Application Profiles and OWL Ontologies

http://dcevents.dublincore.org/IntConf/index/pages/view/APaltOO
Session I

Presentations

• Tom Baker: History and Background of the Description Set Profile
• Karen Coyle: Annotations, an Application Profile case study
• Gordon Dunsire: FRBRer, an OWL Ontology

Discussion
Session II

- Presentation
  - Antoine Isaac: Europeana and its implementation of validation

- Discussion of Key Questions

- Next steps
OWL ontologies

- Define a model of an information space - classes of things that are found in that world, their properties, and their relationships
- These can be leveraged to infer additional information about things that are described using the ontology.

OWL ontologies do **NOT** provide constraints that one would typically view as data validation.
Application profiles
• can define constraints on data creation similar to those provided by XML schema
• or application-specific rules that are used for the validation of instance data.

Machine-actionable APs can document such rules both for quality control usage during data creation and data re-use, and for documenting shared data.
This session examines how the dual requirements of (data-oriented) quality control and (Web-oriented) interoperability are addressed using minimally constrained ontologies with Application Profiles.

This topic is particularly timely in light of interest in RDF validation in the W3C community.
**Premise:**

- Inference schemas, such as OWL Ontologies, specify a simplified, "cartoon" universe that can be leveraged to infer additional knowledge based on what is already known.
- The more tightly that cartoon universe is defined, the more information one will be able to infer.

**Questions:**

- For what purposes is it most appropriate to define an ontology, or inference schema, using strong semantic constraints?
- What advantages do such schemas offer to a community of practice?
Key premises and Questions

Premise:
- Validation schemas, such as Application Profiles, are designed to ensure the quality and consistency of data by specifying constraints on the structure and content of that data.

Questions:
- For what purposes is it most appropriate to specify a validation schema such as an Application Profile?
- If a given dataset was created using a validation schema, such as an Application Profile, how can the creators of data advertise, and consumers of the data discover, the schema or profile used?
- Might datasets describe themselves using a property for this purpose?
Key premises and Questions

Premise:
- To make use of existing vocabularies in a linked environment, it is important that users can understand the semantics of the elements they are re-using and to be able to use these correctly.

Questions:
- When is it desirable to define properties strongly linked to specific data models, and when is it better to anticipate that they be used with other models?
- What are the implications of strongly versus weakly constrained vocabularies for their uptake and consumption by users who do not know (or understand) a given data model?
Next steps