



Semantics and Standards Interoperability at OMG

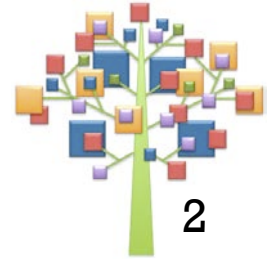
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8 November 2012



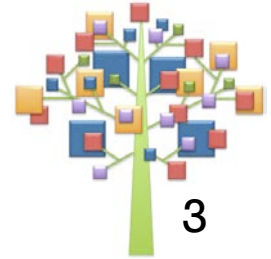
Semantics at OMG



- Two primary “flavors” of work
 - Cross-domain, “platform” standards
 - Basic language modeling specifications (e.g., Ontology Definition Metamodel (ODM), Semantics for Business Vocabularies and Rules (SBVR))
 - Supporting infrastructure development (e.g., Application Programming Interfaces for Knowledge Bases (API4KB))
 - Domain-specific vocabularies, ontologies, and service interfaces
 - Healthcare – Common Terminology Services 2, developed jointly with HL7
 - Finance – Financial Industry Business Ontology (FIBO), Property and Casualty Information Models
 - Government – Information Exchange Policy Vocabulary (IEPV)



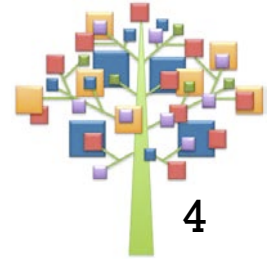
Status of OMG platform standards



- Update to support OWL 2 is underway – ODM 1.1 revision targets include December 2012 (draft convenience document) / March 2013 (spec revision)
- CL Metamodel is identical to the UML diagrams in ISO 24707, update to support planned work to revise the CL standard is anticipated, and will be done in sync with the ISO effort
- High degree of synergy between ODM and Topic Maps ISO 13250 working group
- Current work in ISO JTC1 SC32 on ISO 11179 (Metadata Registration) references ODM
- All ODM metamodels are referenced and used in ISO CD 19763 (MMF – Metamodel Framework, Model Registry specification)
- SBVR 1.1 Revision underway, anticipated publication in early 2013



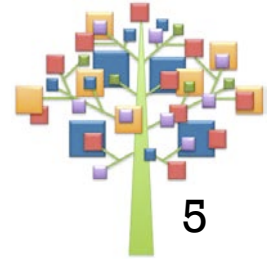
Current activities



- Revision of ODM to support OWL 2, fix bugs is ongoing
- Extensions under consideration include mappings to
 - IMM Metamodels (ER, XML Schema ...)
 - SysML
 - Production Rule Representation (PRR) specification
 - BPMN (Business Process Modeling Notation) and the Business Motivation Model (BMM)
- RFP to support APIs for knowledge base access (API4KBs) – the need to fill gaps in existing infrastructure options has become painfully obvious across architectural styles (library APIs, resource-oriented architectures, service-oriented architectures, cloud)
- Date Time Vocabulary (currently in SBVR, CLIF, OCL), mapping to ODM/OWL is in work, and has led us to develop a more general mapping from SBVR to ODM/OWL



Domain requirements drive platform activities



- When we first initiated the API4KBs effort, many of us felt the need for standardized “glue” APIs that separated concerns (interface from business logic), but it was speculative w.r.t. requirements
- Emerging work in financial services on FIBO, CTS2 in healthcare, and IEPV have only highlighted the need for a well designed set of APIs that
 - stem from a common set of platform independent requirements
 - map to platform-specific, standard interfaces that meet OMG member needs
 - are sufficiently general to address requirements of the broader semantic technology / software engineering communities
- The need to leverage semantic web-based tools, query and reasoning facilities have motivated the mapping from SBVR to OWL, and requirements from the business community to use structured English for ontology/rule representation motivate the mapping in the opposite direction
- In other words, standards interoperability, even within a single consortium such as the OMG has become critically important