

# Web Services Transaction Coordination

by

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I hereby declare that the work included in this dissertation has not been submitted in part or whole for any other academic qualification at any institution.



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## ***UOM Verified Signature***

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## Abstract

The work carried out during this research covers the transactional aspects of Web Services. A model and protocols that describe Web Services Transactions are defined by OASIS [16] in the Web Services Coordination, Web Services Atomic Transactions and Web Service Business Transactions specifications [7], [8], [9]. An attempt has been taken to design and implement a transaction coordination framework based on these specifications.

The transaction coordination framework discussed here is capable of supporting both Atomic Transactions and Business Activities as defined in respective specifications. The interoperability among the implementations of the aforementioned specifications is a major concern and is guided by the interoperability scenarios [10], [11] defined by OASIS. The transaction coordination framework discussed in this thesis is designed in such a way that it can be implemented in any of the major platforms. The design has been implemented in the .Net environment and it confirms to the interoperability guidelines provided by the OASIS.



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## **Symbols, Notations, Abbreviations and Acronyms**

EAI	- Enterprise Application Integration
WS	- Web Services
SOAP	- Simple Object Access Protocol
WSDL	- Web Services Description Language
WS-TX	- Web Services Transactions
WS-Coor	- Web Services Coordination
WS-AT	- Web Service Atomic Transactions
WS-BA	- Web Service Business Activity
WCF	- Microsoft Windows Communication Foundation
W3C	- World Wide Web Consortium



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