

Leo Obrst, revisions by Dagobert Soergel

Main changes

Comment to 1.2/1.3, new points 1.4, 1.5

New points 1.4, 1.5, addendum to 2.2.5, 2.4, (old 2.4 now 2.5), 2.5.1, 2.5.2, 3.2

1. Points of Agreement

- 1.1 We desire semantic interoperability.
- 1.2 We agree that a mere taxonomy is insufficient for that.
- 1.3 We agree that axioms are an indispensable part of creating semantic interoperability.
DS comment: A more nuanced statement on 1.2 and 1.3 might be appropriate. There might be some discussion as to what types of semantic interoperability require axioms and what types could be achieved with taxonomies with verbal definitions
- 1.4 We agree to disagree on the best way to achieve interoperability: establishing (partial) alignments/correspondence, common subset, common upper ontology, ...
We agree that the best combination of mechanism may emerge from the work to be undertaken
- 1.5 We agree that the dialog on making upper ontologies interoperable will contribute to improvements in the existing upper ontologies

2. Opportunities and Challenges

- 2.1 Modularity: How to Achieve? Incompatibilities?
 - 2.1.1 Lattice/poset of theories?
 - 2.1.2 3-D vs. 4-D vs. 3-D/4-D
 - 2.1.3 Other?
- 2.2 Mapping among the terms/axioms of the relevant upper ontologies
 - 2.2.1 Term to term maps
 - 2.2.2 Bridging axioms
 - 2.2.3 Finding consistent common interpretation subsets
 - 2.2.4 Create a reference library of upper ontologies
 - 2.2.5 Express in a common language: SCL, IKL?
A common language for expressing commonalities and differences
- 2.3 Identifying an intersecting subset of terms/axioms of the relevant upper ontologies
- 2.4 Identifying areas where agreement is easy vs. areas where agreement would be difficult. Barriers to agreement such as differing assumptions on which ontologies are based. Do these assumptions permeate all aspects of an ontology so that two ontologies based on different assumptions do have no points of agreement or are some

elements neutral with respect to assumptions? Does it make sense to seek agreement in what needs to be defined without necessarily reaching agreement on the definitions

2.5 Evaluation and certification of ontologies

2.5.1 Criteria for evaluating ontologies, including application-based criteria

2.5.2 Methods for evaluating ontologies, including protocols and testbeds

3. Next Steps

3.1 Create a consortium or working group

3.1.1 Align with existing standards organization?

3.1.2 Independent: New committee under NCOR, ECOR, JCOR:
Upper Ontology Reconciliation and Mapping Committee?

3.2 Identify (or begin to identify) pairs of upper ontologies and/or content elements across upper ontologies where alignment work would be particularly appropriate

3.2 Seek joint funding to address 2 and 3.1 and 3.2

3.3 Other?