Update of Legacy IANA Registrations of Enumservices

Abstract

This document revises all Enumservices that were IANA registered under the now obsolete specification of the Enumservice registry defined in RFC 3761.

Status of This Memo

This is an Internet Standards Track document.

This document is a product of the Internet Engineering Task Force (IETF). It represents the consensus of the IETF community. It has received public review and has been approved for publication by the Internet Engineering Steering Group (IESG). Further information on Internet Standards is available in Section 2 of RFC 5741.

Information about the current status of this document, any errata, and how to provide feedback on it may be obtained at http://www.rfc-editor.org/info/rfc6118.

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1. Introduction

[RFC6117] has obsoleted the IANA registration section of [RFC3761]. Since the IANA Enumservice registry contains various Enumservices registered under the regime of RFC 3761, those registrations do not conform to the new guidelines as specified in [RFC6117]. To ensure consistency among all Enumservice registrations at IANA, this document adds the (nowadays) missing elements to those legacy registrations. Furthermore, all legacy Enumservice registrations are converted to the new XML-chunk format, and, where deemed necessary, minor editorial corrections are applied.

However, this document only adds the missing elements to the XML chunks as specified in the IANA Considerations section of [RFC6117], but it does not complete the (nowadays) missing sections of the corresponding Enumservice Specifications. In order to conform with the new registration regime as specified in [RFC6117], those Enumservice Specifications still have to be revised.

It is important to note that this document does not update the functional specification of the concerned Enumservices.

The following RFCs are updated by this document:

- [RFC3762]
- [RFC3764]
- [RFC3953]
- [RFC4143]
- [RFC4002]
- [RFC4238]
- [RFC4355]
- [RFC4415]
- [RFC4769]
- [RFC4969]
- [RFC4979]
- [RFC5028]
- [RFC5278]
- [RFC5333]

2. Terminology

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].
3. IESG Action

According to [RFC3761], any Enumservice registration had to be published as a Standards Track, Experimental, or BCP (Best Current Practice) RFC. [RFC6117] no longer has this requirement, i.e., "Specification Required", which implies the use of a Designated Expert [RFC5226], is sufficient.

This document changes the approval requirement for updates to Enumservice registrations to Specification Required, whereby the specification and request are reviewed by a Designated Expert as described in [RFC6117].

4. Legacy Enumservice Registrations Converted to XML Chunks

In the following, the legacy Enumservice Registrations are converted to XML chunks that include the new elements introduced by [RFC6117].

(Not that references in Sections 4.1 - 4.39 refer to the references section within the respective Enumservice Specification.)

4.1. email:mailto

<record>
  <!-- email:mailto -->
  <class>Application-Based, Common</class>
  <type>email</type>
  <subtype>mailto</subtype>
  <urischeme>mailto</urischeme>
  <functionalspec>
    <paragraph>
      This Enumservice indicates that the resource can be addressed by the associated URI in order to send an email.
    </paragraph>
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc4355"/>, Section 6.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc4355"/> (updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Rudolf_Brandner"/>
    <xref type="person" data="Lawrence_Conroy"/>
    <xref type="person" data="Richard_Stastny"/>
  </requesters>
</record>
4.2. ems:mailto

<record>
<!-- ems:mailto -->
<class>Application-Based, Common</class>
<type>ems</type>
<subtype>mailto</subtype>
<urischeme>mailto</urischeme>
<functionalspec>
  <paragraph>
  This Enumservice indicates that the resource identified by the associated URI is capable of receiving a message using an email protocol.
  </paragraph>
  <paragraph>
  EMS content is sent over SMTP using the format specified by TS 23.140 [15] Section 8.4.4 and TS 26.140 [16] Section 4, as an MMS message. Within such a message, EMS content is carried as either a text or application/octet-stream MIME sub-part (see TS 26.140 [16], Section 4.1).
  </paragraph>
  <paragraph>
  References are contained in <xref type="rfc" data="rfc4355"/>.
  </paragraph>
</functionalspec>
<security>
  <paragraph>
  There are no specific security issues with this Enumservice. However, the general considerations of Section 6 of <xref type="rfc" data="rfc4355"/> apply.
  </paragraph>
</security>
<usage>COMMON</usage>
<registrationdocs>
  <xref type="rfc" data="rfc4355"/> (updated by RFC 6118)
  <xref type="rfc" data="RFC 6118"/>
</registrationdocs>
<requesters>
  <xref type="person" data="Rudolf_Brandner"/>
  <xref type="person" data="Lawrence_Conroy"/>
  <xref type="person" data="Richard_Stastny"/>
</requesters>
</record>
4.3. ems:tel

<record>
  <!-- ems:tel -->
  <class>Application-Based, Common</class>
  <type>ems</type>
  <subtype>tel</subtype>
  <urischeme>tel</urischeme>
  <functionalspec>
    <paragraph>
      This Enumservice indicates that the resource identified by the associated URI is capable of receiving a message using the Enhanced Message Service (EMS) [14].
    </paragraph>
    <paragraph>
      References are contained in <xref type="rfc" data="rfc4355"/>
    </paragraph>
  </functionalspec>
  <security>
    <paragraph>
      There are no specific security issues with this Enumservice. However, the general considerations of Section 6 of <xref type="rfc" data="rfc4355"/> apply.
    </paragraph>
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rafc4355"/> (updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Rudolf_Brandner"/>
    <xref type="person" data="Lawrence_Conroy"/>
    <xref type="person" data="Richard_Stastny"/>
  </requesters>
  <additionalinfo>
    <paragraph>
      Note that an indication of EMS can be taken as implying that the recipient is capable of receiving SMS messages at this address as well.
    </paragraph>
  </additionalinfo>
</record>
4.4. fax:tel

<record>

<!-- fax:tel -->
<class>Application-Based, Subset</class>
<type>fax</type>
<subtype>tel</subtype>
<urischeme>tel</urischeme>

<functionalspec>

<paragraph>
This Enumservice indicates that the resource identified by the associated URI is capable of being contacted to provide a communication session during which facsimile documents can be sent.
</paragraph>

<paragraph>
A client selecting this NAPTR will have support for generating and sending facsimile documents to the recipient using the PSTN session and transfer protocols specified in [12] and [13] in <xref type="rfc" data="rfc4355"/> - in short, they will have a fax program with a local or shared PSTN access over which they can send faxes.
</paragraph>

<paragraph>
References are contained in <xref type="rfc" data="rfc4355"/>.
</paragraph>

</functionalspec>

<security>
See <xref type="rfc" data="rfc4355"/>, Section 6.
</security>

<usage>COMMON</usage>

<registrationdocs>
<xref type="rfc" data="rfc4355"/> (updated by RFC 6118)
<xref type="rfc" data="RFC 6118"/>
</registrationdocs>

<requesters>
<xref type="person" data="Rudolf_Brandner"/>
<xref type="person" data="Lawrence_Conroy"/>
<xref type="person" data="Richard_Stastny"/>
</requesters>

</record>
4.5. ft:ftp

    <record>
    <!-- ft:ftp -->
    <class>Application-Based, Subset</class>
    <type>ft</type>
    <subtype>ftp</subtype>
    <urischeme>ftp</urischeme>
    <functionalspec>
        <paragraph>
        This Enumservice indicates that the resource identified by the associated URI is a file service from which a file or file listing can be retrieved.
        </paragraph>
    </functionalspec>
    <security>
        See &lt;xref type="rfc" data="rfc4002"/&gt;, Section 5.
    </security>
    <usage>COMMON</usage>
    <registrationdocs>
        <xref type="rfc" data="rfc4002"/&gt; (updated by RFC 6118)
        <xref type="rfc" data="RFC 6118"/>
    </registrationdocs>
    <requesters>
        <xref type="person" data="Rudolf_Brandner"/>
        <xref type="person" data="Lawrence_Conroy"/>
        <xref type="person" data="Richard_Stastny"/>
    </requesters>
    </record>
4.6. h323

<record>
  <!-- h323 -->
  <class>Protocol-Based</class>
  <type>h323</type>
  <!-- No subtype -->
  <urischeme>h323</urischeme>
  <functionalspec>
    See <xref type="rfc" data="rfc3762"/>
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc3762"/>
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc3762"/>
    (updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Orit_Levin"/>
  </requesters>
</record>
4.7.  ical-access:http

<record>
  <!-- ical-access:http -->
  <class>Application-Based, Common</class>
  <type>ical-access</type>
  <subtype>http</subtype>
  <urischeme>http</urischeme>
  <functionalspec>
    <paragraph>
      This Enumservice indicates that the resource identified can be addressed by the associated URI in order to access a user’s calendar (for example free/busy status) using the CalDAV [7] protocol for Internet calendaring.
    </paragraph>
    <paragraph>
      References are contained in <xref type="rfc" data="rfc5333"/>. 
    </paragraph>
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc5333"/>, Section 4.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc5333"/> (updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Rohan_Mahy"/>
  </requesters>
</record>
4.8.  ical-access:https

<record>
  <!-- ical-access:https -->
  <class>Application-Based, Common</class>
  <type>ical-access</type>
  <subtype>https</subtype>
  <urischeme>https</urischeme>
  <functionalspec>
    <paragraph>
      This Enumservice indicates that the resource identified
      can be addressed by the associated URI in order to access
      a user’s calendar (for example free/busy status) using
      the CalDAV [7] protocol for Internet calendaring.
    </paragraph>
    <paragraph>
      References are contained in <xref type="rfc" data="rfc5333"/>.
    </paragraph>
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc5333"/>, Section 4.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc5333"/> (updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Rohan_Mahy"/>
  </requesters>
</record>
4.9.  ical-sched:mailto

<record>
<!-- ical-sched:mailto -->
<class>Application-Based, Common</class>
?type>ical-sched</type>
<subtype>mailto</subtype>
<urischeme>mailto</urischeme>
<functionalspec>
  <paragraph>
  This Enumservice indicates that the resource identified can be addressed by the associated URI used for scheduling using Internet calendaring via Internet mail with the iMIP [6] protocol.
  </paragraph>
  <paragraph>
  References are contained in <xref type="rfc" data="rfc5333"/>.
  </paragraph>
</functionalspec>
<security>
  See <xref type="rfc" data="rfc5333"/>, Section 4.
</security>
<usage>COMMON</usage>
<registrationdocs>
  <xref type="rfc" data="rfc5333"/> (updated by RFC 6118)
  <xref type="rfc" data="RFC 6118"/>
</registrationdocs>
<requesters>
  <xref type="person" data="Rohan_Mahy"/>
</requesters>
</record>
4.10. ifax:mailto

<record>
   <!-- ifax:mailto -->
   <class>Application-Based, Subset</class>
   <type>ifax</type>
   <subtype>mailto</subtype>
   <urischeme>mailto</urischeme>
   <functionalspec>
      See <xref type="rfc" data="rfc4143"/>., Section 1.
   </functionalspec>
   <security>
      See <xref type="rfc" data="rfc4143"/>., Section 3.
   </security>
   <usage>COMMON</usage>
   <registrationdocs>
      <xref type="rfc" data="rfc4143"/> (updated by RFC 6118)
      <xref type="rfc" data="RFC 6118"/>
   </registrationdocs>
   <requesters>
      <xref type="person" data="Kiyoshi_Toyoda"/>
      <xref type="person" data="Dave_Crocker"/>
   </requesters>
   <additionalinfo>
      <paragraph>
         The URI Scheme is 'mailto' because facsimile is a
         profile of standard Internet mail and uses standard
         Internet mail addressing.
      </paragraph>
   </additionalinfo>
</record>
4.11. im

<record>
  <!-- im -->
  <class>Application-Based, Common</class>
  <type>im</type>
  <!-- No subtype -->
  <urischeme>im</urischeme>
  <functionalspec>
    <paragraph>
      This Enumservice indicates that the resource identified is an ‘im:’ URI. The ‘im:’ URI scheme does not identify any particular protocol that will be used to handle instant messaging receipt or delivery, rather the mechanism in RFC 3861 [4] is used to discover whether an IM protocol supported by the party querying ENUM is also supported by the target resource.
    </paragraph>
    <paragraph>
      References are contained in <xref type="rfc" data="rfc5028"/>.
    </paragraph>
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc5028"/>, Section 3.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc5028"/> (updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Rohan_Mahy"/>
  </requesters>
</record>
4.12. mms:mailto

<record>
  <!-- mms:mailto -->
  <class>Application-Based, Common</class>
  <type>mms</type>
  <subtype>mailto</subtype>
  <urischeme>mailto</urischeme>
  <functionalspec>
    <paragraph>
      This Enumservice indicates that the resource identified by the associated URI is capable of receiving a message using an email protocol.
    </paragraph>
    <paragraph>
      MMS messages are sent over SMTP using the format specified by TS 23.140 [15] Section 8.4.4 and TS 26.140 [16] Section 4.
    </paragraph>
    <paragraph>
      Within and between MMS Environments (MMSE, network infrastructures that support the MultiMedia Service), other pieces of state data (for example, charging-significant information) are exchanged between MMS Relay Servers. Thus, although these servers use SMTP as the "bearer" for their application exchanges, they map their internal state to specialized header fields carried in the SMTP message exchanges. The header fields used in such MMSE are described in detail in [17].
    </paragraph>
    <paragraph>
      References are contained in <xref type="rfc" data="rfc4355"/>.
    </paragraph>
  </functionalspec>
  <security>
    <paragraph>
      There are no specific security issues with this Enumservice. However, the general considerations of Section 6 of <xref type="rfc" data="rfc4355"/> apply.
    </paragraph>
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc4355"/> (updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
</record>
The MMS Architecture describes an interface between the MMSE and "legacy messaging systems" (labelled as MM3) that accepts "standard" SMTP messages. Thus, although the MMS Relay Server that supports this interface appears as a standard SMTP server from the perspective of an Internet-based mail server, it acts as a gateway and translator, adding the internal state data that is used within and between the MMS Environments. This mechanism is described in [17], which also includes references to the specifications agreed by those bodies responsible for the design of the MMS.

References are contained in <xref type="rfc" data="rfc4355"/>.
4.13. mms:tel

<record>
<!-- mms:tel -->
<class>Application-Based, Common</class>
<type>mms</type>
<subtype>tel</subtype>
<urischeme>tel</urischeme>
<functionalspec>
  <paragraph>
  This Enumservice indicates that the resource identified by the associated URI is capable of receiving a message using the Multimedia Messaging Service (MMS) [15].
  </paragraph>
  <paragraph>
  References are contained in <xref type="rfc" data="rfc4355"/>
  </paragraph>
</functionalspec>
<security>
  <paragraph>
  There are no specific security issues with this Enumservice. However, the general considerations of Section 6 of <xref type="rfc" data="rfc4355"/> apply.
  </paragraph>
</security>
<usage>COMMON</usage>
<registrationdocs>
  <xref type="rfc" data="rfc4355"/> (updated by RFC 6118)
  <xref type="rfc" data="RFC 6118"/>
</registrationdocs>
<requesters>
  <xref type="person" data="Rudolf_Brandner"/>
  <xref type="person" data="Lawrence_Conroy"/>
  <xref type="person" data="Richard_Stastny"/>
</requesters>
<additionalinfo>
  <paragraph>
  Note that MMS can be used as an alternative to deliver an SMS RP-DATA RPDU if, for example, the SMS bearer is not supported. If an entry includes this Enumservice, then in effect this can be taken as implying that the recipient is capable of receiving EMS or SMS messages at this address. Such choices on the end system design do have two small caveats; whilst in practice all terminals supporting MMS today support SMS as well, it might not necessarily be the case in the future, and there may
be tariff differences in using the MMS rather than using the SMS or EMS.
</paragraph>
</additionalinfo>
</record>

4.14.  pres

<record>
  <!-- pres -->
  <class>Application-Based, Common</class>
  <type>pres</type>
  <!-- No subtype -->
  <urischeme>pres</urischeme>
  <functionalspec>
    See <xref type="rfc" data="rfc3953"/>, Section 4.
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc3953"/>, Section 6.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc3953"/>(updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Jon_Peterson"/>
  </requesters>
  <additionalinfo>
    <paragraph>
      See <xref type="rfc" data="rfc3953"/>, Section 3.
    </paragraph>
  </additionalinfo>
</record>
4.15. pstn:sip

<record>
  <!-- pstn:sip -->
  <class>Application-Based, Common</class>
  <type>pstn</type>
  <subtype>sip</subtype>
  <urischeme>sip</urischeme>
  <functionalspec>
    <paragraph>
      These Enumservices indicate that the resource identified can be addressed by the associated URI in order to initiate a telecommunication session, which may include two-way voice or other communications, to the PSTN.
    </paragraph>
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc4769"/>, Section 7.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc4769"/> (updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Jason_Livingood"/>
    <xref type="person" data="Richard_Shockey"/>
  </requesters>
  <additionalinfo>
    <paragraph>
      A Number Portability Dip Indicator (npdi) should be used in practice (see <xref type="rfc" data="rfc4769"/>, Section 4).
    </paragraph>
  </additionalinfo>
</record>
4.16.  pstn:tel

<record>
  <!-- pstn:tel -->
  <class>Application-Based, Ancillary</class>
  <type>pstn</type>
  <subtype>tel</subtype>
  <urischeme>tel</urischeme>
  <functionalspec>
    <paragraph>
      These Enumservices indicate that the resource identified can be addressed by the associated URI in order to initiate a telecommunication session, which may include two-way voice or other communications, to the PSTN. These URIs may contain number portability data as specified in RFC4694 [10].
    </paragraph>
    <paragraph>
      References are contained in <xref type="rfc" data="rfc4769"/>. 
    </paragraph>
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc4769"/>
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc4769"/>(updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Jason_Livingood"/>
    <xref type="person" data="Richard_Shockey"/>
  </requesters>
  <additionalinfo>
    <paragraph>
      A Number Portability Dip Indicator (npdi) should be used in practice (see <xref type="rfc" data="rfc4769"/>
    </paragraph>
  </additionalinfo>
</record>
4.17. sip

<record>
  <!-- sip -->
  <class>Protocol-Based</class>
  <type>sip</type>
  <!-- No subtype -->
  <urischeme>sip</urischeme>
  <urischeme>sips</urischeme>
  <functionalspec>
    See <xref type="rfc" data="rfc3764"/>
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc3764"/>
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc3764"/>
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Jon_Peterson"/>
  </requesters>
  <additionalinfo>
    <paragraph>
      See <xref type="rfc" data="rfc3764"/>
    </paragraph>
  </additionalinfo>
</record>
4.18. sms:mailto

<record>
  <!-- sms:mailto -->
  <class>Application-Based, Common</class>
  <type>sms</type>
  <subtype>mailto</subtype>
  <urischeme>mailto</urischeme>
  <functionalspec>
    <paragraph>
      This Enumservice indicates that the resource identified by the associated URI is capable of receiving a message using an email protocol.
    </paragraph>
    <paragraph>
      SMS content is sent over SMTP using the format specified by TS 23.140 [15] Section 8.4.4 and TS 26.140 [16] Section 4, as an MMS message. Within such a message, SMS content is carried as either a text or application/octet-stream MIME sub-part (see TS 26.140 [16], Section 4.1)
    </paragraph>
    <paragraph>
      References are contained in <xref type="rfc" data="rfc4355"/>.
    </paragraph>
  </functionalspec>
  <security>
    <paragraph>
      There are no specific security issues with this Enumservice. However, the general considerations of Section 6 of <xref type="rfc" data="rfc4355"/> apply.
    </paragraph>
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc4355"/> (updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Rudolf_Brandner"/>
    <xref type="person" data="Lawrence_Conroy"/>
    <xref type="person" data="Richard_Stastny"/>
  </requesters>
</record>
4.19. sms:tel

<record>
  <!-- sms:tel -->
  <class>Application-Based, Common</class>
  <type>sms</type>
  <subtype>tel</subtype>
  <urischeme>tel</urischeme>
  <functionalspec>
    <paragraph>
    This Enumservice indicates that the resource
    identified by the associated URI is capable
    of receiving a message using the Short Message
    Service (SMS) [14].
    </paragraph>
    <paragraph>
    References are contained in <xref type="rfc" data="rfc4355"/>.
    </paragraph>
  </functionalspec>
  <security>
    <paragraph>
    There are no specific security issues with this
    Enumservice. However, the general considerations of
    Section 6 of <xref type="rfc" data="rfc4355"/> apply.
    </paragraph>
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc4355"/> (updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Rudolf_Brandner"/>
    <xref type="person" data="Lawrence_Conroy"/>
    <xref type="person" data="Richard_Stastny"/>
  </requesters>
</record>
4.20. unifmsg:http

<record>
  <!-- unifmsg:http -->
  <class>Application-Based, Common</class>
  <type>unifmsg</type>
  <subtype>http</subtype>
  <urischeme>http</urischeme>
  <functionalspec>
    <paragraph>
      This Enumservice indicates that the resource identified by
      the associated URI scheme is capable of being a source of
      information.
    </paragraph>
    <paragraph>
      Note that the kind of information retrieved can be manifold.
      provides a document. This document can contain references
      that will trigger the download of many different kinds of
      information, such as text, audio, video, executable code, or
      even video message files. Thus, one cannot be more specific
      about the kind of information expected when contacting the
      resource.
    </paragraph>
    <paragraph>
      References are contained in <xref type="rfc" data="rfc5278"/>.
    </paragraph>
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc5278"/>, Section 3.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc5278"/> (updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Jason_Livingood"/>
    <xref type="person" data="Don_Troshynski"/>
  </requesters>
  <additionalinfo>
    <paragraph>
      Implementers should review a non-exclusive list of examples
      in Section 7 of <xref type="rfc" data="rfc5278"/>.
    </paragraph>
  </additionalinfo>
</record>
4.21. unifmsg:https

<record>
  <!-- unifmsg:https -->
  <class>Application-Based, Common</class>
  <type>unifmsg</type>
  <subtype>https</subtype>
  <urischeme>https</urischeme>
  <functionalspec>
    <paragraph>
      This Enumservice indicates that the resource identified by
      the associated URI scheme is capable of being a source of
      information, which can be contacted using TLS or the Secure
      Socket Layer protocol.
    </paragraph>
    <paragraph>
      Note that the kind of information retrieved can be manifold.
      Usually, contacting a resource by an ‘https’ [12] URI
      provides a document. This document can contain references
      that will trigger the download of many different kinds of
      information, such as text, audio, video, executable code, or
      even video message files. Thus, one cannot be more specific
      about the kind of information expected when contacting the
      resource.
    </paragraph>
    <paragraph>
      References are contained in <xref type="rfc" data="rfc5278"/>.
    </paragraph>
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc5278"/>, Section 3.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc5278"/>(updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Jason_Livingood"/>
    <xref type="person" data="Don_Troshynski"/>
  </requesters>
  <additionalinfo>
    <paragraph>
      Implementers should review a non-exclusive list of examples
      in Section 7 of <xref type="rfc" data="rfc5278"/>.
    </paragraph>
  </additionalinfo>
</record>
4.22. unifmsg:sip

    <record>
    <!-- unifmsg:sip -->
    <class>Application-Based, Common</class>
    <type>unifmsg</type>
    <subtype>sip</subtype>
    <urischeme>sip</urischeme>
    <functionalspec>
        <paragraph>
            This Enumservice indicates that the resource identified can
            be addressed by the associated URI scheme in order to
            initiate a unified communication session to a unified
            messaging system.
        </paragraph>
    </functionalspec>
    <security>
        See <xref type="rfc" data="rfc5278"/>
    </security>
    <usage>COMMON</usage>
    <registrationdocs>
        <xref type="rfc" data="rfc5278"/>
        <xref type="rfc" data="RFC 6118"/>
    </registrationdocs>
    <requesters>
        <xref type="person" data="Jason_Livingood"/>
        <xref type="person" data="Don_Troshynski"/>
    </requesters>
    <additionalinfo>
        <paragraph>
            Implementers should review a non-exclusive list of examples
            in Section 7 of <xref type="rfc" data="rfc5278"/>.
        </paragraph>
    </additionalinfo>
    </record>
4.23. unifmsg:sips

<record>
  <!-- unifmsg:sips -->
  <class>Application-Based, Common</class>
  <type>unifmsg</type>
  <subtype>sips</subtype>
  <urischeme>sips</urischeme>
  <functionalspec>
    <paragraph>
      This Enumservice indicates that the resource identified can
      be addressed by the associated URI scheme in order to
      initiate a unified communication session to a unified
      messaging system.
    </paragraph>
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc5278"/>
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc5278"/>
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Jason_Livingood"/>
    <xref type="person" data="Don_Troshynski"/>
  </requesters>
  <additionalinfo>
    <paragraph>
      Implementers should review a non-exclusive list of examples
      in Section 7 of <xref type="rfc" data="rfc5278"/>.
    </paragraph>
  </additionalinfo>
</record>
4.24. vcard

<record>
  <!-- vcard -->
  <class>Data Type-Based</class>
  <type>vcard</type>
  <!-- No subtype -->
  <urischeme>http</urischeme>
  <urischeme>https</urischeme>
  <functionalspec>
    <paragraph>
      This Enumservice indicates that the resource identified is a plain vCard, according to RFC2426, which may be accessed using HTTP / HTTPS [7].
    </paragraph>
    <paragraph>
      Clients fetching the vCard from the resource indicated should expect access to be restricted. Additionally, the comprehension of the data provided may vary depending on the client’s identity.
    </paragraph>
    <paragraph>
      References are contained in <xref type="rfc" data="rfc4969"/>.
    </paragraph>
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc4969"/>, Section 5.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc4969"/> (updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Alexander_Mayrhofer"/>
  </requesters>
</record>
4.25. videomsg:http

<record>
<!-- videomsg:http -->
<class>Application-Based, Common</class>
<type>videomsg</type>
<subtype>http</subtype>
<urischeme>http</urischeme>
<functionalspec>
  <paragraph>
  This Enumservice indicates that the resource identified by
  the associated URI scheme is capable of being a source of
  information.
  </paragraph>
  <paragraph>
  Note that the kind of information retrieved can be manifold.
  provides a document. This document can contain references
  that will trigger the download of many different kinds of
  information, such as text, audio, video, executable code, or
  even video message files. Thus, one cannot be more specific
  about the kind of information expected when contacting the
  resource.
  </paragraph>
  <paragraph>
  References are contained in <xref type="rfc" data="rfc5278"/>.
  </paragraph>
</functionalspec>
<security>
  See <xref type="rfc" data="rfc5278"/>, Section 3.
</security>
<usage>COMMON</usage>
<registrationdocs>
  <xref type="rfc" data="rfc5278"/> (updated by RFC 6118)
  <xref type="rfc" data="RFC 6118"/>
</registrationdocs>
<requesters>
  <xref type="person" data="Jason_Livingood"/>
  <xref type="person" data="Don_Troshynski"/>
</requesters>
<additionalinfo>
  <paragraph>
  Implementers should review a non-exclusive list of examples
  in Section 7 of <xref type="rfc" data="rfc5278"/>.
  </paragraph>
</additionalinfo>
</record>
4.26. videomsg:https

<record>
<!-- videomsg:https -->
<class>Application-Based, Common</class>
$type>videomsg</type>
$subtype>https</subtype>
$urischeme>https</urischeme>
$functionalspec>
   <paragraph>This Enumservice indicates that the resource identified by the associated URI scheme is capable of being a source of information, which can be contacted using TLS or the Secure Socket Layer protocol.\n</paragraph>
   <paragraph>Note that the kind of information retrieved can be manifold. Usually, contacting a resource by an ‘https:’ [12] URI provides a document. This document can contain references that will trigger the download of many different kinds of information, such as text, audio, video, executable code, or even video message files. Thus, one cannot be more specific about the kind of information expected when contacting the resource.\n</paragraph>
   <paragraph>References are contained in $xref type="rfc" data="rfc5278"/>.\n</paragraph>
$functionalspec>
$security>
   <xref type="rfc" data="rfc5278"/>, Section 3.\n$security>
$usage>COMMON</usage>
$registrationdocs>
   $xref type="rfc" data="rfc5278"/>(updated by RFC 6118)\n$registrationdocs>
$requesters>
   $xref type="person" data="Jason_Livingood"/>\n$registrationdocs>
   $xref type="person" data="Don_Troshynski"/>\n$requesters>
$additionalinfo>
   <paragraph>Implementers should review a non-exclusive list of examples in Section 7 of $xref type="rfc" data="rfc5278"/>.\n</paragraph>
$additionalinfo>
</record>
4.27. videomsg:sip

<record>
  <!-- videomsg:sip -->
  <class>Application-Based, Common</class>
  <type>videomsg</type>
  <subtype>sip</subtype>
  <urischeme>sip</urischeme>
  <functionalspec>
    <paragraph>
      This Enumservice indicates that the resource identified can be addressed by the associated URI scheme in order to initiate a video communication session to a video messaging system.
    </paragraph>
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc5278" />, Section 3.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc5278"/> (updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Jason_Livingood"/>
    <xref type="person" data="Don_Troshynski"/>
  </requesters>
  <additionalinfo>
    <paragraph>
      Implementers should review a non-exclusive list of examples in Section 7 of <xref type="rfc" data="rfc5278"/>.
    </paragraph>
  </additionalinfo>
</record>
4.28. videomsg:sips

<record>
   <!-- videomsg:sips -->
   <class>Application-Based, Common</class>
   <type>videomsg</type>
   <subtype>sips</subtype>
   <urischeme>sips</urischeme>
   <functionalspec>
      <paragraph>
         This Enumservice indicates that the resource identified can
         be addressed by the associated URI scheme in order to
         initiate a video communication session to a video messaging
         system.
      </paragraph>
   </functionalspec>
   <security>
      See <xref type="rfc" data="rfc5278"/> , Section 3.
   </security>
   <usage>COMMON</usage>
   <registrationdocs>
      <xref type="rfc" data="rfc5278"/> (updated by RFC 6118)
      <xref type="rfc" data="RFC 6118"/>
   </registrationdocs>
   <requesters>
      <xref type="person" data="Jason_Livingood"/>
      <xref type="person" data="Don_Troshynski"/>
   </requesters>
   <additionalinfo>
      <paragraph>
         Implementers should review a non-exclusive list of examples
         in Section 7 of <xref type="rfc" data="rfc5278"/> .
      </paragraph>
   </additionalinfo>
</record>
4.29. voice:tel

<record>
<!-- voice:tel -->
<class>Application-Based, Common</class>
?type>voice</type>
<subtype>tel</subtype>
<urischeme>tel</urischeme>
<functionalspec>
  <paragraph>
  The kind of communication indicated by this Enumservice is "Interactive Voice". From a protocol perspective, this communication is expected to involve bidirectional media streams carrying audio data.
  </paragraph>
  <paragraph>
  A client may imply that the person controlling population of a NAPTR holding this Enumservice indicates their capability to engage in an interactive voice session when contacted using the URI generated by this NAPTR.
  </paragraph>
</functionalspec>
<security>
  See <xref type="rfc" data="rfc4415"/>, Section 5.
</security>
<usage>COMMON</usage>
<registrationdocs>
  <xref type="rfc" data="rfc4415"/> (updated by RFC 6118)
  <xref type="rfc" data="RFC 6118"/>
</registrationdocs>
<requesters>
  <xref type="person" data="Rudolf_Brandner"/>
  <xref type="person" data="Lawrence_Conroy"/>
  <xref type="person" data="Richard_Stastny"/>
</requesters>
<additionalinfo>
  <paragraph>
  This Enumservice indicates that the person responsible for the NAPTR is accessible via the PSTN (Public Switched Telephone Network) or PLMN (Public Land Mobile Network) using the value of the generated URI.
  </paragraph>
  <paragraph>The kind of subsystem required to initiate a Voice Enumservice with this Subtype is a "Dialler". This is a subsystem that either provides a local...
connection to the PSTN or PLMN, or that provides an indirect connection to those networks. The subsystem will use the telephone number held in the generated URI to place a voice call. The voice call is placed to a network that uses E.164 numbers to route calls to an appropriate destination.

Note that the PSTN/PLMN connection may be indirect. The end user receiving this NAPTR may have a relationship with a Communications Service Provider that accepts call initiation requests from that subsystem using an IP-based protocol such as SIP or H.323, and places the call to the PSTN using a remote gateway service. In this case, the Provider may either accept requests using "tel:" URIs or has a defined mechanism to convert "tel:" URI values into a "protocol-native" form.

The "tel:" URI value SHOULD be fully qualified (using the "global phone number" form of RFC 3966 [10]). A "local phone number" as defined in that document SHOULD NOT be used unless the controller of the zone in which the NAPTR appears is sure that it can be distinguished unambiguously by all clients that can access the resource record and that a call from their network access points can be routed to that destination.

References are contained in <xref type="rfc" data="rfc4415"/>.

</additionalinfo>
</record>
4.30. voicemsg:http

        <!-- voicemsg:http -->
        <record>
            <class>Application-Based, Common</class>
            <type>voicemsg</type>
            <subtype>http</subtype>
            <urischeme>http</urischeme>
            <functionalspec>
                <paragraph>
                    This Enumservice indicates that the resource identified by
                    the associated URI scheme is capable of being a source of
                    information.
                </paragraph>
                <paragraph>
                    Note that the kind of information retrieved can be manifold.
                    provides a document. This document can contain references
                    that will trigger the download of many different kinds of
                    information, such as text, audio, video, executable code, or
                    even voice message files. Thus, one cannot be more specific
                    about the kind of information expected when contacting the
                    resource.
                </paragraph>
                <paragraph>
                    References are contained in <xref type="rfc" data="rfc5278"/>.
                </paragraph>
            </functionalspec>
            <security>
                See <xref type="rfc" data="rfc5278"/>, Section 3.
            </security>
            <usage>COMMON</usage>
            <registrationdocs>
                <xref type="rfc" data="rfc5278"/> (updated by RFC 6118)
                <xref type="rfc" data="RFC 6118"/>
            </registrationdocs>
            <requesters>
                <xref type="person" data="Jason_Livingood"/>
                <xref type="person" data="Don_Troshynski"/>
            </requesters>
            <additionalinfo>
                <paragraph>
                    Implementers should review a non-exclusive list of examples
                    in Section 7 of <xref type="rfc" data="rfc5278"/>.
                </paragraph>
            </additionalinfo>
        </record>
4.31. voicemsg:https

<record>
  <!-- voicemsg:https -->
  <class>Application-Based, Common</class>
  <type>voicemsg</type>
  <subtype>https</subtype>
  <urischeme>https</urischeme>
  <functionalspec>
    <paragraph>
      This Enumservice indicates that the resource identified by
      the associated URI scheme is capable of being a source of
      information, which can be contacted using TLS or the Secure
      Socket Layer protocol.
    </paragraph>
    <paragraph>
      Note that the kind of information retrieved can be manifold.
      Usually, contacting a resource by an ‘https:’ [12] URI
      provides a document. This document can contain references
      that will trigger the download of many different kinds of
      information, such as text, audio, video, executable code, or
      even voice message files. Thus, one cannot be more specific
      about the kind of information expected when contacting the
      resource.
    </paragraph>
    <paragraph>
      References are contained in <xref type="rfc" data="rfc5278"/>.
    </paragraph>
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc5278"/>, Section 3.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc5278"/>(updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Jason_Livingood"/>
    <xref type="person" data="Don_Troshynski"/>
  </requesters>
  <additionalinfo>
    <paragraph>
      Implementers should review a non-exclusive list of examples
      in Section 7 of <xref type="rfc" data="rfc5278"/>.
    </paragraph>
  </additionalinfo>
</record>
4.32. voicemsg:sip

<record>
  <!-- voicemsg:sip -->
  <class>Application-Based, Common</class>
  <type>voicemsg</type>
  <subtype>sip</subtype>
  <urischeme>sip</urischeme>
  <functionalspec>
    <paragraph>
      This Enumservice indicates that the resource identified can be addressed by the associated URI scheme in order to initiate a voice communication session to a voice messaging system.
    </paragraph>
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc5278"/>, Section 3.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc5278"/> (updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Jason_Livingood"/>
    <xref type="person" data="Don_Troshynski"/>
  </requesters>
  <additionalinfo>
    <paragraph>
      Implementers should review a non-exclusive list of examples in Section 7 of <xref type="rfc" data="rfc5278"/>.
    </paragraph>
  </additionalinfo>
</record>
4.33. voicemsg:sips

    <record>
    <!-- voicemsg:sips -->
    <class>Application-Based, Common</class>
    <type>voicemsg</type>
    <subtype>sips</subtype>
    <urischeme>sips</urischeme>
    <functionalspec>
        <paragraph>
        This Enumservice indicates that the resource identified can
        be addressed by the associated URI scheme in order to
        initiate a voice communication session to a voice messaging
        system.
        </paragraph>
    </functionalspec>
    <security>
        See <xref type="rfc" data="rfc5278" />, Section 3.
    </security>
    <usage>COMMON</usage>
    <registrationdocs>
        <xref type="rfc" data="rfc5278"/> (updated by RFC 6118)
        <xref type="rfc" data="RFC 6118"/>
    </registrationdocs>
    <requesters>
        <xref type="person" data="Jason_Livingood"/>
        <xref type="person" data="Don_Troshynski"/>
    </requesters>
    <additionalinfo>
        <paragraph>
        Implementers should review a non-exclusive list of examples
        in Section 7 of <xref type="rfc" data="rfc5278"/>.
        </paragraph>
    </additionalinfo>
    </record>
4.34. voicemsg:tel

<record>
  <!-- voicemsg:tel -->
  <class>Application-Based, Common</class>
  <type>voicemsg</type>
  <subtype>tel</subtype>
  <urischeme>tel</urischeme>
  <functionalspec>
    <paragraph>
      This Enumservice indicates that the resource identified can be addressed by the associated URI scheme in order to initiate a voice communication session to a voice messaging system.
    </paragraph>
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc5278" />, Section 3.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc5278" /> (updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Jason_Livingood"/>
    <xref type="person" data="Don_Troshynski"/>
  </requesters>
  <additionalinfo>
    <paragraph>
      Implementers should review a non-exclusive list of examples in Section 7 of <xref type="rfc" data="rfc5278"/>.
    </paragraph>
  </additionalinfo>
</record>
4.35. vpim:ldap

  <!-- vpim:ldap -->
  <record>
  <class>Data Type-Based</class>
  <type>vpim</type>
  <subtype>ldap</subtype>
  <urischeme>ldap</urischeme>
  <functionalspec>
    See <xref type="rfc" data="rfc4238"/>, Section 3.2 - 3.3.
  </functionalspec>
  <security>
    <paragraph>
      Malicious Redirection:
      One of the fundamental dangers related to any service such as this is that a malicious entry in a resolver's database will cause clients to resolve the E.164 into the wrong LDAP URI. The possible intent may be to cause the client to connect to a rogue LDAP server and retrieve (or fail to retrieve) a resource containing fraudulent or damaging information.
    </paragraph>
    <paragraph>
      Denial of Service:
      By removing the URI to which the E.164 maps, a malicious intruder may remove the client’s ability to access the LDAP directory server.
    </paragraph>
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc4238"/> (updated by RFC 6118)
    <xref type="rfc" data="RFC 6118"/> (updated by RFC 6118)
  </registrationdocs>
  <requesters>
    <xref type="person" data="Greg_Vaudreuil"/>
  </requesters>
  </record>
4.36. vpim:mailto

<!-- vpim:mailto -->
<class>Data Type-Based</class>
<type>vpim</type>
<subtype>mailto</subtype>
<urischeme>mailto</urischeme>

<functionalspec>
See <xref type="rfc" data="rfc4238"/>
</functionalspec>

<security>

Malicious Redirection:
One of the fundamental dangers related to any service such as this is that a malicious entry in a resolver’s database will cause clients to resolve the E.164 into the wrong email URI. The possible intent may be to cause the client to send the information to an incorrect destination.

Denial of Service:
By removing the URI to which the E.164 maps, a malicious intruder may remove the client’s ability to access the resource.

Unsolicited Bulk Email:
The exposure of email addresses through the ENUM service provides a bulk mailer access to large numbers of email addresses where only the telephone number was previously known.

</security>

<usage>COMMON</usage>

<registrationdocs>
<xref type="rfc" data="rfc4238"/>
<xref type="rfc" data="RFC 6118"/>
</registrationdocs>

<requesters>
<xref type="person" data="Greg_Vaudreuil"/>
</requesters>

<additionalinfo>

Error Conditions:
</additionalinfo>
E.164 number not in the numbering plan
</paragraph>
E.164 number in the numbering plan, but no
URIs exist for that number
</paragraph>
E2U+vpim:mailto Service unavailable of email
addresses where only the telephone number was
previously known.
</paragraph>
</additionalinfo>
</record>
This Enumservice indicates that the resource identified by the associated URI is capable of being a source of information. It has to be noted that the kind of information retrieved can be manifold. Usually, contacting a resource by an "http:" URI provides a document. This document can contain references that will trigger download of many different kinds of information, like audio or video or executable code. Thus, one cannot be more specific about the kind of information that can be expected when contacting the resource.
4.38. web:https

<record>
 <!-- web:https -->
<class>Application-Based, Common</class>
<type>web</type>
<subtype>https</subtype>
<urischeme>https</urischeme>
<functionalspec>
  <paragraph>
  This Enumservice indicates that the resource identified by the associated URI is capable of being a source of information, which can be contacted by using TLS or the Secure Socket Layer protocol. It has to be noted that the kind of information retrieved can be manifold. Usually, contacting a resource by an "https:" URI provides a document. This document can contain all different kinds of information, like audio or video or executable code. Thus, one cannot be more specific what information to expect when contacting the resource.
  </paragraph>
</functionalspec>
<security>
  See <xref type="rfc" data="rfc4002" />, Section 5.
</security>
<usage>COMMON</usage>
<registrationdocs>
  <xref type="rfc" data="rfc4002" /> (updated by RFC 6118)
  <xref type="rfc" data="RFC 6118" />
</registrationdocs>
<requesters>
  <xref type="person" data="Rudolf_Brandner"/>
  <xref type="person" data="Lawrence_Conroy"/>
  <xref type="person" data="Richard_Stastny"/>
</requesters>
</record>
4.39. xmpp

<record>
   <!-- xmpp -->
   <class>Protocol-Based</class>
   <type>xmpp</type>
   <!-- No subtype -->
   <urischeme>xmpp</urischeme>
   <functionalspec>
      <paragraph>
         This Enumservice indicates that the resource identified is an XMPP entity.
      </paragraph>
   </functionalspec>
   <security>
      See <xref type="rfc" data="rfc4979"/>
   </security>
   <usage>COMMON</usage>
   <registrationdocs>
      <xref type="rfc" data="rfc4979"/>
      <xref type="rfc" data="RFC 6118"/>
   </registrationdocs>
   <requesters>
      <xref type="person" data="Alexander_Mayrhofer"/>
   </requesters>
</record>

5. IANA Considerations

IANA replaced all legacy Enumservice Registrations as per Section 4.

6. Security Considerations

Since this document does not introduce any technology or protocol, there are no security issues to be considered for this document itself.

7. Acknowledgements

The authors would like to thank the following people who have provided feedback or significant contributions to the development of this document: Jari Arkko, Scott Bradner, Gonzalo Camarillo, Alfred Hoenes, Ari Keranen, and Alexey Melnikov.
8. References

8.1. Normative References


8.2. Informative References

Appendix A. Former Content of the IANA Repository

Enumservice Registrations

(last updated 2009-10-13)

Registries included below:
- Enumservice Registrations

Registry Name: Enumservice Registrations
Reference: [RFC3761]
Registration Procedures: Require an RFC approved by the IESG

Note:
Enumservice specifications contain the functional specification (i.e. what it can be used for), the valid protocols, and the URI schemes that may be returned.

Registry:
Service Name: "H323"
URI Scheme(s): "h323:"
Functional Specification:
   See Section "3. The E2U+H323 ENUM Service" of [RFC3762]
Security considerations:
   see section "5. Security Considerations" of [RFC3762]
Intended usage: COMMON
Author: Orit Levin
[RFC3762]

Service Name: "SIP"
Type(s): "SIP"
Subtype(s): N/A
URI Scheme(s): "sip", "sips:"
Functional Specification: see Section 4 of [RFC3764]
Security considerations: see Section 6 of [RFC3764]
Intended usage: COMMON
Author: Jon Peterson (jon.peterson@neustar.biz)
Any other information that the author deems interesting:
   see Section 3 of [RFC3764]
[RFC3764]
Service Name: "ifax"
Type: "ifax"
Subtype: "mailto"
URI Scheme: "mailto"

The URI Scheme is "mailto" because facsimile is a profile of
standard Internet mail and uses standard Internet mail
addressing.

Functional Specification: see section 1 of [RFC4143]
Security Considerations: see section 3 of [RFC4143]
Intended usage: COMMON
Author: Kiyoshi Toyoda(toyoda.kiyoshi@jp.panasonic.com)
        Dave Crocker(dcrocker@brandenburg.com)

[ RFC4143 ]

Service Name: "pres"
URI Scheme(s): "pres:"

Functional Specification: see Section 4 of [RFC3953]
Security considerations: see Section 6 of [RFC3953]
Intended usage: COMMON
Author: Jon Peterson (jon.peterson@neustar.biz)
Any other information that the author deems interesting:
See Section 3 of [RFC3953]

[ RFC3953 ]

Service Name: "web"
Type: "web"
Subtype: "http"
URI Scheme: 'http:'

Functional Specification:
This ENUMservice indicates that the resource identified by the
associated URI scheme is capable of being a source of
information. It has to be noted that the kind of information
retrieved can be manifold. Usually, contacting a resource by an
'http:' URI provides a document. This document can contain
references that will trigger download of many different kinds
of information, like audio or video or executable code. Thus,
one can not be more specific about the kind of information that
can be expected when contacting the resource.

Security Considerations:
See section 5 of [RFC4002].
Intended Usage: COMMON
Authors:
        Rudolf Brandner (rudolf.brandner@siemens.com)
        Lawrence Conroy (lwc@roke.co.uk)
        Richard Stastny (richard.stastny@oefeg.at)
Any other information the author deems interesting: None

[ RFC4002 ]
Service Name: "web"
Type: "web"
Subtype: "https"
URI Scheme: 'https:'
Functional Specification:
This ENUMservice indicates that the resource identified by the associated URI scheme is capable of being a source of information, which can be contacted by using TLS or Secure Socket Layer protocol. It has to be noted that the kind of information retrieved can be manifold. Usually, contacting a resource by an 'https:' URI provides a document. This document can contain all different kind of information, like audio or video or executable code. Thus, one can not be more specific what information to expect when contacting the resource.

Security Considerations:
See section 5 of [RFC4002].

Intended Usage: COMMON

Authors:
Rudolf Brandner (rudolf.brandner@siemens.com)
Lawrence Conroy (lwc@roke.co.uk)
Richard Stastny (richard.stastny@oefeg.at)

Any other information the author deems interesting: None

Service Name: "ft"
Type: "ft"
Subtype: "ftp"
URI Scheme: 'ftp:'
Functional Specification:
This ENUMservice indicates that the resource identified by the associated URI scheme is a file service from which a file or file listing can be retrieved.

Security Considerations:
See section 5 of [RFC4002].

Intended Usage: COMMON

Authors:
Rudolf Brandner (rudolf.brandner@siemens.com)
Lawrence Conroy (lwc@roke.co.uk)
Richard Stastny (richard.stastny@oefeg.at)

Any other information the author deems interesting: None
Enumservice Name: "email"
Enumservice Type: "email"
Enumservice Subtype: "mailto"
URI Scheme: ‘mailto:’
Functional Specification:
This Enumservice indicates that the remote resource can be addressed by the associated URI scheme in order to send an email.
Security Considerations:
See Section 6 of [RFC4355]
Intended Usage: COMMON
Authors:
Rudolf Brandner, Lawrence Conroy, Richard Stastny (for author contact detail see [RFC4355])
Any other information the author deems interesting:
None

Enumservice Name: "fax"
Enumservice Type: "fax"
Enumservice Subtype: "tel"
URI Scheme: ‘tel:’
Functional Specification:
This Enumservice indicates that the resource identified by the associated URI scheme is capable of being contacted to provide a communication session during which facsimile documents can be sent.
A client selecting this NAPTR will have support for generating and sending facsimile documents to the recipient using the PSTN session and transfer protocols specified in [12] and [13] in [RFC4355] - in short, they will have a fax program with a local or shared PSTN access over which they can send faxes.
Security Considerations:
See Section 6 of [RFC4355]
Intended Usage: COMMON
Authors:
Rudolf Brandner, Lawrence Conroy, Richard Stastny (for author contact detail see [RFC4355])
Any other information the author deems interesting:
None
Enumservice Name: "sms"
Enumservice Type: "sms"
Enumservice Subtypes: "tel"
URI Scheme: 'tel:'

Functional Specification:
This Enumservice indicates that the resource identified by the associated URI scheme is capable of receiving a message using the Short Message Service (SMS) [14] in [RFC4355].

Security Considerations:
There are no specific security issues with this Enumservice. However, the general considerations of Section 6 apply.

Intended Usage: COMMON

Authors:
Rudolf Brandner, Lawrence Conroy, Richard Stastny (for author contact detail see [RFC4355])

Any other information the author deems interesting:
None

Enumservice Name: "sms"
Enumservice Type: "sms"
Enumservice Subtypes: "mailto"
URI Scheme: 'mailto:'

Functional Specification:
This Enumservice indicates that the resource identified by the associated URI scheme is capable of receiving a message using an email protocol.

SMS content is sent over SMTP using the format specified by TS 23.140 [15] section 8.4.4 and TS 26.140 [16] section 4 (for references see [RFC4355]), as an MMS message. Within such a message, SMS content is carried as either a text or application/octet-stream MIME sub-part (see TS 26.140 [16], section 4.1)

For references see [RFC4355].

Security Considerations:
There are no specific security issues with this Enumservice. However, the general considerations of Section 6 apply, see [RFC4355].

Intended Usage: COMMON

Authors:
Rudolf Brandner, Lawrence Conroy, Richard Stastny (for author contact detail see [RFC4355])

Any other information the author deems interesting:
None
Enumservice Name: "ems"
Enumservice Type: "ems"
Enumservice Subtype: "tel"
URI Scheme: 'tel:'
Functional Specification:
This Enumservice indicates that the resource identified by the associated URI scheme is capable of receiving a message using the Enhanced Message Service (EMS) [14] (For reference see [RFC4355]).
Security Considerations:
There are no specific security issues with this Enumservice. However, the general considerations of Section 6 apply.
See [RFC4355]
Intended Usage: COMMON
Authors:
Rudolf Brandner, Lawrence Conroy, Richard Stastny (for author contact detail see [RFC4355])
Any other information the author deems interesting:
Note that an indication of EMS can be taken as implying that the recipient is capable of receiving SMS messages at this address as well.

Enumservice Name: "ems"
Enumservice Type: "ems"
Enumservice Subtypes: "mailto"
URI Scheme: 'mailto:'
Functional Specification:
This Enumservice indicates that the resource identified by the associated URI scheme is capable of receiving a message using an email protocol.
EMS content is sent over SMTP using the format specified by TS 23.140 [15] section 8.4.4 and TS 26.140 [16] section 4, as an MMS message. Within such a message, EMS content is carried as either a text or application/octet-stream MIME sub-part (see TS 26.140 [16], section 4.1).
For references see [RFC4355]
Security Considerations:
There are no specific security issues with this Enumservice. However, the general considerations of Section 6 of [RFC4355] apply.
Intended Usage: COMMON
Authors:
Rudolf Brandner, Lawrence Conroy, Richard Stastny (for author contact detail see [RFC4355])
Any other information the author deems interesting:
None
Enumservice Name: "mms"
Enumservice Type: "mms"
Enumservice Subtype: "tel"
URI Scheme: 'tel:'

Functional Specification:
This Enumservice indicates that the resource identified by the associated URI scheme is capable of receiving a message using the Multimedia Messaging Service (MMS) [15].

For references see [RFC4355]

Security Considerations:
There are no specific security issues with this Enumservice. However, the general considerations of Section 6 of [RFC4355] apply.

Intended Usage: COMMON

Authors:
Rudolf Brandner, Lawrence Conroy, Richard Stastny (for author contact detail see [RFC4355])

Any other information the author deems interesting:
Note that MMS can be used as an alternative to deliver an SMS RP-DATA RPDU if, for example, the SMS bearer is not supported. If an entry includes this Enumservice, then in effect this can be taken as implying that the recipient is capable of receiving EMS or SMS messages at this address. Such choices on the end system design do have two small caveats; whilst in practice all terminals supporting MMS today support SMS as well, it might not necessarily be the case in the future, and there may be tariff differences in using the MMS rather than using the SMS or EMS.

Enumservice Name: "mms"
Enumservice Type: "mms"
Enumservice Subtypes: "mailto"
URI Scheme: 'mailto:'

Functional Specification:
This Enumservice indicates that the resource identified by the associated URI scheme is capable of receiving a message using an email protocol.

MMS messages are sent over SMTP using the format specified by TS 23.140 [15] section 8.4.4 and TS 26.140 [16] section 4. Within and between MMS Environments (MMSE, network infrastructures that support the MultiMedia Service), other pieces of state data (for example, charging-significant information) are exchanged between MMS Relay Servers. Thus, although these servers use SMTP as the "bearer" for their application exchanges, they map their internal state to specialised headers carried in the SMTP message exchanges. The headers used in such MMSE are described in detail in [17]. For references see [RFC4355]
Security Considerations:
There are no specific security issues with this Enumservice. However, the general considerations of Section 6 of [RFC4355] apply.

Intended Usage: COMMON

Authors:
Rudolf Brandner, Lawrence Conroy, Richard Stastny (for author contact detail see [RFC4355])

Any other information the author deems interesting:
The MMS Architecture describes an interface between the MMSE and "legacy messaging systems" (labelled as MM3) which accepts "standard" SMTP messages. Thus although the MMS Relay Server that supports this interface appears as a standard SMTP server from the perspective of an Internet-based mail server, it acts as a gateway and translator, adding the internal state data that is used within and between the MMS Environments. This mechanism is described in [17], which also includes references to the specifications agreed by those bodies responsible for the design of the MMS.

Service Name: E.164 to VPIM MailTo: URL
URI Type: "Mailto:"
Type: VPIM
Subtype: MAILTO
Functional Specification: See section 4.2 through 4.4 of [RFC4238]
Intended Usage: COMMON
Author: Greg Vaudreuil (gregv@ieee.org)

Error Conditions:
- E.164 number not in the numbering plan
- E.164 number in the numbering plan, but no URLs exist for that number
- E2U+VPIM:Mailto Service unavailable

Security Considerations:
- Malicious Redirection
  One of the fundamental dangers related to any service such as this is that a malicious entry in a resolver’s database will cause clients to resolve the E.164 into the wrong email URL. The possible intent may be to cause the client to send the information to an incorrect destination.
- Denial of Service
  By removing the URL to which the E.164 maps, a malicious intruder may remove the client’s ability to access the resource.
- Unsolicited Bulk Email
  The exposure of email addresses through the ENUM service provides a bulk mailer access to large numbers of email addresses where only the telephone number was previously known.
Service Name: E.164 to VPIM LDAP URL
   URI Type: "LDAP:"
   Type: VPIM
   Subtype: LDAP
   Functional Specification: See section 3.2 through 3.3 of [RFC4238]
   Intended Usage: COMMON
   Author: Greg Vaudreuil (gregv@ieee.org)
   Security Considerations:
      - Malicious Redirection
         One of the fundamental dangers related to any service such as this is that a malicious entry in a resolver’s database will cause clients to resolve the E.164 into the wrong LDAP URL. The possible intent may be to cause the client to connect to a rogue LDAP server and retrieve (or fail to retrieve) a resource containing fraudulent or damaging information.
      - Denial of Service
         By removing the URL to which the E.164 maps, a malicious intruder may remove the client’s ability to access the LDAP directory server.

Enumservice Name: "voice"
Enumservice Type: "voice"
Enumservice Subtype: "tel"
URI Scheme: ‘tel:’
Functional Specification:
   The kind of communication indicated by this Enumservice is "Interactive Voice". From a protocol perspective, this communication is expected to involve bidirectional media streams carrying audio data.
   A client may imply that the person controlling population of a NAPTR holding this Enumservice indicates their capability to engage in an interactive voice session when contacted using the URI generated by this NAPTR.
   Security Considerations:
      - See Section 5 of [RFC4415]
      - Intended Usage: COMMON
      - Authors: Rudolf Brandner, Lawrence Conroy, Richard Stastny (for author contact detail see Authors’ Addresses section)
      - Any other information the author deems interesting:
         - This Enumservice indicates that the person responsible for the NAPTR is accessible via the PSTN (Public Switched Telephone Network) or PLMN (Public Land Mobile Network) using the value of the generated URI.
         - The kind of subsystem required to initiate a Voice Enumservice with this sub-type is a "Dialler". This is a subsystem that either provides a local connection to the PSTN or PLMN, or that provides an indirect connection to those networks. The
subsystem will use the telephone number held in the generated
URI to place a voice call. The voice call is placed to a
network that uses E.164 numbers to route calls to an appropriate
destination.

- Note that the PSTN/PLMN connection may be indirect. The end
  user receiving this NAPTR may have a relationship with a
  Communications Service Provider that accepts call initiation
  requests from that subsystem using an IP-based protocol such as
  SIP or H.323, and places the call to the PSTN using a remote
gateway service. In this case the Provider may either accept
  requests using "tel:" URIs or has a defined mechanism to convert
  "tel:" URI values into a "protocol-native" form.

- The "tel:" URI value SHOULD be fully qualified (using the
  "global phone number" form of RFC3966 [10]). A "local phone
  number" as defined in that document SHOULD NOT be used unless
  the controller of the zone in which the NAPTR appears is sure
  that it can be distinguished unambiguously by all clients that
  can access the resource record and that a call from their
  network access points can be routed to that destination.

Enumservice Name: "pstn"
Enumservice Type: "pstn"
Enumservice Subtype: "tel"
URI Scheme: ‘tel:’

Functional Specification:
These Enumservices indicate that the remote resource identified
can be addressed by the associated URI scheme in order to
initiate a telecommunication session, which may include two-way
voice or other communications, to the PSTN. These URIs may
contain number portability data as specified in RFC 4694 [10].

Security Considerations: See Section 7 of [RFC4769].

Intended Usage: COMMON

Authors:
Jason Livingood (jason_livingood@cable.comcast.com)
Richard Shockey (richard.shockey@neustar.biz)

Any other information the author deems interesting:
A Number Portability Dip Indicator (npdi) should be used in
practice (see examples below in Section 4 of [RFC4769]).
Enumservice Name: "pstin"
Enumservice Type: "pstin"
Enumservice Subtype: "sip"
URI Scheme: 'sip:'
Functional Specification:
These Enumservices indicate that the remote resource identified can be addressed by the associated URI scheme in order to initiate a telecommunication session, which may include two-way voice or other communications, to the PSTN.
Security Considerations: See Section 7 of [RFC4769].
Intended Usage: COMMON
Authors:
Jason Livingood (jason_livingood@cable.comcast.com)
Richard Shockey (richard.shockey@neustar.biz)
Any other information the author deems interesting:
A Number Portability Dip Indicator (npdi) should be used in practice (see examples below in Section 4 of [RFC4769]).

Enumservice Name: "vCard"
Enumservice Name: "vCard"
Enumservice Type: "vcard"
Enumservice Subtype: n/a
URI Schemes: "http", "https"
Functional Specification:
This Enumservice indicates that the resource identified is a plain vCard, according to RFC 2426, which may be accessed using HTTP/ HTTPS [7].
Clients fetching the vCard from the resource indicated should expect access to be restricted. Additionally, the comprehension of the data provided may vary depending on the client’s identity.
Security Considerations: see Section 5 [RFC4969]
Intended Usage: COMMON
Author: Alexander Mayrhofer <alexander.mayrhofer@enum.at>

Enumservice Name: "XMPP"
Enumservice Type: "xmpp"
Enumservice Subtype: n/a
URI Schemes: "xmpp"
Functional Specification:
This Enumservice indicates that the resource identified is an XMPP entity.
Security Considerations: see Section 6 of [RFC4979]
Intended Usage: COMMON
Author: Alexander Mayrhofer <alexander.mayrhofer@enum.at>
Enumservice Name: "im"
Enumservice Type: "im"
Enumservice Subtypes: N/A
URI scheme(s): "im:"
Functional Specification:
This Enumservice indicates that the resource identified is an 'im:' URI. The 'im:' URI scheme does not identify any particular protocol that will be used to handle instant messaging receipt or delivery, rather the mechanism in RFC 3861 [4] is used to discover whether an IM protocol supported by the party querying ENUM is also supported by the target resource.
Security considerations: See section 3 of [RFC5028]
Intended usage: COMMON
Author: Rohan Mahy (rohan@ekabal.com)

Enumservice Name: "voicemsg"
Enumservice Type: "voicemsg"
Enumservice Subtypes: "sip"
URI Schemes: 'sip:'
Functional Specification:
This Enumservice indicates that the remote resource identified can be addressed by the associated URI scheme in order to initiate a voice communication session to a voice messaging system.
Security Considerations: See Section 3 of [RFC5278]
Intended Usage: COMMON
Authors:
Jason Livingood (jason_livingood@cable.comcast.com)
Don Troshynski (dtroshynski@acmepacket.com)
Any other information the author deems interesting:
Implementers should review a non-exclusive list of examples below in Section 7 of [RFC5278]

Enumservice Name: "voicemsg"
Enumservice Type: "voicemsg"
Enumservice Subtypes: "sips"
URI Schemes: 'sips:'
Functional Specification:
This Enumservice indicates that the remote resource identified can be addressed by the associated URI scheme in order to initiate a voice communication session to a voice messaging system.
Security Considerations: See Section 3 of [RFC5278]
Intended Usage: COMMON
Authors:
Jason Livingood (jason_livingood@cable.comcast.com)
Don Troshynski (dtroshynski@acmepacket.com)
Any other information the author deems interesting:
   Implementers should review a non-exclusive list of examples
   below in Section 7 of [RFC5278]

Enumservice Name: "voicemsg"
Enumservice Type: "voicemsg"
Enumservice Subtype: "tel"
URI Schemes: 'tel:'
Functional Specification:
   This Enumservice indicates that the remote resource identified
   can be addressed by the associated URI scheme in order to
   initiate a voice communication session to a voice messaging
   system.
Security Considerations: See Section 3 of [RFC5278]
Intended Usage: COMMON
Authors:
   Jason Livingood (jason_livingood@cable.comcast.com)
   Don Troshynski (dtroshynski@acmepacket.com)
Any other information the author deems interesting:
   Implementers should review a non-exclusive list of examples
   below in Section 7 of [RFC5278]

Enumservice Name: "voicemsg"
Enumservice Type: "voicemsg"
Enumservice Subtype: "http"
URI Schemes: 'http:'
Functional Specification:
   This Enumservice indicates that the remote resource identified
   by the associated URI scheme is capable of being a source of
   information.
   Note that the kind of information retrieved can be manifold.
   Usually, contacting a resource by an ‘http:’ URI provides a
   document. This document can contain references that will trigger
   the download of many different kinds of information, such as
   text, audio, video, executable code, or even voice message
   files. Thus, one cannot be more specific about the kind of
   information expected when contacting the resource.
Security Considerations: See Section 3 of [RFC5278]
Intended Usage: COMMON
Authors:
   Jason Livingood (jason_livingood@cable.comcast.com)
   Don Troshynski (dtroshynski@acmepacket.com)
Any other information the author deems interesting:
   Implementers should review a non-exclusive list of examples
   below in Section 7 of [RFC5278]
Enumservice Name: "voicemsg"
Enumservice Type: "voicemsg"
Enumservice Subtype: "https"
URI Schemes: 'https:'

Functional Specification:
This Enumservice indicates that the remote resource identified by the associated URI scheme is capable of being a source of information, which can be contacted using TLS or the Secure Socket Layer protocol.
Note that the kind of information retrieved can be manifold. Usually, contacting a resource by an 'https:' [12] URI provides a document. This document can contain references that will trigger the download of many different kinds of information, such as text, audio, video, executable code, or even voice message files. Thus, one cannot be more specific about the kind of information expected when contacting the resource.

Security Considerations: See Section 3 of [RFC5278]
Intended Usage: COMMON

Authors:
Jason Livingood (jason_livingood@cable.comcast.com)
Don Troshynski (dtroshynski@acmepacket.com)

Any other information the author deems interesting:
Implementers should review a non-exclusive list of examples below in Section 7 of [RFC5278]

Enumservice Name: "videomsg"
 Enumservice Type: "videomsg"
 Enumservice Subtypes: "sip"
 URI Schemes: 'sip:'

Functional Specification:
This Enumservice indicates that the remote resource identified can be addressed by the associated URI scheme in order to initiate a video communication session to a video messaging system.

Security Considerations: See Section 3 of [RFC5278]
Intended Usage: COMMON

Authors:
Jason Livingood (jason_livingood@cable.comcast.com)
Don Troshynski (dtroshynski@acmepacket.com)

Any other information the author deems interesting:
Implementers should review a non-exclusive list of examples below in Section 7 of [RFC5278]
Enumservice Name: "videomsg"
Enumservice Type: "videomsg"
 Enumservice Subtypes: "sips"
 URI Schemes: 'sips:'

Functional Specification:
This Enumservice indicates that the remote resource identified can be addressed by the associated URI scheme in order to initiate a video communication session to a video messaging system.

Security Considerations: See Section 3 of [RFC5278]

Intended Usage: COMMON

Authors:
Jason Livingood (jason_livingood@cable.comcast.com)
Don Troshynski (dtroshynski@acmepacket.com)

Any other information the author deems interesting:
Implementers should review a non-exclusive list of examples below in Section 7 of [RFC5278]

Enumservice Name: "videomsg"
Enumservice Type: "videomsg"
 Enumservice Subtype: "http"
 URI Schemes: 'http:'

Functional Specification:
This Enumservice indicates that the remote resource identified by the associated URI scheme is capable of being a source of information.
Note that the kind of information retrieved can be manifold. Usually, contacting a resource by an ‘http:’ [11] URI provides a document. This document can contain references that will trigger the download of many different kinds of information, such as text, audio, video, executable code, or even video message files. Thus, one cannot be more specific about the kind of information expected when contacting the resource.

Security Considerations: See Section 3 of [RFC5278]

Intended Usage: COMMON

Authors:
Jason Livingood (jason_livingood@cable.comcast.com)
Don Troshynski (dtroshynski@acmepacket.com)

Any other information the author deems interesting:
Implementers should review a non-exclusive list of examples below in Section 7 of [RFC5278]
Enumservice Name: "videomsg"
Enumservice Type: "videomsg"
Enumservice Subtype: "https"
URI Schemes: 'https:'

Functional Specification:
This Enumservice indicates that the remote resource identified by the associated URI scheme is capable of being a source of information, which can be contacted using TLS or the Secure Socket Layer protocol.
Note that the kind of information retrieved can be manifold. Usually, contacting a resource by an 'https:' URI provides a document. This document can contain references that will trigger the download of many different kinds of information, such as text, audio, video, executable code, or even video message files. Thus, one cannot be more specific about the kind of information expected when contacting the resource.

Security Considerations: See Section 3 of [RFC5278]
Intended Usage: COMMON
Authors:
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Any other information the author deems interesting:
Implementers should review a non-exclusive list of examples below in Section 7 of [RFC5278]

Enumservice Name: "unifmsg"
Enumservice Type: "unifmsg"
Enumservice Subtypes: "sip"
URI Schemes: 'sip:'

Functional Specification:
This Enumservice indicates that the remote resource identified can be addressed by the associated URI scheme in order to initiate a unified communication session to a unified messaging system.

Security Considerations: See Section 3 of [RFC5278]
Intended Usage: COMMON
Authors:
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Any other information the author deems interesting:
Implementers should review a non-exclusive list of examples below in Section 7 of [RFC5278]
Enumservice Name: "unifmsg"
Enumservice Type: "unifmsg"
Enumservice Subtypes: "sips"
URI Schemes: ‘sips:’
Functional Specification:
This Enumservice indicates that the remote resource identified can be addressed by the associated URI scheme in order to initiate a unified communication session to a unified messaging system.
Security Considerations: See Section 3 of [RFC5278]
Intended Usage: COMMON
Authors:
Jason Livingood (jason_livingood@cable.comcast.com)
Any other information the author deems interesting:
Implementers should review a non-exclusive list of examples below in Section 7 of [RFC5278]

Enumservice Name: "unifmsg"
Enumservice Type: "unifmsg"
Enumservice Subtype: "http"
URI Schemes: ‘http:’
Functional Specification:
This Enumservice indicates that the remote resource identified by the associated URI scheme is capable of being a source of information. Note that the kind of information retrieved can be manifold. Usually, contacting a resource by an 'http:' [11] URI provides a document. This document can contain references that will trigger the download of many different kinds of information, such as text, audio, video, executable code, or even video message files. Thus, one cannot be more specific about the kind of information expected when contacting the resource.
Security Considerations: See Section 3 of [RFC5278]
Intended Usage: COMMON
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Any other information the author deems interesting:
Implementers should review a non-exclusive list of examples below in Section 7 of [RFC5278]
Enumservice Name: "unifmsg"
Enumservice Type: "unifmsg"
Enumservice Subtype: "https"
URI Schemes: 'https:'
Functional Specification:
This Enumservice indicates that the remote resource identified by the associated URI scheme is capable of being a source of information, which can be contacted using TLS or the Secure Socket Layer protocol.
Note that the kind of information retrieved can be manifold. Usually, contacting a resource by an 'https:' URI provides a document. This document can contain references that will trigger the download of many different kinds of information, such as text, audio, video, executable code, or even video message files. Thus, one cannot be more specific about the kind of information expected when contacting the resource.
Security Considerations: See Section 3 of [RFC5278]
Intended Usage: COMMON
Authors:
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Any other information the author deems interesting:
Implementers should review a non-exclusive list of examples below in Section 7 of [RFC5278]

Enumservice Name: "ical-sched"
Enumservice Type: "ical-sched"
Enumservice Subtypes: "mailto"
URI scheme(s): 'mailto:'
Functional Specification:
This Enumservice indicates that the resource identified can be addressed by the associated URI used for scheduling using Internet calendaring via Internet mail with the IMAP [6] protocol.
Security Considerations: See Section 4 of [RFC5333].
Intended usage: COMMON
Author:
Rohan Mahy (rohan@ekabal.com)
Enumservice Name: "ical-access"
Enumservice Type: "ical-access"
Enumservice Subtypes: "http"
URI scheme(s): 'http:'
Functional Specification:
This Enumservice indicates that the resource identified can be
addressed by the associated URI in order to access a user's
calendar (for example free/busy status) using the CalDAV [7]
protocol for Internet calendaring.
Security considerations: See Section 4 of [RFC5333].
Intended usage: COMMON
Author:
Rohan Mahy (rohan@ekabal.com)

Enumservice Name: "ical-access"
Enumservice Type: "ical-access"
Enumservice Subtypes: "https"
URI scheme(s): 'https:'
Functional Specification:
This Enumservice indicates that the resource identified can be
addressed by the associated URI in order to access a user's
calendar (for example free/busy status) using the CalDAV [7]
protocol for Internet calendaring.
Security considerations: See Section 4 of [RFC5333].
Intended usage: COMMON
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