Preface

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Biographical notes: Eric Pardede is an Associate Lecturer at the Department of Computer Science and Computer Engineering, La Trobe University, Australia. Currently, he is completing his PhD at the same institution. He received a Master of Information Technology and a Master of Quality Management from La Trobe University (2002) and University of Wollongong (2000), respectively. He has published a book and several research papers appeared in international journals and conference proceedings. He is an active scholar who has chaired several international conferences and workshops. His current research area is in XML database, data modelling and query optimisation.

The *2nd International Ubiquitous Web Systems and Intelligences Workshop (UWSI)* was held in May 2006 in Glasgow, Scotland. The workshop was co-located with the *2006 International Conference on Computational Science and its Applications*.

From amongst the accepted papers in the workshop, we have invited eight authors to submit their extended versions for a special issue in the *International Journal of Web and Grid Services*. Submitted papers were then reviewed by at least two reviewers and based on the reviews, four papers were accepted in the special issue.

The theme of this special issue is 'Intelligence in Web Services'. The papers discuss the use of agents and other mechanisms, such as context-awareness policy and case-based reasoning, for providing more intelligent web services and their applications. The work presented in these papers is summarised as follows.

In the first paper, Bravo *et al.* propose the use of shared ontology to translate a variety of negotiation primitives during electronic negotiation. The work is motivated by the fact that in electronic negotiation, agents will require to exchange negotiation primitives, which most of the time are very restricted on the type and format. To deploy and integrate multiple heterogeneous negotiation agents in an open and dynamic environments can be a challenging task, since there will be a lack of understanding between agents during the negotiation process. Ontology can be a good solution to facilitate shared understanding between negotiation agents. In this paper, the authors demonstrate the ontology construction and implement a web-based system architecture for executing negotiation processes using the integrated service-oriented technologies. The experimentation shows that the integrated solution improves the continuity of the execution of negotiation processes, reduces misunderstandings and results in more agreements.

In the pervasive environment, it is beneficial to have policies that govern and control entities' behaviours in accessing services, especially services with shared resources. The applicable policies are selected based on the context of users such as location, activity and user's role. In the next paper, Syukur and Loke present the concepts, design and implementation of Mobile Hanging Services (MHS) to accommodate these policies. MHS is an infrastructure used for building, delivering and regulating context-aware mobile services access and execution. The paper illustrates the proposed service through a case study of Mobile Windows Media Player application in a pervasive campus environment.

In the next paper, Fragoso Diaz *et al.* raise the needs of intelligence web services selection given a set of user requirements and a set of available web services. With a large number of available web services, locating one or several web services to meet special requirements of a user can be a resource consuming activity. As a solution, the paper proposes the use of case-based reasoning to represent knowledge structures. The knowledge is embedded in UDDI directories used for searching and selecting web services. The prototype of the system shows significant improvement in the precision of web service search and selection.

In a ubiquitous world, collaboration between networks of users and devices are made through mobile and wireless network. In this environment, the efficient transmission and processing of the information is crucial. Based on this fact, Park *et al.* propose an efficient Message Transport Interface (MTI) between agent framework and event service. From experimentation, the authors show that the reliability of message transmission is guaranteed and the performance is improved in terms of message processing time.

The guest editor would like to thank the editorial board and Inderscience for the editorial opportunity in IJWGS. We also thank all the authors who have contributed to this special issue. We are looking forward to working with you again in the future.