OWL vs. RDFS Ontology

LD4L Labs / LD4P Ontology Group
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LD4L Labs / LD4P Ontology Group Alignment Decision

- We will continue to work at the OWL level
- We will remain cognizant of RDFS interoperability issues and take note of implications where relevant

We will continue building our ontology using the OWL language. OWL offers a lot of power to enrich the data, e.g. distinguishing object, datatype, and annotation properties; inverse, inverse functional, and symmetric properties; disjointness, union, intersection, restrictions, etc.

To avoid confusion, we emphasize that OWL rests on the RDF/S vocabularies and that we continue to use those in our ontology. Many of these terms are part of standard usage in OWL ontologies; for example: rdf:type, rdf:domain, rdf:range, rdfs:label, rdfs:comment, rdfs:subClassOf, etc. However, we will not use RDF/S terms that conflict with OWL DL. For example, we will not use rdf:Property to define properties, since in OWL DL every property must be defined as either an owl:ObjectProperty, owl:DatatypeProperty, or owl:AnnotationProperty. We will define classes as owl:Class in order to access the semantic properties and capabilities of owl:Class, as well as using OWL-specific assertions such as owl:SymmetricProperty, owl:FunctionalProperty, owl:inverseOf, etc. to make use of the richer expressivity provided by these terms.

An externally-recommended comparison document on the question of RDFS versus OWL for ontology development: http://www.cambridgesemantics.com/semantic-university/rdfs-vs-owl

Approach for Moving Forward

For LD4L Labs / LD4P Ontology Group usage of BIBFRAME 2.0, and bibliotek-o, we will continue to work with OWL. The OWL 'flavor' will be determined by the needs/cases/axioms outlined in the alignment and modeling process.

When we reuse external ontology fragments in bibliotek-o, or when we align bibliotek-o resources to external ontology fragments (or when we recommend either option to BIBFRAME), we will do so with special consideration for RDF - RDFS - OWL interoperability questions if-and-when considering RDFS external ontologies.