



Semantic Execution Environment (SEE)

Execution Semantics

Working Draft 01, 1st December 2005

Document identifier:

SEE-Execution-Semantics-01

Location:

<http://www.oasis-open.org/>

Editor:

John Domingue, The Open University <j.b.domingue@open.ac.uk>

Barry Norton, The Open University <B.J.Norton@open.ac.uk>

Maciej Zaremba, DERI <maciej.zaremba@deri.org>

Contributors:

John Domingue, The Open University <j.b.domingue@open.ac.uk>

Barry Norton, The Open University <B.J.Norton@open.ac.uk>

Maciej Zaremba, DERI <maciej.zaremba@deri.org>

Abstract:

SEE strives to provide guidelines for a Semantic Web Services platform enabling dynamic discovery, mediation and invocation of Semantic Web Services. It is an architecture based on loosely-coupled components following the principles of Service Oriented Architecture where interactions between the components are not by any means preordained but can be specified during the system exploitation.

Status:

This document is updated periodically on no particular schedule. Send comments to the editor.

Committee members should send comments on this specification to the semantic-ex@lists.oasis-open.org list. Others should subscribe to and send comments to the semantic-ex-comment@lists.oasis-open.org list. To subscribe, send an email message to semantic-ex-comment-request@lists.oasis-open.org with the word "subscribe" as the body of the message.

For information on whether any patents have been disclosed that may be essential to implementing this specification, and any offers of patent licensing terms, please refer to the Intellectual Property Rights section of the Semantic Execution Environment TC web page (<http://www.oasis-open.org/committees/semantic-ex/>).

35 **Table of Contents**

36 1 Introduction 3
37 1.1 Terminology..... 3
38 1.2 Document Overview 3
39 2 Methodology 4
40 2.1 Rationale behind using Execution Semantics 4
41 2.2 UML Activity Diagrams 5
42 3 SEE mandatory execution semantics 6
43 3.1 One-way goal execution..... 6
44 3.2 List of Semantic Web Services fulfilling given Goal 6
45 3.3 Semantic Web Service execution with choreography 6
46 3.4 Register communication with SEE 6
47 4 Dynamic execution semantics 7
48 5 References..... 8
49 5.1 Normative 8
50 Appendix A. Acknowledgments 9
51 Appendix B. Revision History 10
52 Appendix C. Notices 11

53

54 **1 Introduction**

55 **1.1 Terminology**

56 The key words *must*, *must not*, *required*, *shall*, *shall not*, *should*, *should not*, *recommended*, *may*,
57 and *optional* in this document are to be interpreted as described in **[RFC2119]**.

58 **1.2 Document Overview**

59 **2 Motivation**

60 **2.1 Rationale behind using Execution Semantics**

61 **3 Proposed Description Formalism**

62 Use of UML activity diagrams and WSML?

63	4 Overall Approach
64	4.1 Capability based service execution
65	4.2 Goal centric Web Service discovery
66	4.3 The invocation of Web Services
67	Emphasize here that execution is with choreography
68	4.4 Register communication with SEE
69	

70 **5 Dynamic execution semantics**

71 Include all components here

72

73 **6 References**

74 **6.1 Normative**

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

77 **Appendix A. Acknowledgments**

78 The following individuals were members of the committee during the development of this
79 specification:

- 80 • ...

81 In addition, the following people made contributions to this specification:

- 82 • ...

83

Appendix B. Revision History

Rev	Date	By Whom	What
wd-00	2005-11-28	Maciej Zaremba	Initial version
wd-00	2005-11-1	John Domingue and Barry Norton	Light edit of initial version

84

85 **Appendix C. Notices**

86 OASIS takes no position regarding the validity or scope of any intellectual property or other rights
87 that might be claimed to pertain to the implementation or use of the technology described in this
88 document or the extent to which any license under such rights might or might not be available;
89 neither does it represent that it has made any effort to identify any such rights. Information on
90 OASIS's procedures with respect to rights in OASIS specifications can be found at the OASIS
91 website. Copies of claims of rights made available for publication and any assurances of licenses
92 to be made available, or the result of an attempt made to obtain a general license or permission
93 for the use of such proprietary rights by implementors or users of this specification, can be
94 obtained from the OASIS Executive Director.

95 OASIS invites any interested party to bring to its attention any copyrights, patents or patent
96 applications, or other proprietary rights which may cover technology that may be required to
97 implement this specification. Please address the information to the OASIS Executive Director.

98 **Copyright © OASIS Open 2005. All Rights Reserved.**

99 This document and translations of it may be copied and furnished to others, and derivative works
100 that comment on or otherwise explain it or assist in its implementation may be prepared, copied,
101 published and distributed, in whole or in part, without restriction of any kind, provided that the
102 above copyright notice and this paragraph are included on all such copies and derivative works.
103 However, this document itself does not be modified in any way, such as by removing the
104 copyright notice or references to OASIS, except as needed for the purpose of developing OASIS
105 specifications, in which case the procedures for copyrights defined in the OASIS Intellectual
106 Property Rights document must be followed, or as required to translate it into languages other
107 than English.

108 The limited permissions granted above are perpetual and will not be revoked by OASIS or its
109 successors or assigns.

110 This document and the information contained herein is provided on an "AS IS" basis and OASIS
111 DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO
112 ANY WARRANTY THAT THE USE OF THE INFORMATION HEREIN WILL NOT INFRINGE
113 ANY RIGHTS OR ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A
114 PARTICULAR PURPOSE.