Semantic Web Services Architecture and Information Model

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- [specifications replaced by this standard]
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- [related specifications]
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[Summary of the technical purpose of the document]

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1 Introduction

1.1 What is the Semantic Execution Environment

1.2 Audience

The anticipated audience for this work includes all OASIS Web Service and ebXML TCs, non-OASIS Web Service standards groups, Semantic Web Services research and interest groups, SOA architects and programmers, vendors and users. The work should be of interest to anyone involved with Semantic Web Services and more generally also in Service Oriented Architectures (SOAs).

1.3 Relationships to Other Specifications

All Web Services and Service Oriented Architecture groups are the primary target of this work. It is anticipated that liaisons may be needed for many SOA-related Technical Committees such as the following:

- OASIS SOA Reference Model TC
- OASIS ebSOA TC
- OASIS Web Services Resource Framework (WSRF) TC
- OASIS ebXML Registry TC
- OASIS UDDI TC
- OASIS FWSI TC
- OASIS SOA Adoption Blueprints TC
- OASIS ebXML BP TC
- W3C WS Description Working Group
- W3C WS Choreography Working Group
- W3C Resource Description Framework
- Web Services Modelling Ontology Working Group
- Web Services Modelling Language Working Group
- WS-BPEL
- SWSI
- Meteor-S
- OWL-S

1.4 Terminology

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in this document are to be interpreted as described in **[RFC2119]**.

1.5 Organization of the document

1.6 Normative References

[RFC2119] S. Bradner, *Key words for use in RFCs to Indicate Requirement Levels*, http://www.ietf.org/rfc/rfc2119.txt, IETF RFC 2119, March 1997.

1.7 Non-Normative References

38 # 2 Motivation for SEE

39 ## 2.1 Service Oriented Architectures

40 ## 2.2 Open SOA

41 ## 2.3 Nature of Existing Service Execution Environments

42 Briefly describe existing pros and cons of existing execution environments like BizTalk, WebSphere, Artix
43 etc. Should be a discussion at the conceptual level abstracting the common pro's and cons of these
44 systems.

45 ## 2.4 Benefits of adding Semantics to SOA

46 Then describe how the introduction of semantics can solve problems. Might be in terms of modeling,
47 adaptiveness, runtime data and behaviour interoperability.

48 ## 2.5 Scope and Requirements for SEE

49 Not sure if this is the right place for this but I think it is very important to describe the scope and
50 requirements. These should be based on what is extracted from case-studies.

51 # 3 Architecture Overview

52 ## 3.1 Overview of SEE Infrastructure

53 ## 3.2 A P2P Network for SEE Components

54 ## 3.3 Overview of Single Node

55 ## 3.4 Overview of Single Abstract Component

4 Structural View

4.1 Compulsory Vertical Components

4.1.1 Communication Space/Object Repository

4.1.2 Reasoner

4.1.3 Service Discovery

4.1.4 Process Mediator

4.1.5 Data Mediator

4.1.6 Service Selection

4.1.7 Communication Manager

4.1.8 Choreography

4.1.9 Orchestration

4.1.10 Parser

4.2 Compulsory Horizontal Components

4.2.1 Security

I think this needs to be addressed from the beginning

4.2.2 Reliability

I think this needs to be addressed from the beginning too but might not require an own component?

4.3 Services

4.4 Interface for End Users and Developers

75 # 5 SEE Behavioral View

76 ## 5.1 External Behavior

77 ## 5.2 Execution Semantics

78 # 6 Related Work

79 Put the work of the TC into context with external work e.g. Semantic Web Service Initiative – SWS
80 Architecture, IEEE 1471, GERAM, OMG MD etc.

7 SEE API

Should this be an appendix?

8 Summary

A. Acknowledgements

The following individuals have participated in the creation of this specification and are gratefully acknowledged:

Participants:

Michal Zaremba, DERI
Matthew Moran, DERI

B. Non-Normative Text

C. Revision History

[optional; should not be included in OASIS Standards]

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