WS3 Session Notes 6 Oct

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Geo Ontology

Geo Ontology Imports diagram

Demonstrated cross reference using the OWL equivalentClass construct.

The Law of Demeter

Boston Uni, 1990s

Class library rule of thumb that controlled visibility.

Don't have leakage of information through an interface.

When we want to put a facade in front of the external ontologies we are referencing.

Mappings Added

Added «equivalentClass» between:

• UN-FAO Geopolitical Entity and GeopoliticalEntity • Geopolitical Group

Transactions Ontologies

REA Derivation

Options:

1. Use OWL Equivalent Class because the terms are equivalent 2. Use something else because the Range of this is not an OWL Ontology. 3. SKOS Related Match 4. Create an OWL Ontology from the REA UML.

Potential issues

Range of SKOS Match - is this necessarily an OWL Class?

Default way people use it is to create instances of resources.

Anything with a URI. But UML classes do not have a URI.

SKOS Working Group: some differences of opinion.

See OWL Ontology in ODM. Hoping to see as an example for use in ODM 1.1, we intend to base some of the FIBO metadata on that.

Some of the SKOS relationships are not well understood. This means we should exercise caution in how we publish how we have elected to use the SKOS relationship.

Can we identify a model and theory between how we use SKOS and an interpretation of how we are making our semantics claims. That would mean including this in the RFC documentation.

Which SKOS ones are we thinking about?

Related Match

There are no domains and ranges in the SKOS match relationship.

Domain must be a “concept”. What we mean by Concept which could be an OWL class, an instance.

For us, we want to be able interpret “Concept” in SKOS as being any meaningful Thing or a Relationship, whether in OWL, XBRL, ISO 20022 or whatever. Used to state an associative mapping link between two conceptual resources in different concept schemes.

Specifically Instances (individuals) NOT properties. So no.

Can we treat a Class as an Instance in OWL? Only if all the punning algo in OWL 2 work. Typical usages Used to state an associative mapping between two conceptual resources in different concept schemes.

Definition above versus typical usage.

typical usage is based on instances.

Our usage is not typical but seems to be valid; must formally state that it should not be used for reasoning over individuals.

• Model • Theory • Interpretation

URLs

UML does not have URLs.

UML 2.4 does support URLs for UML resources. NoMagic supports this.

2 questions:

How do you put in a UML model a URL. What the URL should be.

Possible solutions

a. Add URLs to our internal snapshots of UML standards b. Use SKOS and declare that our usage of it includes “Resource” where the Resource does NOT have a URI or c. Not use SKOS.

Discussion

SKOS intends for the thing to have a URI. For SPARQL queries over the Repository this would cause a problem. There are good reasons to do this. Example: to display these for analysts.

Decision

Do (a) Assume future MOF to UML spec. There is a non normative version of this which we can look at. So do (a) but with the approach documented inthat standard. Then for ODM it would just show up as an RDF Class.

So to do this now, proxy in an RDF Class.

URIs in UML

Each UML component has a URI or can have one by default.

This is the GUID with some wrapper around it.

CONCLUSIONS

The SKOS relationships can point directly to the UML elements.

This begs the question of the URIs we are minting for this model and whether they are consistent and reliable.

The URI can be one or other of the GUID OR the package structure plus name of the element.