

Exploring the CDIF standards with HTML-rendered versions, intertwining dependencies via hyperlink

OOPSLA'98 - CDIF Workshop

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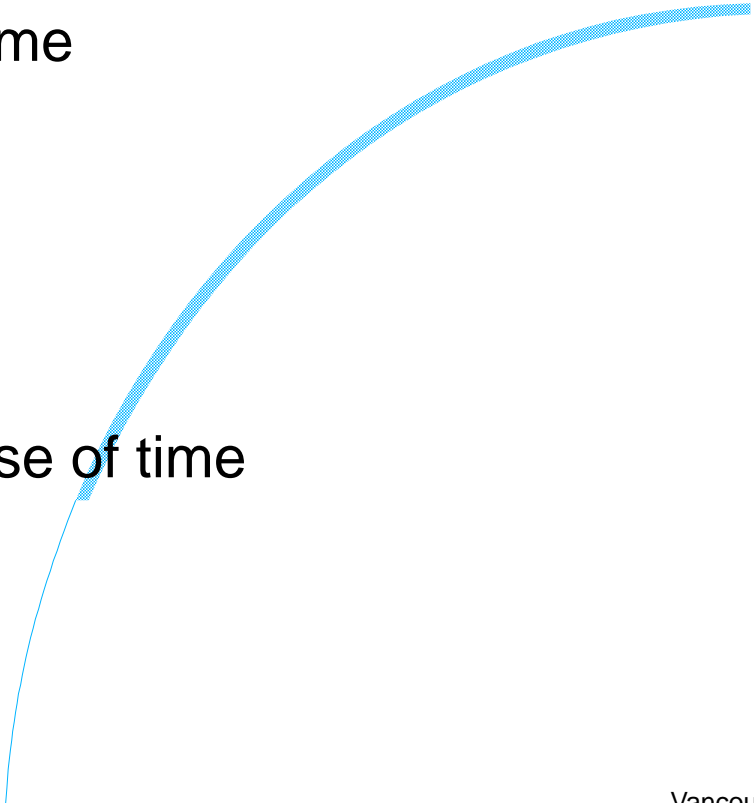


Overview

- Problem statement
- The structure of EIA/CDIF's meta-model standards
- HTML hyper-referencing
- HTML-rendered EIA/CDIF meta-models
- Roundup and outlook



Problem Statement

- Documentation on paper
 - Hyperlinking not possible
 - Identifying possible links cumbersome
 - Following paper links cumbersome
 - Producing the documentation
 - Cumbersome
 - Error prone
 - Change of editors over the course of time
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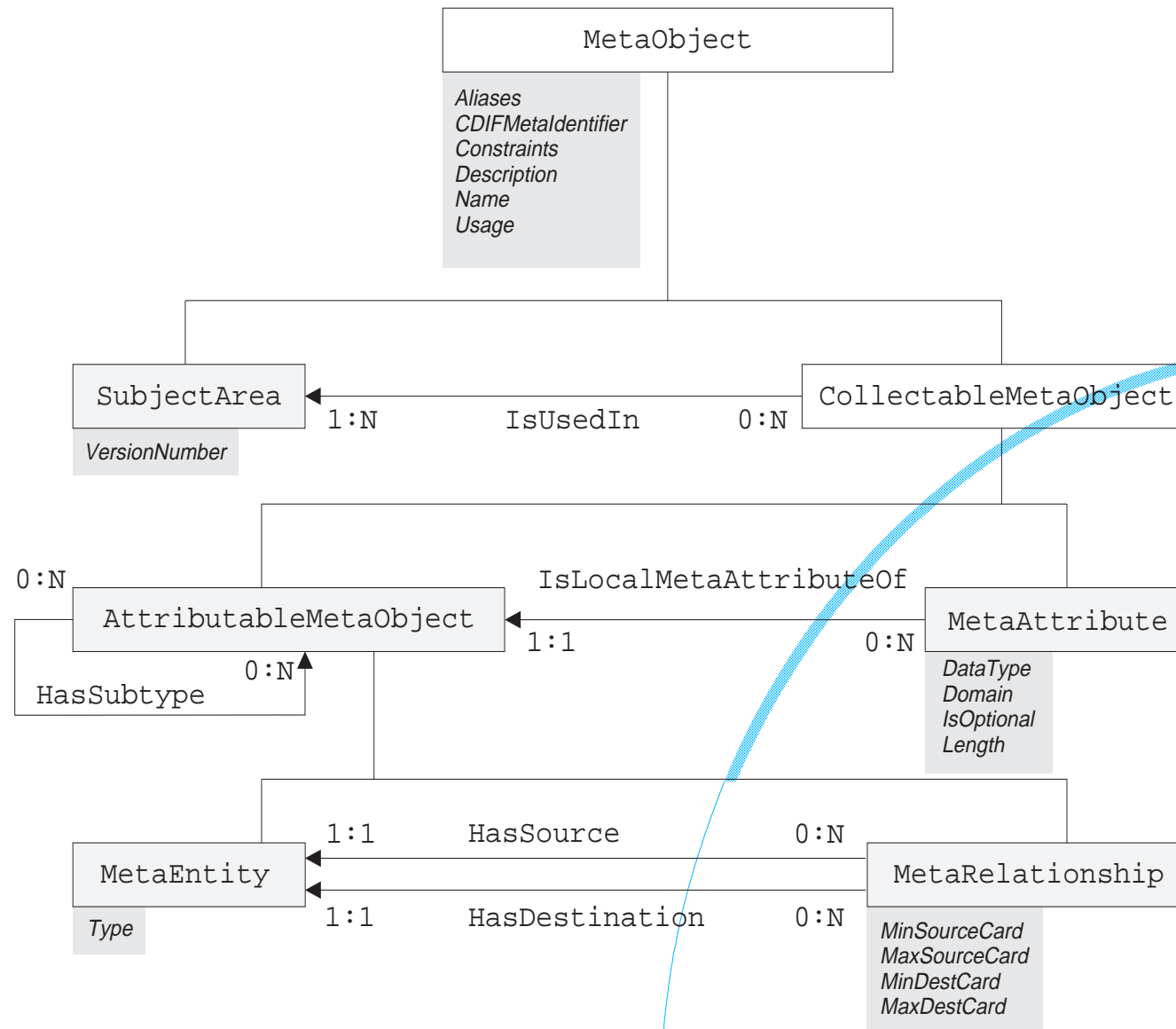
Structure of EIA/CDIF's M2 Standards

(1) Editing rules

- Set of rules (editor guidelines) for wordprocessing to have independent editors produce documentation to
 - appear in the same style and
 - use the same structure
- Thoughtfully laid out
 - Exploiting EIA/CDIF's Meta-meta-model
 - Using "views" upon EIA/CDIF's Meta-meta-model
 - *Overview*
 - *Detailed definitions for the Subject Area*
 - *Detailed definitions for used concepts, originally defined in another (in EIA/CDIF: unspecified) Subject Area*
- Take advantage of that work

Structure of EIA/CDIF's M2 Standards

(2) The EIA/CDIF Meta-meta-model





Structure of EIA/CDIF's M2 Standards

(3) Subject Area Overview

- Chapter 4: Overview & summaries
 - Description and diagrams
 - `AttributableMetaObject` Hierarchy
 - Summaries with inherited & local meta-attributes
 - *AttributableMetaObject Summary (FND only)*
 - *MetaEntity Summary*
 - *MetaRelationship Summary*
- Chapter 5: Subject Area Detailed Definitions ("fat pages")
 - Detailed meta-entity and meta-relationship definitions
- Chapter 6: Referenced Objects Definitions
 - Detailed meta-entity and meta-relationship definitions

HTML Hyper-referencing (1)

- `<A>...` tag
 - Defining an anchor to be used as a target
 - `...`
 - Defining a hyperlink
 - `...`
 - "target" may be omitted, if in the same file
- Producing files, anchors and hyperlinks
 - One file for summary information
 - One file per EIA/CDIF documentation section (4, 5 and 6)
 - Forward referencing (anchor name to refer to may not exist yet)
 - Find out in which of the files (5, 6) the fat page is located in

HTML Hyper-referencing (2)

- Meta-entities in overview and fat page listings
 - Hyperlink to the appropriate fat page description
- Meta-relationships in overview and fat page listings
 - Hyperlink the two meta-entities to their appropriate fat page descriptions
 - Hyperlink the middle name (i.e. the unqualified name of the meta-relationship itself) to the appropriate fat page description
- Meta-attributes
 - Hyperlink to the appropriate fat page description of the attributable meta-object, the meta-entity or the meta-relationship where it is defined



HTML-rendered Versions of the EIA/CDIF Meta-model Standards (1)

- Use the same basic structure for the HTML-rendering as in the original docs
 - Create a file for sections 4 (overview), 5 (subject area) and 6 (references)
 - Create a summary file containing structural information
 - Add navigational aid on top of all files belonging together
- Additional information
 - Use pictograms to make interesting information more comprehensible
 - Exploit the generalization tree a little more
 - *Indicate explicitly the meta-objects from which meta-attributes are inherited*

HTML-rendered Versions of the EIA/CDIF Meta-model Standards (2)

- Introduce even more structural information
 - Emphasize in **bold** meta-entities which **must** participate in a mandatory meta-relationship
 - Add cardinalities on either side of meta-relationships
 - Show cardinalities in **bold**, if *minimum value* $\langle \rangle$ '0'
 - Use summary page
 - To give statistics on the subject area definition
 - To indicate errors and warnings found
- Alphabetic ordering to increase comprehensiveness
 - Although no explicit ordering is defined for any part of the EIA/CDIF standards, for easier comprehension alphabetic sorts are applied at all times (also on multiple inheritance)



Roundup and Outlook

- Studied original EIA/CDIF documents
 - Using the same structuring for the HTML-renderings, exploiting the EIA/CDIF Meta-meta-model
- Enhancing with new information
 - Pictograms, structural information and sources of definitions
- Adapting to ISO/CDIF
 - Concepts can only be defined in *one* subject area (meta-model)
 - Referenced meta-objects are explicitly defined
- Generating the HTML-renderings ad hoc from RDBMS
- XML: once editors and renderers are really available

CDIF-related URLs (as of: 1998-10-14)

- OOPSLA'98: CDIF-workshop

<http://www.metamodel.com/oopsla98-cdif-workshop/>

- EIA/CDIF

<http://www.cdif.org>

- Cf. book on EIA/CDIF (e.g. overview, cross-references, IMM, specifications, implementations ...)

<http://www.wu-wien.ac.at/wi/rgf/adv/>

- ISO/CDIF ("ISO/IEC JTC1/SC7 WG11")

- ISO/IEC JTC1/SC7

http://saturne.info.uqam.ca/Labo_Recherche/Lrg1/sc7/

- OMG

- Stream-based Model Interchange Format ("SMIF")

http://www.omg.org/library/schedule/Stream-based_Model_Interchange.htm