A Proposal for a Shared Symptom Ontology for OWL Applications

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Proposal

Development of a common, shared Ontology for describing Symptoms of inconsistencies and possible errors in OWL documents.
Motivation for Symptom Ontology

• Why “Symptoms”?
  – Specific errors cannot always be identified but you can always observe the symptoms

• Machine readable output from OWL tools
  – Consistent with the objectives of the Semantic Web
  – Permits automated processing and piping of OWL tool output

• Justification for stated system results (e.g. OWL Test Cases)
  – Desirable to have connection to specific OWL axioms violated

• Shared common language
  – Rather than N independent ontologies why not collaborate on one
Symptom Ontology Use Cases

- Validation Tools
- Tools that require consistent OWL Docs
- Justification of Tool Conclusions
- Meta Reasoning Tools
- Co-Reference
- Rule Validation
ConsVISor Symptom Ontology

• ConsVISor’s Objective: identify symptoms of errors & possible errors in OWL documents and provide helpful diagnostic information to authors
• Symptom ontology driven mostly by desire to produce output as OWL annotations
• Symptoms categorized by the information needed to describe them and their implicated statements
• Symptoms linked to specific OWL/RDF axioms being violated
• Severity Levels: Info, Warnings, Errors, Failures
  – documents can be problematic without being inconsistent
ConsVISor Symptom Ontology
Explicit Example

- http://www.vistology.com/consvisor
Next Steps?

• Gather feedback from Semantic Web community on the general concept of a shared symptom ontology
• Encourage tool-based use of ConsVISor service and solicit feedback (e.g., AeroSwarm)
• Find tool developers interested in using and extending the current symptom ontology
• Organize team interested in establishing a single shared symptom ontology for Semantic Web applications. Challenge:
  – Categorize symptoms and associate them with axioms
Interested?

• Talk to us: Chris Matheus or Mitch Kokar
• Visit Web Site: http://www.vistology.com
• Send Email to: symptom@vistology.com