

ISO/IEC 18384-3:2016-06 (E)

Information technology - Reference Architecture for Service Oriented Architecture (SOA RA) - Part 3: Service Oriented Architecture ontology

Contents	Page
Foreword	vi
Introduction	vii
1 Scope	1
2 Normative references	1
3 Terms, definitions and abbreviated terms	1
3.1 Terms and definitions	1
3.2 Abbreviated terms	1
4 Notations	2
5 Conventions	2
6 Conformance	2
7 SOA Ontology Overview	3
7.1 At a Glance	3
7.2 Intended Use	5
7.3 Applications	5
8 System and Element	5
8.1 Overview	5
8.2 The Element Class	6
8.3 The uses and usedBy Properties	6
8.4 Element -- Organizational Example	7
8.5 The System Class	7
8.6 System -- Examples	8
8.6.1 Organizational Example	8
8.6.2 Service composition Example	8
8.6.3 Car wash Example	8
8.7 The represents and representedBy Properties	9
8.8 The represents and representedBy Examples	10
8.8.1 Organizational Example	10
8.8.2 Car Wash Example	10
9 HumanActor and Task	11
9.1 Overview	11
9.2 The HumanActor Class	11
9.3 HumanActor -- Examples	12
9.3.1 The uses and usedBy Properties Applied to HumanActor	12
9.3.2 The represents and representedBy Properties Applied to HumanActor	12
9.3.3 Organizational Example	12
9.3.4 Car Wash Example	13
9.4 The Task Class	13
9.5 The does and doneBy Properties	13
9.6 Task -- Examples	14
9.6.1 The uses and usedBy Properties Applied to Task	14
9.6.2 The represents and representedBy Properties Applied to Task	14

9.6.3	Organizational Example	14
9.6.4	Car Wash Example	15
10	Service, ServiceContract, and ServiceInterface	15
10.1	Overview	15
10.2	The Service Class	16
10.3	The performs and performedBy Properties	16
10.4	Service Consumers and Service Providers	17
10.5	Service -- Examples	17
10.5.1	The uses and usedBy properties Applied to Service	17
10.5.2	The represents and representedBy Properties Applied to Service	18
10.5.3	Exemplifying the Difference Between Doing a Task and Performing a Service	18
10.5.4	Car Wash Example	18
10.6	The ServiceContract Class	18
10.7	The interactionAspect and legalAspect Datatype Properties	19
10.8	The hasContract and isContractFor Properties	20
10.9	The involvesParty and isPartyTo Properties	20
10.10	The Effect Class	21
10.11	The specifies and isSpecifiedBy Properties	22
10.12	ServiceContract -- Examples	22
10.12.1	Service-level Agreements	22
10.12.2	Service Sourcing	23
10.12.3	Car Wash Example	23
10.13	The ServiceInterface Class	23
10.14	The Constraints Datatype Property	24
10.15	The hasInterface and isInterfaceOf Properties	25
10.16	The InformationType Class	25
10.17	The hasInput and isInputAt Properties	26
10.18	The hasOutput and isOutputAt Properties	26
10.19	Examples	26
10.19.1	Interaction Sequencing	26
10.19.2	Car wash example	27
11	CompositionanditsSubclasses	27
11.1	Overview	27
11.2	The Composition Class	27
11.3	The compositionPattern Datatype Property	28
11.3.1	Overview	28
11.3.2	The Orchestration Composition Pattern	29
11.3.3	The Choreography Composition Pattern	29
11.3.4	The Collaboration Composition Pattern	29
11.4	The orchestrates and orchestratedBy Properties	31
11.5	The ServiceComposition Class	32
11.6	The Process Class	32
11.7	Service Composition and Process Examples	33
11.7.1	Simple Service Composition Example	33
11.7.2	Process Example	33
11.7.3	Process and Service Composition Example	34
11.7.4	Car Wash Example	34
12	Policy	34
12.1	Overview	34
12.2	The Policy Class	34
12.3	The appliesTo and isSubjectTo Properties	35
12.4	The setsPolicy and isSetBy Properties	35
12.5	Examples	36
12.5.1	Car Wash Example	36
13	Event	36
13.1	Overview	36
13.2	The Event Class	36

13.3	The generates and generatedBy Properties	37
13.4	The respondsTo and respondedToBy Properties	37
Annex A (informative) Complete Car Wash Example		39
Annex B (informative) Internet Purchase Example		44
Annex C (normative) TheOWLDefinitionoftheSOAOntology		46
Annex D (informative) Class Relationship Matrix		55
Annex E (informative) Terms Mapping Between the SOA RA Parts		59
Bibliography		74