

Study Period Meeting on
ROR/ODMS/PSO & SQL/MM-8 MDR



Issues for Standardization of 20943-6: Procedure for the Specification of Web Ontology

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❖ Introduction to 20943-6: PSO

- ✓ Motivation
- ✓ Purposes
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Discussion History

- ❖ The idea of this proposal has been presented in the following meetings

ISO/IEC JTC 1/ SC 32 Workshop (September 2008, China)

ISO/IEC JTC 1/ SC 32 Workshop on ROR–ODMS-SMMP Study Period
※ WG2 N1177: "Extending the Metadata Registry for Semantic Web"



ISO/IEC JTC 1/SC 32/ WG2 Interim (November 2008, Portugal)

ISO/IEC JTC 1/SC 32/WG2 Interim Meeting
※ WG2 N1219: "Extending the Metadata Registry for Semantic Web"
Subtitle: PSO: Procedure for the Specification of Web Ontology (based on MDR)



ISO/IEC JTC 1/SC 32 Plenary (July 2009, Korea)

ISO/IEC JTC 1/SC 32/WG2 Plenary Meeting
※ WG2 N1283: Study Period on Extending the MDR for Semantic Web
Project Subdivision 20943-6: Procedure for the Specification of Web Ontology





Motivation

❖ MDR

- ✓ provides a good introduction to metadata concepts, including a lot of insight into certain aspects of the granularity of metadata
- ✓ MDR contributes knowledge integrity in a large scale
 - The simplicity provides the organization of implemental adaptation
 - The representational simplicity allows for easy sharing of metadata
- ✓ In a word, **MDR contains standardized concepts** for various applications fields

❖ **Semantic Web promotes structured metadata representation, such as an ontology schema that data concepts are associated via relationships**

❖ **For creating ontology, concepts are firstly defined and then relationships are linked between the concepts**





Motivation (cont.)

- ❖ Under such a situation, we can use the standardized concepts in MDR for building Ontology

Need to specify Ontology using standardized concepts in MDR for the Semantic Web

- ❖ However, there is no standard for specifying Ontology using concepts in a registry
- ❖ The Goal of this proposal is to provide the specification support of Ontology using the concepts in a registry





Purposes

- ❖ **The purposes of this 20943-6 are to promote the followings:**
 - ✓ **Ease of definition** of Ontology schema
 - ✓ **Creation of Ontology schema consisting of standardized concepts**
 - i.e., well-known concepts or generalized concepts, which are accepted by general users as well as domain experts
 - ✓ **Common understanding support of concepts** across corresponding application fields
 - ✓ **More formalized specification of ontology**



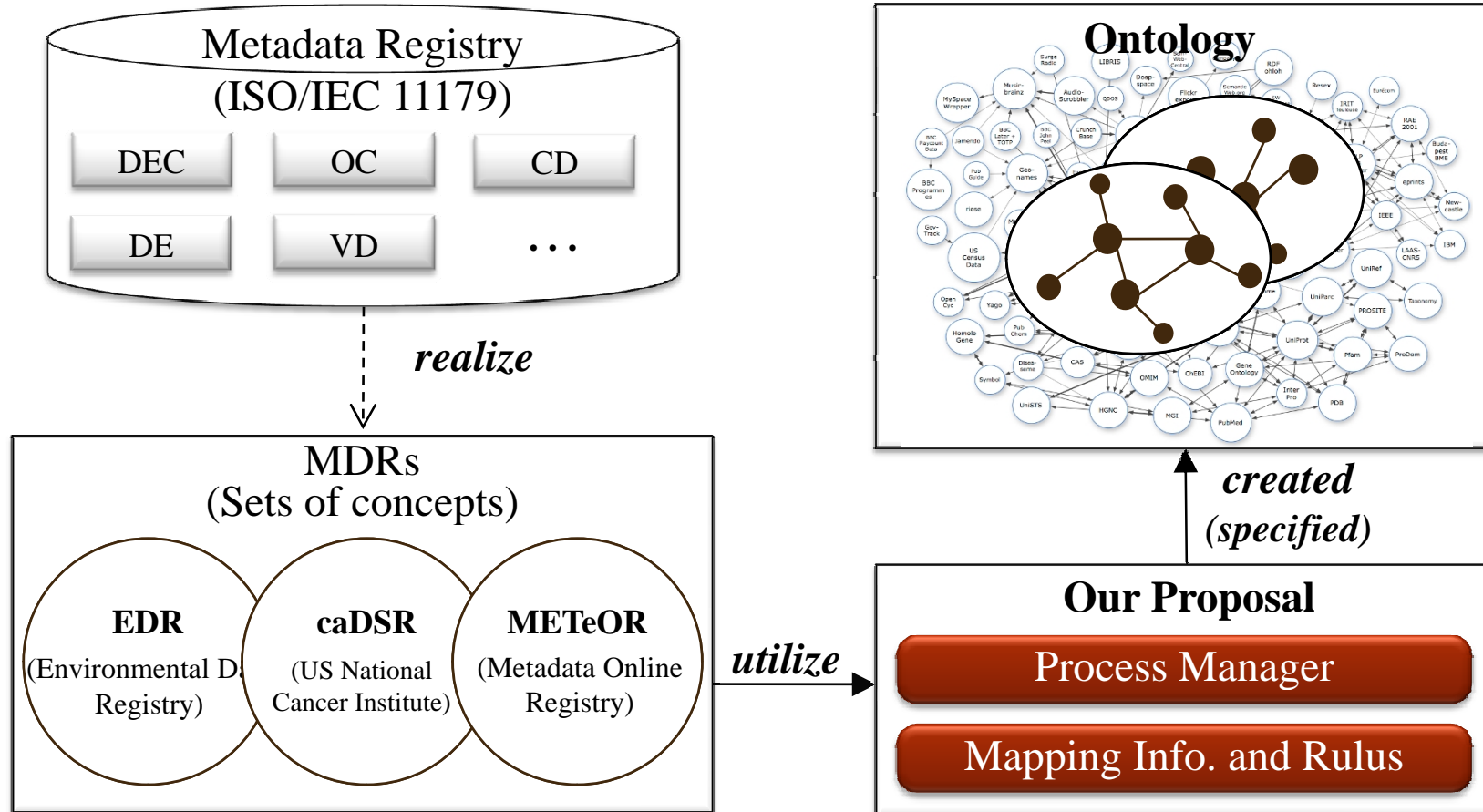


Scope

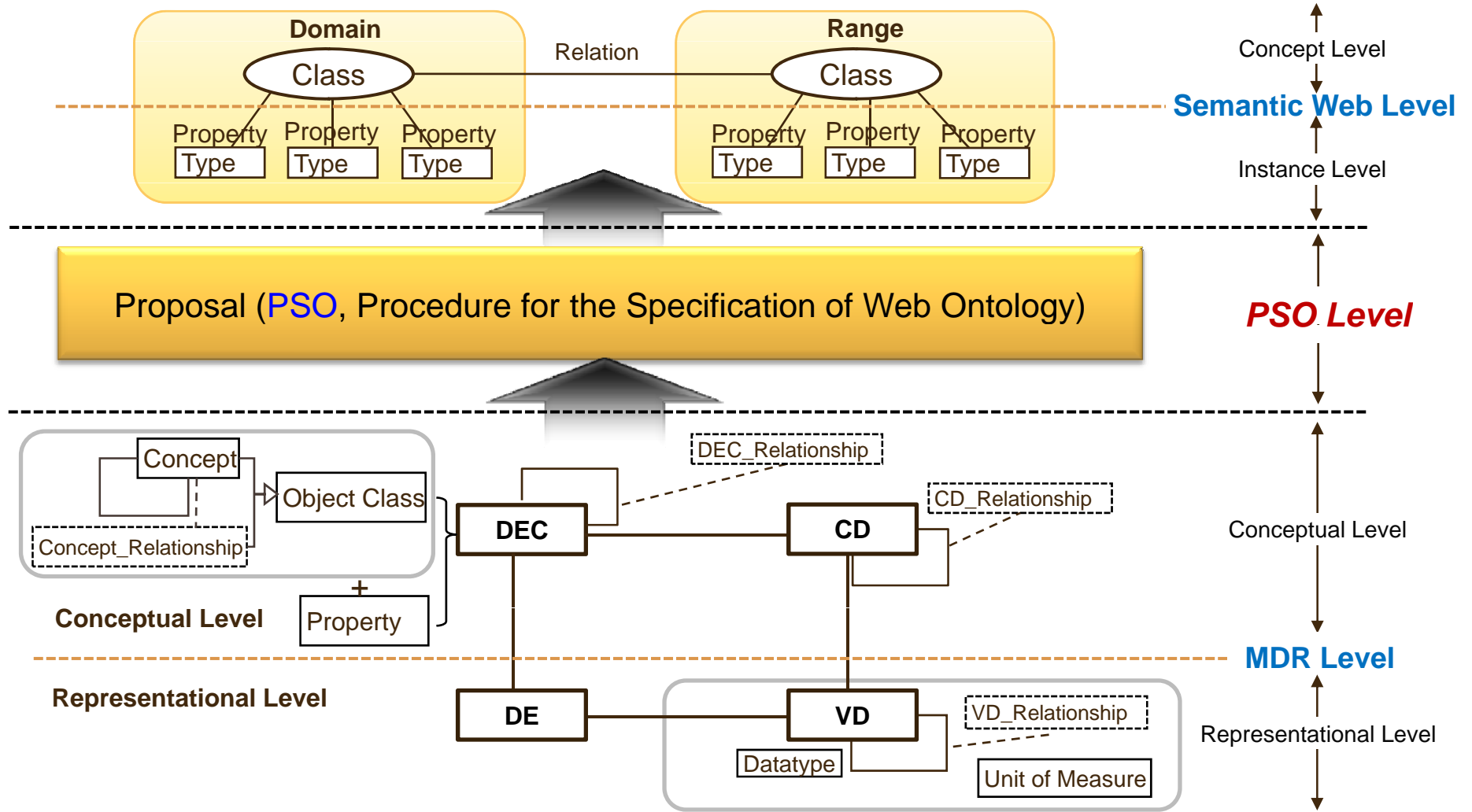
- ❖ **The scope of 20943-6 covers procedures for the specification of Ontology based on ISO/IEC 11179**
- ❖ **This part of 20943-6 will use standardized concepts registered and managed in MDR to specify Ontologies.**
- ❖ **This part currently consists of the following clauses:**
 - ✓ **Clause 1:** Framework for Ontology Specification
 - ✓ **Clause 2:** Mapping Model between MDR and Ontology
 - ✓ **Clause 3:** Procedure for Ontology Specification
- ❖ **This proposal does not contain**
 - ✓ A Ontology building methods by a specific ontology description language, such as RDF, RDF-S, OWL, Topic Maps, KIF, and so on



Conceptual Model



Conceptual Model (cont.)





Issues for Standardization of PSO

❖ We first need to consider the following issues

- ✓ Defining Mapping Relation between components of MDR and Ontology
- ✓ Definition of processes for specification
 - Class → Property → Relation

❖ We have Canadian Comments

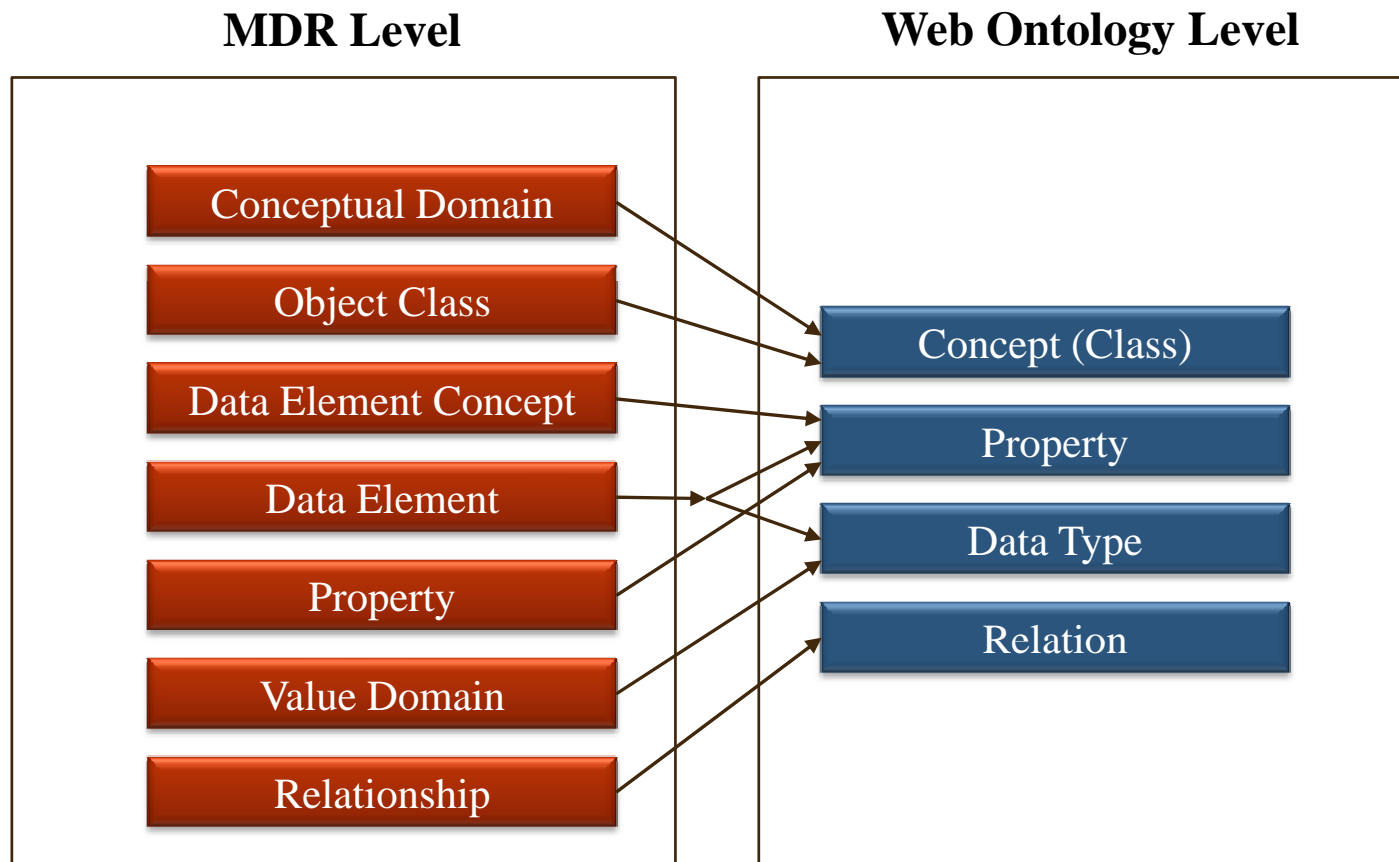
- ✓ Input date: August 13, 2009



Issues: Mapping Model

❖ Mapping Model between MDR and Ontology

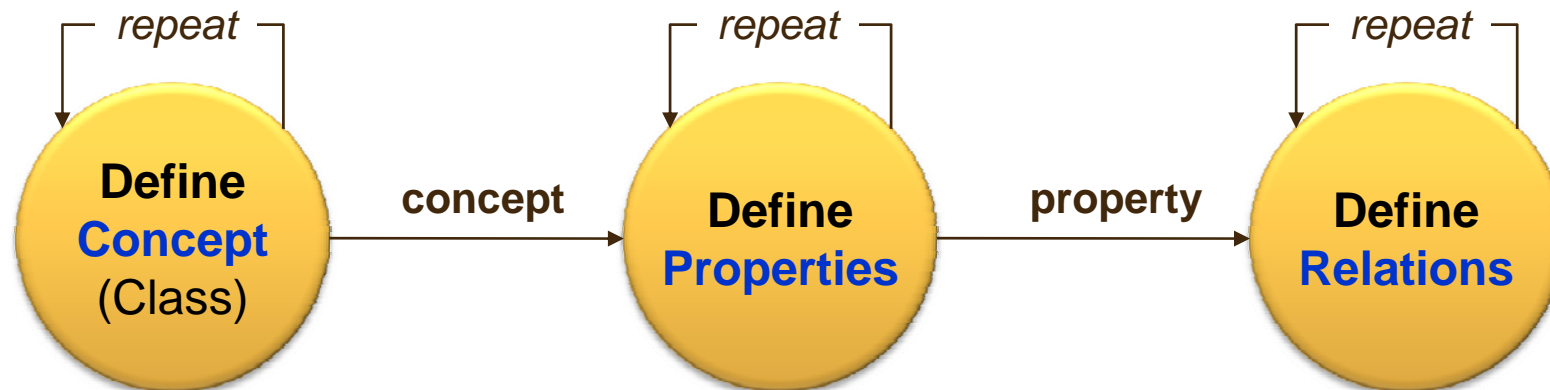
- ✓ Analyzes mapping relations between Ontology and MDR



Issues: Specification Process

❖ We need to define formal specification steps

- ✓ This part contains the overall process for building ontology, and develops and defines concrete/detailed operations of each process.





Issues: Canadian Comments

- ❖ **The summary of the comments is as follows**

- ✓ Referneces
- ✓ Scope
- ✓ Title
- ✓ Some minors

- ❖ **Details: Original Document**

- ✓ [WG2_N1291-Canadian-Position-on-Procedure-for-specification-of-web-ontology](#)





Q/A

Thank you!



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