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International Journal on
Semantic Web and Information Systems (IJSWIS)
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Special Issue on Ontology Matching

THEME DESCRIPTION
An ontology typically provides a vocabulary that describes a domain of interest and a specification of the meaning of terms used in the vocabulary. Depending on the precision of this specification, the notion of ontology encompasses several data/conceptual models, for example, classifications, database schemas, or fully axiomatized theories. Ontologies tend to be put everywhere. They are viewed as the silver bullet for many applications, such as information integration, electronic commerce, semantic web services, social networks, and so on. They, indeed, are a practical means to conceptualize what is expressed in a computer format. However, in open or evolving systems, such as the semantic web, different parties would, in general, adopt different ontologies. Thus, just using ontologies, like just using XML, does not reduce heterogeneity: it raises heterogeneity problems at a higher level.

Ontology matching is a plausible solution to the semantic heterogeneity problem faced by information management systems. Ontology matching finds correspondences between semantically related entities of the input ontologies. These correspondences can be used for various tasks, such as ontology merging, query answering, data translation, etc. Thus, matching ontologies enables the knowledge and data expressed in the matched ontologies to interoperate.

The goal of this special issue is to present recent advances in all the themes related to ontology matching. Topics of interest include, but are not limited to:

THEORIES AND METHODS
- Formal foundations and frameworks;
- Background knowledge in ontology matching;
- Uncertainty in ontology matching;
- Performance of ontology matching techniques;
- Interactive ontology matching;
- Explanations and transparency of ontology matching;
- Social aspects of ontology matching;
- Multilingual ontology matching;
- Partial automated ontology matching;
- Libraries of basic (elementary) automatic matchers;
- Automation of the combination of basic matchers;
- Self-configuration of matching solutions;
- Ontology matching evaluation methodology;
- Large evaluation dataset construction;
- Evaluation quality measures;
- Large-scale case studies.

APPLICATIONS
- Information integration;
- Query answering;
- Web query interfaces integration;
- Peer-to-peer systems;
- Multi-agent systems;
- Web services integration.

TOOLS
- User interfaces;
- Scalability of visualization techniques;
- Customizing technology;
- Systems and Infrastructures.
SUBMISSION GUIDELINES
Submissions to this special issue should follow the Style and Author Guidelines for regular IJSWIS papers available at http://www.idea-group.com/ijswis. Please submit manuscripts through the online system at http://www.ijswis.org with a copy to Pavel Shvaiko at pavel@dit.unitn.it. We recommend that manuscripts do not exceed 35 pages (including figures and references). Potential authors are asked to notify the guest editors of their interest by email (pavel@dit.unitn.it) as soon as they are certain to provide a contribution. Submissions will be reviewed by the program committee of the special issue. Accepted papers will have an opportunity for further revision and an additional round of reviewers’ feedback.

SCHEDULE
Email Interest in Submitting: As soon as the authors are certain to contribute.
Submission Deadline for Papers: 30th June, 2006.
Major/Minor Revisions Due: 30th November 2006.

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ABOUT THE JOURNAL
The International Journal on Semantic Web and Information Systems is an open forum aiming to cultivate the Semantic Web vision within the Information Systems research community. In the common practice of anticipating Semantic Web as a technology driven phenomenon, a scientific insight is provided, which reveals the practical implications and the research challenges of Semantic Web in the context of Information Systems. It goes beyond the traditional research agenda of Information Systems and critical themes are analyzed through a Semantic Web perspective in horizontal and vertical pillars.

More information about the Journal can be found at: