ENUM -- Telephone Number Mapping
Working Group
Internet-Draft
Updates: 3762, 3764, 3953, 4143,
4002, 4238, 4355, 4415, 4769,
4969, 4979, 5028, 5278, 5333
(if approved)
Intended status: Standards Track
Expires: January 1, 2011

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June 30, 2010

# Update of legacy IANA Registrations of Enumservices
# draft-ietf-enum-enumservices-transition-06

## Abstract

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

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## 1. Introduction

[I-D.ietf-enum-enumservices-guide] 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 [I-D.ietf-enum-enumservices-guide]. 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 does only add the missing elements to the XML chunks as specified in the IANA Considerations section of [I-D.ietf-enum-enumservices-guide], but does not complete the (nowadays) missing sections of the corresponding Enumservice Specifications. In order to conform with the new registration regime as specified in [I-D.ietf-enum-enumservices-guide], 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 RFC on the Standards Track, Experimental RFC, or as a BCP. [I-D.ietf-enum-enumservices-guide] no longer has this requirement, i.e. "Specification Required", which implies the use of a Designated Expert, [RFC5226] is sufficient. As any update to an existing specification must have at least the same Maturity Level (see [RFC2026]) as the document it updates, an IETF action (approval of this document) is required to override this requirement.

This document changes the approval required for updates of Enumservice registrations to Specification Required including that the specification and request are reviewed by a Designated Expert as described in [I-D.ietf-enum-enumservices-guide].

## 4. Legacy Enumservice Registrations Converted to XML Chunks

In the following the legacy Enumservice Registrations converted to XML chunks including the new elements introduced by [I-D.ietf-enum-enumservices-guide].

(Note that any references in Sections 4.1 - 4.39 refer to the references section within the respective Enumservice Specification.)

[Note for RFC Editor: Please replace any instance of RFCTHIS with the RFC number of this document before publication]

### 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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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="rfc4355"/> (updated by RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 <xref type="rfc" data="rfc4002"/>, Section 5.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc4002"/> (updated by RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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"/>, Section 3.
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc3762"/>, Section 5.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc3762"/> (updated by RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 RFC3861 [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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </registrationdocs>
  <requesters>
```

```
        <xref type="person" data="Rudolf_Brandner"/>
        <xref type="person" data="Lawrence_Conroy"/>
        <xref type="person" data="Richard_Stastny"/>
      </requesters>
      <additionalinfo>
        <paragraph>
          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.
        </paragraph>
        <paragraph>
          References are contained in <xref type="rfc" data="rfc4355"/>.
        </paragraph>
      </additionalinfo>
    </record>
```

### 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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 de 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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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"/>, Section 7.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc4769"/> (updated by RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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>
```

### 4.17. 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"/>, Section 4.
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc3764"/>, Section 6.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc3764"/> (updated by RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Jon_Peterson"/>
  </requesters>
  <additionalinfo>
    <paragraph>
      See <xref type="rfc" data="rfc3764"/>, Section 3.
    </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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.
      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.
    </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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"/>, Section 3.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc5278"/> (updated by RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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"/>, Section 3.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc5278"/> (updated by RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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.
      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.
    </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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.
    </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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>
```

### 4.27. 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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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.
        </paragraph>
        <paragraph>
          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.
        </paragraph>
        <paragraph>
          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.
        </paragraph>
        <paragraph>
          References are contained in <xref type="rfc" data="rfc4415"/>.
        </paragraph>
      </additionalinfo>
    </record>
```

### 4.30. voicemsg:http

```
<record>
  <!-- voicemsg:http -->
  <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.
      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 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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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

```
<record>
  <!-- vpim:ldap -->
  <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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Greg_Vaudreuil"/>
  </requesters>
</record>
```

### 4.36. vpim:mailto

```
<record>
  <!-- vpim:mailto -->
  <class>Data Type-Based</class>
  <type>vpim</type>
  <subtype>mailto</subtype>
  <urischeme>mailto</urischeme>
  <functionalspec>
    See <xref type="rfc" data="rfc4238"/>, Section 4.2 - 4.4.
  </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 email URI. The possible
      intent may be to cause the client to send the
      information to an incorrect destination.
    </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 resource.
    </paragraph>
    <paragraph>
      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.
    </paragraph>
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc4238"/> (updated by RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Greg_Vaudreuil"/>
  </requesters>
  <additionalinfo>
    <paragraph>
      Error Conditions:
    </paragraph>
    <paragraph>
```

```
          E.164 number not in the numbering plan
        </paragraph>
        <paragraph>
          E.164 number in the numbering plan, but no
          URIs exist for that number
        </paragraph>
        <paragraph>
          E2U+vpim:mailto Service unavailable of email
          addresses where only the telephone number was
          previously known.
        </paragraph>
      </additionalinfo>
    </record>
```

### 4.37. web:http

```
<record>
  <!-- web:http -->
  <class>Application-Based, Common</class>
  <type>web</type>
  <subtype>http</subtype>
  <urischeme>http</urischeme>
  <functionalspec>
    <paragraph>
      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 can not be more
      specific about the kind of information that can be
      expected 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 RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Rudolf_Brandner"/>
    <xref type="person" data="Lawrence_Conroy"/>
    <xref type="person" data="Richard_Stastny"/>
  </requesters>
</record>
```

### 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 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.
    </paragraph>
  </functionalspec>
  <security>
    See <xref type="rfc" data="rfc4002"/>, Section 5.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc4002"/> (updated by RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </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"/>, Section 6.
  </security>
  <usage>COMMON</usage>
  <registrationdocs>
    <xref type="rfc" data="rfc4979"/> (updated by RFCTHIS)
    <xref type="rfc" data="rfcTHIS"/>
  </registrationdocs>
  <requesters>
    <xref type="person" data="Alexander_Mayrhofer"/>
  </requesters>
</record>
```

## 5. IANA Considerations

IANA are to replace 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, and Alfred Hoenes, Ari Keranen, Alexey Melnikov

# 8. References

## 8.1. Normative References

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[RFC3761] Faltstrom, P. and M. Mealling, "The E.164 to Uniform Resource Identifiers (URI) Dynamic Delegation Discovery System (DDDS) Application (ENUM)", RFC 3761, April 2004.

[RFC3762] Levin, O., "Telephone Number Mapping (ENUM) Service Registration for H.323", RFC 3762, April 2004.

[RFC3764] Peterson, J., "enumservice registration for Session Initiation Protocol (SIP) Addresses-of-Record", RFC 3764, April 2004.

[RFC3953] Peterson, J., "Telephone Number Mapping (ENUM) Service Registration for Presence Services", RFC 3953, January 2005.

[RFC4143] Toyoda, K. and D. Crocker, "Facsimile Using Internet Mail (IFAX) Service of ENUM", RFC 4143, November 2005.

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[RFC4415] Brandner, R., Conroy, L., and R. Stastny, "IANA Registration for Enumservice Voice", RFC 4415, February 2006.

[RFC4769] Livingood, J. and R. Shockey, "IANA Registration for an Enumservice Containing Public Switched Telephone Network (PSTN) Signaling Information", RFC 4769, November 2006.

[RFC4969] Mayrhofer, A., "IANA Registration for vCard Enumservice", RFC 4969, August 2007.

[RFC4979] Mayrhofer, A., "IANA Registration for Enumservice 'XMPP'", RFC 4979, August 2007.

[RFC5028] Mahy, R., "A Telephone Number Mapping (ENUM) Service Registration for Instant Messaging (IM) Services", RFC 5028, October 2007.

[RFC5278] Livingood, J. and D. Troshynski, "IANA Registration of Enumservices for Voice and Video Messaging", RFC 5278, July 2008.

[RFC5333] Mahy, R. and B. Hoeneisen, "IANA Registration of Enumservices for Internet Calendaring", RFC 5333, October 2009.

## 8.2. Informative References

[RFC5226] Narten, T. and H. Alvestrand, "Guidelines for Writing an IANA Considerations Section in RFCs", BCP 26, RFC 5226, May 2008.

## 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
      [RFC4002]

  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
[RFC4002]

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

Security Considerations:
- o 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.
- o 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.

o 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:

o 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.

o 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:

o 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.

- o 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.
- o 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.
- o 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: "pstn"
Enumservice Type: "pstn"

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:' [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 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:' [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.
     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: "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:
         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: "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
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: "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:' [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.
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: "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 iMIP [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
     Author:
        Rohan Mahy (rohan&ekabal.com)
```

## Appendix B. Document Changelog

[RFC Editor: This section is to be removed before publication]

draft-ietf-enum-enumservices-transition-06:

- o bernie/alex: added "References are contained in..." in each XML chunk with references internal to the Enumservice specification (Alexey / Ari)

- o bernie/alex: Added sentence to clarify references in XML chunks
- o bernie: fixed multiple <urischeme> (separate elements) (Ari)
- o bernie: change back to Standards Track (IESG Request)

draft-ietf-enum-enumservices-transition-05:

- o bernie: minor editorial (Feedback Alfred Hoenes)
- o bernie: updated my author's address (swisscom -> ucom.ch)
- o bernie: clarified IANA registration policy: "Specification Required", which implies "Expert Review", i.e. point to a single policy (Feedback Gonzalo Camarillo)

draft-ietf-enum-enumservices-transition-04:

- o alex: changed vpim to data-type
- o alex: changed ical services to application-based, common
- o bernie: Upgraded remaining references from I-D to RFC 5333

draft-ietf-enum-enumservices-transition-03:

- o bernie: Added fixed calendaring Enumservices (RFC 5333)
- o bernie: Updated my author's address
- o bernie: made own sub-section for each registration
- o bernie: Split XML Chunk section and IANA Considerations section
- o bernie: other editorial changes, e.g. existing -> legacy

draft-ietf-enum-enumservices-transition-02:

- o bernie: Temporarily removed calendaring Enumservices (will be added again, once these are fixed)
- o bernie: added current state of IANA repository

draft-ietf-enum-enumservices-transition-01:

- o bernie: Added 13 new Enumservices (RFC 5278)
- o bernie: Updated 'Open Issues' section
- o bernie: Updated ipr attribute to 'pre5378Trust200902' according to http://www.ietf.org/mail-archive/web/syslog/current/msg02333.html
- o alex: Added missing classifications
- o alex: Editorial improvements
- o bernie: More editorials
- o bernie: Changed status to bcp, to avoid downref problem with enumservice-guide
- o bernie: Rewrite of IESG Action

draft-ietf-enum-enumservices-transition-00:

- o bernie: Updated affiliation: Switch -> Swisscom
- o bernie: Revised all Enumservices to the form of XML chunks
- o bernie: Added statement for IESG Actions to downgrade existing all Enumservice specifications
- o bernie: Updated 'Open Issues' section

draft-hoeneisen-enum-enumservices-transition-01:

- o bernie: Fixed wrong reference

draft-hoeneisen-enum-enumservices-transition-01:

- o bernie: integrated feedback from Alfred Hoenes
  - * Typos / corrections
  - * Removed the words "remote" and "scheme" in existing registrations
  - * changed "URL" to "URI" in existing registrations
  - * changed "headers" to "header fields" in existing "mms:mailto" registration
- o bernie: Added Acknowledgments section

draft-hoeneisen-enum-enumservices-transition-00:

- o bernie: Initial version
- o bernie: Imported and adjusted existing IANA Enumservice registrations
- o bernie: Removed Name and added Class fields
- o bernie: Put caption to each Enumservice
- o bernie: Sorted alphabetically
- o bernie: All URI Schemes without colon
- o alex: Added classification

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