International Telecommunication Union

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

J.366.2

(08/2010)

SERIES J: CABLE NETWORKS AND TRANSMISSION OF TELEVISION, SOUND PROGRAMME AND OTHER MULTIMEDIA SIGNALS

IPCablecom

IPCablecom2 IP Multimedia Subsystem (IMS): Session handling – IM call model – Stage 2 specification

Recommendation ITU-T J.366.2

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IPCablecom2 IP Multimedia Subsystem (IMS): Session handling – IM call model – Stage 2 specification

Summary

Recommendation ITU-T J.366.2 specifies the IP multimedia (IM) call model for handling of an IP multimedia session origination and termination for an IP multimedia subscriber. It includes interactions between an application server and IP multimedia sessions.

Recommendation ITU-T J.366.2 references the ETSI version of the 3GPP specification (ETSI TS 123 218 V6.3.0 (2005-03)) and specifies only the modifications necessary to optimize it for the cable environment. Additions are shown in blue underline and deletions ~~in red strikethrough~~.

History

Edition	Recommendation	Approval	Study Group
1.0	ITU-T J.366.2	2010-08-29	9

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure e.g., interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

INTELLECTUAL PROPERTY RIGHTS

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at http://www.itu.int/ITU-T/ipr/.

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1 Scope

This Recommendation specifies the IP multimedia (IM) call model for handling of an IP multimedia session origination and termination for an IP multimedia subscriber. It includes interactions between an application server and IP multimedia sessions.

The Third Generation Partnership Project (3GPP) has developed the specification in a form optimized for the wireless environment. This Recommendation references the ETSI version of the 3GPP specification and specifies only the modifications necessary to optimize it for the cable environment. Additions are shown in blue underline and deletions ~~in red strikethrough~~.

It is an important objective of this work that interoperability between IPCablecom 2.0 and 3GPP IMS is provided. IPCablecom 2.0 is based upon 3GPP IMS, but includes additional functionality necessary to meet the requirements of cable operators. Recognizing developing converged solutions for wireless, wireline and cable, it is expected that further development of IPCablecom 2.0 will continue to monitor and contribute to IMS developments in 3GPP, with the aim of alignment of 3GPP IMS and IPCablecom 2.0.

Because this Recommendation indicates modifications from the ETSI specification [ETSI TS 123 218], the structure of the Recommendation does not follow normal ITU-T practice so as to ease the task of the reader to correlate the three documents.

The modifications to [ETSI TS 123 218] are listed below.

2 References

<<Add the following two normative references>>

[22] IETF RFC 5627 (2009), *Obtaining and Using Globally Routable User Agent URIs (GRUUs) in the Session Initiation Protocol (SIP).*

[23] IETF RFC 5628 (2009), *Registration Event Package Extension for Session Initiation Protocol (SIP) Globally Routable User Agent URIs (GRUUs).*

[ETSI TS 123 218] ETSI TS 123 218 V6.3.0 (2005-03), *Multimedia (IM) session handling; IM call model.*

3 Definitions and abbreviations

3.1 Definitions

<<No changes.>>

3.2 Abbreviations

<<Add the following abbreviations:>>

GRUU Globally Routable User Agent URI

TSG Technical Specification Group

4 Architecture and information flows for IM multimedia session

<<No Changes>>

5 Functional requirements of network entities

<<No Changes>>

6 Functional requirements of serving CSCF

6.1 Modes of operation of the S-CSCF

<<No Changes>>

6.2 Interfaces defined for S-CSCF

<<No Changes>>

6.3 Handling of SIP registration

<<Modify the paragraph below Figure 6.3.1 as follows>>

Figure 6.3.1 – S-CSCF handling registration

Application Servers can in addition subscribe to the S-CSCF Registration Event Package. This provides a mechanism for the Application Server to discover all the implicitly registered public user identities without requiring multiple Register requests to be sent to the Application Server and to obtain the current capabilities of the UE as well as be notified about refresh registrations and de-registrations. It also provides a mechanism for the UE to learn the GRUU it should use for each implicitly registered public identity. (GRUU is described in [22].) The S-CSCF will send NOTIFY requests to the Application Server that has subscribed to the registration event package for the registered public user identity.

NOTE – When the Application Server maintains a persistent subscription to the reg-event package it is not necessary for the Application Server to receive third party registration requests from the S-CSCF in response to refresh and de-registration events as these are communicated to the Application Server in the Registration event notifications.

6.4 Handling of mobile originating requests

<<No Changes>>

6.5 Handling of mobile terminating requests

<<Add the following text>>

The destination address of a terminating request may designate either a Public User Identity or a GRUU associated with a particular Public User Identity. If the destination address is a GRUU, the S-CSCF shall determine the corresponding Public User Identity and use it in what follows.

6.6 Handling of IP multimedia session release requests

<<No Changes>>

6.7 Handling of subscription and notification

<<Make the following changes:>>

The S-CSCF supports subscription to and notification of user registration events by the UE, P-CSCFs and Application Servers using the mechanisms specified in IETF RFC 3265 [13] and

extended by [23]. The subscribing entity may subscribe to the registration state of individual public user identities for the purpose of discovering the implicitly registered public user identities and the associated GRUUs. When notifying a subscribing entity of a change in the registration state of a subscribed to public user identity the S-CSCF shall include in the notification all the implicitly registered public user identities associated with the registered public user identity in addition to the registered public user identity. With each identity, it will include the associated GRUUs, if any.

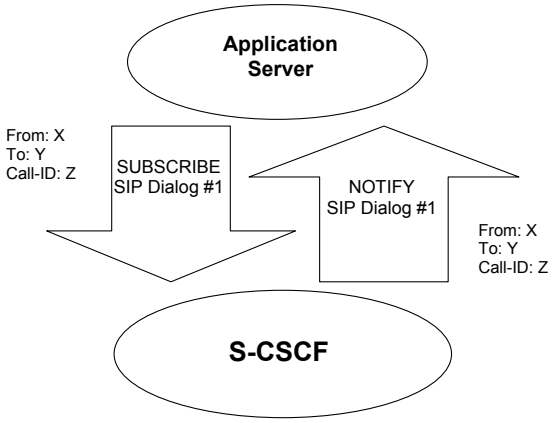

Figure 6.7.1 – Application Server – S-CSCF subscribe notify dialog

6.8 S-CSCF handling IMS charging

<<No Changes>>

6.9 Description of subscriber data

<<No Changes>>

No changes to the remainder of the document.

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Printed in Switzerland
Geneva, 2010