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User Agent Capability Extension to Presence Information Data Format  
(PIDF)  
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Abstract

Interoperation of Instant Messaging and Presence systems has been defined in the IMPP working group. The IMPP WG has come up with baseline interoperable operations and formats for presence and instant messaging systems. However, these base formats might need standardized extensions in order to enable building rational applications using presence and instant messaging. This memo proposes an extension to represent "Indicating User Agent Capabilities in the Session Initiation Protocol (SIP)" capabilities

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in the Presence Information Document Format (PIDF) compliant presence documents.

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## 1. Introduction

Interoperation of instant messaging and presence systems has been defined in IMPP working group. Working group has defined "A model for Presence and Instant Messaging" [RFC2778](#) [2] and also requirements for protocols implementing such a system in [RFC 2779](#) [3]. Common presence (CPP) [5] and instant messaging (CPIM) [11] define common operations and formats which all Presence and Instant Messaging services must agree upon so that basic interoperability would be possible. The actual base format for the presence is defined in the Presence Information Document Format (PIDF) [4]. The PIDF document format has been designed to reduce the need for gatewaying and to allow end-to-end security of presence data. It has taken very minimalistic approach to support such operations. In order to make the PIDF format usable by different presence applications, these applications usually must extend the basic PIDF format by standard XML mechanism as defined in the PIDF [4].

The aim of this memo is to introduce SIP/SIMPLE specific extension mechanism for the PIDF document. With this extension SIMPLE based applications can have richer and more usable formats compared to the baseline PIDF data format. Aim of this document is to introduce extension for "Indicating User Agent Capabilities in the Session Initiation Protocol (SIP)" [6].

### 1.1 Motivation

The PIDF document format [4] defines a <contact> element which may

appear once inside every <tuple> element. The content of the <contact> element encodes the CONTACT ADDRESS and CONTACT MEANS as defined in [RFC2778](#) [2]. The <contact> element is defined to be an URI. This URI can be of any URI type. In some implementations this URI can uniquely identify the application the tuple intends to describe (e.g. im: URIs usually represent Instant Messaging service). However, this may not be the case in all implementations. For example in SIP, a SIP URI can represent different kinds of applications. A SIP URI can be used to contact voice applications, video applications, or messaging applications. If it is not known by other means, it might be hard for applications processing the presence document containing only SIP URI contact addresses to know what particular application the tuple intends to describe. Also watchers receiving presence information would probably benefit for getting more descriptive information about what particular communication means or applications are supported by the presentity.

"Indicating User Agent Capabilities in the Session Initiation Protocol (SIP)" document [6] defines a set of extensions which allow callees to express preferences about request handling in SIP servers.

The same information can provide value also to presence watchers so that they can make more rational decisions on how presentity should be contacted if presence document would contain similar information as defined in "Indicating User Agent Capabilities in the Session Initiation Protocol (SIP)" extension.

## [1.2](#) Scope

This document defines extension to the PIDF document format which enables presence implementations based on SIP protocol to utilize similar capabilities in presence document as what "Indicating User Agent Capabilities in the Session Initiation Protocol (SIP)" document [6] defines.

This extension does not replace media negotiation mechanisms defined for SIP (e.g. SDP [15]). This extension is only aimed to give the watchers hints about the presentity's preferences, willingness and capabilities to communicate before watchers would initiate communication with the presentity.

## [2](#). Conventions

In this document, the key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" are to be interpreted as described in [RFC 2119](#) [1] and indicate requirement levels for compliant implementations.

This memo makes use of the vocabulary defined in [RFC2778](#) [2], and in PIDF [4].

### [3.](#) Extension for "Indicating User Agent Capabilities in the Session Initiation Protocol (SIP)" in PIDF documents

This section presents "Indicating User Agent Capabilities in the Session Initiation Protocol (SIP)" extension namespace, its elements, their values, and semantics. This section also describes how this extension can be further extended. Extension is intended to be used with "urn:ietf:params:xml:ns:pidf" namespace and that particular usage is described here. This extension may also be used with other namespaces if appropriate.

#### [3.1](#) Extension overview

This extension adds features presented in "Indicating User Agent Capabilities in the Session Initiation Protocol (SIP)" document [6] into the PIDF presence document format. Extension also includes type feature tag [RFC2913](#) [7] and language feature tag [RFC2987](#) [8] definitions. Features presented in "Indicating User Agent

Capabilities in the Session Initiation Protocol (SIP)" [6], [RFC2913](#) [7], and [RFC2987](#) [8] are used here without any change in their semantics. Bringing these features to the PIDF presence document format basically means mapping them to XML formatted structure. Namespace identifier for this extension is:

urn:ietf:params:xml:ns:simple-prescaps-ext

When this extension namespace is congregated with the PIDF document, combined document must follow the same general formatting rules as specified in the PIDF [4] in [Section 4.1](#).

#### [3.2](#) <prescaps> element

Root element of this extension namespace is <prescaps>. The root element MUST be always present. This element MAY contain one or more elements as specified later in this document.

<prescaps> element does not have any attributes and it MAY contain other namespace declarations for the extensions used in the presence XML document.

### [3.3](#) <audio> element

The <audio> element indicates that the device supports audio as a streaming media type as defined in [\[6\]](#).

The <audio> element is of boolean type and does not have any attributes. Value 'true' indicates that device supports audio media type and value 'false' indicates that device does not support audio media type.

### [3.4](#) <application> element

The <application> element indicates that the device supports application as a streaming media type as defined in [\[6\]](#).

The <application> element is of boolean type and does not have any attributes. Value 'true' indicates that device supports application media type and value 'false' indicates that device does not support application media type.

### [3.5](#) <data> element

The <data> element indicates that the device supports data as a streaming media type as defined in [\[6\]](#).

The <data> element is of boolean type and does not have any

attributes. Value 'true' indicates that device supports data media type and value 'false' indicates that device does not support data media type.

### [3.6](#) <control> element

The <control> element indicates that the device supports control as a

streaming media type as defined in [\[6\]](#).

The <control> element is of boolean type and does not have any attributes. Value 'true' indicates that device supports control media type and value 'false' indicates that device does not support control media type.

### [3.7](#) <video> element

The <video> element indicates that the device supports video as a streaming media type as defined in [\[6\]](#).

The <video> element is of boolean type and does not have any attributes. Value 'true' indicates that device supports video media type and value 'false' indicates that device does not support video media type.

### [3.8](#) <text> element

The <text> element indicates that the device supports text as a streaming media type as defined in [\[6\]](#).

The <text> element is of boolean type and does not have any attributes. Value 'true' indicates that device supports text media type and value 'false' indicates that device does not support text media type.

### [3.9](#) <type> element

The <type> element indicates a MIME media content type (i.e. that appears in a 'Content-type:' header of the corresponding MIME-formatted data) as defined in [RFC2913](#)[\[7\]](#).

The <type> element is of string type and does not have any attributes. It must be a string of the form "type/subtype", where 'type' and 'subtype' are defined by the MIME specification [RFC2045](#) [\[17\]](#). Only lower-case letters should be used.

### [3.10](#) <automata> element

The <automata> element indicates whether the UA represents an



automata (such as a voicemail server, conference server, IVR, or recording device) or a human as defined in [\[6\]](#).

The <automata> element is of boolean type and does not have any attributes. Value 'true' indicates that the UA represents an automata and value 'false' indicates that it represents a human.

### [3.11](#) <class> element

The <class> element indicates the setting, business or personal, in which a communications device is used as defined in [\[6\]](#).

The <class> element is of string type and does not have any attributes. Possible values include: "business" and "personal".

### [3.12](#) <duplex> element

The <duplex> element lists whether a communications device can simultaneously send and receive media ("full"), alternate between sending and receiving ("half"), can only receive ("receive-only") or only send ("send-only") defined in [\[6\]](#).

The <duplex> element is of string type and does not have any attributes. possible values include: "full", "half", "receive-only", and "send-only".

### [3.13](#) <mobility> element

The <mobility> element indicates whether the device is fixed (meaning that it is associated with a fixed point of contact with the network), or mobile (meaning that it is not associated with a fixed point or contact). Note that cordless phones are fixed, not mobile, based on this definition.as defined in [\[6\]](#).

The <mobility> element is of string type and does not have any attributes. Possible values include: "fixed" and "mobile"

### [3.14](#) <description> element

The <description> element provides a textual description of the device as defined in [\[6\]](#).

The <description> element is of string type and does not have any attributes.

### [3.15](#) <event-packages> element

The <event-packages> element lists the event packages [\[13\]](#) supported

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by a device.

<event-packages> element can contain any number of <event-package> elements which can be used to describe individual event packages supported by the device.

#### [3.15.1](#) <event-package>

The <event-package> is string type element and it is used to describe individual event package supported by the device. The <event-package> element can contain 'negated' attribute. This attribute is of boolean type. Value 'true' indicates that device supports particular event package and value 'false' indicates that device does not support particular event package as defined in [6]. Default value for 'negated' attribute is 'false'.

The values for this tag equal the event package names that are registered by each event package as defined in [6].

#### [3.16](#) <priority> element

The <priority> element indicates the call priorities the device is willing to handle. A value of X means that the device is willing to take requests with priority X and higher as defined in [6].

The <priority> element is of integer type does not have any attributes.

#### [3.17](#) <methods> element

The <methods> element indicates the SIP methods supported by this UA. In this case, "supported" means that the UA can receive requests with this method. In that sense, it has the same connotation as the Allow header field as defined in [6].

<methods> element can contain any number of <method> elements which can be used to describe individual methods supported by the device.

##### [3.17.1](#) <method>

The <method> is string type element and it is used to describe individual method supported by the device. The <method> element can contain 'negated' attribute. This attribute is of boolean type.

Value 'false' indicates that device supports particular method and value 'true' indicates that device does not support particular method as defined in [6]. Default value for 'negated' attribute is 'false'.

### [3.18](#)   <extensions> element

The <extensions> element is a list of SIP extensions (each of which is defined by an option-tag registered with IANA) that are understood by the UA. Understood, in this context, means that the option tag would be included in a Supported header field in a request as defined in [6].

<extensions> element can contain any number of <extension> elements which can be used to describe individual extensions supported by the device.

#### [3.18.1](#)   <extension>

The <extension> is string type element and it is used to describe individual extension supported by the device. The <extension> element can contain 'negated' attribute. This attribute is of boolean type. Value 'false' indicates that device supports particular extension and value 'true' indicates that device does not support particular extension as defined in [6]. Default value for 'negated' attribute is 'false'.

### [3.19](#)   <schemes> element

The <schemes> element provides the set of URI schemes that are supported by a UA. Supported implies, for example, that the UA would know how to handle a URI of that scheme in the Contact header field of a redirect response as defined in [6].

<schemes> element can contain any number of <scheme> elements which can be used to describe individual schemes supported by the device.

#### [3.19.1](#)   <scheme>

The <scheme> is string type element and it is used to describe individual scheme supported by the device. The <scheme> element can

contain 'negated' attribute. This attribute is of boolean type. Value 'false' indicates that device supports particular scheme and value 'true' indicates that device does not support particular scheme as defined in [6]. Default value for 'negated' attribute is 'false'.

### [3.20](#) <actor> element

The <actor> element indicates the type of entity that is available at this URI as defined in [6].

The <actor> element is of string type and does not have any attributes. Possible values include:

- o principal: The device provides communication with the principal that is associated with the device. Often this will be a specific human being, but it can be an automata (for example, when calling a voice portal).
- o attendant: The device provides communication with an automaton or person that will act as an intermediary in contacting the principal associated with the device, or a substitute.
- o msg-taker: The device provides communication with an automaton or person that will take messages and deliver them to the principal.
- o information: The device provides communication with an automaton or person that will provide information about the principal.

### [3.21](#) <is-focus> element

The <is-focus> element indicates that the UA is a conference server, also known as a focus, and will mix together the media for all calls to the same URI as defined in [6].

The <is-focus> element is of boolean type and does not have any attributes.

### [3.22](#) <languages> element

The <languages> element indicates Ability to display particular human languages as as defined in [8].

<languages> element can contain any number of <language> elements which can be used to describe individual languages supported by the device.

### [3.22.1](#) <language>

The <language> is string type element and it is used to describe individual language supported by the device. The <language> element can contain 'negated' attribute. This attribute is of boolean type. Value 'false' indicates that device supports particular language and value 'true' indicates that device does not support particular language as defined in [6]. Default value for 'negated' attribute is 'false'.

## [4.](#) Publishing and using 'prescaps' elements

In "Indicating User Agent Capabilities in the Session Initiation Protocol (SIP)" [6] it is recommended that a UA provides complete

information in its contact predicate. However, it may be that presentity is not willing to publish presence information which would be consistent with actual device capabilities (e.g. presentity may not want to indicate that he/she supports voice when the device actually is able to support it). Also authorization rules or policies in presence server may limit or modify the published presence information in a way that all published presence information may not end up to all possible watchers.

It is RECOMMENDED that Presence User Agent (PUA) using this extension provides as complete presence information as it can. However, it is not mandated that this presence information should be consistent with actual device capabilities. Also, watchers should not expect that presence information represented by this extension fully represents actual presentity's device capabilities.

## [5.](#) Using extension with PIDF document format

PIDF format allows use of extension XML namespaces inside <presence>, <tuple>, and <status> elements. <presence> element is intended to describe presentity as a whole. PIDF extension namespace defined in this document relates to contact address defined by PIDF <contact>

element to which this extension is applied to. These contact addresses can only appear inside <tuple> elements as defined in the PIDF [4]. PIDF extension namespace defined in this document SHOULD be placed inside <status> element. Root element <prescaps> MUST NOT appear more than once inside a single <tuple> element but MAY appear multiple times in PIDF document format inside different <tuple> elements.

### [5.1](#) Contact URI

"Indicating User Agent Capabilities in the Session Initiation Protocol (SIP)" [6] has restrictions what kind of URIs can be used with callee capabilities. As Address of Record of the presentity represents the union of all presentity's device capabilities it is RECOMMENDED that contact URI in <contact> element used with this specifications SHOULD be Address of Record of the presentity.

## [6.](#) Examples

### [6.1](#) Example

```
<?xml version="1.0" encoding="UTF-8"?>
<presence xmlns="urn:ietf:params:xml:ns:pidf"
  xmlns:ext="urn:ietf:params:xml:ns:simple-prescaps-ext
  entity="pres:someone@example.com">
  <tuple id="joi9877866786ua9">
    <status>
      <basic>open</basic>
      <ext:prescaps>
        <ext:video>true</ext:video>
        <ext:audio>true</ext:video>
        <ext:text>false</ext:text>
        <ext:mobile>true</ext:mobile>
        <ext:methods>
```

```

    <ext:method>INVITE</ext:method>
    <ext:method>MESSAGE</ext:method>
    <ext:method>ACK</ext:method>
    <ext:method>BYE</ext:method>
    <ext:method>CANCEL</ext:method>
    <ext:method negated="true">REFER</ext:method>
  </ext:methods>
</ext:prescaps>
</status>
<contact>sip:someone@example.com</contact>
</tuple>
</presence>

```

## 7. XML schema definitions

This section gives the XML schema definition for the extension defined in this document.

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema
  targetNamespace="urn:ietf:params:xml:ns:simple-prescaps-ext"
  xmlns:tns="urn:ietf:params:xml:ns:simple-prescaps-ext"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified"
  attributeFormDefault="unqualified">
  <!-- This import brings in the XML language
       attribute xml:lang-->
  <xs:import namespace="http://www.w3.org/XML/1998/namespace"
    schemaLocation="http://www.w3.org/2001/xml.xsd"/>

  <xs:element name="prescaps" type="tns:prescaps"/>

```

```

<xs:complexType name="prescaps">
  <xs:sequence>
    <xs:element name="audio" type="tns:audio" minOccurs="0"/>
    <xs:element name="application" type="tns:application"
      minOccurs="0"/>
    <xs:element name="data" type="tns:data" minOccurs="0"/>
    <xs:element name="control" type="tns:control"
      minOccurs="0"/>
  </xs:sequence>
</xs:complexType>

```

```

<xs:element name="video" type="tns:video" minOccurs="0"/>
<xs:element name="text" type="tns:text" minOccurs="0"/>
<xs:element name="automata" type="tns:automata"
    minOccurs="0"/>
<xs:element name="class" type="tns:class" minOccurs="0"/>
<xs:element name="duplex" type="tns:duplex" minOccurs="0"/>
<xs:element name="mobility" type="tns:mobility"
    minOccurs="0"/>
<xs:element name="description" type="tns:description"
    minOccurs="0"/>
<xs:element name="event-packages" type="tns:event-packages"
    minOccurs="0"/>
<xs:element name="priority" type="tns:priority"
    minOccurs="0"/>
<xs:element name="methods" type="tns:methods"
    minOccurs="0"/>
<xs:element name="extensions" type="tns:extensions"
    minOccurs="0"/>
<xs:element name="schemes" type="tns:schemes"
    minOccurs="0"/>
<xs:element name="actor" type="tns:actor" minOccurs="0"
    maxOccurs="4"/>
<xs:element name="is-focus" type="tns:is-focus"
    minOccurs="0"/>
<xs:element name="languages" type="tns:languages"
    minOccurs="0"
    maxOccurs="unbounded"/>
<xs:any namespace="##other" processContents="lax"
    minOccurs="0" maxOccurs="unbounded"/>
</xs:sequence>
</xs:complexType>

<xs:complexType name="audio">
    <xs:restriction base="xs:boolean"/>
</xs:complexType>

<xs:complexType name="application">
    <xs:restriction base="xs:boolean"/>
</xs:complexType>

```

```

<xs:complexType name="data">

```



```

    <xs:restriction base="xs:boolean"/>
</xs:complexType>

<xs:complexType name="control">
  <xs:restriction base="xs:boolean"/>
</xs:complexType>

<xs:complexType name="video">
  <xs:restriction base="xs:boolean"/>
</xs:complexType>

<xs:complexType name="text">
  <xs:restriction base="xs:boolean"/>
</xs:complexType>

<xs:simpleType name="type">
  <xs:restriction base="xs:string"/>
</xs:simpleType>

<xs:simpleType name="automata">
  <xs:restriction base="xs:boolean"/>
</xs:simpleType>

<xs:simpleType name="class">
  <xs:restriction base="xs:string">
    <xs:enumeration value="personal"/>
    <xs:enumeration value="business"/>
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="duplex">
  <xs:restriction base="xs:string">
    <xs:enumeration value="full"/>
    <xs:enumeration value="half"/>
    <xs:enumeration value="receive-only"/>
    <xs:enumeration value="send-only"/>
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="mobility">
  <xs:restriction base="xs:string">
    <xs:enumeration value="fixed"/>
    <xs:enumeration value="mobile"/>
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="description">

```

```
<xs:restriction base="xs:string"/>
</xs:simpleType>

<xs:complexType name="event-packages">
  <xs:sequence>
    <xs:element name="event-package" type="tns:event-package"
      minOccurs="0" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>

<xs:complexType name="event-package">
  <xs:simpleContent>
    <xs:extension base="xs:string">
      <xs:attribute name="negated" type="xs:boolean"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>

<xs:simpleType name="priority">
  <xs:restriction base="xs:integer"/>
</xs:simpleType>

<xs:complexType name="methods">
  <xs:sequence>
    <xs:element name="method" type="tns:method"
      minOccurs="0" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>

<xs:complexType name="method">
  <xs:simpleContent>
    <xs:extension base="xs:string">
      <xs:attribute name="negated" type="xs:boolean"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>

<xs:complexType name="extensions">
  <xs:sequence>
    <xs:element name="extension" type="tns:extension"
      minOccurs="0" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>

<xs:complexType name="extension">
  <xs:simpleContent>
```

```
<xs:extension base="xs:string">
  <xs:attribute name="negated" type="xs:boolean"/>
</xs:extension>
```

```
</xs:extension>
</xs:simpleContent>
</xs:complexType>

<xs:complexType name="schemes">
  <xs:sequence>
    <xs:element name="scheme" type="tns:scheme"
      minOccurs="0" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>

<xs:complexType name="scheme">
  <xs:simpleContent>
    <xs:extension base="xs:string">
      <xs:attribute name="negated" type="xs:boolean"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>

<xs:simpleType name="actor">
  <xs:restriction base="xs:string">
    <xs:enumeration value="principal"/>
    <xs:enumeration value="attendant"/>
    <xs:enumeration value="msg-taker"/>
    <xs:enumeration value="information"/>
  </xs:restriction>
</xs:simpleType>

<xs:simpleType name="is-focus">
  <xs:restriction base="xs:boolean"/>
</xs:simpleType>

<xs:complexType name="languages">
  <xs:sequence>
    <xs:element name="language" type="tns:language"
      minOccurs="0" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
```

```

<xs:complexType name="language">
  <xs:simpleContent>
<xs:extension base="xs:string">
  <xs:attribute name="negated" type="xs:boolean"/>
</xs:extension>
  </xs:simpleContent>
</xs:complexType>

</xs:schema>

```

Figure 2

## [8.](#) IANA Considerations

This memo calls for IANA to register a new XML namespace URN as defined in [\[9\]](#)

### [8.1](#) URN sub-namespace registration for 'urn:ietf:params:xml:ns:simple-prescaps-ext'

URI:

urn:ietf:params:xml:ns:simple-prescaps-ext

Description:

This is the XML namespace for XML elements defined by [\[\[\[RFCXXXX\]\]\]](#) to describe user agent capability extension for PIDF presence document format in application/pidf+xml content type.

Registrant Contact:

IETF, SIMPLE working group, <simple@ietf.org>  
Mikko Lonnfors, <mikko.lonnfors@nokia.com>

XML:

BEGIN

```

<?xml version="1.0"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML Basic 1.0//EN"
"http://www.w3.org/TR/xhtml-basic/xhtml-basic10.dtd">
<html xmlns="http://www.w3.org/1999/xhtml
<head>
  <meta http-equiv="content-type"

```

```
content="text/html; charset=iso-8859-1"/>
<title>User agent capability extension to the Presence
  information data format (PIDF)</title>
</head>
<body>
  <h1>Namespace for PIDF user agent capability extension</h1>
  <h2>urn:ietf:params:xml:ns:simple-prescaps-ext</h2>
  <p>See <a href="[[[URL of published RFC]]]">RFCXXXX</a>.</p>
</body>
</html>
END
```

## 9. Security Considerations

All security considerations specified in CPIM [\[5\]](#) and in PIDF [\[4\]](#)

documents apply to this document. Compared to PIDF [\[4\]](#) this presence document format may reveal additional information about user's device capabilities.

Because presence is very privacy-sensitive information, the transport protocol for the presence information SHOULD have capabilities to protect protocol messages from possible threats, such as eavesdropping, corruption, tamper and replay attacks. The protocols SHOULD be able to use security mechanisms which are standardized or being standardized in IETF. However, it depends on the actual transport protocols which security mechanisms should be used, and it is beyond the scope of this memo.

## 10. Acknowledgments

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## 11. References

### 11.1 Normative references

- [1] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.

- [2] Day, M., Rosenberg, J. and H. Sugano, "A Model for Presence and Instant Messaging", [RFC 2778](#), February 2000.
- [3] Day, M., Aggarwal, S., Mohr, G. and J. Vincent, "Instant Messaging / Presence Protocol Requirements", [RFC 2779](#), February 2000.
- [4] Sugano, H., Fujimoto, S., Klyne, G., Bateman, A., Carr, W. and J. Peterson, "Presence Information Data Format (PIDF)", [draft-ietf-impp-cpim-pidf-08](#) (work in progress), May 2003.
- [5] Peterson, J., "Common Profile for Presence (CPP)", [draft-ietf-impp-pres-04](#) (work in progress), August 2003.
- [6] Schulzrinne, H., Rosenberg, J. and P. Kyzivat, "Indicating User Agent Capabilities in the Session Initiation Protocol (SIP)", [draft-ietf-sip-callee-caps-03](#) (work in progress), December 2003.
- [7] Klyne, G., "MIME Content Types in Media Feature Expressions", [RFC 2913](#), September 2000.
- [8] Hoffman, P., "Registration of Charset and Languages Media

Features Tags", [RFC 2987](#), November 2000.

- [9] Mealling, M., "The IETF XML Registry", [RFC 3688](#), January 2004.

## 11.2 Informative references

- [10] Schulzrinne, H., Rosenberg, J. and P. Kyzivat, "Caller Preferences for the Session Initiation Protocol (SIP)", [draft-ietf-sip-callerprefs-10](#) (work in progress), October 2003.
- [11] Peterson, J., "Common Profile for Instant Messaging (CPIM)", [draft-ietf-impp-im-04](#) (work in progress), August 2003.
- [12] Rosenberg, J., Schulzrinne, H., Camarillo, G., Johnston, A., Peterson, J., Sparks, R., Handley, M. and E. Schooler, "SIP: Session Initiation Protocol", [RFC 3261](#), June 2002.
- [13] Roach, A., "Session Initiation Protocol (SIP)-Specific Event

Notification", [RFC 3265](#), June 2002.

- [14] Rosenberg, J., "Session Initiation Protocol (SIP) Extensions for Presence", [draft-ietf-simple-presence-10.txt](#) (work in progress), May 2002.
- [15] Handley, M. and V. Jacobson, "SDP: Session Description Protocol", [RFC 2327](#), April 1998.
- [16] Freed, N. and N. Borenstein, "Multipurpose Internet Mail Extensions (MIME) part two: Media Types", [RFC 2046](#), November 1996.
- [17] Freed, N. and N. Borenstein, "Multipurpose Internet Mail Extensions (MIME) part one:Format of Internet Message Bodies", [RFC 2045](#), November 1996.
- [18] Alvestrand, H., "Tags for the Identification of Languages", [RFC 1766](#), March 1995.
- [19] Holtman, K., Mutz, A. and T. Hardie, "Media Feature Tag Registration Procedure", [RFC 2046](#), March 1999.

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