XEP-0428: Fallback Indication

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Experimental	Standards Track	fallback

This specification proposes a mechanism by which message bodies or parts thereof can be marked as being for fallback purposes, and therefore to be ignored by anything that understands the original intent of the message.

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1 Introduction

A common and convenient practise for new extensions is to supply a fallback in the body. This provides immediate backwards compatibility for naive clients, since - not understanding the new protocol - they will gracefully degrade to displaying the body as an instant message. By way of example, a recent Reactions proposal suggested including the emoji as a <body/> element, so that existing clients would simply display it as a normal message.

The downside of this approach is that servers and other intermediaries treat the presence of a <body/> as being an indicator that a message is indeed an instant message. They may errornously treat a message this way for archival purposes, etc, that only has a <body/> for fallback purposes, which might not be appropriate.

This specification tackles the problem by providing an element to be used as a hint that parts or all of the supplied <body/> and <subject/> elements are for fallback purposes, and the message may be treated as if they were not present if the processing entity understands what the message is a fallback for.

Additionally, the specification allows for transporting information about which parts of a <body/> are used for fallback purposes and for which reason, such that supporting clients can hide or dim those parts when displaying them to the user or otherwise treat those parts special as intended or encouraged by other specifications.

2 Overview

2.1 Discovering Support

Support for this protocol MAY be advertised by the Service Discovery protocol defined in Service Discovery (XEP-0030) [1] using a feature of urn:xmpp:fallback:0. Note that lack of support will result in the desired fallback behaviour.

2.2 Fallback Indicator

The fallback indicator is an element <fallback/> qualified by the urn:xmpp:fallback:0 namespace. It has an attribute for that indicates the specification that the fallback is meant to replace. This is typically the primary namespace of the respective specification, but may be specified otherwise. The <fallback/> element may have one or multiple <body/> or <subject/> child elements, that indicate the part of the message, that is a fallback. Both of these child elements may have a start and end attribute which point to the start and end of a fallback character sequence as defined in Character counting in message bodies (XEP-0426) [2] in the respective element in the message. If start and end attribute are not supplied, the whole respective message element should be assumed to be there for fallback purposes. If the <fallback/> element does not have any childs, it is assumed to apply to every message <body/>

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[1]XEP-0030: Service Discovery <https://xmpp.org/extensions/xep-0030.html>.

[2]XEP-0426: Character counting in message bodies <https://xmpp.org/extensions/xep-0426.html>.

and <subject/> present in the message.

A previous version of this specification had an example using an encrypted message. It is suggested to use Explicit Message Encryption (XEP-0380) [3] instead of this specification for that usecase.

```
<message to='anna@example.com' id='message-id2' type='groupchat'>
  <body>
    > Anna wrote:
    > Hi, how are you?
    Great
  </body>
  <reply to='anna@example.com' id='message-id1' xmlns='
      urn:xmpp:reply:0' />
  <fallback xmlns='urn:xmpp:fallback:0' for='urn:xmpp:reply:0'>
    <body start='0' end='33' />
  </fallback>
</message>
```

Receiving the above message, a naive client will naturally display the full <body/> element text, but a client which supports this specification and the specification for urn:xmpp:reply:0 will know that a part of the message is merely a fallback placeholder, and to ignore (and not display) that part, if it has other ways to convey the intended meaning.

2.3 Alternatives

- Message Processing Hints (XEP-0334) [4] was considered to inform intermediaries, and would probably be ideal - servers often examine these elements and alter behaviour accordingly, but the specification was rejected by Council.

- Placing fallback elements within the <fallback/> element would shift the onus from server to client, but this is likely to be less useful.

3 Schema

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema attributeFormDefault="unqualified" elementFormDefault="
    qualified" targetNamespace="urn:xmpp:fallback:0" xmlns="
    urn:xmpp:fallback:0" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="fallback">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="subject" type="region" minOccurs="0"
            maxOccurs="unbounded" />
```

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[3]XEP-0380: Explicit Message Encryption <https://xmpp.org/extensions/xep-0380.html>.
[4]XEP-0334: Message Processing Hints <https://xmpp.org/extensions/xep-0334.html>.

```
        <xs:element name="body" type="region" minOccurs="0" maxOccurs=
            "unbounded" />
      </xs:sequence>
      <xs:attribute name="for" type="xs:string" />
    </xs:complexType>
  </xs:element>
  <xs:complexType name="region">
    <xs:attribute name="start" type="xs:unsignedInt" />
    <xs:attribute name="end" type="xs:unsignedInt" />
  </xs:complexType>
</xs:schema>
```

4 Security Considerations

This specification allows messages with a body (and real message content therein) to be treated by a server as if that body text does not exist. Servers MAY, particularly in a secure setting, wish to archive copies of the message even if they ordinarily would not archive a message with no body.

5 IANA Considerations

This XEP requires no interaction with the Internet Assigned Numbers Authority (IANA) [5].

6 XMPP Registrar Considerations

None.

7 Acknowledgements

The author wishes to share any credit with many members of the community.

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[5]The Internet Assigned Numbers Authority (IANA) is the central coordinator for the assignment of unique parameter values for Internet protocols, such as port numbers and URI schemes. For further information, see <http://www.iana.org/>.