

7.2.8 Check for Anomalies

An important advantage of using OWL rather than RDF Schema is the possibility of detecting inconsistencies in the ontology itself, or in the set of instances that were defined to populate the ontology. Examples of often occurring anomalies are incompatible domain and range definitions for transitive, symmetric, or inverse properties. Similarly, cardinality properties are frequent sources of inconsistencies. Finally, the requirements on property values can conflict with domain and range restrictions, giving yet another source of possible inconsistencies.

7.3 Reusing Existing Ontologies

One should begin with an existing ontology if possible. Existing ontologies come in a wide variety.

7.3.1 Codified Bodies of Expert Knowledge

Some ontologies are carefully crafted by a large team of experts over many years. An example in the medical domain is the cancer ontology from the National Cancer Institute in the United States.¹ Examples in the cultural domain are the Art and Architecture Thesaurus (AAT),² containing 125,000 terms, and the Union List of Artist Names (ULAN),³ with 220,000 entries on artists. Another example is the Iconclass vocabulary of 28,000 terms for describing cultural images.⁴ An example from the geographical domain is the Getty Thesaurus of Geographic Names (TGN),⁵ containing over 1 million entries.

¹www.mindswap.org/2003/CancerOntology/.

²www.getty.edu/research/tools/vocabulary/aat.

³www.getty.edu/research/conducting_research/vocabularies/ulan.

⁴www.iconclass.nl/.

⁵www.getty.edu/research/conducting_research/vocabularies/tgn.