



1 Web Services ReliableMessaging Policy 2 Assertion (WS-RM Policy) 1.1

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27 **Related Work:**

28 This specification replaces or supercedes:

- 29 ● WS-ReliableMessaging Policy v1.0

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31 <http://docs.oasis-open.org/ws-rx/wsrmp/200702>

32 **Abstract:**

33 This specification describes a domain-specific policy assertion for WS-ReliableMessaging [[WS-](#)
34 [RM](#)] that that can be specified within a policy alternative as defined in WS-Policy Framework [[WS-](#)
35 [Policy](#)].

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

41 **Status:**

42 This document was last revised or approved by the WS-RX on the above date. The level of
43 approval is also listed above. Check the "Latest Version" or "Latest Approved Version" location
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118 **1 Introduction**

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

121 **1.1 Goals and Requirements**

122 **1.1.1 Requirements**

123 **1.1 Terminology**

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

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

- 128 • The syntax appears as an XML instance, but values in italics indicate data types instead of values.
- 129 • Characters are appended to elements and attributes to indicate cardinality:
 - 130 ○ "?" (0 or 1)
 - 131 ○ "*" (0 or more)
 - 132 ○ "+" (1 or more)
- 133 • The character "|" is used to indicate a choice between alternatives.
- 134 • The characters "[" and "]" are used to indicate that contained items are to be treated as a group
135 with respect to cardinality or choice.
- 136 • An ellipsis (i.e. "...") indicates a point of extensibility that allows other child, or attribute, content.
137 Additional children and/or attributes MAY be added at the indicated extension points but MUST
138 NOT contradict the semantics of the parent and/or owner, respectively. If an extension is not
139 recognized it SHOULD be ignored.
- 140 • XML namespace prefixes (See Section [1.3](#)) are used to indicate the namespace of the element
141 being defined.

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

- 145 • An element extensibility point is referred to using {any} in place of the element name. This
146 indicates that any element name can be used, from any namespace other than the wsrn:
147 namespace.
- 148 • An attribute extensibility point is referred to using @{any} in place of the attribute name. This
149 indicates that any attribute name can be used, from any namespace other than the wsrn:
150 namespace.

151 **1.2 Namespace**

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

153 <http://docs.oasis-open.org/ws-rx/wsrmp/200702>

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

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

158 Table 1

Prefix	Namespace	Specification
wSDL	http://schemas.xmlsoap.org/wSDL/	[WSDL 1.1]
wsp	http://schemas.xmlsoap.org/ws/2004/09/policy	[WS-Policy]
wsrmp	http://docs.oasis-open.org/ws-rx/wsrmp/200702	This specification.
wsu	http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd	WS-Security-Utility Schema

159 **1.3 Compliance**

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

164 Normative text within this specification takes precedence over normative outlines, which in turn take
165 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"]? ... >
  <wsp:Policy>
    [ <wsrmp:SequenceSTR/> |
      <wsrmp:SequenceTransportSecurity/> ] ?
    <wsrmp:DeliveryAssurance>
      <wsp:Policy>
        [ <wsrmp:ExactlyOnce/> |
          <wsrmp:AtLeastOnce/> |
          <wsrmp:AtMostOnce/> ]
        <wsrmp:InOrder/> ?
      </wsp:Policy>
    </wsrmp:DeliveryAssurance> ?
  </wsp:Policy>
  ...
</wsrmp:RMAssertion>
```

The following describes the content model of the RMAssertion element.

/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/wsp:Policy

This required element allows for the inclusion of nested policy assertions.

/wsrmp:RMAssertion/wsp:Policy/wsrmp:SequenceSTR

When present, this assertion defines the requirement that an RM Sequence MUST be bound to an explicit token that is referenced from a wsse:SecurityTokenReference in the CreateSequence message. See section 2.5.1.

208 /wsrmp:RMAssertion/wsp:Policy/wsrmp:SequenceTransportSecurity
 209 When present, this assertion defines the requirement that an RM Sequence MUST be bound to
 210 the session(s) of the underlying transport-level protocol used to carry the `CreateSequence` and
 211 `CreateSequenceResponse` message. When present, this assertion MUST be used in
 212 conjunction with the `sp:TransportBinding` assertion, see section 2.5.2.

213 /wsrmp:RMAssertion/wsp:Policy/wsrmp:DeliveryAssurance
 214 This expression, which may be omitted, describes the message delivery quality of service
 215 between the RM and application layer. When used by an RM Destination it expresses the delivery
 216 assurance in effect between the RM Destination and its corresponding application destination,
 217 and it also indicates requirements on any RM Source that transmits messages to this RM
 218 destination. Conversely when used by an RM Source it expresses the delivery assurance in effect
 219 between the RM Source and its corresponding application source, as well as indicating
 220 requirements on any RM Destination that receives messages from this RM Source. In either case
 221 the delivery assurance does not affect the messages transmitted on the wire. Absence of this
 222 expression from a `wsrmp:RMAssertion` policy assertion simply means that the endpoint has
 223 chosen not to advertise its delivery assurance characteristics.
 224 Note that when there are multiple policy alternatives of the RM Assertion, the Delivery Assurance
 225 on each MUST NOT conflict.

226 /wsrmp:RMAssertion/wsp:Policy/wsrmp:DeliveryAssurance/wsp:Policy
 227 This required element identifies additional requirements for the use of the
 228 `wsrmp:DeliveryAssurance`.

229 /wsrmp:RMAssertion/wsp:Policy/wsrmp:DeliveryAssurance/wsp:Policy/wsrmp:ExactlyOnce
 230 This expresses the ExactlyOnce Delivery Assurance defined in [14].

231 /wsrmp:RMAssertion/wsp:Policy/wsrmp:DeliveryAssurance/wsp:Policy/wsrmp:AtLeastOnce
 232 This expresses the AtLeastOnce Delivery Assurance defined in [WS-RM].

233 /wsrmp:RMAssertion/wsp:Policy/wsrmp:DeliveryAssurance/wsp:Policy/wsrmp:AtMostOnce
 234 This expresses the AtMostOnce Delivery Assurance defined in [WS-RM].

235 /wsrmp:RMAssertion/wsp:Policy/wsrmp:DeliveryAssurance/wsp:Policy/wsrmp:InOrder
 236 This expresses the InOrder Delivery Assurance defined in [WS-RM].

237 /wsrmp:RMAssertion/{any}
 238 This is an extensibility mechanism to allow different (extensible) types of information, based on a
 239 schema, to be passed.

240 /wsrmp:RMAssertion/@{any}
 241 This is an extensibility mechanism to allow different (extensible) types of information, based on a
 242 schema, to be passed.

243 **2.3 Assertion Attachment**

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

- 245 ● Endpoint Policy Subject
- 246 ● Message Policy Subject

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

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

- 252 • wsdl:message
- 253 • wsdl:portType/wsdl:operation/wsdl:input
- 254 • wsdl:portType/wsdl:operation/wsdl:output
- 255 • wsdl:portType/wsdl:operation/wsdl:fault
- 256 • wsdl:portType

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

- 259 • wsdl:port
- 260 • wsdl:binding
- 261 • wsdl:binding/wsdl:operation/wsdl:input
- 262 • wsdl:binding/wsdl:operation/wsdl:output
- 263 • wsdl:binding/wsdl:operation/wsdl:fault

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

- 265 • wsdl:binding/wsdl:operation/wsdl:input
- 266 • wsdl:binding/wsdl:operation/wsdl:output
- 267 • wsdl:binding/wsdl:operation/wsdl:fault

268 then an RM policy assertion, specifying `wsp:Optional=true` MUST be attached to the corresponding
269 `wsdl:binding` or `wsdl:port`, indicating that the endpoint supports WS-RM. Any messages, regardless of
270 whether they have an attached Message Policy Subject RM policy assertion, MAY be sent to that endpoint
271 using WS-RM. Additionally, the receiving endpoint MUST NOT reject any message belonging to a
272 Sequence, simply because there was no Message Policy Subject RM policy assertion attached to that
273 message. There might be certain RM implementations that are incapable of applying RM Quality of
274 Service (QoS) semantics on a per-message basis. In order to ensure the broadest interoperability, when
275 an endpoint decorates its WSDL with RM policy assertions using Message Policy Subject, it MUST also
276 be prepared to accept that all messages sent to that endpoint might be sent within the context of an RM
277 Sequence, regardless of whether the corresponding `wsdl:input`, `wsdl:output` or `wsdl:fault` had an attached
278 RM policy assertion.

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

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

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

286 2.4 Assertion Example

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

288 Table 2: Example policy with RM policy assertion

```
289 (01) <wsdl:definitions
290 (02)   targetNamespace="example.com"
291 (03)   xmlns:tns="example.com"
292 (04)   xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
293 (05)   xmlns:wsp="http://schemas.xmlsoap.org/ws/2004/09/policy"
294 (06)   xmlns:wsrmp="http://docs.oasis-open.org/ws-rx/wsrmp/200702"
295 (07)   xmlns:wssu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-
296 wss-wssecurity-utility-1.0.xsd">
297 (08)
298 (09) <wsp:UsingPolicy wsdl:required="true" />
299 (10)
300 (11) <wsp:Policy wsu:Id="MyPolicy" >
301 (12)   <wsrmp:RMAssertion>
302 (13)     <wsp:Policy/>
303 (14)   </wsrmp:RMAssertion>
304 (15)   <!-- omitted assertions -->
305 (16) </wsp:Policy>
306 (17)
307 (18) <!-- omitted elements -->
308 (19)
309 (20) <wsdl:binding name="MyBinding" type="tns:MyPortType" >
310 (21)   <wsp:PolicyReference URI="#MyPolicy" />
311 (22)   <!-- omitted elements -->
312 (23) </wsdl:binding>
313 (24)
314 (25) </wsdl:definitions>
```

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

316 Lines (11-16) are a policy expression that includes a RM policy assertion (lines 12-14) to indicate that WS-
317 ReliableMessaging must be used.

318 Lines (20-23) are a WSDL binding. Line (21) indicates that the policy in lines (11-16) applies to this
319 binding, specifically indicating that WS-ReliableMessaging must be used over all the messages in the
320 binding.

321 2.5 Sequence Security Policy

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

326 2.5.1 RM Assertion with Sequence STR Assertion

327 This version of the RM assertion includes the requirement that an RM Sequence MUST be bound to an
328 explicit token that is referenced from a `wsse:SecurityTokenReference` in the `CreateSequence`
329 message.

330 This assertion MUST apply to [Endpoint Policy Subject]. The normative outline for this form of the
331 Sequence STR Assertion is:

```
332 <wsrmp:RMAssertion [wsp:Optional="true"]? ...>
333   <wsp:Policy>
334     <wsrmp:SequenceSTR/>
335     <wsp:Policy>
336   </wsrmp:RMAssertion>
```

337 The following describes the content model of the `SequenceSTR` element.

338 `/wsrmp:SequenceSTR`

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

341 **2.5.2 RM Assertion with Sequence Transport Security Assertion**

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

345 This assertion MUST apply to [Endpoint Policy Subject]. This assertion MUST be used in conjunction with
346 the `sp:TransportBinding` assertion that requires the use of some transport-level security mechanism
347 (e.g. `sp:HttpsToken`).

348 The normative outline for this form of the RM Assertion with the Sequence Transport Security Assertion is:

```
349 <wsp:Policy>
350   <wsp:ExactlyOne>
351     <wsp>All>
352       <wsrm:RMAssertion [wsp:Optional="true"]> ...>
353       <wsp:Policy>
354         <wsrmp:SequenceTransportSecurity/>
355       </wsp:Policy>
356     </wsrm:RMAssertion>
357     <sp:TransportBinding ...>
358       ...
359     </sp:TransportBinding>
360   </wsp>All>
361 </wsp:ExactlyOne>
362 </wsp:Policy>
```

363 The following describes the content model of the `SequenceTransportSecurity` element.

364 `/wsrmp:SequenceTransportSecurity`

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

367 This form of the RM Assertion says that an endpoint MAY have RM as an option but always requires
368 HTTPS to be used. All the `SequenceTransportSecurity` assertion indicates is that RM's rules for protecting
369 the Sequence over TLS are followed.

370 **3 Security Considerations**

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

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

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

379 **4 References**

380 **4.1 Normative**

381 **[KEYWORDS]**

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437 [http://www.oasis-open.org/committees/download.php/16790/wss-v1.1-](http://www.oasis-open.org/committees/download.php/16790/wss-v1.1-spec-os-SOAPMessageSecurity.pdf)

438 [spec-os-SOAPMessageSecurity.pdf](http://www.oasis-open.org/committees/download.php/16790/wss-v1.1-spec-os-SOAPMessageSecurity.pdf)

439 **Appendix A. Acknowledgments**

440 This document is based on initial contribution to OASIS WS-RX Technical Committee by the following
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473 Appendix B. XML Schema

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

476 <http://docs.oasis-open.org/ws-rx/wsrmp/200702/wsrmp-1.1-schema-200702.xsd>

477 The following copy is provided for reference.

```
478 <?xml version="1.0" encoding="UTF-8"?>
479 <!-- Copyright(C) OASIS(R) 1993-2007. All Rights Reserved.
480 OASIS trademark, IPR and other policies apply. -->
481 <xs:schema xmlns:tns="http://docs.oasis-open.org/ws-rx/wsrmp/200702"
482 xmlns:xs="http://www.w3.org/2001/XMLSchema"
483 targetNamespace="http://docs.oasis-open.org/ws-rx/wsrmp/200702"
484 elementFormDefault="qualified" attributeFormDefault="unqualified">
485 <xs:element name="RMAssertion">
486 <xs:complexType>
487 <xs:sequence>
488 <xs:any namespace="##other" processContents="lax" minOccurs="0"
489 maxOccurs
490 </xs:sequence>
491 <xs:anyAttribute namespace="##any" processContents="lax"/>
492 </xs:complexType>
493 </xs:element>
494 <xs:element name="SequenceSTR">
495 <xs:complexType>
496 <xs:sequence/>
497 <xs:anyAttribute namespace="##any" processContents="lax"/>
498 </xs:complexType>
499 </xs:element>
500 <xs:element name="SequenceTransportSecurity">
501 <xs:complexType>
502 <xs:sequence/>
503 <xs:anyAttribute namespace="##any" processContents="lax"/>
504 </xs:complexType>
505 </xs:element>
506 <xs:element name="DeliveryAssurance">
507 <xs:complexType>
508 <xs:sequence>
509 <xs:any namespace="##any" processContents="lax" minOccurs="0"
510 maxOccurs="unbounded"/>
511 </xs:sequence>
512 </xs:complexType>
513 </xs:element>
514 <xs:element name="ExactlyOnce">
515 <xs:complexType>
516 <xs:sequence/>
517 </xs:complexType>
518 </xs:element>
519 <xs:element name="AtLeastOnce">
520 <xs:complexType>
521 <xs:sequence/>
522 </xs:complexType>
523 </xs:element>
524 <xs:element name="AtMostOnce">
525 <xs:complexType>
526 <xs:sequence/>
527 </xs:complexType>
528 </xs:element>
```

529
530
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532
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534

```
<xs:element name="InOrder">  
  <xs:complexType>  
    <xs:sequence/>  
  </xs:complexType>  
</xs:element>  
</xs:schema>
```

535 **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 Yalçinalp	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 Yalçinalp	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

Revision	Date	By Whom	What
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.
wd-11	2006-10-25	Doug Davis	Accept all changes, update to wd11
wd-11	2006-10-26	Doug Davis	PR004 applied
wd-11	2007-01-26	Doug Davis	PR037 applied
wd-12	2007-01-31	Doug Davis	Lots of typos from MarcG Updated WD number and date
wd-12	2007-02-01	Doug Davis	PR035 (009,020 dups) applied