

Proposal for a Structure of the PROVO HTML document

1. Introduction

- Give an introduction to the ontology, including its relationship with prov-dm
- Say that we are using OWL-RL

2. PROVO at a Glance

Provide a glance view of all the classes and properties we have in the provo ontology.

We classify this overview of the ontology into three parts: core terms, terms used to encode qualified relationships, and “common” (or what we can also call additional or convenient) terms. This section provides a rationale on this categorization preferably in one paragraph, and then presents three indexes that list the terms in each category hyperlinked to their detailed description in Section 4 for quick reference. To see what we mean by an index, take a look at the following link <http://rdfs.org/sioc/spec/#sec-glance>

3 The PROVO Ontology Description

This section provides the reader with an understanding about the structure of the section, so that they know which section they should go to read and where they should stop. That said, the message about the purpose of each section can still be repeated at each individual section.

This section describes each of the three parts of the ontology. In each section, it might provide an overview diagram (if applicable) that showcase the terms in the corresponding part, and examples (if applicable).

3.1 PROVO Core

This section presents a diagram illustrating the core concepts and properties that compose the ontology, without talking about terms used for expressing any n-ary relationships. A diagram similar to the one in Section 7 “Overview of the ontology”, can be used but it will need to be improved. No need to show the “Thing” class in the diagram, as we are doing now. That just makes the diagram more complex. Neither SIOC nor OPMV do that. The classes and properties to show in this diagram are the following:

Entity, Agent, Activity, used, wasGeneratedBy, wasDerivedFrom, wasAssociatedWith, actedOnBehalfOf, wasInformedBy, wasAttributedTo, hadOriginalSource, “Temporal stuff”

Example

Turtle + Explanation. The example does not have to illustrate all the terms. Instead, it focuses on the main ones.

3.2 Qualified Relationships in PROVO (If there is a better title then we should use it)

This section shows how qualified relationships are encoded in provo. We need a diagram to illustrate qualified involvement. We have in the current provo HTML document a diagram about qualified involvement in Section 8 “Overview of

Qualified Involvement”, but we don’t think that such a diagram is great. We need to illustrate the hierarchy of involvements and some of, not necessarily all, the associated object properties. The focus in the diagram will be on the elements of prov-dm that are illustrated in the previous section 3.1.

The diagram can show the following kinds on involvements, and shows some (not necessarily all) the properties that link them together, e.g., entity, activity, agent, qualified. We might have several separate small diagrams to show the reification relationship between any two prov-o classes (such as between an agent and an activity). A big, over complicated diagram might not work.

Involvement, EntityInvolvement, ActicityInvolvement, AgentInvolvement, Derivation, Usage, Generation, Association, Delegation, Revision, entity, activity, agent, qualified.

Example

Turtle + Explanation. It can be the same example used in Section 3.1 with some qualified involvement. Again, we should not strive to cover all kinds of involvement and properties in the example.

3.3 “Common” (or “Additional” or “Convenient”) Classes and Relationships in PROVO

This section presents the rest of classes and properties textually without using a diagram. We may use some examples in English.

The classes and properties covered in this section are:

Note, hasAnnotation, tracedTo, Revision, wasRevisionOf, wasQuotatedFrom, wasSummaryOf, terms related to Collection?

3.4 Extension of PROVO (This section is not mandatory and can be dropped if deemed unnecessary)

This section contains a summary of what is currently in Section 9 “Specializing the PROV Ontology for Domain-specific Provenance Applications” of the HTML document of provo summarized in one or two paragraphs. It also references the best practices document.

4 Cross-reference for PROVO classes and properties

4.1 CORE Terms

4.2 Terms used to encode qualified relationships

4.3 Common, Additional, or Convenient Terms

We divide this section into three parts, following the categorization we introduced in previous sections, and in each section we present the classes and properties that compose that part of the ontology. No need to provide a diagram illustrating the domain and the range of the object properties. Also, no need to provide an example for each class and property. We should be able to present most of classes with an example stated using a sentence or two in English. In other words, we don’t need to provide the turtle for every small example if a

sentence in English is enough. We should reserve the use of turtle only for the classes and properties that we think may be difficult for the user to grasp, e.g., involvement.

A class description contains:

- A textual description
- Its super-class (or sub-class). Sometimes not always. Only the direct ones, no need to go through all the hierarchy.
- Information about the properties that the class in question is used as a domain or range. Sometimes not always
- An example (one or two English sentences).

A property description contains:

- A textual description
- Domain
- Range
- Inverse property: if such a property exists.
- Super-properties: only the direct ones, no need to go through all the hierarchy.

Note that there is no need to reference terms listed in Section 4 from within the table of contents, this makes the table of contents difficult to browse. We think that the reader is likely to prefer to use the links provided in “PROVO in a glance”, as well as links used throughout the document.