# [MS-IMESYN]:
# IMESync Syntax Structure

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## 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. |

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# 1 Introduction

This document specifies the IMESync structure that 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 contain RFC 2119 language. All other sections and examples in this specification are informative.

## 1.1 Glossary

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

**ASCII**
**GUID**

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

**IME**
**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 described 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. Please check the archive site, http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624, as an additional source.

[MS-LISTSWS] Microsoft Corporation, "Lists Web Service Protocol Specification".

[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-GLOS] Microsoft Corporation, "Windows Protocols Master Glossary".

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

## 1.3 Structure Overview (Synopsis)

The IMESync 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 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 via 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 **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 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 consistently 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.

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 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. |
| IMEComment1 | Text | (optional) A string that describes the word. |

| Field Name | Field type | Field Description |
|---|---|---|
| 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 Parameters

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 15 JPN LANGPAK Technical Preview
- Microsoft® SharePoint® Server 15 JPN, KOR, CHT, CHS LANGPAK Technical Preview

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

This section identifies changes that were made to the [MS-IMESYN] protocol document between the June 2011 and January 2012 releases. Changes are classified as New, Major, Minor, Editorial, or No change.

The revision class **New** means that a new document is being released.

The revision class **Major** means that the technical content in the document was significantly revised. 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.
- The removal of a document from the documentation set.
- Changes made for template compliance.

The revision class **Minor** means that the meaning of the technical content was clarified. Minor changes do not affect protocol interoperability or implementation. Examples of minor changes are updates to clarify ambiguity at the sentence, paragraph, or table level.

The revision class **Editorial** means that the language and formatting in the technical content was changed. Editorial changes apply to grammatical, formatting, and style issues.

The revision class **No change** means that no new technical or language changes were introduced. The technical content of the document is identical to the last released version, but minor editorial and formatting changes, as well as updates to the header and footer information, and to the revision summary, may have been made.

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

- New content added.
- Content updated.
- 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 are always classified with the change type **Editorially updated.**

Some important terms used in the change 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.

The changes made to this document are listed in the following table. For more information, please contact protocol@microsoft.com.

| Section | Tracking number (if applicable) and description | Major change (Y or N) | Change type |
|---|---|---|---|
| 4.1 Security Considerations for Implementers | Added section containing content formerly in "Security" section. | N | New content added. |
| 4.2 Index of Security Parameters | Added section. | N | New content added for template compliance. |

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