

Ontolog

OOOR Use Case Review

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(v 1.2)

Definitions



Repository (WordNet)

- A facility where things can be deposited for storage or safekeeping

Ontology Repository (Ontolog)



- An ontology repository is a facility where ontologies and related information artifacts can be stored, retrieved and managed

Goals



Provide an architecture and an infrastructure that supports

- Creation, sharing, searching, mapping, integration and governance/management of ontologies, and
- Linkage to database and XML Schema structured data and documents.

Complementary goals

- Foster use of ontologies and semantic technologies
- Aid the Semantic Web community
- Identify and promote best practices
- Provision services relevant to the RDFS, OWL, CL ontologies and RDF instance stores.

Architecture Principles



- Support evolutionary development
- Support distributed instances
- Support federation
- Scalable
- Ontology services decoupled from core repository functionality
- No hierarchical dependencies
- Support arbitrary ontology representation languages
- Ontologically driven – Development & Runtime
- Platform independent

Assumptions



- OOR Supports Evolutionary Development
- Partitioning of Functionality
- OOR instance data not stored apart from infrastructure data (e.g. policies, rules)
- Repository architecture (mostly) independent of knowledge representation language
- Initial support for OWL
- Meta/Provenance information ontologically based
- Standards based to extent possible
- Not Near-Real Time
- Federatable

Core OOR Requirements



- Storing, Management, Governance of Ontologies & Related Items
- Discovery/Searching Ontologies
- Scalable (Parallelism, Federation)
- Multi-Language Support
- Arbitrary Knowledge Domain
- Platform Independent
- Don't impede storing of instance data

Role: Ontology User



- Find/Browse Ontology
 - **Simple Ontology Search/Browsing**
 - **Criteria** – Domain, Creator, Subject, Owner, Organization, ...
 - Complex Search
 - Modes – Single, Multiple, Federations
 - Extended Search/Browse – Brings up related ontologies/terms/relations (e.g. lattice of theories)
- Find Term/Relation
- Find Mappings
- Find Theory/Rules
- Non-Developer Review
 - Review/Rank an OOR Ontology
 - **Add Comment for an Uncontrolled Review**
 - Add Change Request
- Subscriptions
- Get Help

Role: Ontology Designer



- Upload Theory
 - Upload Ontology
 - Create Metadata
 - Metadata Completeness Check
 - Syntax Check
 - Consistency Check
 - Upload Rules
 - Create Metadata
 - Metadata Completeness Check
 - Syntax Check
 - Consistency Check
- Modify Theory
 - Update Ontology
 - Update Rules
 - Correct Ontology Errors
 - Correct Rules Errors
 - Modify Ontology Metadata
 - Modify Rules Metadata
 - Delete Ontology
 - Delete Rules

Role: Ontology Designer



- Map Ontologies
 - Create Mapping
 - Modify Mapping
- Download Theory
 - Download Ontology
 - Download Rules
- Merge/Split/Integrate Ontologies

Role: Administrator



- Reporting
 - Create Usage Reports
 - Publish Reports
- Access Control
 - Add User
 - Delete User
 - Modify User Privileges
- Administer
 - Content (e.g. delete ontology)
 - Services
 - Policies
 - Persistence
 - Federation

Possible Use Cases



- Role: Agent
- Deployment
- Federation