[MS-IMESYN]:

IMESync Syntax Structure

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Revision Summary

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6/27/2008	1.0	Major	Revised and edited the technical content
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9/14/2016	2.7	None	No changes to the meaning, language, or formatting of the technical content.
4/27/2018	3.0	Major	Significantly changed the technical content.
8/28/2018	4.0	Major	Significantly changed the technical content.

Table of Contents

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. All other sections and examples in this specification are informative.

1.1 Glossary

This document uses the following terms:

ASCII: The American Standard Code for Information Interchange (ASCII) is an 8-bit character-encoding scheme based on the English alphabet. ASCII codes represent text in computers, communications equipment, and other devices that work with text. ASCII refers to a single 8-bit ASCII character or an array of 8-bit ASCII characters with the high bit of each character set to zero.

Augmented Backus-Naur Form (ABNF): A modified version of Backus-Naur Form (BNF), commonly used by Internet specifications. ABNF notation balances compactness and simplicity with reasonable representational power. ABNF differs from standard BNF in its definitions and uses of naming rules, repetition, alternatives, order-independence, and value ranges. For more information, see [RFC5234].

globally unique identifier (GUID): A term used interchangeably with universally unique identifier (UUID) in Microsoft protocol technical documents (TDs). Interchanging the usage of these terms does not imply or require a specific algorithm or mechanism to generate the value. Specifically, the use of this term does not imply or require that the algorithms described in [RFC4122] or [C706] must be used for generating the **GUID**. See also universally unique identifier (UUID).

Input Method Editor (IME): An application that is used to enter characters in written Asian languages by using a standard 101-key keyboard. An IME consists of both an engine that converts keystrokes into phonetic and ideographic characters and a dictionary of commonly used ideographic words.

list item: An individual entry within a SharePoint list. Each list item has a schema that maps to fields in the list that contains the item, depending on the content type of the item.

site: A group of related pages and data within a SharePoint site collection. The structure and content of a site is based on a site definition. Also referred to as SharePoint site and web site.

SOAP message: An XML document consisting of a mandatory SOAP envelope, an optional SOAP header, and a mandatory SOAP body. See [SOAP1.2-1/2007] section 5 for more information.

Uniform Resource Identifier (URI): A string that identifies a resource. The URI is an addressing mechanism defined in Internet Engineering Task Force (IETF) Uniform Resource Identifier (URI): Generic Syntax [RFC3986].

Uniform Resource Locator (URL): A string of characters in a standardized format that identifies a document or resource on the World Wide Web. The format is as specified in [RFC1738].

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

Links to a document in the Microsoft Open Specifications library point to the correct section in the most recently published version of the referenced document. However, because individual documents in the library are not updated at the same time, the section numbers in the documents may not match. You can confirm the correct section numbering by checking the Errata.

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.rfc-editor.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

None.

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** 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.
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.

Field Name	Field type	Field Description
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 updates to those products.

- 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

- Office 2016 JPN LANGPAK

- Office 2019 JPN LANGPAK

Exceptions, if any, are noted in this section. If an update version, service pack or Knowledge Base (KB) number appears with a product name, the behavior changed in that update. The new behavior also applies to subsequent updates 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 this document since the last release. Changes are classified as Major, Minor, or None.

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.
- A document revision that captures changes to protocol functionality.

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 **None** means that no new technical changes were introduced. Minor editorial and formatting changes may have been made, but the relevant technical content is identical to the last released version.

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

Section	Description	Revision class
5 Appendix A: Product Behavior	Updated list of supported products.	Major

7   Index