Ontologies within Semantic Interoperability Ecosystems
Thoughts on Summit 2016

Michael Grüninger

Synthesis

April 14, 2016
Some Outstanding Questions

The Role of Ontologies

- Is semantic integration of systems reducible to ontology integration?
- If every system uses an explicitly axiomatized ontology, and the relationships among these ontologies is specified, have we achieved semantic integration?
- If not, what is missing?
If ontologies are sufficient, why do we still have a semantic mess?

- We have the right ontologies, but we are not using them (properly).
- We have the right ontologies, but we do not understand how they are related to each other (lack of mappings).
- We lack techniques for ontology integration.
- We don’t have the right ontologies
Some Outstanding Questions

Ontology Design

- Do we have the right axiomatizations for the ontologies that are being used?
- Are reference ontologies (such as upper ontologies) a viable solution?
- Are ontologies being developed in an uncoordinated fashion?
Some Outstanding Questions

Terminology and Issues

- Do we really understand the nature of the problems?
- Is there consensus on the distinction between integration and interoperability?
- Is this a non-issue?