Ontology Summit 2014:
Big Data and Semantic Web Meet Applied Ontology
Track A: Common Reusable Semantic Content

Session 2: 23 January 2014
Use and Reuse of Semantic Content - The Problems and Efforts to Address Them

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Track A Mission Statement Summary

- Semantic technologies such as ontologies and reasoning play a major role in the Semantic Web.

- One challenge in these efforts is to build and leverage common semantic content thus reducing the burden of new ontology creation while avoiding silos of different ontologies.

- However, crafting of whole or partial common semantic content has long presented challenges. Achieving commonality and reuse remain key ingredients for practical development of quality and interoperable ontologies.

- Despite development of such things as foundational top-level ontologies and the availability of broad domain models as starting points, the amount of reuse seems quite low in practice.

Track A Mission Statement (continued)

- This track will discuss the reuse problem and explore possible solutions such as
    - the use of ontology repositories and tools
    - the possibility of using basic and common semantic content in smaller, more accessible pieces.

- The goal is to identify exemplary content and also define the related information to enable use/reuse in semantic applications and services.

- A secondary goal is to highlight where more work is needed and enable the applied ontology community to further develop semantic content and its related information.

- We will work to make the results of our discussions useful to the Semantic Web, Linked Data and Big Data communities.

Session Overview

- At the Launch Event last week, the organizing team provided an overview of the program, and how we will be framing the discourse. Today's session focuses on "Common Reusable Semantic Content."

- This session begins with a short introduction to the problem space of reuse, and then continues with three presentations related to differing aspects and qualities of ontologies.

- The first example is from the Earth Sciences domain. It is focused on semantic alignment of two repositories using ontology design patterns.

- The second example addresses the issue of ontological reuse. It describes how portions of the ISO 15926 and FIBO ontologies were mined to define a new ontology.

- The last example is concerned with analyzing the reasoning capabilities of an ontology. The goal is to present very different aspects of ontologies (alignment, patterns, reuse and reasoning) in order to start to understand what "common, reusable semantic content" is and its qualities.

- These example presentations will be followed by time for open discussion around the issues in re-use of semantic content.

Session Agenda

- **Introduction**
  - "Introduction to the Track Topic"
    - Dr. Gary Berg-Cross (SOCoP)
- **Examples**
  - "Towards ontology patterns for ocean science repository integration"
    - Professor Pascal Hitzler (Wright State U)
  - "Reuse of Content from ISO 15926 and FIBO"
    - Ms. Andrea Westerinen (Nine Points Solutions)
  - "Reasoning about Events on the Semantic Web"
    - Ms. Megan Katsumi & Professor Michael Gruninger (U of Toronto)
- **Discussion**