

Ontology Summit 2012

Track 3

Challenge: Ontology and Big Data

Thursday, January 19, 2012

Mission Statement for Track 3 - Challenge: Ontology and Big Data

The mission of Track 3 is to identify appropriate objectives for an Ontology and Big Data challenge, prepare problem statements, identify the organizations and people to be advocates, and identify the resources necessary to complete a challenge. The goal will be to select a challenge showing benefits of ontology to big data.

Action Plan

- **Identify objectives**
- **Prepare problem statements**
- **Identify advocates**
 - **Organizations**
 - **People**
- **Identify resources**

Sample Problem Areas

- How quickly could the highest level of certification be performed for a medical device developed using Automatic Programming techniques? For example, could a patient receive a new life-critical implantable medical device quickly, with all of the latest improvements, without having to choose between waiting months for the new version to be certified versus receiving it rapidly but with insufficient certification?
- How can Automatic Programming help bring disciplined computer science principles to mechanical, electrical, civil, nuclear, and other engineering design and optimization tasks? How can we characterize the potential impact of this technology introduction? Another interesting question is how best to design a meta-generator that allows the rapid development of **domain-specific languages (DSLs)** to respond to time-critical needs.
- Could a library of design knowledge (algorithms, abstractions, coding methods, etc.) for Automatic Programming be obtained by scanning and analyzing all of the open source software on the Internet?
- How close could an Automatic Programming system come to a human-level understanding of software?