

## Part 2: Patterns

### Foreword

These proceedings contain descriptions of patterns accepted at the first Workshop on Ontology Patterns held during the 11th International Semantic Web Conference near Washington DC in October 2009. Besides regular papers we proposed authors to submit ontology patterns. The ontology design patterns portal provides a natural way to describe and share ontology design patterns. The portal reviewing facility provides evaluation means ensuring quality control over the ontology design patterns described on the portal. The patterns accepted at the workshop and presented in these proceedings can thus also be found on the portal.

We distinguish two types of patterns accepted for publication: patterns accepted for discussion during the workshop, and patterns accepted for a poster presentation session also to be held during the workshop. It would for sure have been interesting to discuss all the patterns published in this proceedings as they all deserve attention and questioning. However time constraints made us select the three patterns we considered likely to raise the most lively discussions. We tried to consider for discussion patterns which, by their type (following the ODP typology: <http://ontologydesignpatterns.org/wiki/OPTypes>), and by the kind of problem they try to solve, are representative of the patterns accepted for publication at the workshop.

The submissions can be split in three clearly distinct categories. The first category of patterns is constituted of re-engineering patterns. These patterns propose methods, or algorithms, to transform a structured or semi-structured data model into an ontology. A second category is constituted of evolution and inconsistency resolution patterns. These patterns are particularly useful when a revision of an ontology introduces inconsistency, either in the ontology, or in the knowledge base. Evolution patterns ensure a consistent revision of the ontology, while inconsistency resolution patterns repair an introduced inconsistency. A third category of pattern is constituted of anti-patterns. These patterns actually model bad modeling in ontologies. Anti-patterns are particularly useful for improving the quality of existing ontologies. They can arise because of no usage of a proper design methodology during the ontology construction process. These three categories of patterns are reflected both in poster presentations and in the patterns selected for discussion during the workshop.

Patterns accepted for poster presentation:

- ConceptTerms - Pierre-Yves Vandenbussche and Jean Charlet
- Negative Property Assertion Pattern (NPAs) - Olaf Noppens
- Concept Partition Pattern - Olaf Noppens
- Pattern for Re-engineering a Classification Scheme, Which Follows the Path Enumeration Data Model, to a Taxonomy - Boris Villazon-Terrazas, Mari Carmen Suarez-Figueroa, and Asuncion Gomez-Perez
- Pattern for Re-engineering a Classification Scheme, Which Follows the Adjacency List Data Model, to a Taxonomy - Boris Villazon-Terrazas, Mari Carmen Suarez-Figueroa, and Asuncion Gomez-Perez

Patterns accepted for discussion during the workshop:

- Define Hybrid Class Resolving Disjointness Due to Subsumption - Rim Djedidi and Marie-Aude Afaure
- OnlynessIsLoneliness (OIL) - Oscar Corcho and Catherine Roussey
- Pattern for Re-engineering a Term-based Thesaurus, Which Follows the Record-based Model, to a Lightweight Ontology - Boris Villazon-Terrazas, Mari Carmen Suarez-Figueroa, and Asuncion Gomez-Perez

We would like to thank the authors who both submitted the patterns descriptions and entered patterns on the ODP portal.

We would also like to thank reviewers who take time to understand and discuss the submitted patterns. Judging the quality of a pattern is not an easy task. We therefore tried to focus the evaluation on the clarity of description of the patterns, rather than on their potential usefulness, which will probably be proven together with time and experience of usage.

The patterns chairs,

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