Dublin Core Metadata Initiative Abstract Model
Jenn Riley
Digital Library Brown Bag Series
February 11, 2009

Resources

Presentation slides: <http://www.dlib.indiana.edu/~jenlrile/presentations/bbspr09/dcam/dcmi-am.ppt>

Handout: <http://www.dlib.indiana.edu/~jenlrile/presentations/bbspr09/dcam/handout.pdf>

DCMI Abstract Model home page: <http://dublincore.org/documents/abstract-model/>

DCMI Singapore Framework: <http://dublincore.org/documents/singapore-framework/>

DCMI/RDA Task Group home page: <http://dublincore.org/dcmirdataskgroup/>

Further Reading

Allinson, Julie, Pete Johnston and Andy Powell , "A Dublin Core Application Profile for Scholarly Work," *Ariadne* 50 (2007). http://www.ariadne.ac.uk/issue50/allinson-et-al/

Nilsson, Mikael, Pete Johnston, Ambjörn Naeve, and Andy Powell. "The Future of Learning Object Metadata Interoperability." In: Harman, Keith and Alex Koohang (eds.). *Learning Objects: Standards, Metadata,* Repositories*, and LCMS*. Santa Rosa, California: Informing Science Press, 2007. http://kmr.nada.kth.se/papers/SemanticWeb/FutureOfLOMI.pdf

Understanding the Diagrams Illustrating the Abstract Model

The rest of this handout uses information from the DCMI Abstract Model home page, at <http://dublincore.org/documents/abstract-model/>. From that resource:

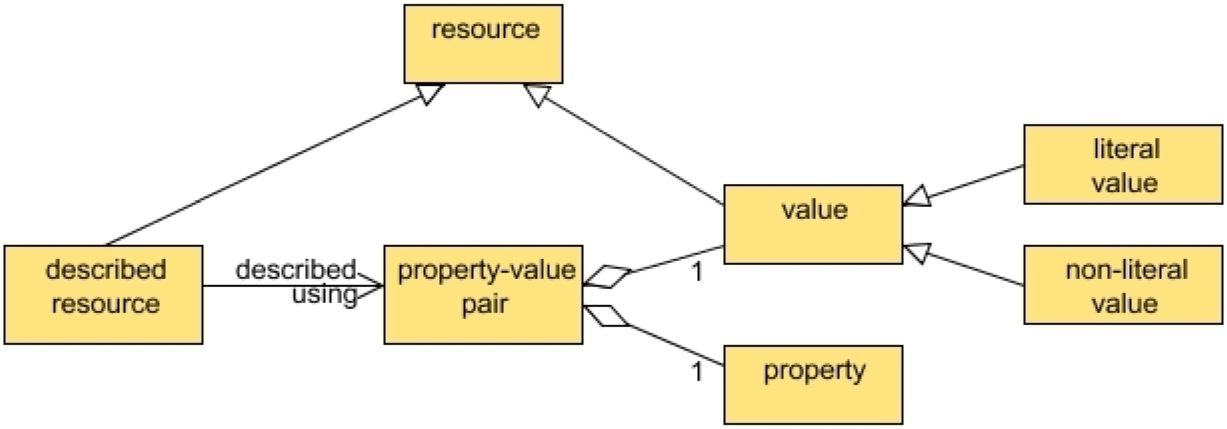
> Lines ending in a block-arrow should be read as 'is' or 'is a' (for example, "a *value* is a *resource*") and that lines starting with a block-diamond should be read as 'contains a' or 'has a' (for example, "a *statement* contains a *property URI*").

DCMI Resource Model

From <http://dublincore.org/documents/abstract-model/>

The abstract model of the *resources* described by *descriptions* is as follows:

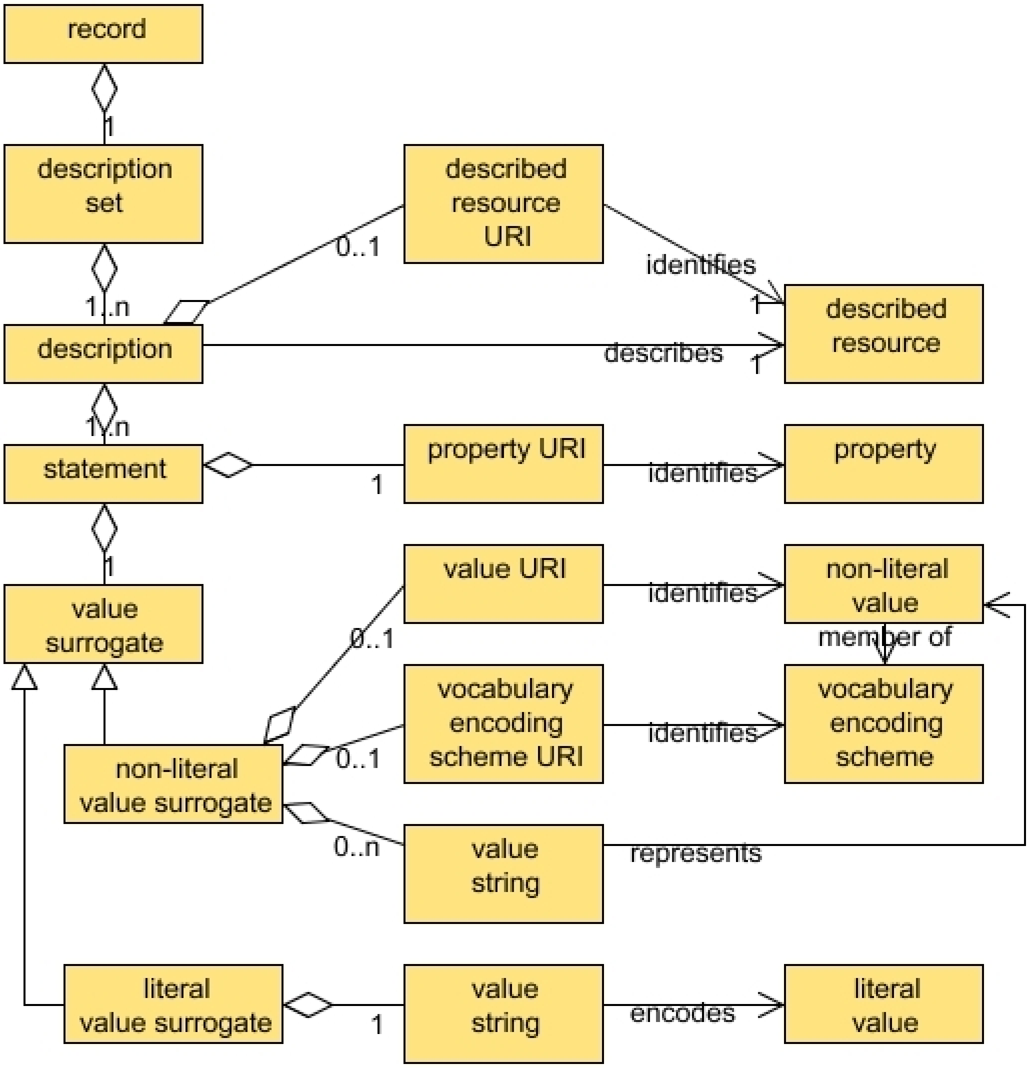
- Each *described resource* is described using one or more *property-value pairs*.
- Each *property-value pair* is made up of one *property* and one *value*.
- Each *value* is a *resource* - the physical, digital or conceptual entity or *literal* that is associated with a *property* when a *property-value pair* is used to describe a *resource*. Therefore, each *value* is either a *literal value* or a *non-literal value*:
    - A *literal value* is a *value* which is a *literal*.
    - A *non-literal value* is a *value* which is a physical, digital or conceptual entity.
- A *literal* is an entity which uses a Unicode string as a lexical form, together with an optional language tag or datatype, to denote a *resource* (i.e. "literal" as defined by RDF).

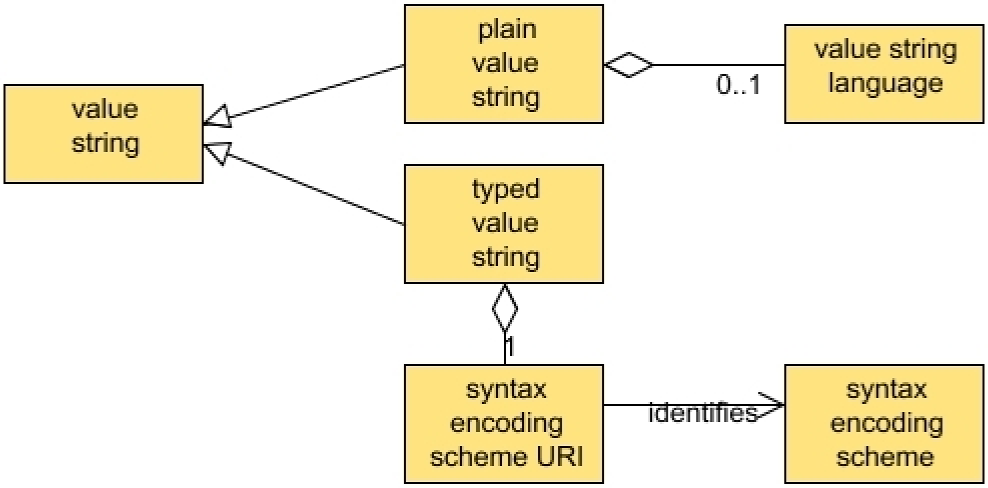


DCMI Description Set Model
From <http://dublincore.org/documents/abstract-model/>

The abstract model of DC metadata *description sets* is as follows:

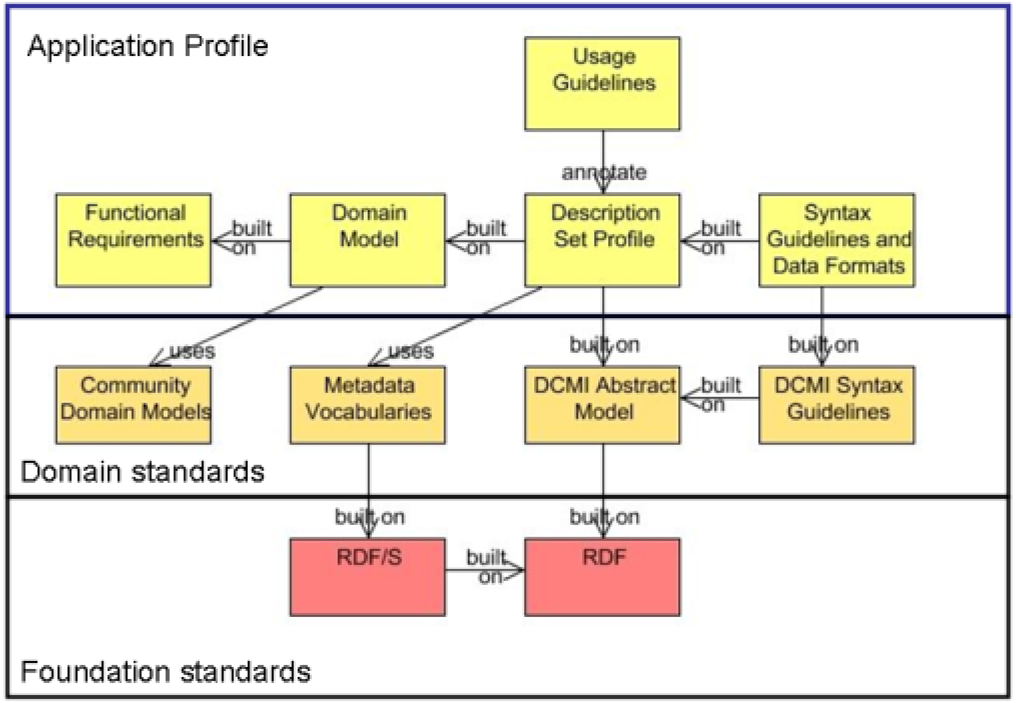
- A *description set* is a set of one or more *descriptions*, each of which describes a single *resource*.
- A *description* is made up of one or more *statements* (about one, and only one, *resource*) and zero or one *described resource URI* (a *URI* that identifies the *described resource*).
- Each *statement* instantiates a *property-value pair*, and is made up of a *property URI* (a *URI* that identifies a *property*) and a *value surrogate*.
- A *value surrogate* is either a *literal value surrogate* or a *non-literal value surrogate*:
    - A *literal value surrogate* is a *value surrogate* for a *literal value*, and is made up of exactly one *value string*. The *value string* is a *literal* which encodes the *literal value*.
    - A *non-literal value surrogate* is a *value surrogate* for a *non-literal value*, and is made up of zero or one *value URI* (a *URI* that identifies the *non-literal value* associated with the *property*), zero or one *vocabulary encoding scheme URI* (a *URI* that identifies the *vocabulary encoding scheme* of which the *non-literal value* is a member), and zero or more *value strings*. Each *value string* is a *literal* which represents the *non-literal value*.
- A *value string* is either a *plain value string* or a *typed value string*
    - A *plain value string* may have an associated *value string language* that is an ISO language tag (for example en-GB). *Plain value strings* are intended to be human-readable.
    - A *typed value string* has an associated *syntax encoding scheme URI* that identifies a *syntax encoding scheme*.


record
1
description set
1..n
description
0..1
described resource URI
identifies
1
described resource
describes
1
1..n
statement
1
property URI
identifies
property
1
value surrogate
0..1
value URI
identifies
non-literal value
member of
vocabulary encoding scheme URI
identifies
vocabulary encoding scheme
non-literal value surrogate
0..1
0..n
value string
represents
literal value surrogate
1
value string
encodes
literal value


plain value string
0..1
value string language
value string
typed value string
1
syntax encoding scheme URI
identifies
syntax encoding scheme

Singapore Framework

From <http://dublincore.org/documents/singapore-framework/>


Application Profile
Usage Guidelines
annotate
Functional Requirements
built on
Domain Model
built on
Description Set Profile
built on
Syntax Guidelines and Data Formats
uses
uses
built on
built on
Community Domain Models
Metadata Vocabularies
DCMI Abstract Model
built on
DCMI Syntax Guidelines
Domain standards
built on
built on
RDF/S
built on
RDF
Foundation standards