An ontological **catalogue of ontology and metadata vocabulary characteristics** relevant to suitability for semantic web & big data applications.

An Ontology Summit 2014 Hackathon Proposal

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Describing Ontologies & Vocabularies: Why?

- In selecting, creating, or effectively using an ontology or metadata vocabulary for (re)use, it is important to understand not only the requirements of the intended use, but the characteristics of any candidate ontology or vocabulary.

Obstacles to useful description

- There is no consistent, meaningful, and widely adopted framework for describing such artifacts.
- Comparison of artifacts features often focuses on classifying by overall type, in entirely (ontology, subject classification system, taxonomy, thesaurus, or other).
  - Much heat, no resolution.
  - Limited use due to granularity mismatch with operational need for understanding existing artifacts or matching these to specific use requirements.
- Evaluation methodologies and tools vary widely in
  - what aspects of ontologies or metadata vocabularies they assess,
  - how those aspects are modeled
  - whether they address relationships between aspects & suitability for varied uses.
- Repositories, registries, & other sources of info about existing ontologies and vocabularies provide limited characterizations of those artifacts themselves.
- It is not feasible, at this stage, to consistently list, or even ascertain, a useful set of characteristics helpful to those looking for ontologies or metadata vocabularies suitable for some particular semantic web or big data application.

Goals of this hackathon

- Create a catalogue, represented in an ontology, of ontology and metadata vocabulary characteristics potentially relevant to suitability for some semantic web or big data application.
- Create this catalogue as an open-source, collaboratively developed, extensible, and publicly available resource.
- Create this catalogue in a form usable by both humans and machine applications, suitable for use in such contexts as:
  - manually creating characteristics metadata for an ontology or metadata vocabulary;
  - representing the outputs of evaluations of such artifacts;
  - listing use-relevant metadata for such artifacts in repositories, registries, and other places and forms in which ontologies and metadata vocabularies may be presented for use or consideration.
- Take a bite out of obstacles to useful description

Hackathon Activities

- Go directly to work on developing this catalogue as a formal ontology.
- Use our own experiences, discussions and presentations from this ontology summit and reuse material gathered and generated during last year's "Ontology of Ontology Evaluation" hackathon.
- Applying lessons learned from last year's hackathon, and applying the focusing scope of this year's summit, we will not dedicate initial time to informal representation on discussion. Rather, we will go directly to formal representation, and use the process of such work to bring out whatever issues we need to discuss and resolve informally.
- Current plan is to create this ontology in the OWL 2 language, using Web Protégé as our collaborative development tool.
  - The language selection is based on existing familiarity and level of use among semantic web and big data application designers, as well as ease of integration into existing repository and other environments.
  - The tool selection is based on language support, collaboration features, and availability to all participants (free and open source).