

GUEST EDITORIAL PREFACE

Special Issue on Ontology and Innovation: Part 1

*Zhongyu (Joan) Lu, School of Computing and Engineering, University of Huddersfield,
Huddersfield, UK*

*Ahlam Sawsaa, School of Computing and Engineering, University of Huddersfield,
Huddersfield, UK*

Ontology organises the things that was used to consist of corpus for the real world. Ontology constructs the model of information systems in term of taxonomy in a wide range of subject areas from social science and natural science. Ontology defines a large number of objects for a wide range of applications, such as education, healthcare, medicine, engineering and manufacturing. Ontology is underpinned by the theories of formal language, classification and automata languages, and can be implemented by the natural language process, particularly involving the tools and technologies in artificial intelligence. Ontology made significant contribution to the computational science, especially in information retrieval/extraction and visualisation from the theory to practice. The challenge ahead for ontology is to prove even more useful and effective in an even broader range of application domains. It follows that ontology made this issue special.

Aikaterini et al investigated in tool called Semantic Mashups that is able to aggregate different and heterogeneous data with rich semantic

annotations. They presented their tool, called Books@HPClab, in which they introduce a personalized semantic service for mashing up information from different on-line bookstores.

Teja Ravoori and Chen developed a new algorithm and present experimental results on various sizes of data sets at two different levels: the one using the entire context of documents and the one using existing Meta tags of the documents. The results shows MVSC-HAC excels at both levels for the document clusters.

Koswatte et al developed ontology called TRIZ for manufacturing industry. The theory of inventive problem solving (TRIZ) supports designers of innovative product design by searching a knowledge base. They applied the semantic TRIZ to a product (Smart Fan) as an interim stage toward a metaontology that can manage general products and other concepts. Modeling real-world (Smart Pen and Smart Machine) ontologies is undertaken as an evaluation of the metaontology. This may open up new possibilities to innovative product designs.

Katifori et al present a user study aiming to investigate how the different aspects of ontology modelling affect the performance and effectiveness of users regarding information retrieval tasks that are carried out using visualization methods. The results of the user study are analysed and guidelines for ontology design are offered.

It is our pleasure to introduce these papers to you. We deeply thank the members of Editorial Review Board of the International Journal of Information Retrieval Research for accepting

these four papers to be published as a special issue in this journal. Also, the thanks will extend to the journal publishing team, particularly to Mr. Sam Hoffmeister for his hard work and great effort to enable the papers published.

Zhongyu (Joan) Lu
Editor-in-Chief
Ahlan Sawsaa
Guest Editor
IJIRR