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Viewpoints consistency management using belief merging operators

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VIEWPOINTS CONSISTENCY MANAGEMENT USING BELIEF MERGING OPERATORS

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CERTIFICATION

I, Qiuming Lin, declare that this thesis, submitted in fulfilment of the requirements for the award of Master of Information Systems by Research, in the School of Economcs & Information Systems, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other academic institution.

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Table of Contents

Abstract

Handling inconsistent requirement specifications is a critical and difficult issue in requirements engineering. There has been considerable research interest in this topic and many methods have been proposed and implemented in the past. This research aims at developing an approach to viewpoint merging for inconsistent management. The recent literature on belief merging provides several well defined merging operators that can be useful for viewpoints merging. This research has implemented a system for merging viewpoints specified as finite state models, in order to demonstrate that belief merging operators can indeed be the basis for viewpoints merging. We extend the state of the art by providing a technique for incremental viewpoints elicitation, and by addressing the problem of iterative merging in the present of viewpoints.

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