



# 1 Web Services ReliableMessaging Policy 2 Assertion (WS-RM Policy)

3 Committee Draft 04, August 11, 2006

## 4 Document identifier:

5 wsrmp-1.1-spec-cd-04

## 6 Location:

7 <http://docs.oasis-open.org/ws-rx/wsrmp/200608/wsrmp-1.1-spec-cd-04.pdf>

## 8 Editors:

9 Doug Davis, IBM <[dug@us.ibm.com](mailto:dug@us.ibm.com)>

10 Anish Karmarkar, Oracle <[Anish.Karmarkar@oracle.com](mailto:Anish.Karmarkar@oracle.com)>

11 Gilbert Pilz, BEA <[gpilz@bea.com](mailto:gpilz@bea.com)>

12 Ümit Yalçinalp, SAP <[umit.yalcinalp@sap.com](mailto:umit.yalcinalp@sap.com)>

## 13 Contributors:

14 See the Acknowledgments (Appendix A).

## 15 Abstract:

16 This specification describes a domain-specific policy assertion for WS-ReliableMessaging [WS-  
17 RM] that that can be specified within a policy alternative as defined in WS-Policy Framework [WS-  
18 Policy].

19 By using the XML [XML], SOAP [SOAP 1.1], [SOAP 1.2] and WSDL [WSDL 1.1] extensibility  
20 models, the WS\* specifications are designed to be composed with each other to provide a rich  
21 Web services environment. This by itself does not provide a negotiation solution for Web services.  
22 This is a building block that is used in conjunction with other Web service and application-specific  
23 protocols to accommodate a wide variety of policy exchange models.

## 24 Status:

25 This document was last revised or approved by the WS-RX on the above date. The level of  
26 approval is also listed above. Check the current location noted above for possible later revisions  
27 of this document. This document is updated periodically on no particular schedule. Technical  
28 Committee members should send comments on this specification to the Technical Committee's  
29 email list. Others should send comments to the Technical Committee by using the "Send A  
30 Comment" button on the Technical Committee's web page at [http://www.oasis-  
31 open.org/committees/ws-rx](http://www.oasis-open.org/committees/ws-rx). For information on whether any patents have been disclosed that  
32 may be essential to implementing this specification, and any offers of patent licensing terms,  
33 please refer to the Intellectual Property Rights section of the Technical Committee web page  
34 (<http://www.oasis-open.org/committees/ws-rx/ipr.php>). The non-normative errata page for this  
35 specification is located at <http://www.oasis-open.org/committees/ws-rx>.

# 36 **Table of Contents**

37	1	Introduction.....	3
38	1.1	Goals and Requirements.....	3
39	1.1.1	Requirements.....	3
40	1.2	Notational Conventions.....	3
41	1.3	Namespace.....	4
42	1.4	Compliance.....	4
43	2	RM Policy Assertions.....	5
44	2.1	Assertion Model.....	5
45	2.2	Normative Outline.....	5
46	2.3	Assertion Attachment.....	5
47	2.4	Assertion Example.....	6
48	2.5	Sequence Security Policy.....	7
49	2.5.1	Sequence STR Assertion.....	7
50	2.5.2	Sequence Transport Security Assertion.....	8
51	3	Security Considerations.....	9
52	4	References.....	10
53	4.1	Normative.....	10
54	4.2	Non Normative.....	10
55		Appendix A. Acknowledgments.....	12
56		Appendix B. XML Schema.....	13
57		Appendix C. Revision History.....	15
58		Appendix D. Notices.....	18

# 59 1 Introduction

60 This specification defines a domain-specific policy assertion for reliable messaging for use with WS-Policy  
61 and WS-ReliableMessaging.

## 62 1.1 Goals and Requirements

### 63 1.1.1 Requirements

### 64 1.2 Notational Conventions

65 The keywords "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD  
66 NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described  
67 in RFC 2119 [[KEYWORDS](#)].

68 This specification uses the following syntax to define normative outlines for messages:

- 69 • The syntax appears as an XML instance, but values in italics indicate data types instead of values.
- 70 • Characters are appended to elements and attributes to indicate cardinality:
  - 71 ○ "?" (0 or 1)
  - 72 ○ "\*" (0 or more)
  - 73 ○ "+" (1 or more)
- 74 • The character "|" is used to indicate a choice between alternatives.
- 75 • The characters "[" and "]" are used to indicate that contained items are to be treated as a group  
76 with respect to cardinality or choice.
- 77 • An ellipsis (i.e. "...") indicates a point of extensibility that allows other child, or attribute, content.  
78 Additional children and/or attributes MAY be added at the indicated extension points but MUST  
79 NOT contradict the semantics of the parent and/or owner, respectively. If an extension is not  
80 recognized it SHOULD be ignored.
- 81 • XML namespace prefixes (See Section [1.3](#)) are used to indicate the namespace of the element  
82 being defined.

83 Elements and Attributes defined by this specification are referred to in the text of this document using  
84 XPath 1.0 [[XPATH 1.0](#)] expressions. Extensibility points are referred to using an extended version of this  
85 syntax:

- 86 • An element extensibility point is referred to using {any} in place of the element name. This  
87 indicates that any element name can be used, from any namespace other than the wsrn:  
88 namespace.
- 89 • An attribute extensibility point is referred to using @{any} in place of the attribute name. This  
90 indicates that any attribute name can be used, from any namespace other than the wsrn:  
91 namespace.

## 92 1.3 Namespace

93 The XML namespace [XML-ns] URI that MUST be used by implementations of this specification is:

94 <http://docs.oasis-open.org/ws-rx/wsrmp/200608>

95 Dereferencing the above URI will produce the Resource Directory Description Language [RDDL 2.0]  
96 document that describes this namespace.

97 Table 1 lists the XML namespaces that are used in this specification. The choice of any namespace prefix  
98 is arbitrary and not semantically significant.

99 Table 1

Prefix	Namespace	Specification
wsdl	<a href="http://schemas.xmlsoap.org/wsdl/">http://schemas.xmlsoap.org/wsdl/</a>	[WSDL 1.1]
wsp	<a href="http://schemas.xmlsoap.org/ws/2004/09/policy">http://schemas.xmlsoap.org/ws/2004/09/policy</a>	[WS-Policy]
wsrmp	<a href="http://docs.oasis-open.org/ws-rx/wsrmp/200608">http://docs.oasis-open.org/ws-rx/wsrmp/200608</a>	This specification.
wsu	<a href="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd</a>	WS-Security-Utility Schema

## 100 1.4 Compliance

101 An implementation is not compliant with this specification if it fails to satisfy one or more of the MUST or  
102 REQUIRED level requirements defined herein. A SOAP Node MUST NOT use the XML namespace  
103 identifier for this specification (listed in Section 1.3) within SOAP Envelopes unless it is compliant with this  
104 specification.

105 Normative text within this specification takes precedence over normative outlines, which in turn take  
106 precedence over the XML Schema [XML-Schema Part1, XML-Schema Part2] descriptions.

## 2 RM Policy Assertions

WS-Policy Framework and WS-Policy Attachment [WS-PolicyAttachment] collectively define a framework, model and grammar for expressing the requirements, and general characteristics of entities in an XML Web services-based system. To enable an RM Destination and an RM Source to describe their requirements for a given Sequence, this specification defines a single RM policy assertion that leverages the WS-Policy framework.

### 2.1 Assertion Model

The RM policy assertion indicates that the RM Source and RM Destination MUST use WS-ReliableMessaging to ensure reliable delivery of messages. Specifically, the WS-ReliableMessaging protocol determines invariants maintained by the reliable messaging endpoints and the directives used to track and manage the delivery of a Sequence of messages.

### 2.2 Normative Outline

The normative outline for the RM assertion is:

```
<wsrmp:RMAssertion [wsp:Optional="true"]? ... >
...
</wsrmp:RMAssertion>
```

The following describes additional, normative constraints on the outline listed above:

/wsrmp:RMAssertion

A policy assertion that specifies that WS-ReliableMessaging protocol MUST be used when sending messages.

/wsrmp:RMAssertion/@wsp:Optional="true"

Per WS-Policy, this is compact notation for two policy alternatives, one with and one without the assertion. The intuition is that the behavior indicated by the assertion is optional, or in this case, that WS-ReliableMessaging MAY be used.

/wsrmp:RMAssertion/{any}

This is an extensibility mechanism to allow different (extensible) types of information, based on a schema, to be passed.

/wsrmp:RMAssertion/@{any}

This is an extensibility mechanism to allow different (extensible) types of information, based on a schema, to be passed.

### 2.3 Assertion Attachment

The RM policy assertion is allowed to have the following Policy Subjects [WS-PolicyAttachment]:

- Endpoint Policy Subject
- Message Policy Subject

WS-PolicyAttachment defines a set of WSDL/1.1 policy attachment points for each of the above Policy Subjects. Since an RM policy assertion specifies a concrete behavior, it MUST NOT be attached to the abstract WSDL policy attachment points.

144 The following is the list of WSDL/1.1 elements whose scope contains the Policy Subjects allowed for an  
145 RM policy assertion but which MUST NOT have RM policy assertions attached:

- 146 • wsdl:message
- 147 • wsdl:portType/wsdl:operation/wsdl:input
- 148 • wsdl:portType/wsdl:operation/wsdl:output
- 149 • wsdl:portType/wsdl:operation/wsdl:fault
- 150 • wsdl:portType

151 The following is the list of WSDL/1.1 elements whose scope contains the Policy Subjects allowed for an  
152 RM policy assertion and which MAY have RM policy assertions attached:

- 153 • wsdl:port
- 154 • wsdl:binding
- 155 • wsdl:binding/wsdl:operation/wsdl:input
- 156 • wsdl:binding/wsdl:operation/wsdl:output
- 157 • wsdl:binding/wsdl:operation/wsdl:fault

158 If an RM policy assertion is attached to any of:

- 159 • wsdl:binding/wsdl:operation/wsdl:input
- 160 • wsdl:binding/wsdl:operation/wsdl:output
- 161 • wsdl:binding/wsdl:operation/wsdl:fault

162 then an RM policy assertion, specifying `wsp:Optional=true` MUST be attached to the corresponding  
163 `wsdl:binding` or `wsdl:port`, indicating that the endpoint supports WS-RM. Any messages, regardless of  
164 whether they have an attached Message Policy Subject RM policy assertion, MAY be sent to that endpoint  
165 using WS-RM. Additionally, the receiving endpoint MUST NOT reject any message belonging to a  
166 Sequence, simply because there was no Message Policy Subject RM policy assertion attached to that  
167 message. There might be certain RM implementations that are incapable of applying RM QoS semantics  
168 on a per-message basis. In order to ensure the broadest interoperability, when an endpoint decorates its  
169 WSDL with RM policy assertions using Message Policy Subject, it MUST also be prepared to accept that  
170 all messages sent to that endpoint might be sent within the context of an RM Sequence, regardless of  
171 whether the corresponding `wsdl:input`, `wsdl:output` or `wsdl:fault` had an attached RM policy assertion.

172 Rather than turn away messages that were unnecessarily sent with RM semantics, the receiving endpoint  
173 described by the WSDL MUST accept these messages.

174 By attaching an RM policy assertion that specifies `wsp:Optional="true"` to the corresponding endpoint that  
175 has attached RM policy assertions at the Message Policy Subject level, the endpoint is describing the  
176 above constraint in policy.

177 In the case where an optional RM Assertion applies to an output message, there is no requirement on the  
178 client to support an RM Destination implementation

## 179 **2.4 Assertion Example**

180 Table 2 lists an example use of the RM policy assertion.

181 Table 2: Example policy with RM policy assertion

```

182 (01) <wsdl:definitions
183 (02)     targetNamespace="example.com"
184 (03)     xmlns:tns="example.com"
185 (04)     xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
186 (05)     xmlns:wsp="http://schemas.xmlsoap.org/ws/2004/09/policy"
187 (06)     xmlns:wsrmp="http://docs.oasis-open.org/ws-rx/wsrmp/200608"
188 (07)     xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-
189 wss-wssecurity-utility-1.0.xsd">
190 (08)
191 (09) <wsp:UsingPolicy wsdl:required="true" />
192 (10)
193 (11) <wsp:Policy wsu:Id="MyPolicy" >
194 (12)   <wsrmp:RMAssertion/>
195 (13)   <!-- omitted assertions -->
196 (14) </wsp:Policy>
197 (15)
198 (16) <!-- omitted elements -->
199 (17)
200 (18) <wsdl:binding name="MyBinding" type="tns:MyPortType" >
201 (19)   <wsp:PolicyReference URI="#MyPolicy" />
202 (20)   <!-- omitted elements -->
203 (21) </wsdl:binding>
204 (22)
205 (23) </wsdl:definitions>

```

206 Line (09) in Table 2 indicates that WS-Policy is in use as a required extension.

207 Lines (11-14) are a policy expression that includes a RM policy assertion (Line 12) to indicate that WS-  
208 ReliableMessaging must be used.

209 Lines (18-21) are a WSDL binding. Line (19) indicates that the policy in Lines (11-14) applies to this  
210 binding, specifically indicating that WS-ReliableMessaging must be used over all the messages in the  
211 binding.

## 212 2.5 Sequence Security Policy

213 WS-SecurityPolicy [SecurityPolicy] provides a framework and grammar for expressing the security  
214 requirements and characteristics of entities in a XML web services based system. The following  
215 assertions MAY be used in conjunction with WS-SecurityPolicy to express additional security  
216 requirements particular to RM Sequences.

### 217 2.5.1 Sequence STR Assertion

218 This assertion defines the requirement that an RM Sequence MUST be bound to an explicit token that is  
219 referenced from a `wsse:SecurityTokenReference` in the `CreateSequence` message.

220 This assertion MUST apply to [Endpoint Policy Subject]. This assertion MUST NOT be used for an  
221 endpoint that does not also use the RM assertion.

222 The normative outline for the Sequence STR Assertion is:

```
223 <wsrmp:SequenceSTR [wsp:Optional="true"]? ... />
```

```
224 /wsrmp:SequenceSTR
```

225 A policy assertion that specifies security requirements which MUST be used with an RM Sequence that  
226 are particular to WS-RM and beyond what can be expressed in WS-SecurityPolicy.

```
227 /wsrm:SequenceSTR /@wsp:Optional="true"
```

228 Per WS-Policy, this is compact notation for two policy alternatives, one with and one without the assertion.  
229 The intuition is that the behavior indicated by the assertion is optional, or in this case, that the RM  
230 Sequence binding to a specific token MAY be used.

## 231 **2.5.2 Sequence Transport Security Assertion**

232 This assertion defines the requirement that an RM Sequence MUST be bound to the session(s) of the  
233 underlying transport-level security protocol (e.g. SSL/TLS) used to carry the `CreateSequence` and  
234 `CreateSequenceResponse` messages.

235 This assertion MUST apply to [Endpoint Policy Subject]. This assertion is effectively meaningless unless it  
236 occurs in conjunction with the `RMAssertion` and a `sp:TransportBinding` assertion that requires the  
237 use of some transport-level security mechanism (e.g. `sp:HttpsToken`).

238 The normative outline for the Sequence Transport Security Assertion is:

```
239 <wsrmp:SequenceTransportSecurity [wsp:Optional="true"]? ... />
```

```
240 /wsrmp:SequenceTransportSecurity
```

241 A policy assertion that specifies that any Sequences targeted to the indicated endpoint MUST be bound to  
242 the underlying session(s) of the transport-level security used to carry messages related to the Sequence.

```
243 /wsrmp:SequenceTransportSecurity /@wsp:Optional="true"
```

244 Per WS-Policy, this is compact notation for two policy alternatives, one with and one without the assertion.  
245 The meaning is that the behavior indicated by the assertion is optional, or in this case, that the binding of  
246 RM Sequences to transport-level security sessions MAY be used.



## 247 **3 Security Considerations**

248 It is strongly RECOMMENDED that policies and assertions be signed to prevent tampering.

249 It is RECOMMENDED that policies SHOULD NOT be accepted unless they are signed and have an  
250 associated security token to specify the signer has proper claims for the given policy. That is, a relying  
251 party shouldn't rely on a policy unless the policy is signed and presented with sufficient claims to pass the  
252 relying parties acceptance criteria.

253 It should be noted that the mechanisms described in this document could be secured as part of a SOAP  
254 message using WS-Security [[WS-Security](#)] or embedded within other objects using object-specific  
255 security mechanisms.

## 256 **4 References**

### 257 **4.1 Normative**

#### 258 **[KEYWORDS]**

259 S. Bradner, "[Key words for use in RFCs to Indicate Requirement Levels](#)," RFC 2119, Harvard University,  
260 March 1997.

#### 261 **[SOAP 1.1]**

262 W3C Note, "[SOAP: Simple Object Access Protocol 1.1](#)" 08 May 2000.

#### 263 **[SOAP 1.2]**

264 W3C Recommendation, "[SOAP Version 1.2 Part 1: Messaging Framework](#)" June 2003.

#### 265 **[URI]**

266 T. Berners-Lee, R. Fielding, L. Masinter, "[Uniform Resource Identifiers \(URI\): Generic Syntax](#)," RFC 3986,  
267 MIT/LCS, U.C. Irvine, Xerox Corporation, January 2005.

#### 268 **[WS-RM]**

269 OASIS WS-RX Technical Committee Draft, "[Web Services Reliable Messaging \(WS-ReliableMessaging\)](#),"  
270 September 2005.

#### 271 **[WS-Policy]**

272 W3C Member Submission, "[Web Services Policy Framework \(WS-Policy\)](#)," April 2006.

#### 273 **[WS-PolicyAttachment]**

274 W3C Member Submission, "[Web Services Policy Attachment \(WS-PolicyAttachment\)](#)," April 2006.

#### 275 **[WSDL 1.1]**

276 W3C Note, "[Web Services Description Language \(WSDL 1.1\)](#)," 15 March 2001.

#### 277 **[XML]**

278 W3C Recommendation, "[Extensible Markup Language \(XML\) 1.0 \(Second Edition\)](#)", October 2000.

#### 279 **[XML-ns]**

280 W3C Recommendation, "[Namespaces in XML](#)," 14 January 1999.

#### 281 **[XML-Schema Part1]**

282 W3C Recommendation, "[XML Schema Part 1: Structures](#)," 2 May 2001.

#### 283 **[XML-Schema Part2]**

284 W3C Recommendation, "[XML Schema Part 2: Datatypes](#)," 2 May 2001.

#### 285 **[XPath 1.0]**

286 W3C Recommendation, "[XML Path Language \(XPath\) Version 1.0](#)," 16 November 1999.

### 287 **4.2 Non Normative**

#### 288 **[RDDL 2.0]**

- 289 Johnathan Borden, Tim Bray, eds. "[Resource Directory Description Language \(RDDL\) 2.0](#)," January 2004
- 290 **[SecurityPolicy]**
- 291 G. Della-Libra, et. al. "[Web Services Security Policy Language \(WS-SecurityPolicy\)](#)", July 2005
- 292 **[WS-Security]**
- 293 Anthony Nadalin, Chris Kaler, Phillip Hallam-Baker, Ronald Monzillo, eds. "[OASIS Web Services Security: SOAP Message Security 1.0 \(WS-Security 2004\)](#)", OASIS Standard 200401, March 2004.
- 294 [SOAP Message Security 1.0 \(WS-Security 2004\)](#)", OASIS Standard 200401, March 2004.
- 295 Anthony Nadalin, Chris Kaler, Phillip Hallam-Baker, Ronald Monzillo, eds. "[OASIS Web Services Security: SOAP Message Security 1.1 \(WS-Security 2004\)](#)", OASIS Standard 200602, February 2006.
- 296 [SOAP Message Security 1.1 \(WS-Security 2004\)](#)", OASIS Standard 200602, February 2006.

## 297 **Appendix A. Acknowledgments**

298 This document is based on initial contribution to OASIS WS-RX Technical Committee by the following  
299 authors:

300 Stefan Batres-Editor(Microsoft), Ruslan Bilorusets(BEA), Don Box(Microsoft), Luis Felipe  
301 Cabrera(Microsoft), Derek Collison(TIBCO Software), Donald Ferguson(IBM), Christopher Ferris-  
302 Editor(IBM), Tom Freund(IBM), Mary Ann Hondo(IBM), John Ibbotson(IBM), Lei Jin(BEA), Chris  
303 Kaler(Microsoft), David Langworthy(Microsoft), Amelia Lewis(TIBCO Software), Rodney  
304 Limpsecht(Microsoft), Steve Lucco(Microsoft), Don Mullen(TIBCO Software), Anthony Nadalin  
305 (IBM), Mark Nottingham(BEA), David Orchard(BEA), Shivajee Samdarshi(TIBCO Software),  
306 John Shewchuk(Microsoft), Tony Storey(IBM).

307 The following individuals have provided invaluable input into the initial contribution:

308 Keith Ballinger(Microsoft), Allen Brown(Microsoft), Michael Conner(IBM), Francisco Curbera  
309 (IBM), Steve Graham(IBM), Pat Helland(Microsoft), Rick Hill(Microsoft), Scott Hinkelman(IBM),  
310 Tim Holloway(IBM), Efim Hudis(Microsoft), Johannes Klein(Microsoft), Frank Leymann(IBM),  
311 Martin Nally(IBM), Peter Niblett(IBM), Jeffrey Schlimmer(Microsoft), Chris Sharp(IBM), James  
312 Snell(IBM), Keith Stobie(Microsoft), Satish Thatte(Microsoft), Stephen Todd(IBM), Sanjiva  
313 Weerawarana(IBM), Roger Wolter(Microsoft).

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

315 Abbie Barbir(Nortel), Charlton Barreto(Adobe), Stefan Batres(Microsoft), Hamid Ben Malek  
316 (Fujitsu), Andreas Bjarlestam(Ericsson), Toufic Boubez(Layer 7), Doug Bunting(Sun), Lloyd Burch  
317 (Novell), Steve Carter(Novell), Martin Chapman(Oracle), Dave Chappell(Sonic), Paul Cotton  
318 (Microsoft), Glen Daniels(Sonic), Doug Davis(IBM), Blake Dournaee(Intel), Jacques Durand  
319 (Fujitsu), Colleen Evans(Microsoft), Christopher Ferris(IBM), Paul Fremantle(WSO2), Robert  
320 Freund(Hitachi), Peter Furniss(Erebor), Marc Goodner(Microsoft), Alastair Green(Choreology),  
321 Mike Grogan(Sun), Ondrej Hrebicek(Microsoft), Kazunori Iwasa(Fujitsu), Chamikara Jayalath  
322 (WSO2), Lei Jin(BEA), Ian Jones(BTplc), Anish Karmarkar(Oracle), Paul Knight(Nortel), Dan  
323 Leshchiner(Tibco), Mark Little(JBoss), Lily Liu(webMethods), Matt Lovett(IBM), Ashok Malhotra  
324 (Oracle), Jonathan Marsh(Microsoft), Daniel Millwood(IBM), Jeff Mischkinsky(Oracle), Nilo Mitra  
325 (Ericsson), Peter Niblett(IBM), Duane Nickull(Adobe), Eisaku Nishiyama(Hitachi), Dave Orchard  
326 (BEA), Chouthri Palanisamy(NEC), Sanjay Patil(SAP), Gilbert Pilz(BEA), Martin Raeppe(SAP),  
327 Eric Rajkovic(Oracle), Stefan Rossmanith(SAP), Tom Rutt(Fujitsu), Rich Salz(IBM), Shivajee  
328 Samdarshi(Tibco), Vladimir Videlov(SAP), Claus von Riegen(SAP), Pete Wenzel(Sun), Steve  
329 Winkler(SAP), Ümit Yalçınalp(SAP), Nobuyuki Yamamoto(Hitachi).

## 330 Appendix B. XML Schema

331 A normative copy of the XML Schema [XML-Schema Part1, XML-Schema Part2] description for this  
332 specification may be retrieved from the following address:

333 <http://docs.oasis-open.org/ws-rx/wsrmp/200608/wsrmp-1.1-schema-200608.xsd>

334 The following copy is provided for reference.

```
335 <?xml version="1.0" encoding="UTF-8"?>
336 <!--
337 OASIS takes no position regarding the validity or scope of any
338 intellectual property or other rights that might be claimed to pertain to
339 the implementation or use of the technology described in this document or
340 the extent to which any license under such rights might or might not be
341 available; neither does it represent that it has made any effort to
342 identify any such rights. Information on OASIS's procedures with respect
343 to rights in OASIS specifications can be found at the OASIS website.
344 Copies of claims of rights made available for publication and any
345 assurances of licenses to be made available, or the result of an attempt
346 made to obtain a general license or permission for the use of such
347 proprietary rights by implementors or users of this specification, can be
348 obtained from the OASIS Executive Director.
349 OASIS invites any interested party to bring to its attention any
350 copyrights, patents or patent applications, or other proprietary rights
351 which may cover technology that may be required to implement this
352 specification. Please address the information to the OASIS Executive
353 Director.
354 Copyright (c) OASIS Open 2002-2006. All Rights Reserved.
355 This document and translations of it may be copied and furnished to
356 others, and derivative works that comment on or otherwise explain it or
357 assist in its implementation may be prepared, copied, published and
358 distributed, in whole or in part, without restriction of any kind,
359 provided that the above copyright notice and this paragraph are included
360 on all such copies and derivative works. However, this document itself
361 does not be modified in any way, such as by removing the copyright notice
362 or references to OASIS, except as needed for the purpose of developing
363 OASIS specifications, in which case the procedures for copyrights defined
364 in the OASIS Intellectual Property Rights document must be followed, or
365 as required to translate it into languages other than English.
366 The limited permissions granted above are perpetual and will not be
367 revoked by OASIS or its successors or assigns.
368 This document and the information contained herein is provided on an "AS
369 IS" basis and OASIS DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED,
370 INCLUDING BUT NOT LIMITED TO ANY WARRANTY THAT THE USE OF THE INFORMATION
371 HEREIN WILL NOT INFRINGE ANY RIGHTS OR ANY IMPLIED WARRANTIES OF
372 MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.
373 -->
374 <xs:schema xmlns:tns="http://docs.oasis-open.org/ws-rx/wsrmp/200608"
375 xmlns:xs="http://www.w3.org/2001/XMLSchema"
376 targetNamespace="http://docs.oasis-open.org/ws-rx/wsrmp/200608"
377 elementFormDefault="qualified" attributeFormDefault="unqualified">
378   <xs:element name="RMAssertion">
379     <xs:complexType>
380       <xs:sequence>
381         <xs:any namespace="##other" processContents="lax" minOccurs="0"
382 maxOccurs
383 </xs:sequence>
384       <xs:anyAttribute namespace="##any" processContents="lax"/>
385     </xs:complexType>
```

```
386 </xs:element>
387 <xs:element name="SequenceSTR">
388   <xs:complexType>
389     <xs:sequence/>
390     <xs:anyAttribute namespace="##any" processContents="lax"/>
391   </xs:complexType>
392 </xs:element>
393 <xs:element name="SequenceTransportSecurity">
394   <xs:complexType>
395     <xs:sequence/>
396     <xs:anyAttribute namespace="##any" processContents="lax"/>
397   </xs:complexType>
398 </xs:element>
399 </xs:schema>
```

## 400 Appendix C. Revision History

Revision	Date	By Whom	What
wd-01.doc	2005-07-06	Ümit Yalçinalp	Initial version created based on submission by the authors.
1.0-wd-01.swx	2005-09-01	Ümit Yalçinalp	Reformatted using Open Office
1.1-wd-01.swx	2005-09-18	Ümit Yalçinalp	Applied resolution i001 Applied resolution i015/16 (doc identifier) Partial application of i017, final yyyy/mm required, changed doc URI to TBD pending yyyy/mm Deleted original copyright section
1.1-wd-01.swx	2005-10-02	Anish Karmarkar	Applied resolution of i013 + minor editorial changes + fixed resolution of i017
1.1-wd-01.swx	2005-10-04	Ümit Yalçinalp	Applied actual value for yyyy/mm. Added resolution of i009
1.1-wd-01.swx	2005-10-06	Ümit Yalçinalp	Editorial fixes suggested by Anish Updated wd draft date to October 6th
1.1-wd-01.swx	2005-10-19	Ümit Yalçinalp	Editorial change to remove .swx suffix from doc id
wd-02	2005-11-03	Gilbert Pilz	Start wd-02 by changing title page from cd-01.
wd-02	2005-11-30	Gilbert Pilz	i072 – editorial nits
wd-02	2005-11-30	Gilbert Pilz	i074 - Use of [tcShortName] in artifact locations namespaces, etc
wd-02	2005-12-01	Gilbert Pilz	Updated fix to i074 to remove trailing '/' from wsrmp namespace.
wd-02	2005-12-01	Anish Karmarkar	Applied resolution for i022
wd-02	2005-12-01	Anish Karmarkar	Applied resolution for i024
wd-02	2005-12-01	Anish Karmarkar	Applied resolution for i054
wd-02	2005-12-01	Anish Karmarkar	Applied resolution of i073
wd-2	2005-12-05	Anish Karmarkar	Applied resolution of i055
wd-2	2005-12-05	Ümit Yalçinalp	Changed fixed date in footer to current date
wd-3	2005-12-21	Doug Davis	Added i050
wd-3	2005-12-23	Ümit Yalçinalp	I057 resolution

Revision	Date	By Whom	What
wd-3	2005-12-23	Ümit Yalçınalp	Changed the ref to WS-RM to the WS-RX committee draft instead of original version Fixed Dug's email address
wd-3	2005-12-23	Ümit Yalçınalp	I060 resolution
wd-03	2005-12-27	Gilbert Pilz	Remove schema example and put it in its own artifact (wsrmp-1.1-schema-200510.xsd). Convert source file to OpenDocument format. Make line numbers all the same style.
wd-03	2005-12-28	Anish Karmarkar	Included a section link to c:\temp\wsrmp-1.1-schema-200510.xsd
wd-03	2006-01-04	Gilbert Pilz	Fixed formatting of included section.
wd-03	2006-01-05	Gilbert Pilz	Fix closing tag of normative outline for RMAssertion.
wd-04	2006-11-11	Doug Davis	Minor tweaks/typos
wd-05	2006-01-23	Gilbert Pilz	Start wd-05 by accepting all changes from wd-04
wd-06	2006-01-23	Doug Davis	Minor typos found by Marc
wd-06	2006-02-14	Doug Davis	Issue 075 resolution
wd-06	2006-02-14	Doug Davis	Issues 086, 087 resolutions
wd-06	2006-02-15	Gilbert Pilz	Issue 088; added link for namespace URI; added text describing link; added non-normative reference for RDDL 2.0
wd-06	2006-02-17	Anish Karmarkar	Removed a sentence in section 2.1 that talked about RM assertion parameters, as there aren't any.
wd-06	2006-02-17	Anish Karmarkar	Change the namespace to 200602.
wd-07	2006-02-22	Doug Davis	Accept all changes to create new WD Minor typo fixed – thanks to Paul Cotton
wd-07	2006-02-23	Doug Davis	Added missing namespace table entries - MarcG
wd-07	2006-03-08	Doug Davis	Issue 097 applied
wd-08	2006-04-11	Doug Davis	Issue 021 applied
wd-08	2006-04-24	Gilbert Pilz	Misc cleanups prior to publishing to TC.
wd-09	2006-05-29	Gilbert Pilz	Issue 117 applied
wd-10	2006-06-05	Gilbert Pilz	Accept all changes; bump WD number
wd-10	2006-06-07	Doug Davis	Applied lots of minor edits from Marc Goodner
wd-10	2006-06-13	Doug Davis	Applied a couple of minor edits



<b>Revision</b>	<b>Date</b>	<b>By Whom</b>	<b>What</b>
wd-10	2006-07-21	Doug Davis	Issues 122-124 applied
wd-10	2006-07-27	Doug Davis	Copied list of TC members from RM spec (i134)
wd-10	2006-08-04	Doug Davis	Updated old namespaces – found by PaulC
wd-10	2006-08-04	Doug Davis	Verify all [refs]
wd-10	2006-08-04	Doug Davis	Change namespace to 2006/08
cd-04	2006-08-11	Doug Davis	Issue 158 applied
cd-04	2006-08-16	Gilbert Pilz	Fix date at 08/11/2006; formatting changes for better HTML rendering.

## 401 **Appendix D. Notices**

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

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

413 Copyright (C) OASIS Open (2006). All Rights Reserved.

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

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

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