

[MS-IMESYN]: IMESync Syntax Structure

Intellectual Property Rights Notice for Open Specifications Documentation

- **Technical Documentation.** Microsoft publishes Open Specifications documentation for protocols, file formats, languages, standards as well as overviews of the interaction among each of these technologies.
- **Copyrights.** This documentation is covered by Microsoft copyrights. Regardless of any other terms that are contained in the terms of use for the Microsoft website that hosts this documentation, you may make copies of it in order to develop implementations of the technologies described in the Open Specifications and may distribute portions of it in your implementations using these technologies or your documentation as necessary to properly document the implementation. You may also distribute in your implementation, with or without modification, any schema, IDL's, or code samples that are included in the documentation. This permission also applies to any documents that are referenced in the Open Specifications.
- **No Trade Secrets.** Microsoft does not claim any trade secret rights in this documentation.
- **Patents.** Microsoft has patents that may cover your implementations of the technologies described in the Open Specifications. Neither this notice nor Microsoft's delivery of the documentation grants any licenses under those or any other Microsoft patents. However, a given Open Specification may be covered by Microsoft [Open Specification Promise](#) or the [Community Promise](#). If you would prefer a written license, or if the technologies described in the Open Specifications are not covered by the Open Specifications Promise or Community Promise, as applicable, patent licenses are available by contacting iplg@microsoft.com.
- **Trademarks.** The names of companies and products contained in this documentation may be covered by trademarks or similar intellectual property rights. This notice does not grant any licenses under those rights. For a list of Microsoft trademarks, visit www.microsoft.com/trademarks.
- **Fictitious Names.** The example companies, organizations, products, domain names, email addresses, logos, people, places, and events depicted in this documentation are fictitious. No association with any real company, organization, product, domain name, email address, logo, person, place, or event is intended or should be inferred.

Reservation of Rights. All other rights are reserved, and this notice does not grant any rights other than specifically described above, whether by implication, estoppel, or otherwise.

Tools. The Open Specifications do not require the use of Microsoft programming tools or programming environments in order for you to develop an implementation. If you have access to Microsoft programming tools and environments you are free to take advantage of them. Certain Open Specifications are intended for use in conjunction with publicly available standard specifications and network programming art, and assumes that the reader either is familiar with the aforementioned material or has immediate access to it.

Revision Summary

Date	Revision History	Revision Class	Comments
04/04/2008	0.1		Initial Availability
06/27/2008	1.0	Major	Revised and edited the technical content
12/12/2008	1.01	Editorial	Revised and edited the technical content
07/13/2009	1.02	Major	Changes made for template compliance
08/28/2009	1.03	Editorial	Revised and edited the technical content
11/06/2009	1.04	Editorial	Revised and edited the technical content
02/19/2010	2.0	Editorial	Revised and edited the technical content
03/31/2010	2.01	Editorial	Revised and edited the technical content
04/30/2010	2.02	Editorial	Revised and edited the technical content
06/07/2010	2.03	Editorial	Revised and edited the technical content
06/29/2010	2.04	Editorial	Changed language and formatting in the technical content.
07/23/2010	2.05	Minor	Clarified the meaning of the technical content.
09/27/2010	2.05	No change	No changes to the meaning, language, or formatting of the technical content.
11/15/2010	2.05	No change	No changes to the meaning, language, or formatting of the technical content.
12/17/2010	2.05	No change	No changes to the meaning, language, or formatting of the technical content.
03/18/2011	2.05	No change	No changes to the meaning, language, or formatting of the technical content.
06/10/2011	2.05	No change	No changes to the meaning, language, or formatting of the technical content.
01/20/2012	2.6	Minor	Clarified the meaning of the technical content.
04/11/2012	2.6	No change	No changes to the meaning, language, or formatting of the technical content.
07/16/2012	2.6	No change	No changes to the meaning, language, or formatting of the technical content.
10/08/2012	2.6	No change	No changes to the meaning, language, or formatting of the technical content.
02/11/2013	2.6	No change	No changes to the meaning, language, or formatting of the technical content.

Date	Revision History	Revision Class	Comments
07/30/2013	2.7	Minor	Clarified the meaning of the technical content.
11/18/2013	2.7	No change	No changes to the meaning, language, or formatting of the technical content.
02/10/2014	2.7	No change	No changes to the meaning, language, or formatting of the technical content.
04/30/2014	2.7	No change	No changes to the meaning, language, or formatting of the technical content.
07/31/2014	2.7	No change	No changes to the meaning, language, or formatting of the technical content.
10/30/2014	2.7	No change	No changes to the meaning, language, or formatting of the technical content.

Table of Contents

1	Introduction	5
1.1	Glossary	5
1.2	References.....	5
1.2.1	Normative References.....	5
1.2.2	Informative References	6
1.3	Overview	6
1.4	Relationship to Protocols and Other Structures	6
1.5	Applicability Statement.....	6
1.6	Versioning and Localization	6
1.7	Vendor-Extensible Fields.....	6
2	Structures	7
2.1	IMESync	7
2.2	Remote List Item Scheme	7
3	Structure Examples	9
4	Security.....	10
4.1	Security Considerations for Implementers.....	10
4.2	Index of Security Fields	10
5	Appendix A: Product Behavior.....	11
6	Change Tracking.....	12
7	Index	13

1 Introduction

The IMESync Syntax Structure specifies a compact string format, and the scheme of a **list item**. The string format is used to locate a remote list using [\[MS-LISTSWS\]](#). The remote list is used to define a custom word list used by an on-screen editor. The string format extends [\[RFC3986\]](#).

Sections 1.7 and 2 of this specification are normative and can contain the terms MAY, SHOULD, MUST, MUST NOT, and SHOULD NOT as defined in [\[RFC2119\]](#). All other sections and examples in this specification are informative.

1.1 Glossary

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

ASCII
Augmented Backus-Naur Form (ABNF)
GUID
IME
Input Method Editor (IME)
list item
site
SOAP message
Uniform Resource Identifier (URI)
Uniform Resource Locator (URL)

The following terms are specific to this document:

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

1.2 References

References to Microsoft Open Specification documents do not include a publishing year because links are to the latest version of the documents, which are updated frequently. References to other documents include a publishing year when one is available.

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.

[MS-LISTSWS] Microsoft Corporation, "[Lists Web Service Protocol](#)".

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

[RFC3986] Berners-Lee, T., Fielding, R., and Masinter, L., "Uniform Resource Identifier (URI): Generic Syntax", STD 66, RFC 3986, January 2005, <http://www.ietf.org/rfc/rfc3986.txt>

[RFC5234] Crocker, D., Ed., and Overell, P., "Augmented BNF for Syntax Specifications: ABNF", STD 68, RFC 5234, January 2008, <http://www.rfc-editor.org/rfc/rfc5234.txt>

1.2.2 Informative References

[MS-OFCGLOS] Microsoft Corporation, "[Microsoft Office Master Glossary](#)".

1.3 Overview

The IMESync syntax structure provides a syntax for the "imesync" scheme of **URIs**. This structure encapsulates the parameters required to use the [\[MS-LISTSWs\]](#) protocol to access data from a remote list residing on a server. The server produces an IMESync syntax structure URI for a list and transmits this URI to the clients. When a client processes the URI it has all the information required to communicate with the server using the [MS-LISTSWs] protocol.

1.4 Relationship to Protocols and Other Structures

This structure provides a means to encapsulate the parameters necessary to access a remote list using the [\[MS-LISTSWs\]](#) protocol.

1.5 Applicability Statement

This structure is implemented by servers and clients that implement the [\[MS-LISTSWs\]](#) protocol. This structure is used when a remote list using the [MS-LISTSWs] protocol specifies a custom word list used by the **Input Method Editor (IME)**.

1.6 Versioning and Localization

None.

1.7 Vendor-Extensible Fields

None.

2 Structures

2.1 IMESync

This structure specifies the syntax of the "imesync" URI scheme. This structure **MUST** be able to be represented as an **ASCII** string.

The string **MUST** begin with imesync: followed by a string enclosed with the tags <IME> and </IME>. The <IME> string range **MUST** contain two sub string ranges enclosed with the tags <URL> and </URL>, and <List> and </List>.

<URL> string range and <List> string range specify properties about a remote list accessible via the [\[MS-LISTSWS\]](#) protocol. Valid fields are as follows:

- **URL:** A **URL** to the **site** (2) that contains the remote list.
- **List:** A **GUID** that uniquely identifies the remote list. **MUST** be of the format "{XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX}", where X represents a hexadecimal character.

Encoding of characters in this structure **MUST** be represented consistent with the URI specification ([\[RFC3986\]](#) section 2). Any characters that do not belong to the limited set of unreserved characters **MUST** be encoded using the percent-encoding mechanism, as specified in [\[RFC3986\]](#) section 2.1.

An "imesync" URI is specified by the following **Augmented Backus-Naur Form (ABNF)** ([\[RFC5234\]](#)):

```
imesyncuri = scheme ":" schemepart
scheme      = "imesync"
schemepart  = "<IME>" (urlpart listpart / listpart urlpart) "</IME>"
urlpart     = "<URL>" urlvalue "</URL>"
listpart    = "<List>" guidvalue "</List>"
urlvalue    = *uchar
uchar       = escape / ALPHA / DIGIT / punctuation
escape      = "%" 2HEXDIG
punctuation = "*" / "(" / ")" / "_" / "+" / ":" / "/" / "#" / "[" / "]" /
              "@" / "!" / "$" / "\" / "."
guidvalue   = "{" 8HEXDIG "-" 4HEXDIG "-" 4HEXDIG "-" 4HEXDIG "-" 12HEXDIG
              "}"
```

ALPHA, DIGIT, and HEXDIG are used as specified in [\[RFC5234\]](#) Appendix B.1.

2.2 Remote List Item Scheme

To form a custom word list used by an **IME**, a remote list item **MUST** have the scheme that is described in the following table. The table identifies each field in the list item by its name and type.

Field Name	Field type	Field Description
Title	Text	A string that specifies the pronunciation of the word. In Japanese, the pronunciation is represented by Hiragana. In other languages, the representation is undefined.
IMEDisplay	Text	A string that represents the word.

Field Name	Field type	Field Description
IMEComment1	Text	(optional) A string that describes the word.
IMEComment2	Text	(optional) A string that describes the word.
IMEComment3	Text	(optional) A string that describes the word.
IMEUrl	URL	(optional) A URL that will be shown with the word.

3 Structure Examples

Example 1

This URI represents the remote list located at <http://contoso.com/lists/example/> with a list GUID of "{891e5acc-c099-4777-93f8-5aaf53240c8b}".

```
imesync:<IME><URL>http://contoso.com/lists/example</URL><List>{891e5acc-c099-4777-93f8-5aaf53240c8b}</List></IME>
```

Example 2

The following **SOAP messages** create a remote list as specified in [\[MS-LISTSWS\]](#), and then create required fields in the remote list to form a custom word list used by an IME.

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"> <soap:Body> <AddList
xmlns="http://schemas.microsoft.com/sharepoint/soap/"> <listName>IME Dictionary
Sample</listName> <templateID>100</templateID> </AddList>
</soap:Body></soap:Envelope>
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <UpdateList xmlns="http://schemas.microsoft.com/sharepoint/soap/">
      <listName>IME Dictionary Sample</listName>
      <newFields>
        <Fields>
          <Method ID="1"><Field Type="Text" Name="IMEDisplay" DisplayName="IMEDisplay"
Required="TRUE"></Field></Method>
          <Method ID="2"><Field Type="Text" Name="IMEComment1"
DisplayName="IMEComment1"></Field></Method>
          <Method ID="3"><Field Type="Text" Name="IMEComment2"
DisplayName="IMEComment2"></Field></Method>
          <Method ID="4"><Field Type="Text" Name="IMEComment3"
DisplayName="IMEComment3"></Field></Method>
          <Method ID="5"><Field Type="URL" Name="IMEUrl"
DisplayName="IMEUrl"></Field></Method>
        </Fields>
      </newFields>
    </UpdateList>
  </soap:Body>
</soap:Envelope>
```

4 Security

4.1 Security Considerations for Implementers

Protocol URIs can be contained in mediums that are not trusted, for example, in the body of an e-mail message or on a Web page. Clients invoked when the user activates a protocol URI could be presented with malicious data intended to initiate unwanted actions when the client processes the URI.

4.2 Index of Security Fields

None.

5 Appendix A: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include released service packs:

- The 2007 Microsoft Office system JPN LANGPAK
- Microsoft Office 2010 JPN LANGPAK
- Microsoft Office SharePoint Server 2007 CHT, CHS, KOR, JPN LANGPAK
- Microsoft SharePoint Server 2010 JPN, KOR, CHT, CHS LANGPAK
- Microsoft Office 2013 JPN LANGPAK
- Microsoft SharePoint Server 2013 JPN, KOR, CHT, CHS LANGPAK

Exceptions, if any, are noted below. If a service pack or Quick Fix Engineering (QFE) number appears with the product version, behavior changed in that service pack or QFE. The new behavior also applies to subsequent service packs of the product unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

Unless otherwise specified, any statement of optional behavior in this specification that is 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 the product does not follow the prescription.

6 Change Tracking

No table of changes is available. The document is either new or has had no changes since its last release.

7 Index

A

[Applicability](#) 6

C

[Change tracking](#) 12

E

[Examples](#) 9
[overview](#) 9

F

[Fields - security index](#) 10
[Fields - vendor-extensible](#) 6

G

[Glossary](#) 5

I

[IMESync structure](#) 7
[Implementer - security considerations](#) 10
[Index of security fields](#) 10
[Informative references](#) 6
[Introduction](#) 5

L

[Localization](#) 6

N

[Normative references](#) 5

O

[Overview \(synopsis\)](#) 6

P

[Product behavior](#) 11

R

[References](#) 5
[informative](#) 6
[normative](#) 5
[Relationship to protocols and other structures](#) 6
[Remote list item scheme](#) 7

S

Security
[field index](#) 10
[implementer considerations](#) 10

Structures

[IMESync](#) 7
[Remote list item scheme](#) 7

T

[Tracking changes](#) 12

V

[Vendor-extensible fields](#) 6
[Versioning](#) 6