

I n t e r n a t i o n a l T e l e c o m m u n i c a t i o n U n i o n

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

H.460.6

(03/2013)

SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS

Infrastructure of audiovisual services – Supplementary
services for multimedia

Extended Fast Connect feature

Recommendation ITU-T H.460.6



International
Telecommunication
Union

Documents
Document Sharing Hub

ITU-T H-SERIES RECOMMENDATIONS
AUDIOVISUAL AND MULTIMEDIA SYSTEMS

CHARACTERISTICS OF VISUAL TELEPHONE SYSTEMS	H.100–H.199
INFRASTRUCTURE OF AUDIOVISUAL SERVICES	
General	H.200–H.219
Transmission multiplexing and synchronization	H.220–H.229
Systems aspects	H.230–H.239
Communication procedures	H.240–H.259
Coding of moving video	H.260–H.279
Related systems aspects	H.280–H.299
Systems and terminal equipment for audiovisual services	H.300–H.349
Directory services architecture for audiovisual and multimedia services	H.350–H.359
Quality of service architecture for audiovisual and multimedia services	H.360–H.369
Supplementary services for multimedia	H.450–H.499
MOBILITY AND COLLABORATION PROCEDURES	
Overview of Mobility and Collaboration, definitions, protocols and procedures	H.500–H.509
Mobility for H-Series multimedia systems and services	H.510–H.519
Mobile multimedia collaboration applications and services	H.520–H.529
Security for mobile multimedia systems and services	H.530–H.539
Security for mobile multimedia collaboration applications and services	H.540–H.549
Mobility interworking procedures	H.550–H.559
Mobile multimedia collaboration inter-working procedures	H.560–H.569
BROADBAND, TRIPLE-PLAY AND ADVANCED MULTIMEDIA SERVICES	
Broadband multimedia services over VDSL	H.610–H.619
Advanced multimedia services and applications	H.620–H.629
Ubiquitous sensor network applications and Internet of Things	H.640–H.649
IPTV MULTIMEDIA SERVICES AND APPLICATIONS FOR IPTV	
General aspects	H.700–H.719
IPTV terminal devices	H.720–H.729
IPTV middleware	H.730–H.739
IPTV application event handling	H.740–H.749
IPTV metadata	H.750–H.759
IPTV multimedia application frameworks	H.760–H.769
IPTV service discovery up to consumption	H.770–H.779
Digital Signage	H.780–H.789

For further details, please refer to the list of ITU-T Recommendations.

Recommendation ITU-T H.460.6

Extended Fast Connect feature

Summary

Recommendation ITU-T H.460.6 provides a method for the rapid creation or reconfiguration of media streams under the control of endpoints or third parties. It is especially useful for operations such as the redirection of a caller to an automatic voice response unit, or the initiation of new media channels, such as a modem data channel, in response to detected events, such as modem answer tone. It also supports the rapid redirection of media streams from a called party to an automatic answering device.

This revision introduces a number of corrections and clarifications by incorporating technical and editorial corrections from the ITU-T H.323-series Implementers Guide (03/2011).

History

Edition	Recommendation	Approval	Study Group
1.0	ITU-T H.460.6	2002-11-29	16
2.0	ITU-T H.460.6	2013-03-16	16

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

ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

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/>.

© ITU 2013

All rights reserved. No part of this publication may be reproduced, by any means whatsoever, without the prior written permission of ITU.

Table of Contents

	Page
1 Scope	1
2 References.....	1
3 Definitions and acronyms	2
3.1 Abbreviations and acronyms	2
3.2 Definitions	2
4 Overview	3
4.1 Negotiation of Extended Fast Connect.....	3
4.2 Invocation of Extended Fast Connect.....	5
4.3 Opening new sessions.....	7
4.4 Closing open channels	7
4.5 Terminating available sessions.....	8
4.6 Conflict resolution	8
4.7 Channel redirection and media session reconfiguration.....	9
4.8 Media encryption.....	10
4.9 Requesting new channel proposals.....	10
4.10 EFC request sequencing	10
4.11 EFC counter proposals	11
4.12 Moving to ITU-T H.245 logical channel procedures	11
4.13 Failure conditions	12
5 Interaction with existing procedures.....	12
5.1 Fast Connect	12
5.2 UserInputIndication	12
5.3 EndSession command.....	12
5.4 Simple Endpoint Type (SET)	12
5.5 EFC third-party pause and rerouting	13

Document Sharing Hub



Documents

Rec. ITU-T H.460.6 (03/2013)

iii

Document Sharing Hub

Recommendation ITU-T H.460.6

Extended Fast Connect feature

1 Scope

Seamless operation of IP telephony requires the ability to initiate, redirect and reconfigure media connections in a fast and efficient manner. The reduction of "dead time" and quick response to user actions both demand that media operations be carried out as quickly as possible. For example, a caller might be redirected from an endpoint that does not answer to a voice messaging endpoint that answers automatically. A call may suspend media transfer when a user invokes "hold", then should re-establish media transfer quickly when the user re-joins the call. Similarly, media connections should be quickly reconfigured when a user activates a conference or is switched to an automatic announcement. Such capabilities are available to the simple endpoint type (SET) as described in Annex F of [ITU-T H.323].

This Recommendation provides a method by which an endpoint may negotiate the capability to initiate, rearrange, reconfigure, or close one or more media channels as efficiently and quickly as a SET using the repeated Fast Connect procedures. The advantages of this method, relative to [ITU-T H.245] include:

- the ability of one party to initiate creation of both transmit and receive media channels (not strictly possible in [ITU-T H.245] since the **ModeRequest** cannot specify a capability, nor can it specify **replacementFor**);
- the ability of two parties to establish media channels with a single exchange of messages ([ITU-T H.245] requires a three-way to five-way exchange);
- the ability of one party to close a media channel with a single message ([ITU-T H.245] requires two or three messages);
- the ability of one party to redirect a media channel with a single message ([ITU-T H.245] requires at least three);
- optional use of tunnelled ITU-T H.245 to provide capability exchange, master/slave negotiation and non-media controls such as user input indication.

The generic extensible framework (GEF) of [ITU-T H.225.0] is used to negotiate the use of Extended Fast Connect (EFC) procedures. This negotiation may proceed in parallel with tunnelled ITU-T H.245 capability negotiation via the **parallelH245Control** tunnel and/or standard Fast Connect establishment of one or more initial media channels, as described below.

The term "party" is used herein to refer to either an endpoint or a gatekeeper actively involved in call signalling and media control with another party. The EFC feature may be invoked between endpoints (direct-routed calls or relayed via a gatekeeper), or may involve one or more active gatekeepers or call feature servers. The term "third party" is used to indicate an active party that is not the source or recipient of a media channel.

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. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.