ONTOLOGY-ORIENTED E-GOVERNMENT SERVICE INTEGRATION UTILISING THE SEMANTIC WEB

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A thesis submitted for the degree of
Doctor of Philosophy

July 2011

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Acknowledgements

This thesis is the result of a four years effort to climb the mount improbable of my life. It has given me the possibility to engage in even higher challenges, which there are many ahead. Looking back to my physical journey from my birth land Kurdistan to Australia and from who I was to whom I have become, I realise that I could have never completed it without the help of so many people. This is the time to thank them all!

I would like to express my sincere gratitude to my principal supervisor, Professor Jie Lu, for her continuous encouragement, advice, help and invaluable suggestions. She has been a generous, helpful and kind hearted person. Many thanks also to my co-supervisor, Professor Guangquan Zhang, for his valued suggestions to this study.

I wish to thank my fellow research students in our Decision Systems and e-Service Intelligence (DeSI) and the staff of the Faculty of Engineering and Information Technology, University of Technology, Sydney (UTS) for their various assistance and advice are of great benefit to this study. I appreciate the financial support from both the Faculty of Engineering and Information Technology and the Centre for Quantum Computation and Intelligent Systems (QCIS).

I appreciate the travel support for attending the international conferences which I received from the Faculty of Engineering and Information Technology, the UTS Vice- Chancellor's Conference Fund and QCIS. This thesis received editorial advice from Ms Sue Felix, helping to identify the correct grammar, syntax and presentation problems.

I would like to express my heartfelt appreciation and gratitude to my parents for all their love and support, also my brothers and sisters for their constant encouragement over all these years.

The Last but certainly not the least, I am extremely fortunate that I could share the joy and the pain of the last four years with my dear wife, Baharak. She has been by my side during hard times and comforted me and encouraged me to continue. I am grateful for her love and endless optimism in times when barriers seemed impossible to pass. Shano and Kani this is also for you to remember that no matter how improbable things may look, nothing is impossible.

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Abstract

E-government service integration process has recently become an important research topic in e-government domain since many countries have developed various levels of e-government services. Non-interoperability between government agencies in service delivery implementation and platform posing the technical challenge, and the lack of the formulated modelling framework is the main methodological obstacle on the way of achieving dynamic delivery of integrated e-government services.

This research is a study of the problems associated with the integration and delivery of integrated e-government services, and proposes a novel solution to tackle them. We start with investigating the fundamentals of e-government as a field of research to build a sensible argument for the questions investigated by this research, which lead to the exposure of the methodological as well as technological problems with the mechanics of e-government in the areas of service integration and delivery.

The outcomes of this study in Chapters 3, 4, 5, 6, and 7 respectively 1) suggests the most practically relevant and technically possible evolutionary pathway to e-government transformation, 2) proposes a modified software engineering process to achieve such transformation, 3) develops an innovative framework for modelling the service integration, 4) proposes an ontology as its knowledgebase, and 5) develops an innovative and intelligent software to support the practice of service integration and delivery. These outcomes collectively result in the introduction of a novel, complete and coherent solution for the abovementioned problems.

This research is a cross disciplinary study of software integration engineering frameworks, e-government service delivery platform and semantic web technology, all working to devise the most efficient and robust framework of using semantic web capabilities to enable the delivery of integrated e-government services in an intelligent platform.