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**Multiple Language Content Type
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Abstract

This document defines an addition to the Multipurpose Internet Mail Extensions (MIME) standard to make it possible to send one message that contains multiple language versions of the same information. The translations would be identified by a language code and selected by the email client based on a user's language settings or locale.

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1. Introduction

Since the invention of email and the rapid spread of the internet, more and more people have been able to communicate in more and more countries and in more and more languages. But during this time of technological evolution, email has remained a single language communication tool, whether it is English to English, Spanish to Spanish or Japanese to Japanese.

Also during this time, many corporations have established their offices in multi-cultural cities and formed departments and teams that span continents, cultures and languages so the need to communicate efficiently with little margin for miscommunication has grown exponentially.

The objective of this document is to define an addition to the widely used Multipurpose Internet Mail Extensions (MIME) standard, to make it possible to send a single message to a group of people in such a way that all of the recipients can read the email in their own first language. The methods of translation of the message content are beyond the scope of this document, but the structure of the email itself is presented herein.

1.1. Requirements Language

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC 2119](#) [[RFC2119](#)].

2. The Content-Type Header

When there is a requirement to send a message in a number of different languages and the translations are to be embedded in the same message, the multipart subtype "multipart/multilingual" SHOULD be used to help the receiving email client make sense of the message structure.

The suggested multipart subtype "multipart/multilingual" has the same semantics as "multipart/alternative" (as discussed in [RFC 2046](#) [[RFC2046](#)]) in that each of the body parts is an alternative version of the same information. The primary difference between "multipart/multilingual" and "multipart/alternative" is that when using "multipart/multilingual", the message part to select for rendering is chosen based on the value of the Content-Language header instead of the ordering of the parts and the Content-Types.

The syntax for this multipart subtype conforms to the common syntax

for subtypes of multipart given in [section 5.1.1. of RFC 2046 \[RFC2046\]](#), therefore, an example "multipart/multilingual" Content-Type header field would look like this:

```
Content-type: multipart/multilingual; boundary=01189998819991197253
```

3. The Multilingual Preface -- the first message part

In order for the message to be received and displayed in non-conforming email clients, the message MUST contain an explanatory message part which MUST-NOT be marked with a Content-Language header but MUST be the first of the message parts. Because non-conforming email clients are expected to treat the message as multipart/mixed (in accordance with sections [5.1.3](#) and [5.1.7](#) of [RFC 2046 \[RFC2046\]](#)) they may show all of the message parts sequentially or as attachments. Including and showing this explanatory part will help the message recipient understand the message structure.

This initial message part SHOULD explain briefly to the message recipient that the message contains multiple languages and the parts may be rendered sequentially or as attachments. This SHOULD be presented in the same languages that are provided in the subsequent message parts.

Whilst this section of the message is useful for backward compatibility, it SHOULD only be shown when rendered by a non-conforming email client because conforming email client SHOULD only show the single message part identified by the user's preferred language (or locale) and the message part's Content-Language.

4. The Subsequent Message Parts

The subsequent message parts are translations of the same message content. These body parts MAY be ordered so that the first part after the multilingual preface is in the language believed to be the most likely to be recognised by recipients using software that does not implement multipart/multilingual.

The Content-Type for each individual language part MAY be any MIME type (including multipart subtypes such as multipart/alternative). However, it is recommended that the Content-Type of the language parts is kept as simple as possible for interoperability with existing email clients. The language parts are not required to have matching Content-Types or multipart structures. For example, there might be an English part of type "text/html" followed by a Spanish part of type "application/pdf" followed by a Chinese part of type

"image/jpeg". Whatever the content-type, the contents SHOULD be composed for optimal viewing in the specified language.

5. The Content-Language Header

The Content-Language header in the individual multipart message parts is used to identify the language in which the message part is written. Based on the value of this header, a conforming email client can determine which message part to display (given the user's language settings or locale).

The Content-Language MUST comply with [RFC 3282](#) [[RFC3282](#)] (which defines the Content-Language header) and [BCP 47](#)/RFC 5646 [[RFC5646](#)] (which defines the structure and semantics for the language code values). Examples of this header for English, English as used in the United States and Latin American Spanish, could look like the following:

Content-Language: en

Content-Language: en-US

Content-Language: es-419

6. The Subject-Translation Header

On receipt of the message, conforming email clients will need to select the correct multipart message content and replace the subject that is shown to the message recipient with the translated subject. To enable this the Subject-Translation header SHOULD be provided in each message part that contains a Content-Language header.

The value for this header should be a simple translated version of the original email subject. An example of this header may look like this:

Subject-Translation: Mensaje de ejemplo para varios idiomas

7. Examples

7.1. An Example of a Simple Multiple language email message

Below is an example of a simple multiple language email message formatted using the method detailed in this document.

From: Nik
To: Nathaniel
Subject: Simple example multiple language message
Content-type: multipart/multilingual; boundary=01189998819991197253

--01189998819991197253

This is a message in two languages: English and Spanish. It says the same thing in each language. If you read it in the first language, you can ignore the other translations. The other translations may be presented as attachments or grouped together.

Este es un mensaje en dos idiomas: Ingles y Espanol. Dice lo mismo en cada idioma. Si lo necesita en el primer idioma, puede ignorar el otras traducciones. Las otras traducciones se pueden presentar como archivos adjuntos o agrupados.

--01189998819991197253

Content-Language: en
Content-Type: text/plain
Subject-Translation: Simple example multiple language message

Hello, this message content is provided in your language.

--01189998819991197253

Content-Language: es
Content-Type: text/plain
Subject-Translation: Ejemplo simple mensaje en varios idiomas

Hola, el contenido de este mensaje esta disponible en su idioma.

--01189998819991197253--

7.2. An Example of a Complex Multiple language email message

Below is an example of a more complex multiple language email message formatted using the method detailed in this document. Note that the language parts have multipart contents and would therefore require further processing to determine the content to display.

From: Nik
To: Nathaniel
Subject: Complex example multiple language message
Content-type: multipart/multilingual; boundary=01189998819991197253

--01189998819991197253

This is a message in two languages: English and Spanish. It says the same thing in each language. If you read it in the first language, you can ignore the other translations. The other translations may be presented as attachments or grouped together.

Este es un mensaje en dos idiomas: Ingles y Espanol. Dice lo mismo en cada idioma. Si lo necesita en el primer idioma, puede ignorar el otras traducciones. Las otras traducciones se pueden presentar como archivos adjuntos o agrupados.

--01189998819991197253

Content-Language: en

Content-Type: multipart/alternative; boundary=multipartaltboundary

Subject-Translation: Complex example multiple language message

--multipartaltboundary

Content-Type: text/plain

Hello, this message content is provided in your language.

--multipartaltboundary

Content-Type: text/html

<html><body><p>Hello, this message content is provided in your language.<p></body></html>

--multipartaltboundary--

--01189998819991197253

Content-Language: es

Content-Type: multipart/mixed; boundary=multipartmixboundary

Subject-Translation: Ejemplo complejo mensaje en varios idiomas

--multipartmixboundary

Content-Type:application/pdf

..PDF file in Spanish here..

--multipartmixboundary

Content-Type:image/jpeg

..JPEG image showing Spanish content here..

--multipartmixboundary--

--01189998819991197253--

8. Acknowledgements

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9. IANA Considerations

The multipart/multilingual MIME type will be registered with IANA.

10. Security Considerations

This document has no additional security considerations beyond those that apply to the standards and procedures on which it is built.

11. Normative References

- [RFC2046] Freed, N. and N. Borenstein, "Multipurpose Internet Mail Extensions (MIME) Part Two: Media Types", [RFC 2046](#), November 1996.
- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.
- [RFC3282] Alvestrand, H., "Content Language Headers", [RFC 3282](#), May 2002.
- [RFC5646] Phillips, A. and M. Davis, "Tags for Identifying Languages", [BCP 47](#), [RFC 5646](#), September 2009.

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