

# Ontology Matching

## OM-2012

Proceedings of the ISWC Workshop

### Introduction

Ontology matching<sup>1</sup> is a key interoperability enabler for the semantic web, as well as a useful tactic in some classical data integration tasks dealing with the semantic heterogeneity problem. It takes the ontologies as input and determines as output an alignment, that is, a set of correspondences between the semantically related entities of those ontologies. These correspondences can be used for various tasks, such as ontology merging, data translation, query answering or navigation on the web of data. Thus, matching ontologies enables the knowledge and data expressed in the matched ontologies to interoperate.

The workshop has three goals:

- To bring together leaders from *academia*, *industry* and *user institutions* to assess how academic advances are addressing real-world requirements. The workshop will strive to improve academic awareness of industrial and final user needs, and therefore direct research towards those needs. Simultaneously, the workshop will serve to inform industry and user representatives about existing research efforts that may meet their requirements. The workshop will also investigate how the ontology matching technology is going to evolve.
- To conduct an extensive and rigorous evaluation of ontology matching approaches through the OAEI (Ontology Alignment Evaluation Initiative) 2012 campaign<sup>2</sup>. The particular focus of this year's OAEI campaign is on real-world specific matching tasks involving, e.g., linked open data and biomedical ontologies. Therefore, the ontology matching evaluation initiative itself will provide a solid ground for discussion of how well the current approaches are meeting business needs.
- To examine similarities and differences from database schema matching, which has received decades of attention but is just beginning to transition to mainstream tools.

The program committee selected 6 submissions for oral presentation and 10 submissions for poster presentation. 21 matching system participated in this year's OAEI campaign.

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<sup>1</sup><http://www.ontologymatching.org/>

<sup>2</sup><http://oei.ontologymatching.org/2012>

The workshop included a panel entitled *What's the user to do? Ontology matching and the real world*, which addressed the following topics:

- What are the tools that are available today? What is their relationships with the mapping algorithms that the researchers are developing?
- What kind of support should ontology mapping user-facing tools provide?
- What is the quality of mappings that domain experts produce?
- Should domain experts be the ones performing ontology matching or are they so bad at it that all the mapping should be automatic anyway?
- How do we factor in the interactive tools into the formal evaluation such as OAEI?
- Are the ontologies mapped in OAEI representative of the ontologies that need to be mapping in the real world, or representative of the ontologies that the tool builders like to map?

with the following panelists:

- Kavitha Srinivas, IBM, USA;
- David Karger, MIT, USA;
- Jacco van Ossenbruggen, VU University Amsterdam, Netherlands;
- Jessica Peterson, Elsevier, USA.

Further information about the Ontology Matching workshop can be found at: <http://om2012.ontologymatching.org/>.

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<sup>3</sup><http://www.taslab.eu>

<sup>4</sup><http://www.openlivinglabs.eu>

<sup>5</sup><http://www.infotn.it>

<sup>6</sup><http://www.seals-project.eu>

<sup>7</sup>[http://www.semanticvalley.org/index\\_eng.htm](http://www.semanticvalley.org/index_eng.htm)

# Organization

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