elements/1.1/relation [dc:relation]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: rights	
URI:	http://purl.org/dc/terms/rights [dcterms:rights]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/elements/1.1/rights [dc:rights]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/RightsStatement [ex:RightsStatement]

Term Name: source	
URI:	http://purl.org/dc/terms/source [dcterms:source]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/elements/1.1/source [dc:source]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: subject	
URI:	http://purl.org/dc/terms/subject [dcterms:subject]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/elements/1.1/subject [dc:subject]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: title	
URI:	http://purl.org/dc/terms/title [dcterms:title]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/elements/1.1/title [dc:title]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: type	
URI:	http://purl.org/dc/terms/type [dcterms:type]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/elements/1.1/type [dc:type]

Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://www.w3.org/2000/01/rdf-schema#Class [rdfs:Class]

3.3. Domain and Range assertions for the existing Properties of the Dublin Core Terms.

The terms described in this section are **existing** *properties* that have already been assigned URIs owned by DCMI, and for which term declarations are already made available by DCMI. Some **changes** to those existing term declarations are proposed, namely the addition of:

- assertions of *sub-property of* relationships with the new *properties* specified above, and
- assertions of *has domain* and/or *has range* relationships with one or more of the *classes* specified above

Note: for completeness, the tables below include *has domain* and/or *has range* relationships with the class rdfs:Resource (italicised in the tables). Such a relationship is implicit even in the absence of an explicit *has domain* or *has range* assertion, so those assertions will not be present in the term declarations.

Term Name: abstract	
URI:	http://purl.org/dc/terms/abstract [dcterms:abstract]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/description [dcterms:description]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: accessRights	
URI:	http://purl.org/dc/terms/accessRights [dcterms:accessRights]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/rights [dcterms:rights]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/RightsStatement [ex:RightsStatement]

Term Name: accrualMethod	
URI:	http://purl.org/dc/terms/accrualMethod [dcterms:accrualMethod]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Has Domain:	http://purl.org/dc/dcmitype/Collection [dcmitype:Collection]
Has Range:	http://example.org/dc/terms/AccrualMethod [ex:AccrualMethod]

Term Name: accrualPeriodicity	
URI:	http://purl.org/dc/terms/accrualPeriodicity [dcterms:accrualPeriodicity]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Has Domain:	http://purl.org/dc/dcmitype/Collection [dcmitype:Collection]
Has Range:	http://example.org/dc/terms/Frequency [ex:Frequency]

Term Name: accrualPolicy	
URI:	http://purl.org/dc/terms/accrualPolicy [dcterms:accrualPolicy]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Has Domain:	http://purl.org/dc/dcmitype/Collection [dcmitype:Collection]
Has Range:	http://example.org/dc/terms/Policy [ex:Policy]

Term Name: alternative	
URI:	http://purl.org/dc/terms/alternative [dcterms:alternative]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/title [dcterms:title]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: audience	
URI:	http://purl.org/dc/terms/audience [dcterms:audience]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/AgentClass [ex:AgentClass]

Term Name: available	
URI:	http://purl.org/dc/terms/available [dcterms:available]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/date [dcterms:date]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/Period [ex:Period]

Term Name: bibliographicCitation	
URI:	http://purl.org/dc/terms/bibliographicCitation [dcterms:bibliographicCitation]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/identifier [dcterms:identifier]
Has Domain:	http://example.org/dc/terms/BibliographicResource [ex:BibliographicResource]
Has Range:	http://example.org/dc/terms/BibliographicReference [ex:BibliographicReference]

Term Name: conformsTo	
URI:	http://purl.org/dc/terms/conformsTo [dcterms:conformsTo]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/relation [dcterms:relation]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/Standard [ex:Standard]

Term Name: created	
URI:	http://purl.org/dc/terms/created [dcterms:created]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/date [dcterms:date]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/Period [ex:Period]

Term Name: dateAccepted

URI:	http://purl.org/dc/terms/dateAccepted [dcterms:dateAccepted]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/date [dcterms:date]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/Period [ex:Period]

Term Name: dateCopyrighted	
URI:	http://purl.org/dc/terms/dateCopyrighted [dcterms:dateCopyrighted]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/date [dcterms:date]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/Period [ex:Period]

Term Name: dateSubmitted	
URI:	http://purl.org/dc/terms/dateSubmitted [dcterms:dateSubmitted]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/date [dcterms:date]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/Period [ex:Period]

Term Name: educationLevel	
URI:	http://purl.org/dc/terms/educationLevel [dcterms:educationLevel]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/audience [dcterms:audience]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/AgentClass [ex:AgentClass]

Term Name: extent	
URI:	http://purl.org/dc/terms/extent [dcterms:extent]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/format [dcterms:format]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/Extent [ex:Extent]

Term Name: hasFormat	
URI:	http://purl.org/dc/terms/hasFormat [dcterms:hasFormat]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/relation [dcterms:relation]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: hasPart

URI:	http://purl.org/dc/terms/hasPart [dcterms:hasPart]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/relation [dcterms:relation]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: hasVersion	
URI:	http://purl.org/dc/terms/hasVersion [dcterms:hasVersion]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/relation [dcterms:relation]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: instructionalMethod	
URI:	http://purl.org/dc/terms/instructionalMethod [dcterms:instructionalMethod]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/InstructionalMethod [ex:InstructionalMethod]

Term Name: isFormatOf	
URI:	http://purl.org/dc/terms/isFormatOf [dcterms:isFormatOf]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/relation [dcterms:relation]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: isPartOf	
URI:	http://purl.org/dc/terms/isPartOf [dcterms:isPartOf]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/relation [dcterms:relation]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: isReferencedBy	
URI:	http://purl.org/dc/terms/isReferencedBy [dcterms:isReferencedBy]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/relation [dcterms:relation]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: isReplacedBy	
URI:	http://purl.org/dc/terms/isReplacedBy [dcterms:isReplacedBy]

Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/relation [dcterms:relation]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: isRequiredBy	
URI:	http://purl.org/dc/terms/isRequiredBy [dcterms:isRequiredBy]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/relation [dcterms:relation]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: issued	
URI:	http://purl.org/dc/terms/issued [dcterms:issued]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/date [dcterms:date]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/Period [ex:Period]

Term Name: isVersionOf	
URI:	http://purl.org/dc/terms/isVersionOf [dcterms:isVersionOf]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/relation [dcterms:relation]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: license	
URI:	http://purl.org/dc/terms/license [dcterms:license]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/rights [dcterms:rights]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/License [ex:License]

Term Name: mediator	
URI:	http://purl.org/dc/terms/mediator [dcterms:mediator]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/audience [dcterms:audience]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/AgentClass [ex:AgentClass]

Term Name: medium	
URI:	http://purl.org/dc/terms/medium [dcterms:medium]

Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/format [dcterms:format]
Has Domain:	http://example.org/dc/terms/PhysicalResource [ex:PhysicalResource]
Has Range:	http://example.org/dc/terms/PhysicalMedium [ex:PhysicalMedium]

Term Name: modified	
URI:	http://purl.org/dc/terms/modified [dcterms:modified]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/date [dcterms:date]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/Period [ex:Period]

Term Name: provenance	
URI:	http://purl.org/dc/terms/provenance [dcterms:provenance]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/ProvenanceStatement [ex:ProvenanceStatement]

Term Name: references	
URI:	http://purl.org/dc/terms/references [dcterms:references]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/relation [dcterms:relation]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: replaces	
URI:	http://purl.org/dc/terms/replaces [dcterms:replaces]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/relation [dcterms:relation]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: requires	
URI:	http://purl.org/dc/terms/requires [dcterms:requires]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/relation [dcterms:relation]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: rightsHolder	
URI:	http://purl.org/dc/terms/rightsHolder [dcterms:rightsHolder]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]

Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/Agent [ex:Agent]

Term Name: spatial	
URI:	http://purl.org/dc/terms/spatial [dcterms:spatial]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/coverage [dcterms:coverage]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/Location [ex:Location]

Term Name: tableOfContents	
URI:	http://purl.org/dc/terms/tableOfContents [dcterms:tableOfContents]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/description [dcterms:description]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*

Term Name: temporal	
URI:	http://purl.org/dc/terms/temporal [dcterms:temporal]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/coverage [dcterms:coverage]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/Period [ex:Period]

Term Name: valid	
URI:	http://purl.org/dc/terms/valid [dcterms:valid]
Type of Term:	http://www.w3.org/1999/02/22-rdf-syntax-ns#Property [rdf:Property]
Sub-Property Of:	http://purl.org/dc/terms/date [dcterms:date]
Has Domain:	*http://www.w3.org/2000/01/rdf-schema#Resource* *[rdfs:Resource]*
Has Range:	http://example.org/dc/terms/Period [ex:Period]

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---

2007-02-26
From: Ivan Herman <ivan@W3.ORG>
Subject: Re: Commain on the domain range draft
To: DC-ARCHITECTURE@JISCMAIL.AC.UK

As has been told many times, the usage of DC is today so widespread that the Library community is only a part of (and maybe even a fraction of) the user community. According to some estimates, after the core SW namespaces (rdf, rdfs, owl), the DC namespace is the largest single namespace used on the Semantic Web. We should not forget that.

I think our options here are:

1. the ranges are *not* restricted. Ie, one could use datatypes directly, or more complex solutions
2. the ranges are defined with the help of OWL's union facility. This union should refer to the xsd datatypes that we want for a specific predicate, plus more complex classes that are required/used by the library community.

Frankly, I do not see any other solution. The current approach, in my view, penalizes a large user community...

Date: Mon, 26 Feb 2007 10:43:52 +0100
From: Mikael Nilsson <mikael@NILSSON.NAME>
Subject: Re: Commain on the domain range draft
To: DC-ARCHITECTURE@JISCMAIL.AC.UK

On m=C3=A5n, 2007-02-26 at 09:25 +0100, Ivan Herman wrote:
> 1. the ranges are *not* restricted. Ie, one could use datatypes
> directly, or more complex solutions
> 2. the ranges are defined with the help of OWL's union facility. This
> union should refer to the xsd datatypes that we want for a specific
> predicate, plus more complex classes that are required/used by the
> library community.

Actually, I think you might have missed the precise details of what we are proposing...

The current set of 15 properties in the http://purl.org/dc/elements/1.1/ namespace (traditionally dc:) will *not* be given ranges and domains.

Instead, these 15 properties will be copied to the http://purl.org/dc/terms/ namespace (traditionally dcterms: or dcq:). These "new" terms will be given domains and ranges, and will be made subproperties of the dc: terms. The existing terms in the dcterms: namespace will also be affected, but their use is far less widespread.

So, any use of the old dc: terms will fall under your option 1. above, i.e. no restriction. At the same time, DCMI will recommend (but not require) the use of the newer terms. In the long term, that will hopefully mean than more and more uses of Dublin Core will make use of the semantically richer terms in the dcterms: namespace (as well as unifying all terms in a single namespace).

> Frankly, I do not see any other solution. The current approach, in my
> view, penalizes a large user community...

The DCMI community has struggled with this exact issue for a few years
now. The hope is that this compromise leads to the best of both worlds.
Of course, feedback on that is more than welcome!

Date: Mon, 26 Feb 2007 07:53:34 -0500
From: Bruce D'Arcus <bdarcus@GMAIL.COM>
Subject: Re: Commain on the domain range draft
To: DC-ARCHITECTURE@JISCMAIL.AC.UK

On Feb 26, 2007, at 4:43 AM, Mikael Nilsson wrote:
>> Frankly, I do not see any other solution. The current approach, in my
>> view, penalizes a large user community...
>
> The DCMI community has struggled with this exact issue for a few years
> now. The hope is that this compromise leads to the best of both worlds.
> Of course, feedback on that is more than welcome!

But WRT to Ivan's suggestions here (either to not limit these
particular properties, or to use the OWL unionOf option to offer a
choice), where is the compromise? As you say above:

> In the long term, that will hopefully mean than more and more uses of
> Dublin Core will make use of the semantically richer terms in the
> dcterms: namespace (as well as unifying all terms in a single
> namespace).

This makes a whole lot of sense for most of the properties, but I
actually think it would be a bad thing to see everyone modeling titles
and dates and descriptions as full resources. E.g. you seem to
characterize this (richer description) as best practice, but I don't
think it is in all cases.

Moreover, the wide practice of modeling titles and dates as resources
will never happen practically because most people (developers and
non-developers alike) would consider it overkill, which then leads to
an even bigger problem that I thought this effort was designed to
overcome (inconsistency).

Just as a practical matter, I'm working with the OpenDocument group at
OASIS on adding RDF support to the format, and on related work on
citations. I was excited to see this effort to clarify DC because we
can just point developers to your documentation and be content that
they will know what to do. But I would find it really awkward to tell
developers "well, OK, use dcterms namespace for most properties, but if
you want to treat titles as literals, better to use dc:title."

Date: Mon, 26 Feb 2007 19:45:15 +0100
From: Mikael Nilsson <mikael@NILSSON.NAME>
Subject: Re: Commain on the domain range draft
To: DC-ARCHITECTURE@JISCMAIL.AC.UK

> Moreover, the wide practice of modeling titles and dates as resources
> will never happen practically because most people (developers and
> non-developers alike) would consider it overkill, which then leads to
> an even bigger problem that I thought this effort was designed to
> overcome (inconsistency).

Two things are happening in parallel here, so please make sure we
distinguish them:

1. In general, the assignment of domains and ranges to a number of terms in the dcterms: namespace, including the replicated dc: terms.

2. Specifically, assignment to ranges and domains to specific properties which might or might not be reasonable.

So, I would like to know if we are discussion 1) the principle of assigning domains and ranges AT ALL, or 2) the particular domains and ranges of certain properties.

I *think* you mean 2). If that is correct, we need to enumerate the problematic properties, and find a solution that does what we want and need. Note, I'm now leaving the dc: namespace and *only* talking about the dcterms: namespace

A) dcterms:title and description. Looking at the draft, they have been given a range of "rdfs:Resource". That is, literals are allowed. This, naturally, has to do with the fact that a string is actually a useful title/description. So you should not have to worry there.

B) dcterms:date. The range of this property is Period. Now, as it stands, xsd:date is not a subClassOf Period. However, this has been put forward as a possibility.

Now, please look at the proposed DC in RDF specification, section 5:

http://dublincore.org/documents/dc-rdf/#sect-5

and in particular the paragraph "RDF shorthand for RDF plain literals and RDF typed literals". Essentially, this says that if your datatype is a subclass of the range of the property, the DCAM allows you to use the typed string as direct object in an RDF statement involving the property.

Thus, IF xsd:date were made subClassOf dcterms:Period, you could do

dcterms:modified "2007-01-01"^^xsd:date

etc.

So, we need to gather all problematic cases, one by one, and take a stand on how to address them.

> Just as a practical matter, I'm working with the OpenDocument group at
> OASIS on adding RDF support to the format, and on related work on
> citations. I was excited to see this effort to clarify DC because we
> can just point developers to your documentation and be content that
> they will know what to do. But I would find it really awkward to tell
> developers "well, OK, use dcterms namespace for most properties, but if

> you want to treat titles as literals, better to use dc:title."

So, this particular case is NOT a valid criticism.... :-)

Date: Tue, 27 Feb 2007 13:26:06 +0100
From: Ivan Herman <ivan@W3.ORG>
Organization: World Wide Web Consortium (W3C)
Subject: Re: Commain on the domain range draft
To: DC-ARCHITECTURE@JISCMAIL.AC.UK

Mikael Nilsson wrote:
[snip]
> Note, I'm now leaving the dc: namespace and *only* talking about
> the dcterms: namespace

Agreed. That was my understanding, too

> A) dcterms:title and description. Looking at the draft, they have been
> given a range of "rdfs:Resource". That is, literals are allowed. This,
> naturally, has to do with the fact that a string is actually a useful
> title/description. So you should not have to worry there.
>

Yep. Although the question is whether an explicit range restriction for
a Literal is not a better solution. See below...

> B) dcterms:date. The range of this property is Period. Now, as it
> stands, xsd:date is not a subClassOf Period. However, this has been put
> forward as a possibility.
>
[snip]
>
> Thus, IF xsd:date were made subClassOf dcterms:Period, you could do
>
> dcterms:modified "2007-01-01"^^xsd:date
>

That is *technically* correct. What I mean is that it is certainly
correct in terms of the RDFS syntax and semantics. However, I must admit
I find it counter-intuitive. And I also find a potential pitfall here.

Indeed: I know that DC has not considered using OWL at the moment.
However, it might be a good idea to slightly think a bit ahead: what if
either DC or some other organization would like to use the DC terms in
an OWL, more exactly in an OWL-DL setting? This may sound far fetched at
first glance, but again may not be that impossible. After all, as I
remarked already at some point, the Dublin Core terms have become
ubiquitous on the Semantic Web (you are the victims of your own
success:-), and if people want to build up more formal ontologies, they
may well want to include DC terms.

However... the solution you propose would *not* be correct OWL DL,
because OWL DL does not allow redefining the semantics of the 'core' RDF
terms (and this is what happens with your approach!). Actually, my
previous solution of using owl:unionOf does not work either, because OWL
DL requires a separation of datatype and object properties.

But maybe this is the case, actually, where the rigour of Description
Logic may help in cleaning up the terms... What if the new dcterm
namespace includes some of the properties in duplicate? What I mean,
what about saying: dcterm has a dcterm:modified and
dcterm:modifiedPeriod properties? One could then say

```
dcterm:modified rdf:type rdfs:Property;
        rdfs:range xsd:date.

dcterm:modifiedPeriod rdf:type rdfs:Property;
        rdfs:range dcterm:Period.
```

If one wanted to turn that into OWL-DL aware definitions, it becomes
simple; one just adds

```
dcterm:modified rdf:type owl:DatatypeProperty.
dcterm:modifiedPeriod rdf:type owl:ObjectProperty.

Thinking about this again, I have the impression that this leads to a
much cleaner modelling. My estimate is (I do not have the numbers at
hand, though) that a vast majority of users would be perfectly content
with the usage of dcterm:modified with the extra bonus of a possible
type checking on the datatype (which is a big plus compared to
dc:modified); this could include the OpenDocument users and many others.
Digital Library users that you were referring to may have to use more
complex terms; they could then use dcterm:modifiedPeriod which would
satisfy their needs.

Is that an impossible avenue to consider?

Just food for thoughts...

------------------------------------------------------------------------
Date:         Tue, 27 Feb 2007 16:45:24 +0100
From:         Mikael Nilsson <mikael@NILSSON.NAME>
Subject: Re: Commain on the domain range draft
To:           DC-ARCHITECTURE@JISCMAIL.AC.UK

On tis, 2007-02-27 at 13:26 +0100, Ivan Herman wrote:
> However... the solution you propose would *not* be correct OWL DL,
> because OWL DL does not allow redefining the semantics of the 'core' RDF
> terms (and this is what happens with your approach!).

Can you clarify this last statement? Where do we redefine the semantics
of the core RDF terms?

> Actually, my
> previous solution of using owl:unionOf does not work either, because OWL
> DL requires a separation of datatype and object properties.

Right, that *is* a problem, I can see that too.

> If one wanted to turn that into OWL-DL aware definitions, it becomes
> simple; one just adds
>
> dcterm:modified rdf:type owl:DatatypeProperty.
> dcterm:modifiedPeriod rdf:type owl:ObjectProperty.

I can see why you would want that, but I am unsure whether that would
actually lead to increased interoperability. I think the solution is to
be found elsewhere.

Maybe the "shortcut" notion in the DC-RDF document is wrong, and we
should rely on literal/datatype ranges for some properties? I don't
knkow.

> Is that an impossible avenue to consider?

I think a doubling of the number of terms for technical reasons is
rather impossible, yes... :-)

------------------------------------------------------------------------
Date:         Tue, 27 Feb 2007 20:27:46 +0100
From:         Ivan Herman <ivan@W3.ORG>
Organization: World Wide Web Consortium (W3C)
Subject: Re: Commain on the domain range draft
```

To: DC-ARCHITECTURE@JISCMAIL.AC.UK

> Can you clarify this last statement? Where do we redefine the semantics
> of the core RDF terms?

I may not have used the right terminology here, sorry. In OWL DL, datatypes are strictly separated from OWL classes. The

xd:data subClassOf YourOwnClass

violates that separation. Put it another way, you cannot express such statement in traditional Description Logic, where datatypes are strictly 'outside' the core subject of discourse.

>>If one wanted to turn that into OWL-DL aware definitions, it becomes
>>simple; one just adds
>>
>>dcterm:modified rdf:type owl:DatatypeProperty.
>>dcterm:modifiedPeriod rdf:type owl:ObjectProperty.
>
> I can see why you would want that, but I am unsure whether that would
> actually lead to increased interoperability. I think the solution is to
> be found elsewhere.

I am happy if there is one...:-) But I do not see any at the moment.

> Maybe the "shortcut" notion in the DC-RDF document is wrong, and we
> should rely on literal/datatype ranges for some properties? I don't
> knkow.

I am not sure what you mean here. Do you mean that in some cases you would define extra XML Schema datatypes for ranges? That may work, but somehow I am not sure it would work for all of them.

>>Is that an impossible avenue to consider?
>
> I think a doubling of the number of terms for technical reasons is
> rather impossible, yes... :-)
>

Why? I am just curious... We may not have to duplicate *all* predicates (I have not checked, though)

Date: Thu, 1 Mar 2007 08:03:39 -0000
From: Pete Johnston <Pete.Johnston@EDUSERV.ORG.UK>
Subject: Re: Commain on the domain range draft
To: DC-ARCHITECTURE@JISCMAIL.AC.UK

Mikael said:
> I think a doubling of the number of terms for technical reasons is
> rather impossible, yes... :-)

I dunno... it would introduce a level of complexity in how DCMI presents/documents stuff, and we'll have to explain things very carefully to the Usage Board, but I'm starting to wonder whether it may not in fact be the "cleanest" (and as Ivan says, most "future-proof") solution. We could probably handle the partitioning of terms at the "namespace" level e.g.

dcterms:modified v someotherdc:modified

Are there any implications for subproperty assertions though?

e.g. Could we continue to say (directly or through a chain of inferences) that an object property and a datatype property are both subproperties of a DCMES property (with no range/domain)? Or would that result in breaking the OWL-DL constraint too?

Date: Thu, 1 Mar 2007 09:36:20 +0100
From: Ivan Herman <ivan@W3.ORG>
Organization: World Wide Web Consortium (W3C)
Subject: Re: Commain on the domain range draft
To: DC-ARCHITECTURE@JISCMAIL.AC.UK

Pete Johnston wrote:
> e.g. Could we continue to say (directly or through a
> chain of inferences) that an object property and a datatype
> property are both subproperties of a DCMES property (with no
> range/domain)? Or would that result in breaking the OWL-DL
> constraint too?

I am not sure. I am not a foolproof Description Logic expert, to be frank, but my first reaction is 'probably not' (I mean: it would probably break DL).

The best way is to use an online checker. I myself used

http://phoebus.cs.man.ac.uk:9999/OWL/Validator

which will yell at you if you create a problem. I used that to check some of my previous statements, to avoid making a complete fool of myself:-)

Date: Thu, 1 Mar 2007 08:37:57 -0000
From: Pete Johnston <Pete.Johnston@EDUSERV.ORG.UK>
Subject: Re: Commain on the domain range draft
To: DC-ARCHITECTURE@JISCMAIL.AC.UK

Or to put it another way, if OWL DL (sub)classes all properties as either DatatypeProperty or ObjectProperty, then we have to apply that approach across the board, including the DCMES, which kind of undercuts the current strategy of not changing the range of those properties?

Maybe that strategy needs to be undercut - I'm just trying to get clear all the implications of the suggestion.

Date: Tue, 13 Feb 2007 09:47:22 +0000
From: Ivan Herman <ivan@W3.ORG>
Subject: Comment on DCAM
To: DC-ARCHITECTURE@JISCMAIL.AC.UK

Third mail from a RDF geek...

I understand there is a subtle complication between the DC abstract model

and RDF for properties. In DC-Text syntax, one can say:

```
DescriptionSet (
      Description (
          ResourceURI ( <http://dublincore.org/pages/home> )
```

```
          Statement (
             PropertyURI ( dc:publisher )
             ValueURI ( <http://example.org/agents/DCMI> )
             ValueString ( "Dublin Core Metadata Initiative" )
          )
      )
```

ie, a property *may* have a string value *and* a URI at the same time, so
 to
say. The way I would translate that into RDF is something like

```
dc:publisher [
    # maybe some type information would be in order here
    rdf:value "Dublin Core Metadata Initiative";
    dc:somepropertyhere <http://example.org/agents/DCMI>.
].
```

The caveat is when one wants to define the range of the
dc:publisher. Indeed, this should be defined as a union,
namely a union of a literal *a nd* some other type that is
used above. Alternatively, the range has to stay a general
resource, ie, nothing is really said about the range.

Being a bit of an outsider to the core DC discussions, this
is all fine with me, but it should be explicitly said and
documented...

(dc:publisher may be a wrong example here; it seems that the new document

for ranges defines its range to be an Agent, ie, no direct Literal is
allowed anyway. But the issue may come up for other properties...)

Date: Wed, 21 Feb 2007 16:07:48 -0000
From: Pete Johnston <Pete.Johnston@EDUSERV.ORG.UK>
Subject: Re: Comment on DCAM
To: DC-ARCHITECTURE@JISCMAIL.AC.UK

Ivan said:

```
> I read the document from an RDF point of view, and my comment
> is probably for clarification only (but it may be worth
> either adding this to the document or having a separate,
> explanatory document).
>
> - The document defines a rich representation. I tried to
> translate a rich representation into RDF, and I am not sure
> it is correct. What I came up with as an example (using
> Turtle syntax) is:
>
> dc:blabla [
>    dcterms:format [
>       rdf:type ex:MediaType;
>       dc:label "image/jpeg";
>    ]
>    rdf:value "base64 encoded bytes of the image".
>  ].
>
> ie, the property using a rich representation refers to a
> blank node that includes a reference to a media type and the
> value.
```

Yes, that is pretty much how I envisaged the rich representation notion being represented using RDF. Actually, given that (according to the DCAM) a single statement may provide multiple rich representations for a single value, I think there may be an additional node and arc involved. So if, say, I want to say that a book was authored by some entity represented by a JPEG and by a GIF, then I think in RDF, that would look something like (gulp):

```
_:mybook
  a ex:Book ;
  dcterms:creator [
    rdfs:seeAlso [
      dcterms:format [
        rdf:type ex:MediaType ;
          rdfs:label "image/jpeg" ;
      ] ;
      rdf:value "base64 encoded bytes"^^xsd:base64Binary

    ] ;
    rdfs:seeAlso [
      dcterms:format [
        rdf:type ex:MediaType ;
          rdfs:label "image/png" ;
      ] ;
      rdf:value "base64 encoded bytes"^^xsd:base64Binary

    ]
  ]
.
```

(Probably with some question marks over whether we use rdfs:seeAlso/rdf:value or some other properties?)

> The ex:MediaType is defined, in [1], as a class, hence
> the extra blank node. It is also not clear how one defined a
> particular media type..

Are their URIs for the IANA registered MIME types?

I found http://www.w3.org/2001/tag/2002/01-uriMediaType-9 expressing the desirability of having some URIs, but I'm not sure whether any were assigned/are in widespread use.

```
Date:         Mon, 26 Feb 2007 09:21:37 +0100
From:         Ivan Herman <ivan@W3.ORG>
Organization: World Wide Web Consortium (W3C)
Subject: Re: Comment on DCAM
To:           DC-ARCHITECTURE@JISCMAIL.AC.UK
```

Pete Johnston wrote:
> (Probably with some question marks over whether we use
> rdfs:seeAlso/rdf:value or some other properties?)

I think to re-use as much as possible existing properties is a good thing, so...

>>The ex:MediaType is defined, in [1], as a class, hence
>>the extra blank node. It is also not clear how one defined a
>>particular media type..
>

> Are their URIs for the IANA registered MIME types?
>
> I found http://www.w3.org/2001/tag/2002/01-uriMediaType-9 expressing the
> desirability of having some URIs, but I'm not sure whether any were
> assigned/are in widespread use.

Unfortunately, I do not know more. Maybe it is a question you may want
to ask on the SW Interest Group, somebody may know about one...

It may well be that DCI will have to define those. Having a set of URI-s
for Media types would be a great plus for the community...

Date: Thu, 22 Feb 2007 20:47:23 +0100
From: Mikael Nilsson <mikael@NILSSON.NAME>
Subject: [DCAM Piblic Comment] DCAM vs RDF and ranges (was:Comment on DCAM)
To: DC-ARCHITECTURE@JISCMAIL.AC.UK

> dc:publisher [
> # maybe some type information would be in order here
> rdf:value "Dublin Core Metadata Initiative";
> dc:somepropertyhere <http://example.org/agents/DCMI>.
>].

Well, except the Value URI will be the uri of the object node (object of
the dc:publisher property)

> for ranges defines its range to be an Agent, ie, no direct Literal is
> allowed anyway. But the issue may come up for other properties...)

The intention of the new domains and ranges indeed tries to address this
very problem - DCMI is moving away from "Literal or resource" to a more
precise range, relying on rdf:value to provide value strings.

So, this should be read together with the domains/ranges document, AND,

http://dublincore.org/documents/dc-rdf/

which is still not fully up-to-date with these DCAM modifications, but
gives you an idea of the direction.

In short, we want DC to fully interoperate in an RDF world, while still
being just as useful in other contexts (OAI etc),

Date: Mon, 26 Feb 2007 11:11:03 +0100
From: Ivan Herman <ivan@W3.ORG>
Organization: World Wide Web Consortium (W3C)
Subject: Re: [DCAM Piblic Comment] DCAM vs RDF and ranges
To: DC-ARCHITECTURE@JISCMAIL.AC.UK

> So, this should be read together with the domains/ranges document, AND,
>
> http://dublincore.org/documents/dc-rdf/

Thanks for this pointer. I looked through the examples, so let me ask
the following. I understand that you can write

```
<rdf:Description rdf:about="http://example.org/123">
   <dc:subject rdf:resource="http://example.org/subject32"/>
 </rdf:Description>
```

```
or it can become more complicated, like:

<rdf:Description rdf:about="http://example.org/123">
   <dc:subject>
     <ex:ExampleSubjects rdf:about="http://example.org/subject32">
       <dcrdf:valueString xml:lang="en">Biology</dcrdf:valueString>
       <dcrdf:valueString
         rdf:datatype="http://example.org/taxonomy/SubjectEncoding">
           EA32
       </dcrdf:valueString>
     </ex:ExampleSubjects>
   </dc:subject>
</rdf:Description>

But does it mean that you will no longer be allowed to use:

<rdf:Description rdf:about="http://example.org/123">
   <dc:subject
rdf:datatype="http://example.org/taxonomy/SubjectEncoding">EA32</dc:subject>
</rdf:Description>

Or, as a really simple case:

<rdf:Description rdf:about="http://example.org/123">
   <dc:subject>something</dc:subject>
</rdf:Description>

The problem I have is that *most* (non-librarian) users of DC will still
use the pure and simple literal. How will you accomodate with that?

Maybe you should have dc:subject and dc:complexSubject when necessary.
For other predicates, some sort of an owl:unionOf might be hand to
define precise range. I am not sure. But what I know that for *lot* of
people the combination with the value String is a little bit too
complicated.

[Actually, I have the impression that what you are fighing with here is
the fact that one cannot use a literal in a subject position in RDF.
Some would like to remove this restriction, but, well, when and how this
issue will be reopened nobody knows...]

------------------------------------------------------------------------
Date:         Mon, 26 Feb 2007 11:42:38 +0100
From:         Mikael Nilsson <mikael@NILSSON.NAME>
Subject: Re: [DCAM Piblic Comment] DCAM vs RDF and ranges
To:           DC-ARCHITECTURE@JISCMAIL.AC.UK

On m=C3=A5n, 2007-02-26 at 11:11 +0100, Ivan Herman wrote:
> Hi Mikael,

> Thanks for this pointer. I looked through the examples, so let me ask
> the following. I understand that you can write
>
> <rdf:Description rdf:about="http://example.org/123">
>    <dc:subject rdf:resource="http://example.org/subject32"/>
>  </rdf:Description>

right.

>
> or it can become more complicated, like:
```

```
>
> <rdf:Description rdf:about="http://example.org/123">
>    <dc:subject>
>      <ex:ExampleSubjects rdf:about="http://example.org/subject32">
>        <dcrdf:valueString xml:lang="en">Biology</dcrdf:valueString>
>        <dcrdf:valueString
>          rdf:datatype="http://example.org/taxonomy/SubjectEncoding">
>            EA32
>        </dcrdf:valueString>
>      </ex:ExampleSubjects>
>    </dc:subject>
> </rdf:Description>
```

Yes, except dcrdf:valueString will probably become just rdf:value in the next draft.

```
> But does it mean that you will no longer be allowed to use:
>
> <rdf:Description rdf:about="http://example.org/123">
>    <dc:subject
> rdf:datatype="http://example.org/taxonomy/SubjectEncoding">EA32</dc:s
ubject>
> </rdf:Description>
```

Again, for the dc: properties, you will be able to do more or less what you want.

There will be a new property, called dcterms:subject. Now, this new property won't have a restricted range, as more or less anything can be used as the "subject" of a resource, so it's actually open for all kind of uses too.

```
> Or, as a really simple case:
>
> <rdf:Description rdf:about="http://example.org/123">
>    <dc:subject>something</dc:subject>
> </rdf:Description>
>
> The problem I have is that *most* (non-librarian) users of DC will still
> use the pure and simple literal. How will you accomodate with that?
```

Use the dc: terms in all such cases, and you don't have to change one thing...

```
> Maybe you should have dc:subject and dc:complexSubject when necessary.
```

We will have dc:subject and dcterms:subject.

```
> For other predicates, some sort of an owl:unionOf might be hand to
> define precise range. I am not sure. But what I know that for *lot* of
> people the combination with the value String is a little bit too
> complicated.
>
> [Actually, I have the impression that what you are fighing with here is
> the fact that one cannot use a literal in a subject position in RDF.
> Some would like to remove this restriction, but, well, when and how this
> issue will be reopened nobody knows...]
```

Well, partly that, but mostly the fact that, for example, the creator of a resource is never a string, but a person, and we want that reflected in the model. The issue is that dc: properties aren't very useful for many RDF uses, simply because one does not know whether to expect a

literal or non-literal as value of a given property.

Please have a further look at

http://dublincore.org/documents/dc-rdf-notes/

that accompanied the dc-rdf draft you read above.

From: Guus Schreiber
To: Alistair Miles <a.j.miles@rl.ac.uk>
CC: SWD WG <public-swd-wg@w3.org>, SKOS <public-esw-thes@w3.org>

Alistair Miles wrote:
> I tried to illustrate some of the issues relating to SKOS and OWL DL
> compatibility, see:
>
> http://www.w3.org/2006/07/SWD/wiki/SkosDesign/OwlCompatibility?action=recall&rev=7

On my todo list is still to write a message to owl-dev entitled something like "forcing a distinction between datatype and object properties leads to ontological overcommitments". The findings of Alistair are a pattern I've seen now a number of times. In our digital heritage projects we have the same problem, e.g. when specializing Dublin Core [1]. For Dublin-Core like properties one often cannot commit to a specific range, not even individual or literal.

The pattern we use is the following:

- specify properties with rdf:Property, indicating only the range in unequivocal cases
- when you know for subparts of the collection which ranges (e.g. vocabulary parts) you want to use, write local range restriction (using owl:Restriction) in a separate local scheme. This approach allows others to use the property with another range.

Editorial changes to terms in the DCTERMS namespace

2007-03-13

In Barcelona, we have the opportunity to finalize a batch of changes to terms in the DCTERMS namespace. Attached is a draft decision text showing "before" and "after" versions of term declarations, along with an introductory section describing categories of change.

1. About this decision text

In 2006, the DCMI Usage Board undertook an editorial revision of terms in the Dublin Core Metadata Element Set (DCMES) in order to clarify intended semantics and bring the wording of their definitions and usage comments into line with the language of the DCMI Abstract Model [DCAM]. After a Public Comment period, these changes were finalized as a Usage Board decision [DCMES-CHANGES].

The changes reflected in this document follow the change categories used to revise terms of the Dublin Core Metadata Element Set and apply them to terms of DCTERMS namespace. In addition to these "systematic" changes, other editorial corrections or updates have been undertaken, as noted below.

The wordings recorded here are reflected in revised versions of the documents "DCMI Metadata Terms" [DCTERMS], and "DCMI Metadata Terms: A complete historical record" [DCTERMS-HISTORY].

All of the changes recorded here were evaluated by the DCMI Usage Board in light of the DCMI Namespace Policy [NAMESPACE]. The namespace policy says that DCMI terms are identified using Uniform Resource Identifiers (URIs). In accordance with the principle that distinct URIs should be assigned to distinct resources, the policy sets limits on the range of editorial changes that may allowably be made to the official labels, definitions, and usage comments associated with DCMI terms. By policy, any changes of meaning judged "likely to have a substantial impact on either machine processing of DCMI terms or the functional semantics of the terms" must trigger the creation of a new, distinct term with a new, distinct URI.

In the opinion of the Usage Board, the changes described in this document are unlikely to have a substantial impact on either machine processing of DCMI terms or the functional semantics of the terms -- i.e., they fall within the allowable range of editorial change. The changes constitute clarifications of term semantics in light of improved theoretical understanding, user feedback, and implementation experience. They provide the final twist of the lens that brings intended meanings more sharply into focus.

- [DCMES-CHANGES] http://dublincore.org/usage/decisions/2006/2006-03.dcmes-changes.shtml
- [DCTERMS] http://dublincore.org/documents/dcmi-terms/
- [DCTERMS-HISTORY] http://dublincore.org/usage/terms/history/
- [NAMESPACE] http://dublincore.org/documents/dcmi-namespace/

General categories of change

Free-standing descriptive labels

[Two or three sentences may be needed here on why "qualifiers" were named as adjectives in the first place?]

This change is relevant to the definitions of:

- dcterms:alternative: "Alternative" to "Alternative title"
- dcterms:available: "Date available"
- dcterms:created: "Date created"
- dcterms:issued: "Date issued"
- dcterms:modified: "Date modified"
- dcterms:valid: "Date valid"
- dcterms:spatial: "Spatial coverage"
- dcterms:temporal: "Temporal coverage"

Replacement of "content of the resource" with just "the resource"

This change is relevant to the definitions of:

- dcterms:abstract
- dcterms:tableOfContents
- dcterms:isFormatOf - CHECK
- dcterms:hasFormat - CHECK
- dcterms:spatial
- dcterms:temporal
- dcterms:DCMIType

Replacement of "reference to a resource" with just "a resource"

This change is relevant to the definitions of:

- dcterms:conformsTo
- Note, however, dcterms:bibliographicCitation.

"Use a controlled vocabulary"

Replacement of phrases such as "use a value from an encoding scheme" and "select a value from a controlled vocabulary" with "use a controlled vocabulary".

- This change is relevant to the comments for:
  - dcterms:accrualMethod
  - dcterms:accrualPeriodicity
  - dcterms:accrualPolicy

"Qualifies" statements

In the DCMI Abstract Model, the only connection between a property (e.g., dcterms:subject) and a Vocabulary Encoding Scheme is

Thus, if it's a collection of Dates, they fit as values of dc:date, etc, all according to the range of the relevant

The set of terms itself does not say anything about their usefulness for a given property. Naturally, the documentation of a VES might say that the terms are all useful as values of dc:subject etc, but we have no formal way of saying that (and should not have I think).

Subproperty relations between terms in the /1.1/ namespace

Is this the time to add those relations to the copied terms in the /terms/ namespace?

- dcterms:creator rdfs:subPropertyOf dcterms:contributor
- dcterms:coverage rdfs:subPropertyOf dcterms:subject
- dcterms:source rdfs;subPropertyOf dcterms;relation

Changes term-by-term

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

- Label: Audience
- Definition: A class of entity for whom the resource is intended or useful.
- Comment: A class of entity may be determined by the creator or the publisher or by a third party.
- Type of term: http://dublincore.org/usage/documents/principles/#element

After:

- Definition: A class of entity for whom the resource is intended or useful.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property

Changes:

- Comment deleted.

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

- Label: Alternative
- Definition: Any form of the title used as a substitute or alternative to the formal title of the resource.
- Comment: This qualifier can include Title abbreviations as well as translations.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/title

After:

- Label: Alternative Title
- Definition: An alternative name for the resource.
- Comment: The distinction between titles and alternatives titles is application-specific.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property

- subPropertyOf: http://purl.org/dc/elements/1.1/title

Changes:

- Clearer label and comment.

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

- Label: Table Of Contents
- Definition: A list of subunits of the content of the resource.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/description

After:

- Definition: A list of subunits of the resource.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/description

Changes:

- Issue "content of the resource".

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

- Label: Abstract
- Definition: A summary of the content of the resource.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/description

After:

- Definition: A summary of the resource.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/description

Changes:

- Issue "content of the resource".

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

- Label: Created
- Definition: Date of creation of the resource.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/date

After:

- Label: Date Created
- Definition: Date of creation of the resource.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/date

Changes:

- Issue "freestanding descriptive labels"

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

- Label: Valid
- Definition: Date (often a range) of validity of a resource.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/date

After:

- Label: Date Valid
- Definition: Date (often a range) of validity of a resource.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/date

Changes:

- Issue "freestanding descriptive labels"

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

- Label: Available
- Definition: Date (often a range) that the resource will become or did become available.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/date

After:

- Label: Date Available
- Definition: Date (often a range) that the resource became or will become available.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/date

Changes:

- Issue "freestanding descriptive labels"

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

- Label: Issued

- Definition: Date of formal issuance (e.g., publication) of the resource.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/date

After:

- Label: Date Issued
- Definition: Date of formal issuance (e.g., publication) of the resource.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/date

Changes:

- Issue "freestanding descriptive labels"

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

- Label: Modified
- Definition: Date on which the resource was changed.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/date

After:

- Label: Date Modified
- Definition: Date on which the resource was changed.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/date

Changes:

- Issue "freestanding descriptive labels"

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

- Label: Extent
- Definition: The size or duration of the resource.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/format

After:

- Definition: The size or duration of the resource.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/format

Changes:

- Issue "freestanding descriptive labels"

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

- Label: Medium
- Definition: The material or physical carrier of the resource.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/format

After:

- Definition: The material or physical carrier of the resource.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/format

Changes:

- No changes.

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

- Label: Is Version Of
- Definition: The described resource is a version, edition, or adaptation of the referenced resource. Changes in version imply substantive changes in content rather than differences in format.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

After:

- Definition: A related resource of which the described resource is a version, edition, or adaptation.
- Comment: Changes in version imply substantive changes in content rather than differences in format.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

Changes:

- Issue "described resource".
- Part of definition turned into a comment.

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

- Label: Has Version
- Definition: The described resource has a version, edition, or adaptation, namely, the referenced resource.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

After:

- Definition: A version, edition, or adaptation of the described resource. (**Or: A related resource of**

which the described resource is a...)

- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

Changes:

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

- Label: Is Replaced By
- Definition: The described resource is supplanted, displaced, or superseded by the referenced resource.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

After:

- Definition: A related resource which supplants, displaces, or supersedes the described resource.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

Changes:

- Issue "described resource".

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

- Label: Replaces
- Definition: The described resource supplants, displaces, or supersedes the referenced resource.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

After:

- Definition: A related resource which is supplanted, displaced, or superseded by the described resource.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

Changes:

- Issue "described resource".

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

- Label: Is Required By
- Definition: The described resource is required by the referenced resource, either physically or logically.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

After:

- Definition: A related resource which physically or logically requires the described resource.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

Changes:

- Issue "described resource".

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

- Label: Requires
- Definition: The described resource requires the referenced resource to support its function, delivery, or coherence of content.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

After:

- Definition: A related resource required by the described resource to support its function, delivery, or coherence of content.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

Changes:

- Issue "described resource".

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

- Label: Is Part Of
- Definition: The described resource is a physical or logical part of the referenced resource.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

After:

- Definition: A resource which is a physical or logical part of the described resource.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

Changes:

- Issue "described resource".

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

- Label: Has Part

- Definition: The described resource includes the referenced resource either physically or logically.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

After:

- Definition: A resource included either physically or logically in the described resource.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

Changes:

- Issue "described resource".

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

- Label: Is Referenced By
- Definition: The described resource is referenced, cited, or otherwise pointed to by the referenced resource.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

After:

- Definition: A resource referenced, cited, or otherwise pointed to by the referenced resource.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

Changes:

- Issue "described resource".

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

- Label: References
- Definition: The described resource references, cites, or otherwise points to the referenced resource.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

After:

- Definition: A resource which is referenced, cited, or otherwise pointed to by the described resource.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

Changes:

- Issue "described resource".

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

- Label: Is Format Of
- Definition: The described resource is the same intellectual content of the referenced resource, but presented in another format.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

After:

- Definition: The described resource has the same content as the referenced resource, but presented in another format.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

Changes:

- Issue "described resource".

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

- Label: Has Format
- Definition: The described resource pre-existed the referenced resource, which is essentially the same intellectual content presented in another format.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

After:

- Definition: The described resource pre-existed the referenced resource, which is essentially the same content presented in another format.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

Changes:

- Issue "described resource".

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

- Label: Conforms To
- Definition: A reference to an established standard to which the resource conforms.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

After:

- Definition: An established standard to which the resource conforms.

- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/relation

Changes:

- Issue "reference to a resource".

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

- Label: Spatial
- Definition: Spatial characteristics of the intellectual content of the resource.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/coverage

After:

- Label: Spatial Coverage
- Definition: Spatial characteristics of the resource.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/coverage

Changes:

- Issue "freestanding property label".
- Issue "content of the resource".

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

- Label: Temporal
- Definition: Temporal characteristics of the intellectual content of the resource.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/coverage

After:

- Label: Temporal Coverage
- Definition: Temporal characteristics of the resource.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/coverage

Changes:

- Issue "freestanding property label".
- Issue "content of the resource".

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

- Label: Mediator

- Definition: A class of entity that mediates access to the resource and for whom the resource is intended or useful.
- Comment: The audiences for a resource are of two basic classes: (1) an ultimate beneficiary of the resource, and (2) frequently, an entity that mediates access to the resource. The mediator element refinement represents the second of these two classes.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/terms/audience

After:

- Definition: A class of entity that mediates access to the resource and for whom the resource is intended or useful.
- Comment: The audiences for a resource are of two basic classes: (1) an ultimate beneficiary of the resource, and (2) frequently, an entity that mediates access to the resource. For the second of these two classes, use the Mediator element.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/terms/audience

Changes:

- No change?

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

- Label: Date Accepted
- Definition: Date of acceptance of the resource (e.g. of thesis by university department, of article by journal, etc.).
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/date

After:

- Definition: Date of acceptance of the resource.
- Comment: Examples of resources to which a Date Accepted may be relevant are a thesis (accepted by a university department) or an article (accepted by a journal).
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/date

Changes:

- Issue "freestanding property label".
- Issue "moving parts of definitions to comments".

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

- Label: Date Copyrighted
- Definition: Date of a statement of copyright.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement

- subPropertyOf: http://purl.org/dc/elements/1.1/date

After:

- Definition: Date of a statement of copyright.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/date

Changes:

- Issue "freestanding property label".

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

- Label: Date Submitted
- Definition: Date of submission of the resource (e.g. thesis, articles, etc.).
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/date

After:

- Definition: Date of submission of the resource.
- Comment: Examples of resources to which a Date Submitted may be relevant are a thesis (submitted to a university department) or an article (submitted to a journal).
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/date

Changes:

- Issue "freestanding property label".
- Better comment.

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

- Label: Audience Education Level
- Definition: A general statement describing the education or training context. Alternatively, a more specific

  statement of the location of the audience in terms of its progression through an education or training context.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/terms/audience

After:

- Definition: An audience, defined in terms of its progression through an educational or training context, for whom the resource is intended.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/terms/audience

Changes:

- A special case, see: http://stage.dublincore.org/usage/meetings/2006/09/manzanillo/domains-ranges/2006-04-30.educationLe

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

- Label: Access Rights
- Definition: Information about who can access the resource or an indication of its security status.
- Comment: Access Rights may include information regarding access or restrictions based on privacy, security or other regulations.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/rights

After:

- Definition: Information about who can access the resource or an indication of its security status.
- Comment: Access Rights may include information regarding access or restrictions based on privacy, security or other regulations.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/rights

Changes:

- No changes.

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

- Label: Bibliographic Citation
- Definition: A bibliographic reference for the resource.
- Comment: Recommended practice is to include sufficient bibliographic detail to identify the resource as unambiguously as possible, whether or not the citation is in a standard form.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/identifier

After:

- Definition: A bibliographic reference for the resource.
- Comment: Recommended practice is to include sufficient bibliographic detail to identify the resource as unambiguously as possible.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/identifier

Changes:

- No changes.

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

- Label: License
- Definition: A legal document giving official permission to do something with the resource.
- Comment: Recommended best practice is to identify the license using a URI. Examples of such licenses can be found at http://creativecommons.org/licenses/.
- Type of term: http://dublincore.org/usage/documents/principles/#element-refinement
- subPropertyOf: http://purl.org/dc/elements/1.1/rights

After:

- Definition: A legal document giving official permission to do something with the resource.
- Comment: Recommended best practice is to identify the license using a URI. Examples of such licenses can be found at http://creativecommons.org/licenses/.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property
- subPropertyOf: http://purl.org/dc/elements/1.1/rights

Changes:

- No changes.

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

- Label: Rights Holder
- Definition: A person or organization owning or managing rights over the resource.
- Comment: Recommended best practice is to use the URI or name of the Rights Holder to indicate the entity.
- Type of term: http://dublincore.org/usage/documents/principles/#element

After:

- Definition: A person or organization owning or managing rights over the resource.
- Comment: Recommended best practice is to use the URI or name of the Rights Holder to indicate the entity.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property

Changes:

- No change.

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

- Label: Provenance
- Definition: A statement of any changes in ownership and custody of the resource since its creation that are significant for its authenticity, integrity and interpretation.
- Comment: The statement may include a description of any changes successive custodians made to the resource.
- Type of term: http://dublincore.org/usage/documents/principles/#element

After:

- Definition: A statement of any changes in ownership and custody of the resource since its creation that are significant for its authenticity, integrity, and interpretation.
- Comment: The statement may include a description of any changes successive custodians made to the resource.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property

Changes:

- No change.

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

- Label: Instructional Method
- Definition: A process, used to engender knowledge, attitudes and skills, that the resource is designed to support.
- Comment: Instructional Method will typically include ways of presenting instructional materials or conducting instructional activities, patterns of learner-to-learner and learner-to-instructor interactions, and mechanisms by which group and individual levels of learning are measured. Instructional methods include all aspects of the instruction and learning processes from planning and implementation through evaluation and feedback.
- Type of term: http://dublincore.org/usage/documents/principles/#element

After:

- Definition: A process, used to engender knowledge, attitudes and skills, that the described resource is designed to support.
- Comment: Instructional Method will typically include ways of presenting instructional materials or conducting instructional activities, patterns of learner-to-learner and learner-to-instructor interactions, and mechanisms by which group and individual levels of learning are measured. Instructional methods include all aspects of the instruction and learning processes from planning and implementation through evaluation and feedback.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property

Changes:

- Issue "described resource".

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

- Label: Accrual Method
- Definition: The method by which items are added to a collection.
- Comment: Recommended best practice is to use a value from a controlled vocabulary.
- Type of term: http://dublincore.org/usage/documents/principles/#element

After:

- Definition: The method by which items are added to a collection.
- Comment: Recommended best practice is to use a controlled vocabulary.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property

Changes:

- Issue "use a controlled vocabulary".

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

- Label: Accrual Periodicity
- Definition: The frequency with which items are added to a collection.
- Comment: Recommended best practice is to use a value from a controlled vocabulary.
- Type of term: http://dublincore.org/usage/documents/principles/#element

After:

- Definition: The frequency with which items are added to a collection.
- Comment: Recommended best practice is to use a controlled vocabulary.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property

Changes:

- Issue "use a controlled vocabulary".

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

- Label: Accrual Policy
- Definition: The policy governing the addition of items to a collection.
- Comment: Recommended best practice is to use a value from a controlled vocabulary.
- Type of term: http://dublincore.org/usage/documents/principles/#element

After:

- Definition: The policy governing the addition of items to a collection.
- Comment: Recommended best practice is to use a controlled vocabulary.
- Type of term: http://www.w3.org/1999/02/22-rdf-syntax-ns#Property

Changes:

- Issue "use a controlled vocabulary".

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

- Label: LCSH
- Definition: Library of Congress Subject Headings
- Type of term: http://dublincore.org/usage/documents/principles/#encoding-scheme
- Qualifies: http://purl.org/dc/elements/1.1/subject

After:

- Definition: Library of Congress Subject Headings

- Type of term: http://purl.org/dc/dcam/VocabularyEncodingScheme
- Qualifies: http://purl.org/dc/elements/1.1/subject

Changes:

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

- Label: MeSH
- Definition: Medical Subject Headings
- See: http://www.nlm.nih.gov/mesh/meshhome.html
- Type of term: http://dublincore.org/usage/documents/principles/#encoding-scheme
- Qualifies: http://purl.org/dc/elements/1.1/subject

After:

- Definition: Medical Subject Headings
- See: http://www.nlm.nih.gov/mesh/meshhome.html
- Type of term: http://purl.org/dc/dcam/VocabularyEncodingScheme
- Qualifies: http://purl.org/dc/elements/1.1/subject

Changes:

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

- Label: DDC
- Definition: Dewey Decimal Classification
- See: http://www.oclc.org/dewey/
- Type of term: http://dublincore.org/usage/documents/principles/#encoding-scheme
- Qualifies: http://purl.org/dc/elements/1.1/subject

After:

- Definition: Dewey Decimal Classification
- See: http://www.oclc.org/dewey/
- Type of term: http://purl.org/dc/dcam/VocabularyEncodingScheme
- Qualifies: http://purl.org/dc/elements/1.1/subject

Changes:

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

- Label: LCC
- Definition: Library of Congress Classification
- See: http://lcweb.loc.gov/catdir/cpso/lcco/lcco.html
- Type of term: http://dublincore.org/usage/documents/principles/#encoding-scheme
- Qualifies: http://purl.org/dc/elements/1.1/subject

After:

- Definition: Library of Congress Classification
- See: http://lcweb.loc.gov/catdir/cpso/lcco/lcco.html
- Type of term: http://purl.org/dc/dcam/VocabularyEncodingScheme
- Qualifies: http://purl.org/dc/elements/1.1/subject

Changes:

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

- Label: UDC
- Definition: Universal Decimal Classification
- See: http://www.udcc.org/
- Type of term: http://dublincore.org/usage/documents/principles/#encoding-scheme
- Qualifies: http://purl.org/dc/elements/1.1/subject

After:

- Definition: Universal Decimal Classification
- See: http://www.udcc.org/
- Type of term: http://purl.org/dc/dcam/VocabularyEncodingScheme
- Qualifies: http://purl.org/dc/elements/1.1/subject

Changes:

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

- Label: DCMI Type Vocabulary
- Definition: A list of types used to categorize the nature or genre of the content of the resource.
- See: http://dublincore.org/documents/dcmi-type-vocabulary/
- Type of term: http://dublincore.org/usage/documents/principles/#encoding-scheme
- Qualifies: http://purl.org/dc/elements/1.1/type

After:

- Definition: A list of types used to categorize the nature or genre of the resource.
- See: http://dublincore.org/documents/dcmi-type-vocabulary/
- Type of term: http://purl.org/dc/dcam/VocabularyEncodingScheme
- Qualifies: http://purl.org/dc/elements/1.1/type

Changes:

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

- Label: IMT
- Definition: The Internet media type of the resource.

- See: http://www.iana.org/assignments/media-types/
- Type of term: http://dublincore.org/usage/documents/principles/#encoding-scheme
- Qualifies: http://purl.org/dc/elements/1.1/format

After:

- Definition: The Internet media type of the resource.
- See: http://www.iana.org/assignments/media-types/
- Type of term: http://purl.org/dc/dcam/VocabularyEncodingScheme
- Qualifies: http://purl.org/dc/elements/1.1/format

Changes:

http://purl.org/dc/terms/ISO639-2

- Label: ISO 639-2
- Definition: ISO 639-2: Codes for the representation of names of languages.
- See: http://lcweb.loc.gov/standards/iso639-2/langhome.html
- Type of term: http://dublincore.org/usage/documents/principles/#encoding-scheme
- Qualifies: http://purl.org/dc/elements/1.1/language

After:

- Definition: ISO 639-2: Codes for the representation of names of languages.
- See: http://lcweb.loc.gov/standards/iso639-2/langhome.html
- Type of term: http://www.w3.org/2000/01/rdf-schema#Datatype
- Qualifies: http://purl.org/dc/elements/1.1/language

Changes:

http://purl.org/dc/terms/RFC1766

- Label: RFC 1766
- Definition: Internet RFC 1766 'Tags for the identification of Language'

  specifies a two letter code taken from ISO 639, followed optionally by a two letter country code taken from ISO 3166.
- See: http://www.ietf.org/rfc/rfc1766.txt
- Type of term: http://dublincore.org/usage/documents/principles/#encoding-scheme
- Qualifies: http://purl.org/dc/elements/1.1/language

After:

- Definition: Internet RFC 1766 Tags for the identification of Language
- See: http://www.ietf.org/rfc/rfc1766.txt
- Type of term: http://www.w3.org/2000/01/rdf-schema#Datatype
- Qualifies: http://purl.org/dc/elements/1.1/language

Changes:

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

- Label: URI
- Definition: A URI Uniform Resource Identifier
- See: http://www.ietf.org/rfc/rfc2396.txt
- Type of term: http://dublincore.org/usage/documents/principles/#encoding-scheme
- Qualifies: http://purl.org/dc/elements/1.1/identifier
- Qualifies: http://purl.org/dc/elements/1.1/source
- Qualifies: http://purl.org/dc/elements/1.1/relation

After:

- Definition: A URI Uniform Resource Identifier
- See: http://www.ietf.org/rfc/rfc3986.txt
- Type of term: http://www.w3.org/2000/01/rdf-schema#Datatype
- Qualifies: http://purl.org/dc/elements/1.1/identifier
- Qualifies: http://purl.org/dc/elements/1.1/source
- Qualifies: http://purl.org/dc/elements/1.1/relation

Changes:

- RFC 2396 has been obsoleted by RFC 3986.

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

- Label: DCMI Point
- Definition: The DCMI Point identifies a point in space using its geographic coordinates.
- See: http://dublincore.org/documents/dcmi-point/
- Type of term: http://dublincore.org/usage/documents/principles/#encoding-scheme
- Qualifies: http://purl.org/dc/terms/spatial

After:

- Definition: The DCMI Point identifies a point in space using its geographic coordinates.
- See: http://dublincore.org/documents/dcmi-point/
- Type of term: http://www.w3.org/2000/01/rdf-schema#Datatype
- Qualifies: http://purl.org/dc/terms/spatial

Changes:

http://purl.org/dc/terms/ISO3166

- Label: ISO 3166
- Definition: ISO 3166 Codes for the representation of names of countries
- See: http://www.iso.org/iso/en/prods-services/iso3166ma/02iso-3166-code-lists/list-en1.html
- Type of term: http://dublincore.org/usage/documents/principles/#encoding-scheme

- Qualifies: http://purl.org/dc/terms/spatial

After:

- Definition: ISO 3166 Codes for the representation of names of countries
- See: http://www.iso.org/iso/en/prods-services/iso3166ma/02iso-3166-code-lists/list-en1.html
- Type of term: http://www.w3.org/2000/01/rdf-schema#Datatype
- Qualifies: http://purl.org/dc/terms/spatial

Changes:

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

- Label: DCMI Box
- Definition: The DCMI Box identifies a region of space using its geographic limits.
- See: http://dublincore.org/documents/dcmi-box/
- Type of term: http://dublincore.org/usage/documents/principles/#encoding-scheme
- Qualifies: http://purl.org/dc/terms/spatial

After:

- Definition: The DCMI Box identifies a region of space using its geographic limits.
- See: http://dublincore.org/documents/dcmi-box/
- Type of term: http://www.w3.org/2000/01/rdf-schema#Datatype
- Qualifies: http://purl.org/dc/terms/spatial

Changes:

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

- Label: TGN
- Definition: The Getty Thesaurus of Geographic Names
- See: http://www.getty.edu/research/tools/vocabulary/tgn/index.html
- Type of term: http://dublincore.org/usage/documents/principles/#encoding-scheme
- Qualifies: http://purl.org/dc/terms/spatial

After:

- Definition: The Getty Thesaurus of Geographic Names
- See: http://www.getty.edu/research/tools/vocabulary/tgn/index.html
- Type of term: http://purl.org/dc/dcam/VocabularyEncodingScheme
- Qualifies: http://purl.org/dc/terms/spatial

Changes:

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

- Label: DCMI Period
- Definition: A specification of the limits of a time interval.
- See: http://dublincore.org/documents/dcmi-period/
- Type of term: http://dublincore.org/usage/documents/principles/#encoding-scheme
- Qualifies: http://purl.org/dc/elements/1.1/date
- Qualifies: http://purl.org/dc/terms/temporal

After:

- Definition: The DCMI Period specifies the limits of a time interval.
- See: http://dublincore.org/documents/dcmi-period/
- Type of term: http://www.w3.org/2000/01/rdf-schema#Datatype
- Qualifies: http://purl.org/dc/elements/1.1/date
- Qualifies: http://purl.org/dc/terms/temporal

Changes:

http://purl.org/dc/terms/W3CDTF

- Label: W3C-DTF
- Definition: W3C Encoding rules for dates and times - a profile based on ISO 8601
- See: http://www.w3.org/TR/NOTE-datetime
- Type of term: http://dublincore.org/usage/documents/principles/#encoding-scheme
- Qualifies: http://purl.org/dc/elements/1.1/date
- Qualifies: http://purl.org/dc/terms/temporal

After:

- Definition: W3C Encoding rules for dates and times - a profile based on ISO 8601
- See: http://www.w3.org/TR/NOTE-datetime
- Type of term: http://www.w3.org/2000/01/rdf-schema#Datatype
- Qualifies: http://purl.org/dc/elements/1.1/date
- Qualifies: http://purl.org/dc/terms/temporal

Changes:

http://purl.org/dc/terms/RFC3066

- Label: RFC 3066
- Definition: Internet RFC 3066 'Tags for the Identification of Languages' specifies a primary subtag which is a two-letter code taken from ISO 639 part 1 or a three-letter code taken from ISO 639 part 2, followed optionally by a two-letter country code taken from ISO 3166. When a language in ISO 639 has both a two-letter and three-letter code, use the two-letter code; when it has only a three-letter code, use the three-letter code. This RFC replaces RFC 1766.
- See: http://www.ietf.org/rfc/rfc3066.txt
- Type of term: http://dublincore.org/usage/documents/principles/#encoding-scheme
- Qualifies: http://purl.org/dc/elements/1.1/language

After:

- Definition: Internet RFC 3066 Tags for the Identification of Languages
- See: http://www.ietf.org/rfc/rfc3066.txt
- Type of term: http://www.w3.org/2000/01/rdf-schema#Datatype
- Qualifies: http://purl.org/dc/elements/1.1/language

Changes:

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

- Label: NLM
- Definition: National Library of Medicine Classification
- See: http://wwwcf.nlm.nih.gov/class/
- Type of term: http://dublincore.org/usage/documents/principles/#encoding-scheme
- Qualifies: http://purl.org/dc/elements/1.1/subject

After:

- Definition: National Library of Medicine Classification
- See: http://wwwcf.nlm.nih.gov/class/
- Type of term: http://purl.org/dc/dcam/VocabularyEncodingScheme
- Qualifies: http://purl.org/dc/elements/1.1/subject

Changes:

REFERENCES

- [DC-GENERAL] http://www.jiscmail.ac.uk/lists/dc-general.html
- [DCAM] http://dublincore.org/documents/abstract-model/
- [DCMES-CHANGES] http://dublincore.org/usage/decisions/2006/2006-03.dcmes-changes.shtml
- [DCMITERMS] http://dublincore.org/documents/2005/06/13/dcmi-terms/
- [DCTERMS-HISTORY] http://dublincore.org/usage/terms/history/
- [DCTERMS] http://dublincore.org/documents/dcmi-terms/
- [MANZANILLO-DECISIONS] http://www.jiscmail.ac.uk/cgi-bin/webadmin?A2=ind0611&L=dc-usage&P=1110
- [MANZANILLO] http://dublincore.org/usage/meetings/2006/09/manzanillo/dcmes-changes/html/
- [NAMESPACE] http://dublincore.org/documents/dcmi-namespace/
- [PUBLIC-COMMENT] http://dublincore.org/usage/public-comment/2006/08/dcmes-changes/

SubjectScheme and other "undeclared" members of the TERMS namespace

2007-03-13

For many years, the existence of classes has been asserted in
DCMI term declarations such as [1]. These classes are:

    http://purl.org/dc/terms/DateScheme
    http://purl.org/dc/terms/FormatScheme
    http://purl.org/dc/terms/IdentifierScheme
    http://purl.org/dc/terms/LanguageScheme
    http://purl.org/dc/terms/SpatialScheme
    http://purl.org/dc/terms/SubjectScheme
    http://purl.org/dc/terms/TypeScheme

In effect, these are types of encoding scheme and serve to
associate an encoding schemes with a particular property.
For example, LCSH is a SubjectScheme - defined as "a set of
subject encoding schemes and/or formats":

```
    <rdfs:Class rdf:about="http://purl.org/dc/terms/SubjectScheme">
        <rdfs:label xml:lang="en-US">Subject Encoding Schemes</rdfs:label>
        <rdfs:comment xml:lang="en-US">A set of subject encoding schemes and/or formats</rdfs:comment>
        <rdfs:isDefinedBy rdf:resource="http://purl.org/dc/terms/"/>
        <dcterms:references rdf:resource="http://purl.org/dc/elements/1.1/subject"/>
        <dcterms:issued>2000-07-11</dcterms:issued>
      </rdfs:Class>

    <dcterms:SubjectScheme rdf:about="http://purl.org/dc/terms/LCSH">
    <rdfs:label xml:lang="en-US">LCSH</rdfs:label>
    <rdfs:comment xml:lang="en-US">Library of Congress Subject Headings</rdfs:comment>
    <rdf:type rdf:resource="http://www.w3.org/2000/01/rdf-schema#Class"/>
    <rdfs:isDefinedBy rdf:resource="http://purl.org/dc/terms/"/>
    <dcterms:issued>2000-07-11</dcterms:issued>
    <dcterms:modified>2002-06-15</dcterms:modified>
    <dc:type rdf:resource="http://dublincore.org/usage/documents/principles/#encoding-scheme"/>
    <dcterms:hasVersion rdf:resource="http://dublincore.org/usage/terms/history/#LCSH-002"/>
    </dcterms:SubjectScheme>
```

[1] http://dublincore.org/2006/12/18/dcq.rdf

Encoding schemes

2007-03-13

In the current DCAM [7], "vocabulary encoding scheme" is defined as follows:

> vocabulary encoding scheme (Proposed URI: http://purl.org/dc/dcam/VocabularyEncodingScheme)
>
> An enumerated set of resources.

In the current DCAM [7], "syntax encoding scheme" is defined as follows:

> syntax encoding scheme (http://www.w3.org/2000/01/rdf-schema#Datatype)
>
> A set of strings and an associated set of rules that describe a mapping between that set of strings and a set of resources. The mapping rules may define how the string is structured (for example DCMI Box) or they may simply enumerate all the strings and the corresponding resources (for example ISO 3166).

According to http://www.w3.org/TR/2004/REC-rdf-concepts-20040210/#section-Datatypes:

> 5. Datatypes (Normative)
>
> The datatype abstraction used in RDF is compatible with the abstraction used in XML Schema Part 2: Datatypes [XML-SCHEMA2].
>
> A datatype consists of a lexical space, a value space and a lexical-to-value mapping.
>
> The lexical space of a datatype is a set of Unicode [UNICODE] strings.
>
> The lexical-to-value mapping of a datatype is a set of pairs whose first element belongs to the lexical space of the datatype, and the second element belongs to the value space of the datatype:
>
> * Each member of the lexical space is paired with (maps to) exactly one member of the value space.
>
> * Each member of the value space may be paired with any number (including zero) of members of the lexical space (lexical representations for that value).
>
> A datatype is identified by one or more URI references.
>
> RDF may be used with any datatype definition that conforms to this abstraction, even if not defined in terms of XML Schema.
>
> Certain XML Schema built-in datatypes are not suitable for use within RDF. For example, the QName datatype requires a namespace declaration to be in scope during the mapping, and is not recommended for use in RDF. [RDF-SEMANTICS] contains a more detailed discussion of specific XML Schema built-in datatypes.
>
> Note: When the datatype is defined using XML Schema:
>
> * All values correspond to some lexical form, either using the lexical-to-value mapping of the datatype or if it is a union datatype with a lexical mapping associated with one of the member datatypes.

```
        * XML Schema facets remain part of the datatype and
        are used by the XML Schema mechanisms that control
        the lexical space and the value space; however,
        RDF does not define a standard mechanism to access
        these facets.

        * In [XML-SCHEMA1], white space normalization
        occurs during validation according to the value of
        the whiteSpace facet. The lexical-to-value mapping
        used in RDF datatyping occurs after this, so that
        the whiteSpace facet has no effect in RDF datatyping.

In Manzanillo [1], we agreed on the following categorization of
existing encoding schemes:

-- Syntax encoding schemes

   http://purl.org/dc/terms/Box
   http://purl.org/dc/terms/Period
   http://purl.org/dc/terms/Point
   http://purl.org/dc/terms/ISO3166   [2] - previously considered VES
   http://purl.org/dc/terms/ISO639-2  [3] - previously considered VES
   http://purl.org/dc/terms/RFC1766   [4]
   http://purl.org/dc/terms/RFC3066   [5]
   http://purl.org/dc/terms/URI
   http://purl.org/dc/terms/W3CDTF

-- Vocabulary encoding schemes

   http://purl.org/dc/terms/DCMIType
   http://purl.org/dc/terms/DDC
   http://purl.org/dc/terms/IMT       [6]
   http://purl.org/dc/terms/LCC
   http://purl.org/dc/terms/LCSH
   http://purl.org/dc/terms/MESH
   http://purl.org/dc/terms/NLM
   http://purl.org/dc/terms/TGN
   http://purl.org/dc/terms/UDC

REFERENCES

[1] http://stage.dublincore.org/usageboard/log/html/2006-10-01.meeting-notes-manzanillo.html
[2] http://www.iso.org/iso/en/prods-services/iso3166ma/02iso-3166-code-lists/list-en1.html
[3] http://lcweb.loc.gov/standards/iso639-2/langhome.html
[4] http://www.ietf.org/rfc/rfc1766.txt
[5] http://www.ietf.org/rfc/rfc3066.txt
[6] http://www.iana.org/assignments/media-types/
[7] http://dublincore.org/documents/2007/02/05/abstract-model/
```

NISO ballot on DCMES - response to comments

Shepherd: Akira

The final vote tally for the ballot on NISO/ANSI Z39.85 [1] was
YES: 47, NO: 1 (National Library of Medicine), ABSTAIN: 1.

Our task in Barcelona is to formulate responses to each of
the comments for submission to NISO by the end of March.
The last column is where you indicate whether the response
action would be an editorial (E) or substantive (S) change
to the standard text.

[1] http://www.niso.org/standards/balloting.html

==========
Comment 1: NLM in general

> The underlying reason for the No vote is that the revision
> does not resolve the fundamental issues that caused NLM to
> vote No on the original ballot for the standard. Therefore,
> we believe that the consistent position is to vote No
> on the revision. Although the most important issue in
> NLM's No vote in the 2001 standard was that none of
> the elements in Dublin Core are essential or required,
> other reasons included issues related to the definition
> for the Title element and the relationship between the
> Source and Relation elements (which are also addressed
> in our comments below regarding the current revision).
>
> Regarding the specific semantic revisions that are
> presented on the current ballot, the NLM review group
> found that these are minor revisions with the goal of
> clarifying intended semantics and to bring the wording
> of the definitions and usage comments into line with
> the language of the DCMI Abstract Model. In general,
> the review group felt that the changes proposed have
> succeeded in achieving this goal. We do, however, offer
> some specific comments about a few of the proposed changes.

Note: http://www.niso.org/standards/resources/DC-NLM-vote.html (from 2001-01-31):

> Element Name: Title, under "comments" we suggest deletion
> of the word "formally" - the terms may mean something to
> a catalogers but may not mean anything to others outside
> of the information professional and may lead to confusion;
>
> Element Name: Source and Element Name: Relation - The
> differences between these two element is difficult to
> discern even for some information specialists. Several
> foreign DCMESs were reviewed and many struggled with
> definitions that would differentiation these elements. The
> outcome varied between the various interpretations since
> translations do not clarify the ambiguities.

==========
Comment 2: CDL about sections 1 and 3

> RFC 2396 (URI Syntax) is clearly obsoleted by RFC
> 3986. References to it should be changed to RFC 3986. This
> also affects a sentence in the Purpose and Scope section:

"A resource is defined here to be anything which has identity, as in the definitions used in Internet RFC 2396, Uniform Resource Identifiers (URI): Generic Syntax, by Tim Berners-Lee et al., and in the DCMI Abstract Model, by Andy Powell et al." This sentence would be better worded consistent with RFC 3986 (which backs away from defining resource) along the lines of the recently revised RFC 2413 (for Dublin Core), which reads: "As in Internet RFC 3986 [RFC3986], "Uniform Resource Identifier (URI): Generic Syntax," this specification does not limit the scope of what might be a resource

http://dublincore.org/documents/2007/02/05/abstract-model/:

resource (http://www.w3.org/2000/01/rdf-schema#Resource)

Anything that might be identified. Familiar examples include an electronic document, an image, a service (for example, "today's weather report for Los Angeles"), and a collection of other resources. Not all resources are network "retrievable"; for example, human beings, corporations, concepts and bound books in a library can also be considered resources.

http://www.ietf.org/rfc/rfc2396.txt:

Resource

A resource can be anything that has identity. Familiar examples include an electronic document, an image, a service (e.g., "today's weather report for Los Angeles"), and a collection of other resources. Not all resources are network "retrievable"; e.g., human beings, corporations, and bound books in a library can also be considered resources.

http://www.ietf.org/rfc/rfc3986.txt:

Resource

This specification does not limit the scope of what might be a resource; rather, the term "resource" is used in a general sense for whatever might be identified by a URI. Familiar examples include an electronic document, an image, a source of information with a consistent purpose (e.g., "today's weather report for Los Angeles"), a service (e.g., an HTTP-to-SMS gateway), and a collection of other resources. A resource is not necessarily accessible via the Internet; e.g., human beings, corporations, and bound books in a library can also be resources. Likewise, abstract concepts can be resources, such as the operators and operands of a mathematical equation, the types of a relationship (e.g., "parent" or "employee"), or numeric values (e.g., zero, one, and infinity).

==========

Comment 3: CDL on sections 1 and 3: RFC 3066 obsoleted by RFC 4646

RFC 3066 (Language Tags) is clearly obsolete. References to RFC 3066 should all be changed to RFC 4646.

```
==========================================================================
Comment 4: NARA, Definition and comment for dc:format

    The 'Definition' section of the term 'Coverage' includes
    the new term 'spatial applicability', which is not further
    explained (as are 'spatial topic', 'temporal topic' and
    'jurisdiction') in the 'Comments' section. The definition of
    'spatial applicability' is addressed in 'Editorial changes
    to terms in the Dublin Core Metadata Element Set (DCMES) -
    response to comments', so it is unusual that a clarification
    was not incorporated in this draft standard.

--------------------------------------------------------------------------
http://dublincore.org/usage/decisions/2006/2006-03.response-to-comments.shtml

6) For the element Coverage, the following definition had
   been proposed for public comment:

        The spatial or temporal topic of the resource, or
        the jurisdiction under which the resource is relevant.

   The Treasury Board reviewers felt that the words "spatial
   or temporal topic of the resource" did not capture the full
   scope of usage of this element within the Government of
   Canada, where the spatial aspect of Coverage is also used
   for resources that "apply to" a certain geographic area
   (e.g., for employment opportunities in a specific area).

   The reviewers suggested the definition:

        The spatial or temporal characteristics of the
        resource, or the jurisdiction under which the resource
        is relevant.

   However, the Usage Board felt that the examples given do,
   in fact, fall under the proposed definition of Coverage,
   as "applicability" falls under a broad view of "aboutness".

   That spatial applicability is in scope has been made clear
   in the definition approved by the Usage Board:

        The spatial or temporal topic of the resource,
        the spatial applicability of the resource, or the
        jurisdiction under which the resource is relevant.

   The Usage Board notes that including temporal applicability
   within the scope of Coverage would have introduced an
   overlap with the element refinement Valid ("Date (often
   a range) of validity of a resource").

The definition of Type was subject to careful discussion in
light of implementation experience -- in practice, Type has
been interpreted quite broadly -- and in light of the DCMI
Abstract Model.  Comparing the existing definition, from 1999:

    The nature or genre of the content of the resource.

to the definition proposed for public comment:

    The genre, functional category, or aggregation level
    of the resource.
```

the Usage Board felt that the proposed definition makes the semantics of Type more specific in ways that are not well understood. The definition that was approved:

> The nature or genre of the resource.

follows the wording of the existing definition and retains its broad applicability.

3.14. Coverage

```
2001> Element Name:   Coverage
2001> Label:          Coverage
2001> Definition:     The extent or scope of the content of the
2001>                 resource.
2001> Comment:        Typically, Coverage will include spatial
2001>                 location (a place name or geographic
2001>                 coordinates), temporal period (a
2001>                 period label, date, or date range),
2001>                 or jurisdiction (such as a named
2001>                 administrative entity). Recommended best
2001>                 practice is to select a value from a
2001>                 controlled vocabulary (for example, the
2001>                 Thesaurus of Geographic Names [TGN]) and
2001>                 to use, where appropriate, named places
2001>                 or time periods in preference to numeric
2001>                 identifiers such as sets of coordinates
2001>                 or date ranges.

2006> Name:           coverage
2006> Label:          Coverage
2006> Definition:     The spatial or temporal topic of the resource, the
2006>                 spatial applicability of the resource, or the
2006>                 jurisdiction under which the resource is relevant.
2006> Comment:        Spatial topic may be a named place or a location
2006>                 specified by its geographic coordinates. Temporal
2006>                 period may be a named period, date, or date
2006>                 range. A jurisdiction may be a named administrative
2006>                 entity or a geographic place to which the resource
2006>                 applies. Recommended best practice is to use a
2006>                 controlled vocabulary such as the Thesaurus of
2006>                 Geographic Names [TGN].  Where appropriate, named
2006>                 places or time periods can be used in preference
2006>                 to numeric identifiers such as sets of coordinates
2006>                 or date ranges.
```

-- Element Name now called Name, since 2002 in lowercase [see Section 2.6]

-- In definition, replaces the ambiguous phrase "extent or scope of the content of the resource" with the phrase "spatial or temporal topic of the resource". The use of "extent" in the term Coverage had caused confusion with respect to the term Format -- the comment of which refers to "dimensions" such as "size" and "duration" -- and to the term Extent, a refinement of Format defined as "The size or duration of the resource".

-- In definition, added the words "or the jurisdiction under which the resource is relevant. The notion of

"jurisdiction" entered into the scope of Coverage at an early date as part of the comment and has informed a significant number of implementations. The Usage Board has made this meaning explicit by referring to "jurisdiction" in the definition itself and by further clarifying the intended meaning in the comment.

-- In definition, replaces "content of the resource" with "resource" [see Section 2.1]

-- In comment, replaces the phrase "select a value from a controlled vocabulary" with "use a controlled vocabulary" [see Section 2.3]

==========

Comment 5: NLM Definition and comment for dc:format

We question the use of dimensions in format, as dimensions are not a format but rather an attribute of format. Also, we question the removal of the sentence Format may be used to identify the software, hardware, or other equipment needed to display or operate the resource. Deleting this sentence could cause confusion among users of the standard who wish to record this type of information.

3.9. Format

2001> Element Name: Format
2001> Label: Format
2001> Definition: The physical or digital manifestation of
2001> the resource.
2001> Comment: Typically, Format will include the
2001> media-type or dimensions of the resource.
2001> Format may be used to identify the
2001> software, hardware, or other equipment
2001> needed to display or operate the
2001> resource. Examples of dimensions include
2001> size and duration. Recommended best
2001> practice is to select a value from a
2001> controlled vocabulary (for example,
2001> the list of Internet Media Types [MIME]
2001> defining computer media formats).

2006> Name: format
2006> Label: Format
2006> Definition: The file format, physical medium, or dimensions
2006> of the resource.
2006> Comment: Examples of dimensions include
2006> size and duration. Recommended best practice is
2006> to use a controlled vocabulary such as the list
2006> of Internet Media Types [MIME].

-- Element Name now called Name, since 2002 in lowercase [see Section 2.6]

-- The definition of Format as "The physical or digital manifestation of the resource" has been a source of confusion. Specifically, it has been misinterpreted as referring to a related resource that is a "manifestation" in the sense of Functional Requirements for Bibliographic Records (FRBR).

The new wording moves words from the original comment into the definition in order to describe the intended meaning more concretely.

-- In comment, drops the sentence: "Format may be used to identify the software, hardware, or other equipment needed to display or operate the resource."

-- In comment, replaces "select a value from an encoding scheme" with "use a controlled vocabulary" [see Section 2.3]

==========
Comment 6: CDL, definition of dc:source:

A minor issue has to do with the initial word "The" in the definition of the Source element. The closest parallel definition is Relation (Source being a special kind of Relation), which begins with the non-parallel word "A", suggesting that there is only one Source. The confusion is minor because the element set does not restrict the number of occurrences of the Source element.

In the penultimate version of DCMES of 2006-08-28, Source was defined as "A related resource..." [1]. In the set of changes proposed for Public Comment on 2006-08-28, Source was also defined as "A related resource..." [2].

After Public Comment was held, decisions were taken at the meeting in Manzanillo, at which time the article "The" in "The resource" was introduced in the context removing the redundant word "related" as per comments from the Canadian Treasury Board [3, quoted below].

The switch from "A" to "The" carried over into decision text of 2006-12-18 and the error went undetected by reviewers of the decision text in the Usage Board [4]. The change was also noted in the "Response to comments" of 2006-12-18 [5]. The decision text was then used to published "DCMI Metadata Terms" on 2006-12-18 [6], published by NISO for ballot on 2007-01-23 and as Internet-Draft draft-kunze-rfc2413bis-06.txt on 2007-02-19 by IETF [7].

[1] http://dublincore.org/documents/2006/08/28/dcmi-terms/
[2] http://dublincore.org/usage/public-comment/2006/08/dcmes-changes/
[3] http://stage.dublincore.org/usageboard/log/2006-10-01.meeting-notes-manzanillo.txt
[4] http://dublincore.org/usage/decisions/2006/2006-03.dcmes-changes.shtml
[5] http://dublincore.org/usage/decisions/2006/2006-03.response-to-comments.shtml
[6] http://dublincore.org/documents/2006/12/18/dcmi-terms/
[7] http://www.ietf.org/internet-drafts/draft-kunze-rfc2413bis-06.txt

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http://stage.dublincore.org/usageboard/log/2006-10-01.meeting-notes-manzanillo.txt

-- Discussion of Treasury Board of Canada comments on the proposed changes to DCMES

AGREED: For dc:source, the word 'related' in the definition is redundant and should be removed. The new definition for Source will be the wording proposed in the Canadian Treasury Board comments: "The resource from which the described resource is derived.".

ACTION 2006-09-30: Tom - Change dc:source definition to read:
"The resource from which the described resource is derived"
[see http://dublincore.org/usage/public-comment/2006/08/dcmes-changes/].

==========

Comment 7: NLM Definition of dc:source

We find the definition and comment still extremely confusing and question the use of related resource to describe the source. We understand that source is a special type of related resource but this is not made clear in the revisions. We recommend restating the definition to The resource from which the described resource is derived in whole or in part. The comment would then read, The described resource may be derived from the related resource. Recommended best practice is to identify the source by means of a string conforming to a formal identification system.

3.11. Source

```
2001> Element Name:   Source
2001> Label:          Source
2001> Definition:     A reference to a resource from which
2001>                 the present resource is derived.
2001> Comment:        The present resource may be derived
2001>                 from the Source resource in whole or
2001>                 in part. Recommended best practice is
2001>                 to identify the referenced resource by
2001>                 means of a string or number conforming
2001>                 to a formal identification system.

2006> Name:           source
2006> Label:          Source
2006> Definition:     The resource from which the described
2006>                 resource is derived.
2006> Comment:        The described resource may be derived from the
2006>                 related resource in whole or in part. Recommended
2006>                 best practice is to identify the related resource
2006>                 by means of a string conforming to a formal
2006>                 identification system.
```

-- Element Name now called Name, since 2002 in lowercase
[see Section 2.6]

-- In the definition, changes "present resource" to "described resource", both more precise and consistent with the DCMI Abstract Model

-- In definition, replaces "a reference to a resource" with "resource" [see Section 2.2]

-- In comment, drops the redundant words "or number"

==========

Comment 8: NLM, Comment for dc:subject

We question why the comment contains the phrase the topic will be represented. rather than the subject will be represented. as is the case in many of the other elements in which the element name is repeated in the comment field. Repeating the element name in the comment field would help provide

```
    consistency among the elements.

-------------------------------------------------------------------
3.3.  Subject

2001> Element Name:   Subject
2001> Label:          Subject and Keywords
2001> Definition:     A topic of the content of the resource.
2001> Comment:        Typically, Subject will be expressed
2001>                 as keywords, key phrases, or classification
2001>                 codes that describe a topic of the
2001>                 resource. Recommended best practice
2001>                 is to select a value from a controlled
2001>                 vocabulary or formal classification scheme.

2006> Name:           subject
2006> Label:          Subject
2006> Definition:     The topic of the resource.
2006> Comment:        Typically, the topic will be represented using
2006>                 keywords, key phrases, or classification codes.
2006>                 Recommended best practice is to use a controlled
2006>                 vocabulary.  To describe the spatial or temporal
2006>                 topic of the resource, use the Coverage element.

      -- Element Name now called Name, since 2002 in lowercase
         [see Section 2.6]

      -- Change of label from "Subject and Keywords" to
         "Subject".  It continues to be acknowledged in the
         comment that a subject may be expressed with keywords.
         This change also brings the label of the element
         ("Subject") in line with its name ("subject").

      -- In definition, replaces "content of the resource"
         with "resource" [see Section 2.1]

      -- In comment, adds advice that the Coverage element
         be used to describe the spatial or temporal topic
         of the resource

      -- In comment, replaces "use a value from an encoding
         scheme" with "use a controlled vocabulary" [see
         Section 2.3]

      -- In comment, "expressed as" reworded as "represented using"

===================================================================
Comment 9: NLM, Comment for dc:title

    We recommend removing the term formally from the comment
    field. This term is ambiguous and may have a different meaning
    in different communities

-------------------------------------------------------------------
3.1.  Title

2001> Element Name:   Title
2001> Label:          Title
2001> Definition:     A name given to the resource.
2001> Comment:        Typically, Title will be a name by
2001>                 which the resource is formally known.
```

```
2006> Name:           title
2006> Label:          Title
2006> Definition:     A name given to the resource.
2006> Comment:        Typically, a Title will be a name by which
2006>                 the resource is formally known.

      -- Element Name now called Name, since 2002 in lowercase
         [see Section 2.6]

      -- In comment, reference to "Title" changed to "a Title"

------------------------------------------------------------------------
Date:         Fri, 16 Feb 2007 13:37:26 +0000
From:         Misha Wolf <Misha.Wolf@REUTERS.COM>
To:           DC-GENERAL@JISCMAIL.AC.UK
Subject: draft-kunze-rfc2413bis-05.txt
Sender:       General DCMI discussion list <DC-GENERAL@JISCMAIL.AC.UK>

Hi John,

I'm writing to comment on draft-kunze-rfc2413bis-05.txt
(http://ietfreport.isoc.org/idref/draft-kunze-rfc2413bis/).

On behalf of the News Industry, I wish to repeat our strong opposition
to the comment against the DC title element:

    Typically, Title will be a name by which the resource is formally
    known.

    This is true of no Web page that I know of (including the DC Web pages)
    and is certainly not true of News stories.

    If the DC community continues to insist that the Earth is flat, other
    communities are forced to form their own views of DC's powers of
    observation and interest in listening.

    Regards,
    Misha -- Co-author of RFC 2413 (http://www.ietf.org/rfc/rfc2413.txt)

    Misha Wolf
    News Standards Manager
    Reuters

------------------------------------------------------------------------
Date:         Thu, 23 Jun 2005 19:26:29 +0100
From:         Misha Wolf <Misha.Wolf@REUTERS.COM>
Subject: Never mind the syntax, feel the semantics
Comments: cc: semantic-web@w3.org, iptc-metadata@yahoogroups.com
To:           DC-GENERAL@JISCMAIL.AC.UK

I'll start by mentioning that I've put on a hard hat and a flame-
retardant cape, just in case I need them.

It's also worth reiterating Stu's mention of my long involvement
with DC.  See, for example, RFC 2413 (Dublin Core Metadata for
Resource Discovery), dating from 1998:
   http://www.ietf.org/rfc/rfc2413.txt

As I've mentioned in previous postings, the News Architecture
Working Party of the International Press Telecommunications Council
(IPTC) is actively examining the use of DC for those of our metadata
elements where there is a good semantic fit.  Having been involved
```

with DC all those years ago, I had assumed that this would be a relatively pain-free matter. I was wrong. Consider the humble title. RFC 2413 defines this as:

> The name given to the resource, usually by the Creator or Publisher.

The current official DC documentation states:

> Definition: A name given to the resource.
>
> Comment : Typically, Title will be a name by which the resource is formally known.

Ouch! This comment may well work for the Library community. It certainly does not work for many other communities, such as Web page authors, professional photographers, or news organisations.

If I change the title of one of the hundreds of Web pages I maintain, I am most certainly not changing "a name by which the resource is formally known".

The same applies to a professional photographer changing the title of one of thousands of photos on her/his computer.

And the same applies to a news story ... the title (ie headline) is most certainly not any kind of formal name.

So we have a problem. If the Semantic Web is to work, it is not enough to employ some common syntax or even a common abstract model. We need to be able to share meaning. And this is obviously a balancing act between having definitions that are so broad that they become meaningless and definitions that are so narrow that they fit only one community and are not shareable. Those of us working on the architecture of mainstream news standards, perceive the comment associated with dc:title as being on the latter end of the spectrum.

And so, as Chair of the IPTC News Metadata Framework WG, I am asking the DC community to reconsider the text of the comment accompanying the definition of dc:title.

Many thanks,
Misha Wolf
Standards Manager, Reuters

Date: Thu, 23 Jun 2005 15:13:16 -0400
From: "Weibel,Stu" <weibel@OCLC.ORG>
Subject: Re: Never mind the syntax, feel the semantics
Comments: To: Misha Wolf <Misha.Wolf@REUTERS.COM>
To: DC-GENERAL@JISCMAIL.AC.UK

This seems easy to me...

Point A:

The DEFINITION is broad and inclusive, and seems to me to clearly satisfy both the biblioheads and the webheads.

The COMMENT is just that... A comment. Intended to clarify (oops... We might not have done the best possible thing in this case, though the word 'typically' is a very legitimate trap door).

Definitions are normative, comments are... well... Comments.

Point B:

The tricky balance that Misha articulates below has always been hard, and inevitably rough around the margins:

> a balancing act between having definitions that are so broad that they become meaningless and definitions that are so narrow that they fit only one community and are not shareable.

Always we should be apply the test of common sense... In this case, its asking the question...

What is the most title-like-object in this resource, and if I choose it, am I likely to blow up any other community's notion of THEIR title-like-object?

The answer seems SOOOO obvious to me that I can't understand why this is even an issue.

Hey, Misha... We've missed you!
s

==========
Comment 10, NLM Comment for dc:type

> We question the deletion of the sentence Type includes terms describing general categories, functions, genres, or aggregation levels for content. We feel that by removing this sentence it has taken away the guidance that was previously present and resulted in a less user-friendly comment. If one of the objectives of this revision is to define elements at a high-level without much implementation guidance, by only providing a definition and recommended best practices, then the standard should be consistent among all of the elements.

3.8. Type

2001> Element Name: Type
2001> Label: Resource Type
2001> Definition: The nature or genre of the content of
2001> the resource.
2001> Comment: Type includes terms describing general
2001> categories, functions, genres, or
2001> aggregation levels for content. Recommended
2001> best practice is to select a value from
2001> a controlled vocabulary (for example, the
2001> DCMI Type Vocabulary [DCT]). To describe
2001> the physical or digital manifestation of
2001> the resource, use the Format element.

2006> Name: type
2006> Label: Type
2006> Definition: The nature or genre of the resource.
2006> Comment: Recommended best practice is to use a controlled
2006> vocabulary such as the DCMI Type Vocabulary
2006> [DCMITYPE]. To describe the file format, physical
2006> medium, or dimensions of the resource, use the

2006> Format element.

-- Element Name now called Name, since 2002 in lowercase [see Section 2.6]

-- In label, changed "Resource Type" to "Type" [see Section 2.4]

-- In definition, replaces "content of the resource" with "resource" [see Section 2.1]

-- In comment, replaces the phrase "select a value from a controlled vocabulary" with "use a controlled vocabulary" [see Section 2.3]

-- In comment, deletes sentence: "Type includes terms describing general categories, functions, genres, or aggregation levels for content."

Ballot Comments and Committee Response
For: Z39.85-200X, The Dublin Core Metadata Element Set
Ballot Ending 2007-03-08
DRAFT (2007-03-DD)

Note: Responses to the ballot comments are provided by the Maintenance Agency (MA), Dublin Core Management Initiative.

Acronyms used for Voting Members:
CDL = California Digital Library
NARA = U.S. National Archives and Records Administration
NLM = National Library of Medicine

Voting Member	Section	Comment	MA Response	Change Type*
NLM	General	The underlying reason for the No vote is that the revision does not resolve the fundamental issues that caused NLM to vote No on the original ballot for the standard. Therefore, we believe that the consistent position is to vote No on the revision. Although the most important issue in NLM's No vote in the 2001 standard was that none of the elements in Dublin Core are essential or required, other reasons included issues related to the definition for the Title element and the relationship between the Source and Relation elements (which are also addressed in our comments below regarding the current revision).		
NLM	General	Regarding the specific semantic revisions that are presented on the current ballot, the NLM review group found that these are minor revisions with the goal of clarifying intended semantics and to bring the wording of the definitions and usage comments into line with the language of the DCMI Abstract Model. In general, the review group felt that the changes proposed have succeeded in achieving this goal. We do, however, offer some specific comments about a few of the proposed changes.	N/A – see responses to specific comments.	N/A

* E=editorial; S=substantive; N/A = not applicable, no change required

Ballot Comments and Committee Response
For: Z39.85-200X, The Dublin Core Metadata Element Set
Ballot Ending 2007-03-08
DRAFT (2007-03-DD)

Voting Member	Section	Comment	MA Response	Change Type*
CDL	1, 3	RFC 2396 (URI Syntax) is clearly obsoleted by RFC 3986. References to it should be changed to RFC 3986. This also affects a sentence in the Purpose and Scope section: "A resource is defined here to be anything which has identity, as in the definitions used in Internet RFC 2396, Uniform Resource Identifiers (URI): Generic Syntax, by Tim Berners-Lee et al., and in the DCMI Abstract Model, by Andy Powell et al." This sentence would be better worded consistent with RFC 3986 (which backs away from defining resource) along the lines of the recently revised RFC 2413 (for Dublin Core), which reads: "As in Internet RFC 3986 [RFC3986], "Uniform Resource Identifier (URI): Generic Syntax," this specification does not limit the scope of what might be a resource.		
CDL	2 5 (language)	RFC 3066 (Language Tags) is clearly obsolete. References to RFC 3066 should all be changed to RFC 4646.		
NARA	5 (coverage)	The 'Definition' section of the term 'Coverage' includes the new term 'spatial applicability', which is not further explained (as are 'spatial topic', 'temporal topic' and 'jurisdiction') in the 'Comments' section. The definition of 'spatial applicability' is addressed in 'Editorial changes to terms in the Dublin Core Metadata Element Set (DCMES) - response to comments', so it is unusual that a clarification was not incorporated in this draft standard.		

* E=editorial; S=substantive; N/A = not applicable, no change required

Ballot Comments and Committee Response
For: Z39.85-200X, The Dublin Core Metadata Element Set
Ballot Ending 2007-03-08
DRAFT (2007-03-DD)

Voting Member	Section	Comment	MA Response	Change Type*
NLM	5 (format)	We question the use of dimensions in format, as dimensions are not a format but rather an attribute of format. Also, we question the removal of the sentence “Format may be used to identify the software, hardware, or other equipment needed to display or operate the resource.” Deleting this sentence could cause confusion among users of the standard who wish to record this type of information.		
CDL	5 (source)	A minor issue has to do with the initial word "The" in the definition of the Source element. The closest parallel definition is Relation (Source being a special kind of Relation), which begins with the non-parallel word "A", suggesting that there is only one Source. The confusion is minor because the element set does not restrict the number of occurrences of the Source element.		
NLM	5 (source)	We find the definition and comment still extremely confusing and question the use of “related resource” to describe the source. We understand that “source” is a special type of “related resource” but this is not made clear in the revisions. We recommend restating the definition to “The resource from which the described resource is derived **in whole or in part.”** The comment would then read, “The described resource may be derived from the related resource. Recommended best practice is to identify the **source** by means of a string conforming to a formal identification system.”		

* E=editorial; S=substantive; N/A = not applicable, no change required

Ballot Comments and Committee Response
For: Z39.85-200X, The Dublin Core Metadata Element Set
Ballot Ending 2007-03-08
DRAFT (2007-03-DD)

Voting Member	Section	Comment	MA Response	Change Type*
NLM	5 (subject)	We question why the comment contains the phrase "the topic will be represented…." rather than "the subject will be represented…." as is the case in many of the other elements in which the element name is repeated in the comment field. Repeating the element name in the comment field would help provide consistency among the elements.		
NLM	5 (title)	We recommend removing the term "formally" from the comment field. This term is ambiguous and may have a different meaning in different communities.		
NLM	5 (type)	We question the deletion of the sentence "Type includes terms describing general categories, functions, genres, or aggregation levels for content." We feel that by removing this sentence it has taken away the guidance that was previously present and resulted in a less user-friendly comment. If one of the objectives of this revision is to define elements at a high-level without much implementation guidance, by only providing a definition and recommended best practices, then the standard should be consistent among all of the elements.		

* E=editorial; S=substantive; N/A = not applicable, no change required

Review of the Collections Application Profile

This page: http://dublincore.org/usageboardwiki/AgendaBarcelonaCDAP

Shepherd: Joe Tennis
2007-03-13

Reading

-- Feedback of Usage Board to CDAP WG, December 2006
   http://dublincore.org/usageboardwiki/CdapFeedback

-- PDF packet of latest version, Collections Application Profile
   (and related documents): attachment:2007-03-17.barcelona-cdap.pdf
   (http://dublincore.org/usageboardwiki/AgendaBarcelonaCDAP?action=AttachFile&do=get&target=2007-03-17.barcelona-cdap.pdf), includes:

   https://netfiles.uiuc.edu/sshreeve/www/dcmi/Collection-ap-summary/2007-03-09/
   https://netfiles.uiuc.edu/sshreeve/www/dcmi/Collection-application-profile/2007-03-09/
   https://netfiles.uiuc.edu/sshreeve/www/dcmi/Collection-terms/2007-03-09/
   https://netfiles.uiuc.edu/sshreeve/www/dcmi/Colldesc-type/2007-03-09/
   https://netfiles.uiuc.edu/sshreeve/www/dcmi/Accrual-method/2007-03-09/
   https://netfiles.uiuc.edu/sshreeve/www/dcmi/Accrual-policy/2007-03-09/
   https://netfiles.uiuc.edu/sshreeve/www/dcmi/Frequency/2007-03-09/

-- Summary of responses to feedback, March 2007: attachment:ComparisonRubric.rtf

-- See also:
   Version of CDAP reviewed in Manzanillo, October 2006
   http://dublincore.org/usage/meetings/2006/09/manzanillo/profile-cdap/html/

Preparation for the Barcelona meeting

The Usage Board review of CDAP in 2006 [1] identified a need for:

 * Clarity of the data model described and deployed in the AP
   (manifest in property rubrics)

 * Clarity of definitions of concepts described and deployed
   in the AP (manifest in property rubrics)

 * Consistency in the use of terminology deriving from DCMI,
   deriving from any model cited in the profile, or created
   for use in the profile

```
 * Clarity and usefulness of references

Questions to consider when reviewing the CD DC AP

1. Is the data model clearer?  Is the data model complete
   and consistent with stated purpose of the profile?

2. Is the distinction between Collection and Catalogue or
   Index consistent throughout?

3. Does it matter that Catalogue or Index appears at two
   different levels of remove from collection, without a change
   in terminology, as depicted on page 11?

[1] http://dublincore.org/usageboardwiki/CdapFeedback

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2007-03-10: Email from Sarah Shreeves

The most substantial changes are:

1) The profile itself has been renamed "Dublin Core Collections
   Application Profile". This better reflects the resource that
   the AP is meant to describe (collections).

2) We have attempted to clarify the data model by making
   clear that, while derived from the AMCC model, it does stand
   on its own.

3) We have attempted to clarify "collection-description"
   by recategorizing "collection-description" as "catalogue or
   index", and making the necessary changes to the vocabulary
   terms and classes.

In addition we have made minor modifications to update the
profile (for example, aligning the definitions and labels
for dcterms with the most current document).

Below are the comments from the Usage Board on the CDAP from
the 2006 meeting. We have tried to respond to each.

 > 1. The data model used for the CDAP needs a better explanation. This
 >    explanation should include a statement about how the model in the
 >    Application Profile diverges from or otherwise amends the AMCC model
 >    cited as the basis for the profile. The Board feels that more
 >    explanatory material is needed to assist in relating the data model to
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 >    the AP where dependencies exist.

After discussions with the task force, we clarified that
the data model does stand on its own and, although it is
derived from the Analytical Model of Collections and their
Catalogues, there are not dependencies. External references
to the Analytical Model of Collections and their Catalogues
have been removed and a simple reference to the model has
been left. The relationships between entities have been
described. The correspondences between the relationships
represented in the data model and the DC Collections AP
properties have been listed. See the introduction to the
Application Profile.

 >2. The document should include a summary statement of the
 >   purpose and scope of the CDAP.

A new section "Purpose and Scope" has been added to the
Application Profile. It describes the objectives and scope of
the profile. It clearly defines that the profile can be used
to describe either collections as aggregations of physical
or digital resources or catalogs or indices as collections
as aggregations of metadata that describe a collection.

 > 3. The Board feels that the distinction between "use of CDAP for
 >    collection descriptions" and "use of CDAP for collections of collection
 >    descriptions" is a bit confusing, and the CDAP should more clearly
 >    separate the two.  This might be achieved by splitting the current CDAP
 >    into two separate APs -- one for collection descriptions and one for
 >    collections of collection descriptions. Editorial decisions of this
 >    nature are at the discretion of the working group.

After discussions among members of the task force, it did not
appear necessary to create two distinct profiles. However,
the terminology has been clarified to avoid possible
confusions. Whenever possible specific statements have been
made for the use of the DC Collections AP for collections
or for the use of DC Collections AP for collections
descriptions. The collection descriptions have been renamed
to avoid confusions. See the comment below as well.

 > 4. The Board suggests the Working Group reconsider the change of label
 >    for the term 'Collection-Description' [2]. The Board feels that the old
 >    label, 'Catalogue or collection description' [3] is clearer and easier
 >    to understand because the label itself is an example of a typical use
 >    for the term.
```

The term "collection-description" has been replaced by
"Catalogues or Indices". This term encompasses a range of
non-unitary finding aids including, catalogues, finding aids,
and indexes. This label covers more adequately the intended
scope of the application profile. In addition, we deleted the
class http://purl.org/cld/cdtype/UnitaryFindingAid because,
as Pete Johnston points out, the DC Collections Application
Profile does not support the description of UnitaryFindingAids,
it supports the creation of UnitaryFindingAids. We also
asserted that the three classes, HierarchicFindingAid,
IndexingFindingAid, and AnalyticFindingAid, are subclasess
of http://purl.org/cld/cdtype/CatalogueOrIndex. We think that
this has helped to clarify the terminology and model.

> 5. The term 'Content' is not defined in the AP, but is used in a
> definition for 'item' [4]. The Board asks the Working Group to include
> a definition of `content` in the AP Glossary.

The reference to "Content" has been removed. The definition
for item is: A physical or digital resource.

> In general, the Board prefers that Application Profiles be able to
> 'stand alone' as documents; ideally, readers of the CDAP should not
> need to refer to external documents in order to understand its logic
> and suggests that the working group consider adding some additional
> contextual information from external documents as an aid to the reader.

We have tried to extract the reliance on the AMCC document
for the data model and include necessary definitions. It
would be useful to know if there are other references that
need clarification.

Muriel Foulonneau
Sarah Shreeves
co-chairs of the DC Collection Description Application Profile Task Force

DCMI Usage Board Assessment of the Collection Description Application Profile: Feedback to the DCMI Collection Description Working Group

3 December 2006

The DCMI Usage Board undertook an assessment of the Collection Description Application Profile (CDAP) at a meeting in Manzanillo Mexico [1] on Sunday, 1 October 2006. Members present were Tom Baker (chair), Diane Hillmann, Andy Powell, Akira Miyazawa, Stuart Sutton, Joe Tennis, Andrew Wilson (designated shepherd of the Collection Description proposal), and Makx Dekkers (ex officio). This note holds an interim response to the DCMI Collection Description Working Group, short of being a formal review of a submitted application profile. This note includes comments on the Collection Description application profile as a whole. See [1] for links to the actual documents reviewed.

The Board is of the view that this application profile is almost ready to be submitted as a complete proposal to the Usage Board for formal review and compliments the Working Group and the chair Pete Johnston, on the dedication and effort that has been put into the work. The Board asks the working group to resubmit its proposal for re-consideration and recommends the following changes and additions:

1. The data model used for the CDAP needs a better explanation. This explanation should include a statement about how the model in the Application Profile diverges from or otherwise amends the AMCC model cited as the basis for the profile. The Board feels that more explanatory material is needed to assist in relating the data model to the AP where dependencies exist.

2. The document should include a summary statement of the purpose and scope of the CDAP.

3. The Board feels that the distinction between "use of CDAP for collection descriptions" and "use of CDAP for collections of collection descriptions" is a bit confusing, and the CDAP should more clearly separate the two. This might be achieved by splitting the current CDAP into two separate APs -- one for collection descriptions and one for collections of collection descriptions. Editorial decisions of this nature are at the discretion of the working group.

4. The Board suggests the Working Group reconsider the change of label for the term 'Collection-Description' [2]. The Board feels that the old label, 'Catalogue or collection description' [3] is clearer and easier to understand because the label itself is an example of a typical use for the term.

5. The term 'Content' is not defined in the AP, but is used in a definition for 'item' [4]. The Board asks the Working Group to include a definition of `content` in the AP Glossary.

In general, the Board prefers that Application Profiles be able to 'stand alone' as documents; ideally, readers of the CDAP should not need to refer to external documents in order to understand its logic and suggests that the working group consider adding some additional contextual information from external documents as an aid to the reader.

- [1] http://dublincore.org/usage/meetings/2006/09/manzanillo/profile-cdap/html/
- [2] http://dublincore.org/groups/collections/collection-terms/2006-08-24/#cldcollectionDescription
- [3] http://www.ukoln.ac.uk/metadata/dcmi/collection-application-profile/2005-08-25/#dcdescription
- [4] http://dublincore.org/groups/collections/collection-terms/2006-08-24/#clditemType

CDAP Comparison Rubric for UB Meeting Barcelona 2007

Documents reviewed and review materials from Manzanillo at [2]
DCAP response by Sarah Shreeves and Muriel [5]

Usage Board review [1]	DCAP Response and additional changes [5]	Evidence found for revision	Comments or evidence to the contrary
The data model used for the CDAP needs a better explanation. This explanation should include a statement about how the model in the Application Profile diverges from or otherwise amends the AMCC model cited as the basis for the profile. The Board feels that more explanatory material is needed to assist in relating the data model to the AP where dependencies exist.	We have attempted to clarify the data model by making clear that, while derived from the AMCC model, it does stand on its own. After discussions with the task force, we clarified that the data model does stand on its own and, although it is derived from the Analytical Model of Collections and their Catalogues, there are not dependencies. External references to the Analytical Model of Collections and their Catalogues have been removed and a simple reference to the model has been left. The relationships between entities have been described. The correspondences between the relationships represented in the data model and the DC Collections AP properties have been listed. See the introduction to the Application Profile.		Footnote #1 page 54. jtt: They say in this note that their model is derived from [7] and [8] claiming it both a subset and a simplification of the model. I would suggest stronger wording claiming what they claim here in the second column to the left.
The document should include a summary statement of the purpose and scope of the CDAP.	A new section "Purpose and Scope" has been added to the Application Profile. It describes the objectives and scope of the profile. It clearly defines that the profile can be used to describe either collections as aggregations of physical or digital resources or catalogs or indices as collections as aggregations of metadata that describe a collection.	pg. 9 in [9]	
The Board feels that the distinction between "use of CDAP for collection descriptions" and "use of CDAP for collections of collection descriptions" is a bit confusing, and the CDAP should more clearly separate the two. This might be achieved by splitting the current CDAP into two separate	After discussions among members of the task force, it did not appear necessary to create two distinct profiles. However, the terminology has been clarified to avoid possible confusions. Whenever possible specific statements have been made for the use of the DC Collections AP for collections or for the use of DC Collections AP for collections descriptions. The collection descriptions have been renamed to avoid	Model: pg. 10 and 11 in [9]. Properties listing: Pg. 13 for	

APs -- one for collection descriptions and one for collections of collection descriptions. Editorial decisions of this nature are at the discretion of the working group.	confusions.	Describing a Collection and pg. 32 for Describing a Catalogue or Index in [9]	
The Board suggests the Working Group reconsider the change of label for the term 'Collection-Description' [2]. The Board feels that the old label, 'Catalogue or collection description' [3] is clearer and easier to understand because the label itself is an example of a typical use for the term.	We have attempted to clarify "collection-description" by recategorizing "collection-description" as "catalogue or index", and making the necessary changes to the vocabulary terms and classes. The term "collection-description" has been replaced by "Catalogues or Indices". This term encompasses a range of non-unitary finding aids including, catalogues, finding aids, and indexes. This label covers more adequately the intended scope of the application profile. In addition, we deleted the class http://purl.org/cld/cdtype/UnitaryFindingAid because, as Pete Johnston points out, the DC Collections Application Profile does not support the description of UnitaryFindingAids, it supports the creation of UnitaryFindingAids. We also asserted that the three classes, HierarchicFindingAid, IndexingFindingAid, and AnalyticFindingAid, are subclasess of http://purl.org/cld/cdtype/CatalogueOrIndex. We think that this has helped to clarify the terminology and model.		
The term 'Content' is not defined in the AP, but is used in a definition for 'item' [4]. The Board asks the Working Group to include a definition of content in the AP Glossary.	The reference to "Content" has been removed. The definition for item is: A physical or digital resource.	pg. 10 in [9]	Location is still problematic
In general, the Board prefers that Application Profiles be able to 'stand alone' as documents; ideally, readers of the CDAP should not need to refer to external documents in order to understand its logic and suggests that the working group consider adding some additional contextual information from external documents as an aid to the reader.	We have tried to extract the reliance on the AMCC document for the data model and include necessary definitions. It would be useful to know if there are other references that need clarification.		
	The profile itself has been renamed "Dublin Core Collections		

	Application Profile". This better reflects the resource that the AP is meant to describe (collections).		
	In addition we have made minor modifications to update the profile (for example, aligning the definitions and labels for dcterms with the most current document).		
"Provisional Report of DCMI UB Review of DC CD AP" by Pete Johnston – items presented here do not overlap with Usage Board review [6]		**Evidence found of revision**	**Comments or evidence to the contrary**
- Concept of Location is not well defined for Digital Collections. Suggest limiting is-Located-At relationship to case of Collections of Physical Items (i.e. two slightly different data models for Physical Collection and Digital Collection)			jtt: No acknowledgement of the difference between physical and digital collections in location.
- Some lack of specificity in use of VES/SES (e.g. Size/dcterms:extent), requirement for value strings (e.g. Location/cld:isLocatedAt)			

References

[1] http://dublincore.org/usageboardwiki/CdapFeedback
[2] http://dublincore.org/usage/meetings/2006/09/manzanillo/profile-cdap/html/
[3] http://www.ukoln.ac.uk/metadata/dcmi/collection-application-profile/2005-08-25/#dcdescription
[4] http://dublincore.org/groups/collections/collection-terms/2006-08-24/#clditemType
[5] http://dublincore.org/usageboardwiki/AgendaBarcelonaCDAP
[6] http://www.jiscmail.ac.uk/cgi-bin/webadmin?A2=ind0611&L=dc-collections&P=60
[7] Heaney, Michael. An Analytical Model of Collections and their Catalogues http://www.ukoln.ac.uk/metadata/rslp/model/
[8] Heaney, Michael. Users and Information Resources: An Extension of the Analytical Model of Collections and their Catalogues into Usage and Transactions http://www.ukoln.ac.uk/cd-focus/model-ext/
[9] http://dublincore.org/usageboardwiki/AgendaBarcelonaCDAP?action=AttachFile&do=get&target=2007-03-17.barcelona-cdap.pdf

About this draft review

This document is a 'trial run' for a full review of the CD Application Profile by the Usage Board. The draft is work-in-progress; it is intended for internal use of the Usage Board and should not be cited or quoted outside that context. The purpose of this document is to help the Usage Board visualize the end result of the review process -- its outline and (roughly) its length and granularity of detail.

Usage Board Review of the Collection Description Application Profile -- Draft

The DCMI Usage Board undertook an assessment of the Collection Description Application Profile (CDAP) at a meeting in Manzanillo Mexico [1] on Sunday, 1 October 2006. Members present were Tom Baker (chair), Diane Hillmann, Andy Powell, Akira Miyazawa, Stuart Sutton, Joe Tennis, Andrew Wilson (designated shepherd of the Collection Description proposal), and Makx Dekkers (ex officio). This note holds an interim response to the DCMI Collection Description Working Group, short of being a formal review of a submitted application profile. This note includes comments on the Collection Description application profile as a whole. See [1] for links to the actual documents reviewed.

== About the Collection Description Application Profile ==

The following sections in italics are pasted from [2] and should be edited down to summaries.

The purpose of the CD Application Profile is to "provide a means of creating simple descriptions of collections and collection-descriptions suitable for a broad range of collections. It is designed primarily to support the discovery and selection of collections, though it may be used to support other functions such as collection management too. It is not intended to describe every possible characteristic of every type of collection".

Collections and collection-level description

The term "collection" can be applied to any aggregation of physical or digital items. Those items may be of any type, so examples might include aggregations of natural objects, created objects, "born-digital" items, digital surrogates of physical items, and the catalogues of such collections (as aggregations of metadata records). The criteria for aggregation may vary: e.g. by location, by type or form of the items, by provenance of the items, by source or ownership, and so on. Collections may contain any number of items and may have varying levels of permanence.

A "collection-level description" provides a description of the collection as a unit: the resource described by a collection-level description is the collection, rather than the individual items within that collection. Collection-level descriptions are referred to in Michael Heaney's An Analytical Model of Collections and their Catalogues as "unitary finding-aids" [AMCC].

Collection-level description enables a collection provider to

- disclose information about the content and availability of collections to users where item-level metadata does not exist or is not available, or where the provision of item-level detail is not required or appropriate

It enables a user to

- discover and locate collections of interest
- select collections to explore on the basis of a summary description
- compare collections as broadly similar objects, even where items (and/or item-level metadata) are heterogeneous
- understand conditions of access and use
- interpret collections (and items within collections)

Increasingly, many of these functions - notably the discovery, location, selection and comparison of collections - are being carried out by software acting on behalf of a human user, perhaps in accordance with user preferences or with parameters describing the scope of a particular service.

Functional Requirements of the DC CD AP

The DC CD AP is intended to provide a means of creating simple descriptions of collections and collection-descriptions suitable for a broad range of collections. It is designed primarily to support the discovery and selection of collections, though it may be used to support other functions such as collection management too. It is not intended to describe every possible characteristic of every type of collection.

The aim is that the DC CD AP should support:

- the discovery of collections and collection-descriptions of potential interest, by enabling searching on various attributes of the collection including:
    - the name or title of the collection or collection-description
    - the subject and coverage of the collection
    - the nature or genre of the items within the collection or collection-description
    - the media type or format of the items within the collection or collection-description
    - the entity that created the collection or collection-description
    - the entity that owns the collection or collection-description
    - relationships between collections, between collection-descriptions and between collections and collection-descriptions
    - the identification of a known collection or collection-description, by enabling the capture and disclosure of identifying attributes such as
        - the formal identifier(s) the collection or collection-description
        - the name or title of the collection or collection-description
        - a textual description of the collection or collection-description
    - the selection of one or more collections or collection-descriptions from amongst a number of discovered collections or collection-descriptions, by enabling the capture and disclosure of attributes such as
        - a textual description of the collection or collection-description
        - a description of rights held in/over the collection or collection-description and conditions of access and use
        - a description of the custodial history of the collection or collection-description
        - a description of the way in which items are added to the collection or collection-description
    - the identification of the location of the collection or collection-description

- the identification of the services that provide access to the collection or collection description

CDAP Application Model

The DC CD AP is based on a data model which is derived from that described in Michael Heaney's An Analytical Model of Collections and their Catalogues [AMCC] and Users and Information Resources: An Extension of the Analytical Model of Collections and their Catalogues into Usage and Transactions [EAMCC]. The model used here is both a subset and a simplification of that model. The entity type which in that model is referred to as "Resource Mediator" is referred to here as "Service".

Review of CDAP by the Usage Board

The Board is of the view that this application profile is almost ready to be submitted as a complete proposal to the Usage Board for formal review and compliments the Working Group and the chair Pete Johnston, on the dedication and effort that has been put into the work. The Board asks the working group to resubmit its proposal for re-consideration and recommends the following changes and additions:

1. The data model used for the CDAP needs a better explanation. This explanation should include a statement about how the model in the Application Profile diverges from or otherwise amends the AMCC model cited as the basis for the profile. The Board feels that more explanatory material is needed to assist in relating the data model to the AP where dependencies exist.

2. The document should include a summary statement of the purpose and scope of the CDAP.

3. The Board feels that the distinction between "use of CDAP for collection descriptions" and "use of CDAP for collections of collection descriptions" is a bit confusing, and the CDAP should more clearly separate the two. This might be achieved by splitting the current CDAP into two separate APs -- one for collection descriptions and one for collections of collection descriptions. Editorial decisions of this nature are at the discretion of the working group.

4. The Board suggests the Working Group reconsider the change of label for the term 'Collection-Description' [2]. The Board feels that the old label, 'Catalogue or collection description' [3] is clearer and easier to understand because the label itself is an example of a typical use for the term.

5. The term 'Content' is not defined in the AP, but is used in a definition [4]. The Board asks the Working Group to include a definition of `content`
in the Glossary. The same applies to some terms used in the CDAP that are defined in the DCMI Abstract Model, such as 'Rich Description'.

In general, the Board prefers that Application Profiles be able to 'stand alone' as documents; ideally, readers of the CDAP should not need to refer to external documents in order to understand its logic and suggests that the working group consider adding some additional contextual information from external documents as an aid to the reader.

Documentation Submitted

This list to be turned into a more narrative characterization of documentation submitted.

- Full CDAP profile http://dublincore.org/groups/collections/collection-application-profile/2006-08-24/
  - The main change in this version is to separate out a list of properties used to describe a

Collection that is also a Collection Description, as discussed recently.

- 1. Introduction. The Introduction describes the purpose of describing collection level resources, sets out the functional requirements for the application profile, and describes the data model used as the basis for the profile -- the Analytical Model of Collections and their Catalogues developed by Michael Heaney.
- 2. Vocabularies/Namespaces Used in this DCAP. Section 2 lists namespaces used in CDAP: Dublin Core Metadata Element Set, v1.1, Dublin Core Metadata Terms, Dublin Core Type Vocabulary, MARC Relator Code Properties, Collection Description Terms, Collection Description Type Vocabulary Terms.
- 3. Describing a Collection. Starts out defining the class `Collection`. This is followed by documentation on of thirty properties which can be used to describe a Collection.
- 4. Describing a Collection-Description. Defines the Collection Description class and then provides definitions for the twenty-six properties which can be used to describe Collection Description. The 26 terms include 4 terms not appearing in the list above and exclude 8 terms from the above list.
- 5. Vocabulary Encoding Schemes Used
- 6. Syntax Encoding Schemes Used
- 7. Administrative Metadata

- Summary CDAP profile http://dublincore.org/groups/collections/collection-ap-summary/2006-08-24/
  - To minimise redundancy, I moved most of the introductory material out of the summary document and expanded the introduction in the main DCAP document. That really means that the summary document is pretty much a "ready reference" tool only, and readers coming to the DC CD AP really need to look at the full document to understand it.
  - Intended to be a very condensed view of the former -- to enable people to see "at a glance" what terms are used in the DC CD AP (which I think is quite difficult to get from the full doc in its current format) - and/or to act as a sort of "rich table of contents" for the former, but it is not intended to be stand-alone. I deliberately stripped out some of the information that was previously in the summary to avoid duplication/redundancy.
- Documentation submitted by Collection Description WG:
  - I've also created a separate document describing the "Collection Description Terms", i.e. the new properties, vocabulary encoding schemes and syntax encoding schemes coined for use in the DC CD AP:
  - Dublin Core Collection Description Terms
    http://dublincore.org/groups/collections/collection-terms/2006-08-24/
  - Dublin Core Collection Description Type (CDType) Vocabulary
    http://dublincore.org/groups/collections/colldesc-type/2006-08-24/
    - The Collection Description Type Vocabulary has been updated, to correct errors and to separate the descriptive text out into a one-line "Definition" and a more discursive "Comment".
- There are full descriptions of the sets of terms in three vocabulary encoding schemes:
  - Collection Description Frequency [a vocabulary encoding scheme]
    http://dublincore.org/groups/collections/frequency/2006-08-24/
  - Collection Description Accrual Method [a vocabulary encoding scheme]
    http://dublincore.org/groups/collections/accrual-method/2006-08-24/
  - Collection Description Accrual Policy [a vocabulary encoding scheme]

[1] http://dublincore.org/usage/meetings/2006/09/manzanillo/profile-cdap/html/

[2] http://dublincore.org/groups/collections/collection-terms/2006-08-24/#cldcollectionDescription

[3] http://www.ukoln.ac.uk/metadata/dcmi/collection-application-profile/2005-08-25/#dcdescription

[4] http://dublincore.org/groups/collections/collection-terms/2006-08-24/#clditemType

Note - links to current documents about Application Profiles at:
http://dublincore.org/usage/meetings/2006/04/profile-review/

Pete on the RDF representations - 2006-08-29

-- http://dublincore.org/groups/collections/collection-terms/2006-08-24/cldterms.rdf --
http://dublincore.org/groups/collections/colldesc-type/2006-08-24/cdtype.rdf --
http://dublincore.org/groups/collections/frequency/2006-08-24/freq.rdf --
http://dublincore.org/groups/collections/accrual-method/2006-08-24/accmeth.rdf --
http://dublincore.org/groups/collections/accrual-policy/2006-08-24/accpol.rdf

The RDF data should essentially be an alternative representation of what is in the HTML docs i.e. the only question marks are to do with that representation (e.g. the relationship etween a value in a VES and the VES, if we change the DCAM so that it is not is-instance-of (rdf:type))

I put up RDF/XML representations of the "collection description terms", the type vocabulary, and these three vocabularies, and the PURLs for the terms should de-reference to those RDF/XML docs (i.e. in the same way DCMI serves one doc per "namespace"). But some of that data is incomplete/tentative, pending some decisions about the DCAM and/or property ranges/domains, so at the moment it's probably best to treat the RDF/XML stuff more or less as a "placeholder".

All the term URIs (I hope) de-reference to something useful -- at the moment that's an RDF/XML document, but in the future we might set things up so that agents can get alternative representations (e.g. HTML for a browser displaying stuff to a human reader, RDF/XML for an app that wants to get the data about the relationships between terms in a form it can act on).

Note that the current RDF representations listed above are tentative/incomplete, pending discussions in the DC Architecture WG about changes to the DCMI Abstract Model, which would have an impact on how e.g. we describe the relationship between a vocabulary encoding scheme and a member term/value within that vocabulary encoding scheme.

Usage Board review of application profiles: criteria and procedures

About this draft

This is work in progress by the Usage Board. Please do not cite or quote.

What are the boundaries of what constitutes Usage Board review? Need to distinguish between things that affect conformance and usage guidelines that may conform but with which the Usage Board may disagree. Is there a difference between semantic conformance and modeling conformance?

End product of review should be self-contained, including short description of a profile. Questions below should make reviewer assignments explicit enough to elicit such descriptions.

Usage Board Application Profile Review Guidelines (For Review: Barcelona)

General

- The assignment of *conforming* status by DCMI to an application profile indicates that at the time of submission for DCMI review: (1) the profile's usage of terms conforms to the DCMI Abstract Model; (2) the profile, taken as a whole, is internally consistent; and (3) the profile is sufficiently documented to serve the needs of the community of interest.
  - General guidelines for adequate documentation are set out below.
  - See also the *DCMI AP Application Profile*. (outline at Architecture Wiki: Outline of an Application Profile for an Application Profile)
- DCMI draws a jurisdictional distinction between:
  - Matters affecting a profile's conformance to the DCMI Abstract Model--matters upon which a Usage Board judgment of *conforming* status depends; and
  - Matters of conformant usage with which the Usage Board disagrees--matters upon which a Usage Board may only advise and recommend.
- While an application profile may be judged *conforming* by the DCMI, the assignment of *conforming* status does ***not*** mean that DCMI considers the conforming profile to be the only one that is useful for a particular community.

PROFILE PURPOSE AND SCOPE	
Question	**Consideration**
Are the purpose and scope of the AP clearly stated?	The documentation must define the goals of the profile in terms of the community of interest as well as the profile's purpose in terms of the resources to be described and the functionality it intends to support.
	The documentation should describe the context in which the application profile is used or is likely to be used.

	The documentation should identify the organizations or individuals involved in the profile's development as well as any arrangements, policies, or intentions regarding the future development and maintenance of the profile.
FUNCTIONAL REQUIREMENTS	
Question	**Consideration**
Are the functional requirements of the AP stated, and does the AP conform to the stated functional requirements?	The documentation must define the functional requirements of the profile. These requirements should be framed in terms of general functions such as (but not limited to) *discovery*, *identification*, and *selection* as well as in a more detailed enumeration of specific functionality enabled by the profile under each of the more general functions.
	The documentation must demonstrate that the application profile conforms to the stated functional requirements.
APPLICATION DATA MODEL	
Question	**Consideration**
Does the AP provide a coherent data model?	The Application profile must provide a data model that describes the profile's entities and the relationships among those entities. The data model may be illustrated in a graphical form (e.g., as one or more UML class diagrams) or set out in text.
	The application profile may be based on an externally expressed data model. In such a case, the application profile must clearly identify: (1) the external data model used; and (2) any points of divergence of the profile from that external model. Additional information deemed necessary to clarify the relationship between the profile and the external model should be provided.
DOCUMENTATION OF TERMS	
Question	**Consideration**
Are the terms used in the profile well described?	The elements used to describe the terms in the AP should conform to the CEN Guidelines in substance and labeling.
	The AP should use all appropriate descriptive elements to identify a term's *definitional attributes*, *identifying attributes*, *relational attributes*, and *constraints*.
Are *constraints* used consistently across the AP terms?	The AP should use *obligation*, *condition*, *data type*, and *occurrence* in a manner consistent with the functional requirements of the AP.
Do the recommended encoding schemes exist?	The recommended encoding schemes should exist and be declared in an existing namespace prior to Usage Board review.
CONFORMANCE OF INDIVIDUAL TERMS	
Question	**Consideration**
Does the term used in the AP conform to the *DCMI Abstract Model*?	Each term used in the AP should conform to the *DCMI Abstract Model*. Conformance should be confirmed by means of the DCMI Term Decision Tree.
Does the term usage in the AP represent a *refinement* and not a *re-definition* of the term	Terms used in an AP should refine and not re-define the semantics of the term used.

Are the decisions in the AP to declare a new term as opposed to refining an existing term sensible?	In creating an AP, developers are faced with the decision whether to refine an existing term through narrowed usage ***or*** to declare a new term that refines the original term. Where the AP-specific term usage solely restraints the term's value space, preference should be given to refining the original term through narrowed usage. Where the AP-specific term usage narrows the range of resources to which the term applies, the decision to create a new refining term or to use the original term restrained through a usage statement should be made based on the best interest of the community served.
Are the AP-specific encoding schemes appropriate?	{SAS NOTE: I am not sure what we mean by "appropriate" or how we operationalize it.}
Are the terms in the AP-specific encoding schemes adequately defined, sensible and conformant?	{SAS NOTE: I am not sure what "conformant" means in this context or how to operationalize it.}

Previous Draft and Discussions

- General
  - "Does the AP meet the community's needs?" *I think we decided this is the wrong question...*
- Documentation - introductory material
  - Purpose and scope
    - Are the purpose and scope of the AP clearly stated?
    - What is the stated goal? Cite and paraphrase.
  - Functional requirements
    - Are the functional requirements for the AP stated, and does the AP conform to the stated functional requirements?
    - *This needs to be expanded!*
  - Application Model
    - Does the data model make sense?
    - *This needs to be expanded!*
    - When reference is made to an externally expressed model, how much additional material do we expect?
- Documentation on terms
  - Are the terms well described - what descriptive elements are present?
  - How sensible are the labels for the descriptive elements?
  - Are the obligations consistent across the properties?
  - Do the recommended encoding schemes exist?
- Conformance of individual terms
  - Use the term decision tree, http://dublincore.org/architecturewiki/TermDecisionTree:
    - Check that each term conforms to the Abstract Model

- Are any AP-specific encoding schemes appropriate?
- Are the terms in the encoding scheme defined adequately, are the terms sensible, do they conform?
- Making sure that "Usage in this DCAP" is *not* a case or re-definition.
- We used to discourage people from creating new properties; now maybe encourage?

Issues arising from the UB assessment process, Manzanillo:

- The CEN guidelines need to be revised to follow what the UB sees as best practice in reviewing APs.
- When is it OK to use a general property but narrow its usage v when is it appropriate to define a new property?
- What is the convention in application profiles for displaying what comes from an external source and what is intrinsic to the specific application profile?
- We need to describe better how functional requirements fit into the application profile description, and where that relates to the application model.
- We should make it clear that we are not aiming to anoint particular application profiles as the only ones useful for a particular community.
- UB review needs to recognize that there may be a relationship between an externally expressed model and the AP, and the AP documentation might need to have some additional material to assist in relating the model to the AP where dependencies exist.
- Question about whether we are explicitly endorsing subproperty assertions when we say that usage in an AP is conforming. If so we should say that up front.
- Issue of redefinition (or not) should be part of DCAP guidelines.
- Usage guidelines have to leave unchanged or narrow the semantics. And if you are narrowing, then why not define new property? We have been encouraging people to re-use. Rather, we could take the view of encouraging creation of new properties.

Application model (is it enough to support functional requirements?) Need one person looking at both together: Does it, on its face, meeting the requirements as stated? "This is a conforming way to say it in this particular context". Should be enough information in a Profile.

In the spirit of having stand-alone document. Usage guidelines - content rules documented here. Stand-alone documents define what the content standard is, if there is one.

Process: http://dublincore.org/usage/meetings/2006/09/manzanillo/profile-cdap/2006-02-13.process.txt

Three essential criteria are:

- 1. conformance to the abstract model
- 2. internal consistency
- 3. relationship of terms in the application profile to existing DC terms.

DCMI Usage Board Administrative Processes

Creator:	Diane I. Hillmann
Creator:	Stuart A. Sutton
Contributor:	Thomas Baker
Date Issued:	2006-02-13
Identifier:	http://dublincore.org/usage/documents/2006/02/13/process/
Replaces:	http://dublincore.org/usage/documents/2003/02/07/process/
Is Replaced By:	Not Applicable
Latest version:	http://www.dublincore.org/usage/documents/process/
Status of document:	This is a DCMI Process Document.
Description of document:	This document describes the process by which the DCMI Usage Board reaches and documents decisions. The Usage Board (UB) acts in accordance with its charter under the DCMI Bylaws, Article II, section D. The descriptions of process in this document are intended to guide the UB in executing its responsibilities for ensuring "an orderly evolution of the metadata terms maintained by the Dublin Core Metadata Initiative". The process statements are amended from time to time to reflect the evolving role of the Usage Board. In case of discrepancies, the DCMI Bylaws control.

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1. Usage Board Membership [from DCMI Bylaws].

1.1. Membership. The Usage Board will consist of at least seven and no more than eleven people (nine is ideal) appointed by the DCMI Directorate.

1.2. Responsibilities. The mission of the Usage Board is to ensure an orderly evolution of the metadata terms maintained by the Dublin Core Metadata Initiative. The Usage Board evaluates proposals for new terms (or changes to existing terms) in light of grammatical principle, semantic clarity, usefulness, and overlap with existing terms. To proposals that are accepted, it assigns a specific status. The Usage Board also evaluates constructs that use DCMI terms, such as Application Profiles.

1.3. Selection and Appointment Process. Members are selected based on the following criteria: knowledgeable concerning the development history and purpose of the DC element set and its relationship to the metadata world at large; related to a metadata community relevant to DCMI; willing and able to commit time and energy to the functions of the UB; able to communicate verbally and in writing in English well enough to prepare documents and discuss complex issues in a group setting; geographic and domain distribution of members is relevant but will not override other criteria. The DCMI Directorate will appoint the UB Chair from one of the membership. The DCMI Directorate can propose the appointment of non-voting Liaison members to the Usage Board. Liaison members may represent DCMI Affiliates or Sponsors, or other organizations that have a stake in the development of the Dublin Core semantic specifications.

1.4. Terms. Usage Board members are appointed for two-year, renewable terms. They may step down at their own discretion at any time.

1.5. Decision process. The Usage Board strives for consensus, justifying its decisions and interpretations in terms both of principle and of empirical practice. To be approved, a proposal needs more than 50% of assigned votes in favor and less than 25% of assigned votes against. Important decisions will be assigned a number for citation purposes and documented on the DCMI Web site. Decisions of the UB are forwarded to the DCMI Directorate for endorsement and approval.

1.6. Communication and documentation. For internal communication, the UB uses a closed mailing list. The messages are archived and are made publicly available. Meetings are held at least once a year. This meeting is scheduled during the annual DC general workshop/conference. Further meetings can be scheduled, preferably close to other conferences, so as to make attendance convenient for as many members as possible. Scheduling is done far enough in advance so that as many members as possible may be present.

1.7. Reporting. The chair of the Usage Board is responsible for the preparation of a report of meetings and conference calls and submission to the DCMI Directorate. Based on this report and after endorsement of Usage Board decisions, the Managing Director communicates the decisions to the DCMI community. Decisions on semantics are included in the reference documentation on the DCMI Web site.

2. Meetings

2.1. The calendar of UB meetings will be announced prominently on the UB DCMI homepage and announced on the DC-General mailing list.

2.2. Funding for regular UB members attendance at meetings should be supported as much as possible by DCMI. Funding for the attendance of Liaisons at UB meetings should be provided by their institutions.

2.3. The UB Chair maintains the agenda, which cites links to relevant supporting documentation, including JISCMAIL postings. All materials considered by means of the agenda are consolidated in a PDF briefing book and distributed electronically to UB members and Liaisons. At the conclusion of the meeting, the PDF briefing book becomes

the official record of matters considered at the meeting. Important decisions will be assigned a number for citation purposes and documented on the DCMI website.

2.4. Additional meetings of the UB through conference calls may be scheduled at the discretion of the UB Chair.

2.5. The UB chair is responsible for assigning shepherds to proposals. Agenda items shall include the name of the UB member responsible for shepherding the proposal through the UB process. Agendas shall be available at the Web page DCMI Usage Board Meetings several weeks before the meeting.

2.6. Members must attend at least one meeting in a given year to maintain membership in good standing. Members who miss two meetings in succession may be replaced by the DC Directorate.

2.7. Attendance at any UB meeting by other than the UB members and liaisons is by invitation. People interested in attending should request an invitation via the UB Chair or the Managing Director. Participation in discussion of proposals by any interested parties is encouraged.

3. Status assigned by Usage Board decisions

Conforming [URI http://dublincore.org/usage/documents/process/#conforming]. Elements, Element Refinements, and Application Profiles may be assigned a status of conforming. Elements and Element Refinements assigned a status of conforming are those for which an implementation community has a demonstrated need and which conform to the DCMI Abstract Model.

Recommended [URI http://dublincore.org/usage/documents/process/#recommended]. Elements, Element Refinements, and DCMI-maintained Vocabulary Terms (e.g., member terms of the DCMI Type Vocabulary) that conform to the DCMI Abstract Model and do not semantically overlap with other terms in DCMI namespaces (i.e., http://purl.org/dc/elements/1.1/ and http://purl.org/dc/terms/) may be assigned the status of Recommended.

Obsolete [URI http://dublincore.org/usage/documents/process/#obsolete]. For Elements and Element Refinements that have been superseded, deprecated, or rendered obsolete. Such terms will remain in the registry for use in interpreting legacy metadata.

Registered [URI http://dublincore.org/usage/documents/process/#registered]. Used for Vocabulary Encoding Schemes and language translations for which the DCMI provides information but not necessarily a specific recommendation.

Endorsed [URI http://dublincore.org/usage/documents/process/#endorsed]. A non-DCMI assertion may be assigned the status of Endorsed where: (1) the term is managed by a registration authority other than DCMI and the assertion is that the term is conforming to the DCMI Abstract Model; or (2) the term is managed by a registration authority other than DCMI and the assertion is that the term bears either a property or subproperty relationship to a DCMI term.

5. Process for moving proposals

5.1. Assignment of shepherd Each impending proposal and application profile shall be assigned a shepherd by the UB chair from among the UB membership at the earliest opportunity. Shepherds should have knowledge of the proposal issues or application profile domain.

5.2. Shepherd responsibilities include:

- Monitoring discussion on relevant lists (shepherds should be members of the relevant DC WG list during the time of consideration of a proposal and are encouraged to join in the discussion to ensure that all relevant issues are exposed during the discussion period).
- Summarizing the comment period discussion and points of contention of the proposal for the UB, either verbally at the meeting or in writing prior to the meeting (preferred). Serving as liaison to the relevant WG or community during the time the proposal is under discussion and after a decision has been made. Preparing a draft of UB official decision on the proposal for review and approval by the UB.
- In general providing advice and expertise to the Working Group or domain on good practices, the Abstract Model, and other issues affecting the process of developing a proposal or application profile. The shepherd should bring issues of concern to the attention of the UB when appropriate.

5.3. Preparing for public comment periods. Completed proposals are forwarded to DCMI Managing Director or UB Chair. Proposals are given preliminary review for completeness by the DCMI Managing Director and UB Chair. If complete and no revisions are needed, proposals are circulated to UB members and announced for public comment by the Managing Director. A period of two weeks will be allowed between the date of the decision on completeness and the public announcement of the proposal to provide time for preparation of the supporting materials for public dissemination. If incomplete or revisions are needed, proposals are returned to the originator, with a request for revision or additional information.

5.4. Announcing the public comment period. Before announcement of the public comment period, proposals must be moved to the DCMI Web site, given DCMI page headers and a status of 'Proposed'. Announcement of the public comment period shall be made on the DC-General mailing list by the head of UB. Announcements should include links to the proposal; links to other relevant information; deadlines for comments; email addresses to be used for submitting comments. (In general, comments regarding a proposal may be addressed to the relevant WG mailing list, the DC-General mailing list or privately to the shepherd.) Announcements may also include information about the UB meeting at which the proposal will be discussed, including place, time, and how to request an invitation to participate; name and contact information for the assigned shepherd. The announcement should ask specifically for communications supporting the proposal in order to gauge the level of community support.

5.5. Managing public comment periods. The comment period for proposals should be managed on the DC-General list. Comment periods must be at least one month in length and commence at least six weeks before the UB meeting at which action is to be taken. Public discussions of UB related issues during public comment periods should take place on DC-General or other working group mailing lists as specified in the announcement. The public discussion must start at least six weeks before the UB meeting at which the issues will be discussed.

5.6. Communication responsibility

Communication Responsibility Table

What	Where	Who	Comment
Proposal draft posted	WG list, DC-General	WG Chair	
Proposal added to UB agenda	UB Website, UB list	UB Chair	
Proposal announced for public comment	DC-General	DCMI Directorate	

Usage Board decision announced	DC-General	DCMI Directorate	

5.7. Voting on proposals. Voting shall be limited to scheduled meetings and publicly announced conference calls. Voting shall be limited to UB members present at the meeting or conference call and able to participate in the discussion. UB members who cannot be present may present their arguments for or against a proposal in writing prior to a meeting (this shall not constitute a vote). UB members who cannot be present may explore other options with the chair, if they cannot be present for an important vote. In all cases, a vote may not be cast by a member who is not present, either physically or virtually, for the relevant discussion.

5.9. Documenting Usage Board decisions. A document explaining the UB decision regarding a proposal will be written in a timely fashion by the shepherd and approved by the UB. The decision will include brief statements of recommendations being issued and detailed explanations of UB decisions not to issue recommendations. UB decisions will be in a form determined by the UB and numbered consecutively for the purpose of citation. UB decisions must be sufficiently documented so that the rationale for the decision is clear and useful in guiding the development of future proposals. This is particularly true where the decision rejects a proposal or recommends further action.

5.10. Announcing and publishing Usage Board decisions. Decisions are published on the Web page DCMI Usage Board decisions. New terms will be added to the official DCMI documentation by the UB Chair.

6. Proposals for registration of application profiles

6.1. Application Profiles subject to review. Application profiles emanating from DCMI Strategic Activities may be reviewed by the Usage Board. Metadata implementers (established projects, communities or research groups) may also request review, subject to approval by the UB Chair. *Point to information regarding DCMI Strategic Activities when available.*

6.2. Documentation of Application Profiles. Application profiles must provide, for each term, an identifier of the element set where it is defined, ideally in the form of URIs for individual terms. If the terms in an application profile describe anything other than generic "resources" (the typical domain of Dublin Core), the application profile must make this clear. This is particularly important if an application profile is based on a data model that describes multiple classes of resources, such as agents or collections. It is recommended that application profiles be prepared using the guidelines "Dublin Core Application Profile Guidelines".

6.4. Contextual information about Application Profiles. The documentation for each Application Profile must provide -- or point to a short text that describes -- the context and purposes in which the application profile is used or is likely to be used; the organizations or individuals involved in its development and a capsule history thereof; and any arrangements, policies, or intentions regarding the future development and maintenance of the application profile.

6.5. Evaluation of terms in Application Profiles. The use of terms related to Dublin Core (such as refinements of Dublin Core elements, or Dublin Core elements that have been constrained for particular contexts) will be evaluated from the standpoint of semantic conformance, grammatical principle (eg, "dumb-down"), clarity, and good practice. *Note: revisit this.*

6.6. Assignment of status "conforming". Application profiles which pass review will be assigned the status of conforming The status of conforming indicates a Usage Board assessment of the application profile as of the date of its submission for review. Changes to already conforming application profiles require further Usage Board review of the application profile in whole or in part according to the processes and criteria

outlined in sections 6.1 through 6.3.

6.7. Publication of Usage Board reviews of Application Profiles. For application profiles that "pass" review, the Usage Board will publish a Review on a Web page for application profiles. Each Review will include, at a minimum: any comments from the Usage Board on the application profile; pointers to locally archived copies of the application profile as originally submitted and (if necessary) as subsequently amended in light of Usage Board comments; a pointer (with appropriate disclaimers) to the "latest version" of an application profile held by its maintainers.

6.8. Persistent identifiers for reviewed Application Profiles. Review represents a form of recognition, and its URL will be persistent for purposes of citation.

7. New terms proposed with an Application Profile

7.1. Evaluation of new terms. New terms appearing in application profile submissions must be evaluated for compliance with the DCMI Abstract Model prior to evaluation of the Application Profile itself.

7.2. Assignment of DCMI term URIs and status. New terms deemed in compliance with the DCMI Abstract Model may be given URIs in DCMI namespaces and assigned a status of conforming.

7.3. Conformance criteria. Decisions as to whether a proposed term is in compliance with the DCMI Abstract Model will be made using the DCMI-Compliant Term Decision Tree.

8. Proposals for endorsement of terms in other namespaces for use within Application Profiles

8.1. Existing terms housed in other namespaces to be used within Application Profiles seeking review must be evaluated for compliance with the DCMI Abstract Model prior to evaluation of the Application Profile itself.

9.

Revisions of existing DCMI terms

9.1. Proposals for revisions. Requests to change terms in DCMI namespaces may originate within the Usage Board or externally. A Usage Board member will be assigned to draft a proposal for a change. Changes provisionally approved by the Usage Board will be circulated for general comment on the DC-General discussion list for one month before final approval. Final approval for term changes without significant opposition may be approved by email or teleconference vote.

9.2. Changes for formally standardized terms. Terms from namespace http://purl.org/elements/1.1/ require changes to the relevant standards: ISO Standard 15836-2003 (February 2003) and NISO Standard Z39.85-2001 (September 2001).

9.3. Terms from DCMI-hosted namespaces [to be added]

9.4. Application profile terms residing on DCMI hosted namespaces will be subject to the same change processes as other DCMI terms, but managed by the entities responsible for the terms. Application profile terms residing on non-DCMI namespaces will be subject to term policies of the host entity.

9.5. Changes to already 'conforming' application profiles require further Usage Board review of the application profile in whole or in part according to the processes and criteria outlined in previous sections. Changes to DCMI-registered "conforming" application profiles will be versioned according to DCMI namespace policies.

Metadata associated with this resource: http://dublincore.org/usage/documents/process/index.shtml.rdf

REVIEW OF PROCESS DOCUMENT (http://dublincore.org/usage/documents/process/)
Stuart Sutton

2007-03-12

SECTION 6.1. Application Profiles Subject to Review

We still do not have a definitive definition of a "DCMI Strategic Activity." It is framed as the primary mechanism for determining which initiatives will be bringing application profiles to the Usage Board.

SECTION 6.2. Documentation of Application Profiles

The section states that the applicant must include "an identifier of the element set where [the term] is defined, ideally in the form of URIs for individual terms." Since the terms have to conform to the Abstract Model, don't we require "URIs for the individual terms"?

SECTIONS 6.4 through 6.8 are numbered incorrectly. There is no section 6.3.

SECTION 6.5. Evaluation of terms in Application Profiles.

The section speaks of the "use of terms related to Dublin Core ... will be evaluated from the standpoint of semantic conformance, grammatical principle (eg, 'dumb-down'), clarity, and good practice." Doesn't this mean "terms related to Dublin Core" and not "use of terms related to Dublin Core"?

SECTION 6.8. Persistent identifiers for reviewed Application Profiles.

The section states: "Review represents a form of recognition, and its URL will be persistent for purposes of citation." Which URL? The Application Profile or the Usage Board review?

SECTION 7.2. Assignment of DCMI term URIs and status.

This section states: "New terms deemed in compliance with the DCMI Abstract Model may be given URIs in DCMI namespaces and assigned a status of conforming." Does this really mean "may be given," or is it "will be given." If it is "may be given," what's the criteria for being in?

SECTION 8. Proposals for endorsement of terms in other namespaces for use within Application Profiles.

This section says that terms from other name spaces in application profiles need to be reviewed for conformance to the Abstract Model. The section actually does not say anything about assigning a status to those terms; BUT, the section title speaks of "endorsement" which seems wrong to me. Endorsement (as defined in section 3) speaks of endorsing "assertions" by another that a term conforms (e.g., the LOC relators) and not that the term itself conforms. It seems to me that what we are talking about here in this section is "conforming" and not "endorsed."

2007-02-14 Proposed simplification of process (Makx)

We are talking about four categories of proposals:

1. Proposed changes to Dublin Core metadata terms
2. Proposals for new or revised DCMI Recommendations
3. Proposals for DCMI Recommended Resources (incl. Application Profiles)
4. Proposals for DCMI Process Documents

First of all, it seems to me that we don't want to limit sources of these proposals. They can come from the Directorate (e.g. as a result of an outsourced activity), Affiliates, Communities, Task Groups, other organisations (e.g. W3C, LOM) or any individual.

Any document that goes into the approval process needs to be submitted to the DCMI Managing Director using the Proposal Submission Form. Proposals may be submitted by e-mail as plain text, HTML or PDF, or as links to external resources.

The Directorate acknowledges receipt and decides whether a document falls in one of the four categories, in consultation with the Advisory Board. The decision is communicated to the submitter no later than two months after submission with specification of the process and timeline foreseen.

1. Dublin Core metadata terms

Proposals are evaluated by the DCMI Usage Board within four weeks from submission.
If the advice from the Usage Board is negative, the Directorate rejects the proposal and informs the submitter with reasons for rejection.
If the advice is positive, the Directorate prepares for public comment. Any comments from the UB are communicated to submitters who get the opportunity to make modifications based upon those comments. If major changes are being made, the proposal needs to be re-submitted.
Public comment is open for a minimum of four weeks, announced by Directorate on DC-GENERAL and on the DCMI Web site and published on the Public Comment page.
If serious objections are expressed by the public, the Directorate decides what to do, in consultation with the Usage Board: (a) reject the proposal and inform the submitter with reasons, giving the option to re-submit with changes, or (b) ask submitters to make minor changes to the proposal.
If no serious objections are received, the Usage Board incorporates the proposal in the documentation of Dublin Core terms, after which the Directorate publishes the Recommendation on the DCMI Web site and announces to DC-GENERAL and DCMI Web site.

2. DCMI Recommendations

Proposals are given status of Proposed Recommendation or Proposed Revised Recommendation in cases where a Recommendation already exists.
Proposals go through review in the Advisory Board first. Minimum review period: four weeks.
After negative review, Directorate informs submitter with reasons for rejection. Modified proposals can be re-submitted.
If AB review is positive, Directorate prepares for public comment. Any comments from the AB are communicated to submitters who get the opportunity to make modifications based upon those comments. If major

changes are being made, the proposal needs to be re-submitted.
Public comment is open for a minimum of four weeks, announced by Directorate on DC-GENERAL and on the DCMI Web site and published on the Public Comment page.
If serious objections are expressed by the public, the Directorate decides what to do, in consultation with the Advisory Board: (a) reject the proposal and inform the submitter with reasons, giving the option to re-submit with changes, or (b) ask submitters to make minor changes to the proposal.
After successful public comment, the Directorate publishes the Recommendation on the DCMI Web site and announces to DC-GENERAL and DCMI Web site.

3. DCMI Recommended Resources

Evaluation and subsequent acceptance or rejection of the proposal are at the discretion of the Directorate, in consultation with the Advisory Board.
In the special case of Application Profiles that are being proposed as best-practice example, the proposal is assigned to the Usage Board and evaluated according to the published criteria. The Usage Board advises the Directorate on acceptance or rejection of such proposals.
Decision on acceptance or rejection is taken by the Directorate and communicated to the submitter no later than six months after the submission of the proposal.
Rejections are communicated to the submitter with reasons for rejection.
The Directorate announces the acceptance of proposals to the DC-GENERAL and the DCMI Web site. The Recommended Resource is published on the DCMI Web site (possibly as a link to the resource).

4. DCMI Process Documents

Evaluation and subsequent acceptance or rejection of the proposal are at the discretion of the Directorate, in consultation with the Advisory Board. Decision on acceptance or rejection are taken by the Directorate and communicated to the submitter no later than two months after the submission of the proposal.
Rejections are communicated to the submitter with reasons for rejection.
The Directorate announces the acceptance of proposals to the DC-GENERAL and the DCMI Web site. The Recommended Resource is published on the DCMI Web site.

Chair:	Tom Baker, DCMI
Members:	Diane Hillmann, Cornell University, USA
	Akira Miyazawa, NII, Japan
	Andy Powell, Eduserv Foundation, UK
	Stuart Sutton, University of Washington, USA
	Andrew Wilson, Arts and Humanities Data Service, UK
	Joe Tennis, University of British Columbia, Canada
	DCMI Directorate, ex officio
Established:	2001-05-21
Mission:	The mission of the Usage Board is to ensure an orderly evolution of the metadata terms maintained by the Dublin Core Metadata Initiative. The Usage Board evaluates proposals for new terms (or changes to existing terms) in light of grammatical principle, semantic clarity, usefulness, and overlap with existing terms. To proposals that are accepted, it assigns a specific status. The Usage Board also evaluates constructs that use DCMI terms, such as Application Profiles.

IMPORTANT: Do **not**
cite materials in this Wiki other than for the purposes of collaborating on document creation. This Wiki is intended to be used to work on draft copies of documents. Finished documents will be published, in a persistent and citable form, on the [http://dublincore.org/ DCMI Web site] (or elsewhere in some cases).

This Wiki supports the work of the DCMI Usage Board.

Workplan, Usage Board (and Architecture Working Group)

See DC-Architecture WG wiki.

Public Comment (5 February to 5 March) on revised DCAM, Domains and Ranges

- DCAM - Proposed Recommendation, 2007
  - DCAM - Existing DCMI Recommendation, 2005
- Namespace Policy Proposed Recommendation
- Vocabulary of Domain and Range Classes

Follow-up on DCAM Public Comment

- Expressing Dublin Core in RDF
  - Legacy DC-RDF specs - not yet superseded:
    - Expressing Qualified Dublin Core in RDF/XML
    - Expressing Simple Dublin Core in RDF/XML
  - New DC-RDF specs - in preparation:
    - July 2006 DC-RDF spec - passed first round of public comment July 2006

        - Notes on the above
        - 2006-06-30 Report on public comment
- Expressing Dublin Core in XML
    - 2003 DC-in-XML Guidelines - existing DCMI Recommendation
    - 2006-05-29 DC-XML Working Draft - a DCMI Working Draft
    - 2006-07-18 Results of public comment and summary of comments.
    - The Working Draft of 2005-05-29 is intended to be replaced by two new documents:
        - 2006-09-18 Expressing Dublin Core metadata using XML (DC-XML-Min)
            - DC-XML-Min Instances
        - 2006-09-18 DC-XML-Full - Expressing Dublin Core metadata using XML (DC-XML-Full)
            - Supports serialization of full DCAM description model.
    - DC-XML may need to distinguish between dc-xml-full and dc-xml-minimal:
        - June 2006 posting
        - DC-XML-Full Instances
        - DC-XML-Min and DC-XML-Full are intended to replace the legacy DC-in-XML Guidelines as DCMI Recommendations.
        - DC-XML draft should be accompanied by a note addressing compatibility with previous XML guidelines. See:
            - Sep 2006 posting
            - Sep 2006 posting
- DC-Text latest
- Revised form of RDF schemas
    - Revised descriptions of terms with domains and ranges
    - Removed deprecated SubjectScheme construct
    - Support for Domains and Range classes

Usage Board meeting, Barcelona, March 2007

- http://stage.dublincore.org/usage/meetings/2007/03/barcelona/html/index.html
    - Domains and Ranges
        - Approve domain/range classes as new DCMI terms
        - Approve assignments of domains and ranges to existing DCMI terms
    - DCTERMS changes
        - Encoding Schemes: SES and VES
        - Changes to definitions and comments as per DCAM
    - Collections Application Profile
        - Review of revised profile from DCMI Collection Description WG
        - Goal: Full formal review of NISO Collection Description profile
        - Review of application profiles generally
        - Formal Profile Model as an extension of DCAM
    - NISO Z39.85 response to comments

Related DCMI contracted work

- Contracted work packages for user documentation closely related to the above:
  - Guidelines on How to declare a set of metadata terms
  - Guidelines on How to make a DCAP
    - following example of CDAP, possibly later also ePrints, etc
    - contracted editor to liaise with DCAM authors
    - Simple Dublin Core as stand-alone example

Follow-up actions

- Declare domain/range classes
  - Revise source documentation for terms (add Domains and Ranges, change URIs for Term Types)
  - Add domain/range declarations to RDF schemas and HTML documents
  - Revise documentation workflow processes (XSLT scripts), adding Domains and Ranges
  - Revise DCMI Registry to support Domains and Ranges, new URIs for Term Types
- Copy contents of "1.1" namespace to "terms" namespace
- Declare domains and ranges for "terms" terms in TERMS publications
- Public comment period for Documentation on Vocabularies and Profiles
- Change pointers in DCMI documentation to DCAM
  - Change http://dublincore.org/usage/documents/principles/ to point to DCAM
- Update Using Dublin Core
- Legacy "Principles" document

Links

- Log of UB meetings and telecons (for internal use) http://stage.dublincore.org/usageboard/log/html/
- Usage Board Documents http://dublincore.org/usage/documents/
- DCMI Metadata Terms http://dublincore.org/usage/documents/overview/
- Mission and Policies http://dublincore.org/usage/documents/mission/
- Usage Board Process http://dublincore.org/usage/documents/process/
- Usage Board Decisions http://dublincore.org/usage/decisions/
- Usage Board JISCMAIL Archive http://www.jiscmail.ac.uk/lists/dc-usage.html
- Architecture Working Group Wiki
- Travel reimbursement

If you are new to the Dublin Core Wikis, here are some interesting starting points:

- RecentChanges: see where people are currently working
- HelpForBeginners: to get you going
- WikiSandBox: feel free to change this page and experiment with editing
- FindPage: search or browse the database in various ways
- SyntaxReference

Framework for a Bibliographic Future

Draft for discussion, by Karen Coyle, Diane Hillmann, Jonathan Rochkind, Paul Weiss

Introduction

Metadata is a generic term for the data that we create about persons, places, things, documents, and anything else about which we wish to communicate or wish to operate on in an electronic environment. Although it is common to hear that "all data is metadata," it is certainly the case that not all metadata is well designed. Good design increases the potential success of a metadata standard.

The design components proposed in this model are not new. Similar components are used to some degree in standards such as the OpenURL Framework (Z39.88), the Semantic web, and the Dublin Core Metadata Initiative. A framework such as this serves many purposes. In particular, we are interested in producing metadata that is both highly extensible and that will promote compatibility between communities and applications that extend the metadata.

The four components that we propose are: a **model** of basic structures and relationships, a **schema** that defines an extensible set of properties, **guidance** for application of the properties, and **encoding**. The model can be used to create one or more schemas, and any schema can be expressed using one or more encodings. The guidance document is a key element that provides both direction to creators but also describes the semantics of the data elements in a human-understandable way. These four components provide a basis for creation of machine-manipulable metadata that has meaning to a community yet it can be defined in a rigorous way to communicate clearly to any users of the data.

Model

This is sometimes called an abstract model or a data model, although it does not define the data itself. Models are high-level views of the structures and relationships that the metadata will address. In the library community, the entity-relationship structure provided by FRBR is a type of model. It includes basic aspects of the information universe that will eventually be defined by metadata (works, expressions, manifestations, and items, plus the entities such as person and concept that will have a relationship with the primary four). We need to consider carefully how the FRBR model works in the context of other models that are used for bibliographic data such as DCAM and OpenURL Framework. The model that results will be independent of any particular schemas or encodings of bibliographic metadata, but will provide a structure that all implementations of metadata derived from the model will have in common.

Schema

Metadata schemas (sometimes called 'element sets,' 'metadata formats' or 'data dictionaries') define the actual properties that will carry values in the data set, as well as the relationships between those properties. Data elements can be defined at any relevant level of granularity. They can have hierarchical relationships between them or non-hierarchical relationships. The Dublin Core Element Set is an example of a set of data elements. FRBR defines data elements in its attributes, but they must be restructured in a way that allows the development of different levels of granularity and that promotes extensibility of the schema, both over time and across communities. Ideally, the schema would be expressed in one or more machine-readable formats that facilitated its use by both people and computer applications.

Guidance

Guidance is often desired to aid in the creation or assignment of values to data elements in a consistent

way. Guidance may be general or specific, but it usually attempts to address circumstances that users will encounter in the creation of the metadata. Different communities making use of the same data elements may define their own specific best practices that attempt to produce the metadata that is most useful for their purposes, but in general they may not re-define the elements in order to address those needs. The library community has traditionally received its guidance from cataloging rules (such as AACR) and from practices published as part of the encoding of library data using MARC21. Increasingly, specialized guidance for specific communities has been developed that reflects the differences in materials or approach inherent in their tasks: examples are *Cataloging Cultural Objects (CCO)* for the museum community and *Describing Archives: A Content Standard (DACS)* from the archival community.

Encoding

We can assume that any metadata being created today will be expressed and exchanged via a machine-readable encoding. The primary requirement for metadata encoding is that it must be able to encode the full detail of the semantics and relationships intended by the metadata creators; and it must expand as the metadata schema grows and changes. The same metadata can be encoded in different data formats and still be fully shareable, as long as the encoding is true to the data elements and to the overall structure of the metadata model.

Discussion

FRBR

FRBR's entity-relationship model (as defined in Chapters 3-5 of the FRBR Report) is a useful, if not complete or even wholly accurate, analysis of our bibliographic universe. The delineation of the four group 1 entities illuminates an important issue of our legacy: we have been cramming metadata about different bibliographic entities into single descriptions. As just one example, the FRBR report provides an explanation for the ambiguity of dates in bibliographic records: there are at least four dates of creation that apply to each bibliographic resource--those of its work, expression, manifestation, and item. For many resources all these are the same, so there is no need to delve further, but some resources are more complex, and that complexity has led to confusion about dates used in brief displays and search limits.

FRBR, and work by Barbara Tillett, Richard Smiraglia, and others has contributed to an increasingly formalized notion of relationships among bibliographic resources, and between bibliographic resources and associated entities (for instance, FRBR's group 2 entities--persons, corporate bodies--and draft FRAR's families, as well as subject entities). Examining current practices from the perspective of this work on relationships shows great inadequacies in the identification, recording, and utility of relationships.

FRBR does an admirable job of providing one way to analyze the bibliographic universe, though as has been noted by others, it doesn't extend well to museum or archival collections. Although FRBR covers attributes of bibliographic entities, it does not model the metadata itself (that is, none of the entities represents metadata per se).

DCAM

The Dublin Core Abstract Model from the Dublin Core Metadata Initiative (DCMI), on the other hand, takes the next logical step, and models metadata. Its purpose is to "to gain a better understanding of the kinds of descriptions that we are trying to encode and facilitates the development of better mappings and translations between different syntaxes."

The FRBR model and the Dublin Core Abstract Model are not contradictory; in fact, they are complementary. FRBR provides a start at defining properties for RDA and allows the description of

resources using specific relationships that can be assigned at the proper level as well as aggregated for better expression to the user. The DCAM helps us to envision the FRBR entities as a package, allowing the discussion about issues like identity and linking to be posed and discussed in a more useful manner.

Metadata Schemas

Even as we validate the use of FRBR as a model, we take issue with its embedded attributes. One of the things the DCAM and the Dublin Core experience generally tells us is that we need to develop our attributes/properties/elements separately from the model as well as from the values used. Separating elements and their definitions from guidance on determining their values (controlled vocabularies, transcription, etc.) is crucial in order to achieve interoperability and extensibility.

As a first step, the FRBR attributes must be carefully generalized. For example, instead of defining separate elements (including their names, definitions, examples, etc.) for title of the work, title of the expression, and title of the manifestation, there should be one title element reused at multiple levels. The declaration of these elements should include clear specification of where in the FRBR Group I they may be used. This increased generalization promotes interoperability, minimizes a tendency toward complexity, and eases machine manipulation and extensibility. It also requires more rigorous consideration of when attributes at the various levels are really the same thing or not, and can point out inconsistencies that can be rectified. Along with the development of the generalized elements, there should be rules for extension or refinement of those elements, to ensure that appropriate extensions can be made and managed.

Crucial to the proper development of a metadata schema is a clear notion of requirements for technical expression of the attributes, and a plan for maintenance and growth. We have learned much in the library community about the importance of community consensus and how to maintain important standards over time. MARBI is a good example of doing it correctly, and in fact the Dublin Core Usage Board process is based loosely on MARBI.

Guidance for Application

It is critically important that we develop good usage guidance based first on the Metadata Schema attributes in their most generalized form. We must provide this usage guidance in a manner that allows communities of practice to use the general guidance as they extend the basic structure for their own purposes. Traditional library cataloging is just such a community of practice, and should extend the schema and guidance to fit their needs, without the necessity of bringing their special library colleagues along with them. If the general elements, and the guidance attached specifically to them, can be approached as a extensible set, other communities will be encouraged to incorporate them specifically in their metadata and to extend in ways that provide a sound basis for interoperable use and re-use. In this scenario, mapping between library metadata schemas and others, as well as the mix/match capabilities of application profiles, can be made easier. This approach will tend to minimize data loss when information is crosswalked, and improve the ability of machines to act upon the data regardless of its origin.

As part of this development of extended guidance material along specialist lines, we need to recognize that different communities will apply FRBR Group I boundaries differently. Much of the discussion about how decisions will be made about works, expressions and manifestations indicates clearly that specialized communities will tend to make different decisions about where these boundaries lie. This has been seen as a problem, and an impediment to the integration of FRBR principles into actual practice. Part of the rationale for separating traditional library specific instruction from the general RDA, and enabling specific communities to extend from that general base, is that the assumptions and instructions for where these boundaries lie can be made explicit *by community*, and librarians can get out of the trap of trying to herd everyone else into the same decisions. This will make it easier for the communities as a whole to use each other's work--when differences are not exceptions but can be explicitly expressed as policies and appropriately supported with more detailed extensions to the general framework, everyone enjoys easier and more cost effective machine manipulation of data. So

long as the determination of what is a work can be ascribed to the community that made the decision, other communities can predict and cope with the variations.

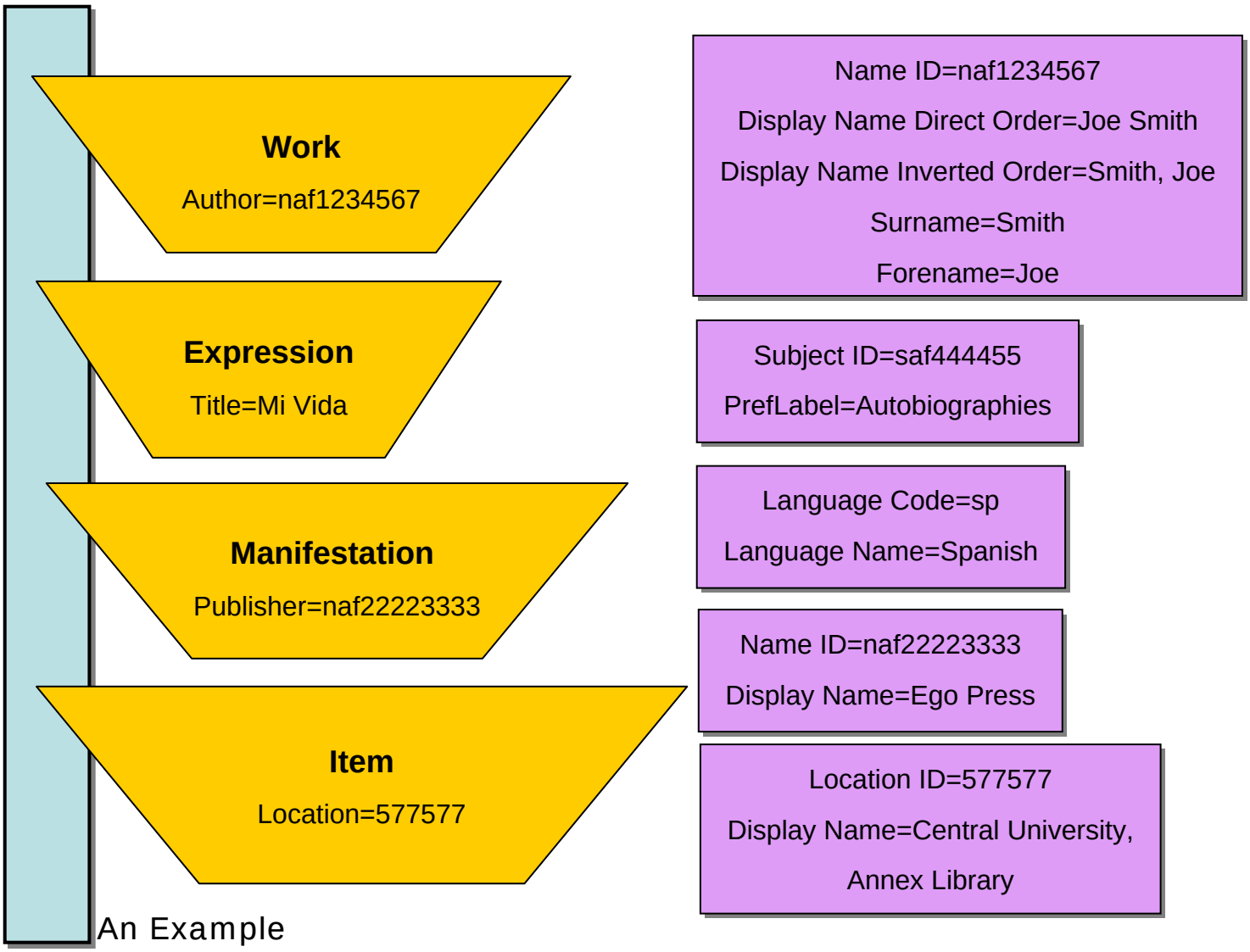
Encoding

It seems unlikely that MARC21 can be sufficiently remodeled to serve as an encoding for a modern metadata schema, but certainly some of the accumulated wisdom and experience embedded in the MARC21 documentation can be repurposed. One issue is that insofar as it supplies definitions, labels and relationships not necessarily explicit in AACR2, MARC21 itself represents a combination of functions that requires significant attention, and perhaps deconstruction, to prise out what should be included in the metadata schema and what remain as encoding.

It should also be recognized that MARC21 encodes more than bibliographic information, and the formats for classification, authorities and holdings might well be more appropriate for future use, given that they operate where competing data structures are sparse. Where they tend to be problematic is in the area of distinctions at the statement level, where specification of language of statement, source, and community of origin may well be necessary.

Encoding for the future must support statement level identification and attribution. Although to a certain extent, this is a 'packaging issue,' it seems important to assert it as a guiding principle, as it supports the notion that the way records will be built in future will be much more iterative, and catalogers are just as likely to start with a re-used description than one created newly for purpose. These catalog records of the future are likely to be aggregations of the work of many catalogers--somewhat like CONSER records are now--and the source and age of particular statements will be critical as we develop applications to make 'decisions' about what statements they will display. Central to this assumption is that, in the shared environment of the future, information may be added, but not subtracted--just ignored if not needed or desired in a particular context.

An Example:



An Example

The figure above illustrates some possibilities for a description set based on DCAM that also includes some of the FRBR entities and shows how they would relate. On the left side are the four Group I entities, with a small assortment of generic properties. In the cases where the value of the properties is contained in another description, the relationship between them is conveyed with an identifier, and the identified Group 2 or 3 description is included in full with the description set. Thus, an application using this description set could presumably pick and chose among the available display values, for the one that suits its goals best. For instance, in the description of the author, there are two identified possibilities for display text for that particular person, one using direct order, and the other surname first.

Note that the linking techniques are the same regardless of what kind of description, whether author, publisher or subject is related to a particular Group 1 entity. There is both a title in the Work description and another in the Expression--the differences between them and their different functions are conveyed not in the property name, but in where it appears, allowing an application to determine how to display either or both. Grouping of expressions and manifestations can be supported using simple linking and

naming strategies, without unnecessary complexity.

Using only the descriptions in this simple example, the following display could be supported:

Author: Joe Smith
Title: Mi Vida
Language: Spanish
Publication: Ego Press, 2005
Extent: 267 pages
Subject: Autobiographies
Location: Central University, Annex Library
Call Number: CT25.S65 2005
Other Language Versions Available: English

Note that the link to an English version is implied by the presence of another description set (not illustrated here) with the same work description and an expression description in English.