[MS-OXORSS]:
RSS Object Protocol Specification

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Revision Summary

Date	Revision History	Revision Class	Comments
04/04/2008	0.1		Initial Availability.
04/25/2008	0.2		Revised and updated property names and other technical content.
06/27/2008	1.0		Initial Release.
08/06/2008	1.01		Revised and edited technical content.
09/03/2008	1.02		Revised and edited technical content.
12/03/2008	1.03		Revised and edited technical content.
04/10/2009	2.0		Updated applicable product releases.
07/15/2009	3.0	Major	Revised and edited for technical content.
11/04/2009	4.0.0	Major	Updated and revised the technical content.
02/10/2010	4.1.0	Minor	Updated the technical content.

Table of Contents

1 Introduction

This document specifies the RSS Object protocol, which defines **properties** of an object that model an item transmitted in a news feed format.

1.1 Glossary

The following terms are defined in [MS-OXGLOS]:

Attachment object
Coordinated Universal Time (UTC)
Folder object
handle
Mail User Agent (MUA)
Message object
named property
property
property ID
recipient
remote operation (ROP)
Uniform Resource Locator (URL)
XML

The following terms are specific to this document:

Atom: The Atom Syndication Format, an XML format for Web feeds, as specified in [RFC4287].

enclosure: An XML element in a feed that contains information, including a URL, about a file (usually a media file) that is associated with an RSS item or Atom entry (for example, a podcast).

Feed: A data source that provides information about frequently updated content.

RSS: An XML format for Web feeds, as specified in [RSS20].

RSS object: A Message object that represents an entry from an RSS item or Atom feed and that adheres to the property specifications in this document.

MAY, SHOULD, MUST, SHOULD NOT, MUST NOT: These terms (in all caps) are used as described in [RFC2119]. All statements of optional behavior use either MAY, SHOULD, or SHOULD NOT.

1.2 References

1.2.1 Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information. Please check the archive site, http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624, as an additional source.

[MS-OXCFOLD] Microsoft Corporation, "Folder Object Protocol Specification", June 2008.

[MS-OXCMSG] Microsoft Corporation, "Message and Attachment Object Protocol Specification", June 2008.

[MS-OXCPRPT] Microsoft Corporation, "Property and Stream Object Protocol Specification", June 2008.

[MS-OXCSPAM] Microsoft Corporation, "Spam Confidence Level Protocol Specification", June 2008.

[MS-OXGLOS] Microsoft Corporation, "Exchange Server Protocols Master Glossary", June 2008.

[MS-OXOMSG] Microsoft Corporation, "E-Mail Object Protocol Specification", June 2008.

[MS-OXPROPS] Microsoft Corporation, "Exchange Server Protocols Master Property List", June 2008.

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997, http://www.ietf.org/rfc/rfc2119.txt.

[RFC4287] Nottingham, M. and Sayre, R., "The Atom Syndication Format", RFC 4287, December 2005, http://www.ietf.org/rfc/rfc4287.txt.

[RSS20] Winer, D., "RSS 2.0 Specification", July 2003, http://cyber.law.harvard.edu/rss/rss.html.

1.2.2 Informative References

[MS-OXBBODY] Microsoft Corporation, "Best Body Retrieval Protocol Specification", June 2008.

1.3 Protocol Overview

The RSS Object protocol allows the representation of entries from **RSS** and **Atom feeds**. The RSS Object protocol extends the Message and Attachment Object protocol in that it defines new properties and adds **restrictions** to the properties that are defined in [MS-OXCMSG].

The properties that are specific to an **RSS object** allow conversion from the **XML** of an RSS item (specified in [RSS20]) or Atom entry (specified in [RFC4287]), including metadata about the feed from which the item or entry came, to properties on a **Message object**. In addition to mapping XML entities from the two formats to shared properties, the XML of the entire RSS item or Atom entry is saved on the Message object.

1.4 Relationship to Other Protocols

The RSS object protocol has the same dependencies as the **Message** and **Attachment object** protocol, which it extends. For details about the Message and Attachment object protocol, see [MS-OXCMSG].

The RSS object protocol is a peer of the **E-mail object** protocol, and uses a subset of the properties specified in [MS-OXOMSG].

1.5 Prerequisites/Preconditions

The RSS object protocol has the same prerequisites and preconditions as the Message and Attachment object protocol, as specified in [MS-OXCMSG].

1.6 Applicability Statement

None.

1.7 Versioning and Capability Negotiation

None.

1.8 Vendor-Extensible Fields

This protocol provides no extensibility beyond what is already specified in [MS-OXCMSG].

1.9 Standards Assignments

None.

2 Messages

2.1 Transport

The RSS object protocol uses the protocols specified in [MS-OXCPRPT] and [MS-OXCMSG] as its primary transport mechanism.

2.2 Message Syntax

An RSS object can be created and modified by clients and servers. Except where noted below, this section defines constraints under which both clients and servers operate.

Clients operate on RSS objects by using the Message and Attachment object protocol, as specified in [MS-OXCMSG]. How a server operates on RSS objects is implementation-dependent. The results of any such operation are exposed to clients in a manner that is consistent with the RSS object protocol.

Unless otherwise specified, an RSS object adheres to all property constraints, as specified in [MS-OXPROPS], and all property constraints, as specified in [MS-OXCMSG]. An RSS object can also contain other properties, which are specified in [MS-OXPROPS], but these properties have no impact on the RSS object protocol.

RSS feeds can be represented by using either the RSS or Atom protocols. Protocol clients MUST be capable of parsing Atom version 0.3, Atom version 1.0, RSS version 1.0, and RSS version 2.0, and creating RSS protocol objects based on those protocols.

RSS object properties can be of several different data types. The following data types used by RSS object properties are specified in [MS-OXCDATA] section 2.12.1:

- PtypBinary
- PtypInteger32
- PtypString
- PtypString8
- PtypTime

2.2.1 RSS Item Properties

The following properties that are specific to RSS objects are defined in this specification.

2.2.1.1 PidLidPostRssChannelLink

Type: **PtypString**.

Contains the **URL** of the RSS or Atom feed that the XML file came from.

2.2.1.2 PidLidPostRssItemLink

Type: **PtypString**.

Contains the URL of the link from the item. For an RSS item, these are the contents of the <link> sub-element. For an Atom entry, the following applies:

- If the rel attribute is not present, or if it is present and set to "alternate", then PidLidPostRssItemLink contains the value of the href attribute.
- If the rel attribute is present and set to anything besides "alternate", then PidLidPostRssItemLink is not set.

2.2.1.3 PidLidPostRssItemHash

Type: **PtypInteger32**.

Contains a hash of the feed XML computed by using an implementation-dependent algorithm; used to quickly determine whether two items are different.

2.2.1.4 PidLidPostRssItemGuid

Type: **PtypString**.

Contains a unique identifier for the object, copied from one of the elements listed in the following table.

RSS items	Atom entries
<GUID>	<id>
<link>	<link>

Note: The **href** attribute of the <link> element is used for Atom entries if the <id> element is not present.

2.2.1.5 PidLidPostRssChannel

Type: **PtypString**.

Contains the contents of the <title> field from the XML of the Atom <feed> or RSS <channel>.

2.2.1.6 PidLidPostRssItemXml

Type: **PtypString**.

Contains the <item> element and all its sub-elements from an RSS feed, or the <entry> element and all its sub-elements from an Atom feed.

2.2.1.7 PidLidPostRssSubscription

Type: **PtypString**.

Contains the user's preferred name for the subscription.

2.2.1.8 PidTagMessageDeliveryTime

Type: **PtypTime**, in **UTC**.

The posting date of the item or entry, copied from one of the elements listed in the following table.

RSS items	Atom entries
<date>	modified
<pubDate>	issued
	updated
	published

If neither <date> nor <pubDate> is defined in the RSS item, use the <lastBuildDate> element.

If neither <issued> or <published> is defined in the Atom entry, use the <modified> or <updated> element.

If no such element exists, set to the current time.

2.2.2 Additional Property Constraints

This protocol specifies additional constraints on the following properties beyond what is specified in [MS-OXCMSG], [MS-OXOMSG], and [MS-OXCSPAM].

2.2.2.1 Attachment Objects

2.2.2.1.1 Full Article Attachment Objects

A full article Attachment object contains the contents of the linked document. Its PidTagAttachMethod MUST be 0x00000001: afByValue (see [MS-OXCMSG]). ThePidLidPostRssItemLink **property** MUST be set to the URL from which the document was downloaded.

An RSS object MUST NOT have more than one full article Attachment object.

2.2.2.1.2 Enclosure Attachment Objects

An **enclosure** Attachment object contains the contents of an enclosure, which is a file referenced in the **href** attribute of a <link> tag where the **rel** attribute is "enclosure" for an Atom entry, or the <enclosure> element of an RSS item.

An enclosure Attachment object MUST have a PidTagAttachMethod of 0x00000001: afByValue (see [MS-OXCMSG]). PidLidPostRssItemLink MUST be set to the URL from which the enclosure was downloaded.

2.2.2.1.3 Other Attachment Objects

An RSS object MUST NOT have Attachment objects other than full article Attachment objects and enclosure Attachment objects.

2.2.2.2 PidNameExchangeJunkEmailMoveStamp

As specified in [MS-OXCSPAM], but MUST be set on all RSS objects.

2.2.2.3 PidTagMessageClass

Type: **PtypString**, case-insensitive.

Specifies the type of the Message item. The value MUST be "IPM.Post.RSS" or begin with "IPM.Post.RSS", in addition to meeting the criteria specified in [MS-OXCMSG].

2.2.2.4 PidTagSenderName

Type: **PtypString**.

Contains origination information about the RSS object, copied from one of the elements in the following table. If no such element exists, set to an empty string.

RSS items	Atom entries
<author>	<name>
<publisher>*	<title>*
<title>*	

*Note: The element is from the metadata rather than the individual item or feed.

This property is further specified in [MS-OXOMSG].

2.2.2.5 PidTagSenderEmailAddress

Type: **PtypString**.

Contains the contents of the <email> element of the <author> element in an Atom entry if it exists. Does not apply to an RSS item.

This property is further specified in [MS-OXOMSG].

2.2.2.6 PidTagSentRepresentingName

Type: **PtypString**.

Contains origination information about the RSS object, copied from one of the elements in the following table. If no such element exists, set to an empty string.

RSS items	Atom entries
<author>	<name> of <author>
<publisher>*	<title>*
<title>*	

*Note: The element is from the metadata, rather than the individual item or feed.

This property is further specified in [MS-OXOMSG].

2.2.2.7 PidTagSentRepresentingEmailAddress

Type: **PtypString**.

Contains the contents of the <email> element of the <author> element in an Atom entry, if it exists. Does not apply to an RSS item.

This property is further specified in [MS-OXOMSG].

2.2.2.8 Recipients

An RSS object MUST NOT have **recipients**.

3 Protocol Details

General protocol details, as specified in [MS-OXPROPS] and [MS-OXCMSG], apply to RSS objects.

3.1 Common Details

The client and server roles are to create and manipulate RSS objects, and otherwise operate in their respective roles, as specified in [MS-OXCMSG].

3.1.1 Abstract Data Model

This section describes a conceptual model of possible data organization that an implementation maintains to participate in this protocol. The described organization is provided to facilitate the explanation of how the protocol behaves.

This document does not mandate that implementations adhere to this model as long as their external behavior is consistent with that described in this document.

3.1.1.1 RSS Objects

An RSS object extends the Message object, as specified in [MS-OXCMSG].

3.1.1.2 Folder Objects

RSS objects are created in **Folder objects** that have a Container class of "IPF.Note.OutlookHomepage" unless the **Mail User Agent (MUA)** explicitly specifies otherwise.

3.1.2 Timers

None.

3.1.3 Initialization

None.

3.1.4 Higher-Layer Triggered Events

3.1.4.1 Creation of an RSS Object

To create an RSS object, the server or client creates a Message object, as specified in [MS-OXCMSG], sets properties in accordance with the requirements specified in [MS-OXCPRPT] section 2, and saves the resulting Message object as specified in [MS-OXCMSG]. In particular, the PidNameExchangeJunkEmailMoveStamp property MUST be set before the RSS object is saved the first time.

3.1.4.2 Modification of an RSS Object

When modifying an RSS object, the server or client opens a Message object, as specified in [MS-OXCMSG], modifies any properties in accordance with the requirements specified in [MS-OXCPRPT] section 2, and saves the resulting Message object as specified in [MS-OXCMSG].

3.1.4.3 Deletion of an RSS Object

RSS objects have no special semantics in relation to deletion beyond what is specified in [MS-OXCFOLD].

3.1.5 Message Processing Events and Sequencing Rules

None.

3.1.6 Timer Events

None.

3.1.7 Other Local Events

None.

4 Protocol Examples

Joe subscribes to an RSS feed. The client polls the feed and finds a new item. The following is a description of what a client might do to accomplish Joe's intentions and describes the responses a server might return. For information about **remote operations (ROPs)**, see [MS-OXCPRPT] and [MS-OXCMSG].

Before manipulating RSS objects, the client needs to ask the server to perform a mapping from **named properties** to **property IDs**, by using RopGetPropertyIDsFromNames.

Property	Property set GUID	NameID
PidLidPostRssChannel	{00020041-0000-0000-C000-00000000046}	0x8904
PidLidPostRssChannelLink	{00020041-0000-0000-C000-00000000046}	0x8900
PidLidPostRssItemGuid	{00020041-0000-0000-C000-00000000046}	0x8903
PidLidPostRssItemHash	{00020041-0000-0000-C000-00000000046}	0x8902
PidLidPostRssItemLink	{00020041-0000-0000-C000-00000000046}	0x8901
PidLidPostRssItemXml	{00020041-0000-0000-C000-00000000046}	0x8905
PidLidPostRssSubscription	{00020041-0000-0000-C000-00000000046}	0x8906
PidLidSideEffects	{00062008-0000-0000-C000-00000000004	0x81f8

Property	Property set GUID	NameID
	6}	
PidNameExchangeJunkEmailMoveStamp	{00020329-0000-0000-C000-000000000046}	HTTP://schemas.microsoft.com/exchange/junkemailmovestamp

The server might respond with the following identifiers, which will be used in the example that follows. (The actual identifiers are at the discretion of the server.)

Property	Property ID
PidLidPostRssChannel	0x8318
PidLidPostRssChannelLink	0x8314
PidLidPostRssItemGuid	0x8317
PidLidPostRssItemHash	0x8316
PidLidPostRssItemLink	0x8315
PidLidPostRssItemXml	0x8319
PidLidPostRssSubscription	0x831a
PidLidSideEffects	0x81f8
PidNameExchangeJunkEmailMoveStamp	0x8415

To create an RSS object, the client uses RopCreateMessage. The server returns a success code and a **handle** to the object.

After processing the contents of the RSS item, the client uses RopSetProperties to transmit its data to the server.

Property	Property ID	Data Type	Value
PidLidPostRssChannel	0x8318	0x001f (PtypString)	Help and How-To for Contoso
PidLidPostRssChannelLink	0x8314	0x001f (PtypString)	HTTP://www.contoso.com
PidLidPostRssItemGuid	0x8317	0x001f (PtypString)	HTTP://www.contoso.com
PidLidPostRssItemHash	0x8316	0x0003 (PtypInteger32)	0xCD0E93CF
PidLidPostRssItemLink	0x8315	0x001f (PtypString)	HTTP://www.contoso.com

Property	Property ID	Data Type	Value
PidLidPostRssItemXml	0x8319	0x001f (PtypString)	See Note 1.
PidLidPostRssSubscription	0x831a	0x001f (PtypString)	Help and How-To for Contoso
PidLidSideEffects	0x81f8	0x0003 (PtypInteger32)	0x00000100
PidTagHtml	0x1013	0x0102 (PtypBinary)	See Note 2.
PidTagClientSubmitTime	0x0039	0x0040 (PtypTime)	High: 0x01C87A36 Low: 0xD74C8CC0 (2008/02/28 18:22:13.900)
PidTagConversationTopic	0x0070	0x001f (PtypString)	Learn to narrow your **search criteria** for better searches in Contoso
PidTagInternetCodepage	0x3fde	0x0003 (PtypInteger32)	0x0000FDE9
PidTagMessageClass	0x001a	0x001f (PtypString)	"IPM.Post.RSS"
PidTagMessageFlags	0x0e07	0x0003 (PtypInteger32)	**Flags**: 0x00000000 <none>
PidTagNormalizedSubject	0x0e1d	0x001f (PtypString)	Learn to narrow your search criteria for better searches in Contoso
PidTagSenderName	0x0c1a	0x001f (PtypString)	Help and How-To for Contoso
PidTagSentRepresentingName	0x0042	0x001f (PtypString)	Help and How-To for Contoso
PidTagSubjectPrefix	0x003d	0x001f (PtypString)	(null)
PidNameExchangeJunkEmailMoveStamp	0x8415	0x0003 (PtypInteger32)	0x802454D1

When the client has made all its changes to the item, it uses RopSaveChangesMessage to commit the properties to the server, and then RopRelease to release the RSS object. The values of some properties will change during the execution of RopSaveChangesMessage, but the properties specified in this document will not change.

Note 1: PidLidPostRssItemXml contains the following text:

```
<?xml version="1.0"?>
<item>
<title>Learn to narrow your search criteria for better searches in Contoso</title>
<description>Instant Search can help you find information in a flash.</description>
```

```
<link>http://www.contoso.com</link>
</item>
```

Note 2: PidTagHtml contains the following text, encoded into binary as specified in [MS-OXBBODY]:

```
<html>
    <body>
        <table>
            <tr>
            <td>Instant Search can help you find information in a flash.</td>
            </tr>
        </table>
        <p><BR/><A HREF="http://www.contoso.com">View article...</A></p>
    </body>
</html>
```

5 Security

5.1 Security Considerations for Implementers

There are no special security considerations specific to the [MS-OXORSS] protocol. General security considerations that pertain to the underlying transport apply as specified in [MS-OXCMSG] and [MS-OXCPRPT].

5.2 Index of Security Parameters

None.

6 Appendix A: Product Behavior

The information in this specification is applicable to the following product versions. References to product versions include released service packs.

- Microsoft Office Outlook 2003
- Microsoft Exchange Server 2003
- Microsoft Office Outlook 2007
- Microsoft Exchange Server 2007
- Microsoft Outlook 2010
- Microsoft Exchange Server 2010

Exceptions, if any, are noted below. If a service pack number appears with the product version, behavior changed in that service pack. The new behavior also applies to subsequent service packs of the product unless otherwise specified.

Unless otherwise specified, any statement of optional behavior in this specification prescribed using the terms SHOULD or SHOULD NOT implies product behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term MAY implies that product does not follow the prescription.

7 Change Tracking

This section identifies changes made to [MS-OXORSS] protocol documentation between November 2009 and February 2010 releases. Changes are classed as major, minor, or editorial.

Major changes affect protocol interoperability or implementation. Examples of major changes are:

- A document revision that incorporates changes to interoperability requirements or functionality.
- An extensive rewrite, addition, or deletion of major portions of content.
- A protocol is deprecated.
- The removal of a document from the documentation set.
- Changes made for template compliance.

Minor changes do not affect protocol interoperability or implementation. Examples are updates to fix technical accuracy or ambiguity at the sentence, paragraph, or table level.

Editorial changes apply to grammatical, formatting, and style issues.

No changes means that the document is identical to its last release.

Major and minor changes can be described further using the following revision types:

- New content added.
- Content update.
- Content removed.
- New product behavior note added.
- Product behavior note updated.
- Product behavior note removed.
- New protocol syntax added.
- Protocol syntax updated.
- Protocol syntax removed.
- New content added due to protocol revision.
- Content updated due to protocol revision.
- Content removed due to protocol revision.
- New protocol syntax added due to protocol revision.
- Protocol syntax updated due to protocol revision.
- Protocol syntax removed due to protocol revision.
- New content added for template compliance.
- Content updated for template compliance.

- Content removed for template compliance.
- Obsolete document removed.

Editorial changes always have the revision type "Editorially updated."

Some important terms used in revision type descriptions are defined as follows:

Protocol syntax refers to data elements (such as packets, structures, enumerations, and methods) as well as interfaces.

Protocol revision refers to changes made to a protocol that affect the bits that are sent over the wire.

Changes are listed in the following table. If you need further information, please contact protocol@microsoft.com.

Section	Tracking number (if applicable) and description	Major change (Y or N)	Revision Type
1 Introduction	49462 Removed references to RSS item and Atom entry.	N	Content update.
1.3 Protocol Overview	49464 Changed "RSS Atom entry" to "Atom entry."	N	Content update.
4 Protocol Examples	49482 Added <?xml> version declaration to XML snippet.	N	Content update.

8 Index