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Supplementary services for multimedia

Call offering supplementary services for H.323

ITU-T Recommendation H.450.10

(Formerly CCITT Recommendation)

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ITU-T Recommendation H.450.10

Call offering supplementary services for H.323

Summary

This Recommendation describes the procedures and the signalling protocol for the Call Offering supplementary service in H.323 (Packet Based Multimedia Communications Systems) networks.

The Call Offer supplementary service (SS-CO) enables a calling user A, encountering a busy destination user B, to "camp-on" to the busy user. This means that the call is indicated to user B and kept in a waiting state until user B reacts to the indication, rather than being released due to the busy condition.

This Recommendation makes use of the "Generic functional protocol for the support of supplementary services in H.323" as defined in ITU-T H.450.1.

The support of ITU-T H.450.6 Call Waiting Supplementary Service for H.323 is required for SS-CO.

This Recommendation requires H.323 version 2 (1998) or later. Version 2 products can be identified by H.225.0 messages containing a **protocolIdentifier** = {itu-t (0) recommendation (0) h (8) 2250 version (0) 2} and H.245 messages containing a **protocolIdentifier** = {itu-t (0) recommendation (0) h (8) 245 version (0) x}, where "x" is 3 or higher.

The procedures and the signalling protocol of this Recommendation are derived from the Call Offering supplementary service specified in ISO/IEC 14841 and ISO/IEC 14843.

Source

ITU-T Recommendation H.450.10 was prepared by ITU-T Study Group 16 (2001-2004) and approved under the WTSA Resolution 1 procedure on 1 March 2001.

FOREWORD

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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.

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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, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

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ITU-T Recommendation H.450.10

Call offering supplementary services for H.323

1 Scope

This Recommendation specifies the Call Offer supplementary service (SS-CO), which is applicable to various basic services supported by H.323 multimedia endpoints.

Call Offer (SS-CO) is a supplementary service which, on request from the calling user (or on that user's behalf), enables a call to be offered to a busy called user and to wait for that called user to accept this call.

The service description, the procedures and the signalling protocol of this Recommendation are derived from the Call Offer supplementary service as specified in ISO/IEC 14841 and 14843. The support of ITU-T H.450.6, *Call Waiting Supplementary Service for H.323* is required for SS-CO.

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published.

- ITU-T H.225.0 (2000), *Call signalling protocols and media stream packetization for packet-based multimedia communication systems*.
- ITU-T H.245 (2000), *Control protocol for multimedia communication*.
- ITU-T H.248 (2000), *Gateway control protocol*.
- ITU-T H.323 (2000), *Packet-based multimedia communications systems*.
- ITU-T H.450.1 (1998), *Generic functional protocol for the support of supplementary services in H.323*.
- ITU-T H.450.2 (1998), *Call transfer supplementary service for H.323*.
- ITU-T H.450.3 (1998), *Call diversion supplementary service for H.323*.
- ITU-T H.450.6 (1999), *Call waiting supplementary service for H.323*.
- ITU-T H.450.11(2001), *Call intrusion supplementary services*.

3 Terms and Definitions

This Recommendation defines the following terms:

3.1 automatic call offer invocation timer: A timer governing the time after which SS-CO is automatically invoked after the calling user has been informed that a call has failed because of busy at the destination. The duration of the timer is an implementation option.

3.2 busy, busy condition: A condition where a destination endpoint engaged in one or more calls cannot accept another incoming call due to resource limitations.

NOTE – In the absence of any supplementary services that might modify the behaviour, the endpoint will, in this situation, send a Release Complete message containing a ReleaseCompleteReason of inConf or a Cause IE with cause value #17, "user busy"; an H.323 endpoint may be busy with one call or may be busy with more than one call depending on implementation.

3.3 call: Refer to Recommendation H.323.

3.4 camp-on: The indication of an incoming call to a busy called user, giving this user the opportunity to accept or reject the call.

NOTE – Acceptance requires that resources will be freed first.

3.5 camp-on tone: A special tone or announcement provided to the calling user A while the call is offered to the busy user B.

3.6 consultation timer: A timer governing the time in which the calling user is allowed to request invocation of SS-CO after being informed that a call has failed because of busy at the destination. The duration of the timer is an implementation option.

3.7 endpoint; gatekeeper; gateway; terminal; user: See ITU-T H.323. Designations "A" or "B" refer to user A's or user B's side, respectively (see definitions of user A/user B below).

3.8 free: A property of a user who can accept an attempt to present a call to that user (i.e. allow the call to reach the alerting or answered state).

3.9 proxy: An entity that acts on behalf of an endpoint for the SS-CO procedures. The proxy may or may not be co-located with the gatekeeper.

3.10 offered call: A call that is in a waiting condition as a result of invocation of SS-CO against a busy called user.

3.11 user A: The calling user, also the served user of SS-CO.

3.12 user B: The (busy) called user against whom SS-CO is invoked.

4 Abbreviations and Acronyms

This Recommendation uses the following abbreviations:

APDU	Application Protocol Data Unit
ASN.1	Abstract Syntax Notation One
EASE	Endpoint A Signalling Entity
EBSE	Endpoint B Signalling Entity
GK	Gatekeeper
IE	Information Element
MGC	Media Gateway Controller
NFE	Network Facility Extension
SCN	Switched Circuit Network
SDL	Specification and Description Language
SS-CO	Supplementary Service – Call Offering