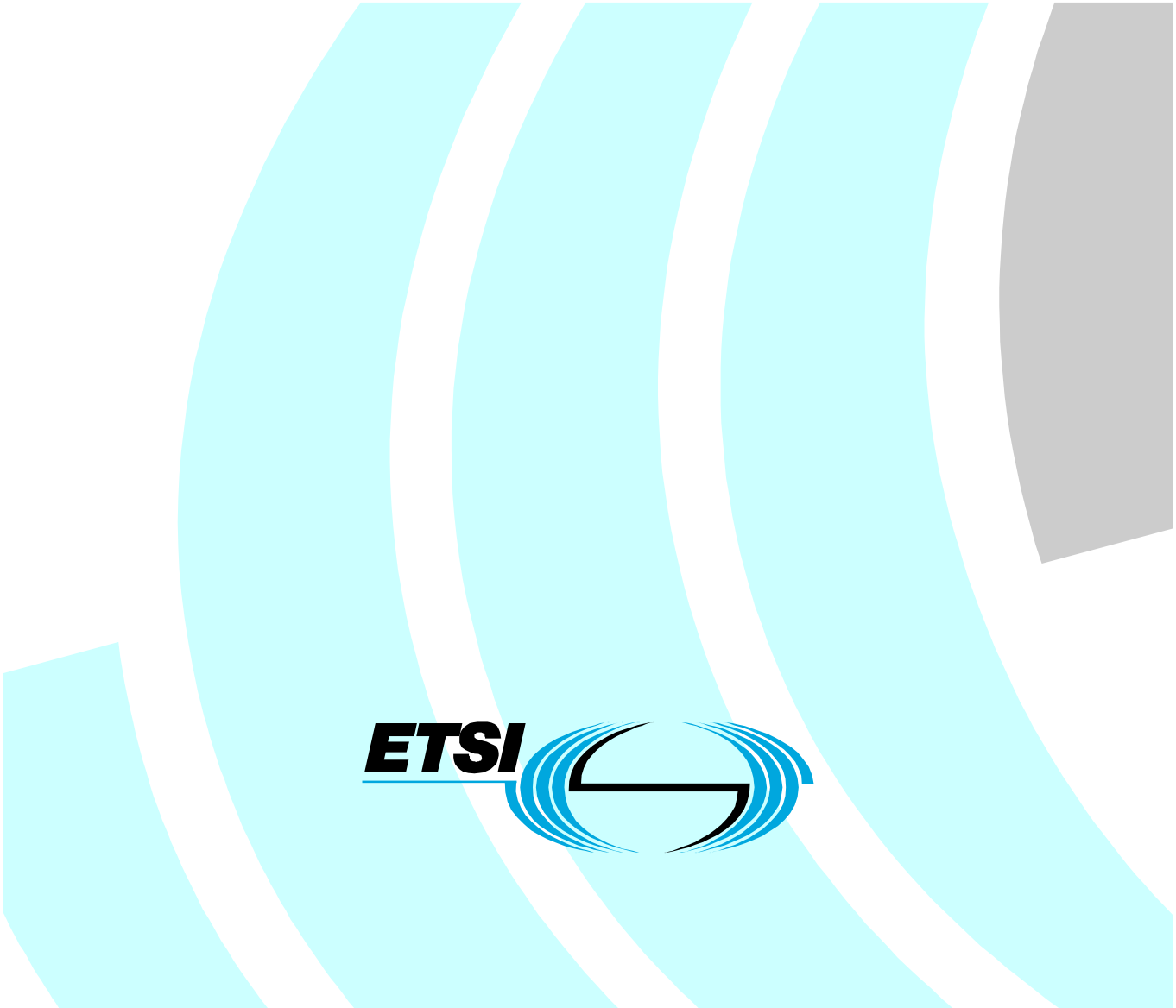
ETSI TS 101 804-1 V2.1.1 (2004-11)

Technical Specification

Methods for Testing and Specification (MTS); Conformance Test Specification for ITU-T H.225.0 (Terminal, Gatekeeper and Gateway); Part 1: Protocol Implementation Conformance Statement (PICS) proforma



Reference
RTS/MTS-00095-1

Keywords
gatekeeper, gateway, H.323, IP, multimedia, PICS, supplementary service, terminal, testing, VoIP

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Contents

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Methods for Testing and Specification (MTS).

The present document is part 1 of a multi-part deliverable covering the H.225.0 protocol for Terminal, Gatekeeper and Gateway as identified below:

Part 1: "Protocol Implementation Conformance Statement (PICS) proforma";

Part 2: "Test Suite Structure and Test Purposes (TSS&TP)";

Part 3: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma".

Introduction

To evaluate conformance of a particular implementation, it is necessary to have a statement of which capabilities and options have been implemented for a telecommunication specification. Such a statement is called an Implementation Conformance Statement (ICS).

1 Scope

The present document provides the Protocol Implementation Conformance Statement (PICS) proforma for the call signalling protocols for packet-based multimedia communication systems defined in ITU-T Recommendation H.323 [1] in accordance with the relevant guidance given in ISO/IEC 9646-7 [4].

The supplier of a protocol implementation which is claimed to conform to ITU-T Recommendation H.323 [1] is required to complete a copy of the PICS proforma provided in annex A of the present document and is required to provide the information necessary to identify both the supplier and the implementation.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

[1] ITU-T Recommendation H.323: "Packet-based multimedia communications systems".

[2] ITU-T Recommendation H.225.0: "Call signalling protocols and media stream packetization for packet-based multimedia communication systems".

[3] ISO/IEC 9646-1: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts".

[4] ISO/IEC 9646-7: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".

[5] ITU-T Recommendation H.245: "Control protocol for multimedia communication".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ITU-T Recommendation H.323 [1], ITU-T Recommendation H.225.0 [2], ISO/IEC 9646-1 [3] and ISO/IEC 9646-7 [4] and the following apply:

ICS proforma: document, in the form of a questionnaire, which when completed for an implementation or system becomes a PICS

Implementation Conformance Statement (ICS): statement made by the supplier of an implementation or system claimed to conform to a given specification, stating which capabilities have been implemented

NOTE: The PICS can take several forms: protocol PICS, profile PICS, profile specific PICS, information object PICS, etc.

Protocol ICS (PICS): ICS for an implementation or system claimed to conform to a given protocol specification

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ACF	Admission Confirmation
ARJ	Admission ReJect
ARQ	Admission ReQuest
BCF	Bandwidth Change Confirmation
BRJ	Bandwidth Change Reject
BRQ	Bandwidth ReQuest
DCF	Disengage ConFirmation
DRJ	Disengage Reject
DRQ	Disengage ReQuest
DTMF	Dual-Tone MultiFrequency
GCF	Gatekeeper ConFirmation
GK	GateKeeper
GRJ	Gatekeeper ReJect
GRQ	Gatekeeper ReQuest
ICS	Implementation Conformance Statement
IRQ	Information ReQuest
IRR	Information Request Response
IUT	Implementation Under Test
LCF	Location ConFirmation
LRJ	Location ReJect
LRQ	Location ReQuest
MCU	Multipoint Control Unit
PDU	Protocol Data Unit
PICS	Protocol Implementation Conformance Statement
RAS	Registration, Admission and status
RCF	Registration ConFirmation
RIP	Request In Progress
RRJ	Registration ReJect
RRQ	Registration ReQuest
RTP	Real Time Protocol
SCS	System Conformance Statement
SUT	System Under Test
TSAP	Transport layer Service Access Point
UCF	Unregister ConFirmation
URJ	Unregister ReJect
URQ	Unregister ReQuest
UUIE	User-to-User Information Element

4 Conformance to this PICS proforma specification

If it claims to conform to the present document, the actual PICS proforma to be filled in by a supplier shall be technically equivalent to the text of the PICS proforma given in annex A, and shall preserve the numbering/naming and ordering of the proforma items.

A PICS which conforms to the present document shall be a conforming PICS proforma completed in accordance with the guidance for completion given in clause A.1.

Annex A (normative): PICS proforma for ITU-T Recommendations H.225.0 and H.323

A.1 Guidance for completing the PICS proforma

A.1.1 Purposes and structure

The purpose of this PICS proforma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in ITU-T Recommendation H.323 [1] may provide information about the implementation in a standardized manner.

The PICS proforma is subdivided into clauses for the following categories of information:

- guidance for completing the PICS proforma;
- identification of the implementation;
- identification of the protocol;
- global statement of conformance;
- H.323 entities concerned;
- Call signalling capabilities;
- Call signalling procedure capabilities;
- Miscellaneous capabilities;
- RAS Messages;
- parameters for each RAS message;
- BCC Messages;
- parameters for each BCC message;
- RAS timers.

A.1.2 Abbreviations and conventions

The PICS proforma contained in this annex is comprised of information in tabular form in accordance with the guidelines presented in ISO/IEC 9646-7 [4].

Item column

The item column contains a qualified number which identifies the item in the table.

Item description column

The item description column describes in free text each respective item (for example parameters, timers, etc.). It implicitly means "is < item description > supported by the implementation?".

Status column

The following notations, defined in ISO/IEC 9646-7 [4], are used for the status column:

M	mandatory - the capability is required to be supported;
O	indicates an optional requirement;
N/A	not applicable - in the given context, it is impossible to use the capability;
X	prohibited (excluded) - there is a requirement not to use this capability in the given context;
Ot.i	qualified optional - for mutually exclusive or selectable options from a set. "i" is an integer which identifies a unique group of related optional items in the table numbered t and the logic of their selection which is defined immediately following the table;
Ct.i	conditional - the requirement on the capability ("m", "o", "x" or "n/a") depends on the support of other optional or conditional items. "i" is an integer identifying a unique conditional status in the table numbered t, expression which is defined immediately following the table.

Support column

The support column shall be filled in by the supplier of the implementation. The following common notations, defined in ISO/IEC 9646-7 [4], are used for the support column:

Y or y	supported by the implementation;
N or n	not supported by the implementation;
N/A, n/a or	no answer required (allowed only if the status is n/a, directly or after evaluation of a conditional status).

It is also possible to provide a comment to an answer in the space provided at the bottom of the table.

Values allowed

Notes describe the content of the field, when only restricted values are supported, for sent message.

References to items

For each possible item answer (answer in the support column) within the PICS proforma a unique reference exists, used, for example, in the conditional expressions. It is defined as the table identifier, followed by a solidus character "/", followed by the item number in the table.

EXAMPLE: A.1/HE1 is the reference to the answer of item HE1 in table 1 of annex A.

Prerequisite line

A prerequisite line takes the form: Prerequisite: < predicate >.

A prerequisite line after a clause or table title indicates that the whole clause or the whole table is not required to be completed if the predicate is FALSE.

A.1.3 Instructions for completing the PICS proforma

The supplier of the implementation shall complete the PICS proforma in each of the spaces provided. In particular, an explicit answer shall be entered, in each of the support or supported column boxes provided, using the notation described in clause A.1.2.

If necessary, the supplier may provide additional comments in space at the bottom of the tables, or separately on sheets of paper.

More detailed instructions are given at the beginning of the different clauses of the PICS proforma.

A.2 Identification of the implementation

Identification of the Implementation Under Test (IUT) and the system in which it resides (the System Under Test (SUT)) should be filled in so as to provide as much detail as possible regarding version numbers and configuration options.

The product supplier information and terminal information should both be filled in if they are different.

A person who can answer queries regarding information supplied in the PICS should be named as the contact person.

A.2.1 Date of the statement

.....

A.2.2 Implementation Under Test (IUT) identification

IUT name:

.....

.....

IUT version:

.....

A.2.3 System Under Test (SUT) identification

SUT name:

.....

.....

Hardware configuration:

.....

.....

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Operating system:

.....

A.2.4 Product supplier

Name:

.....

Address:

.....

.....

.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....

.....

.....

A.2.5 Terminal (if different from product supplier)

Name:

.....

Address:

.....

.....

.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....

.....

A.2.6 PICS contact person

(A person to contact if there are any queries concerning the content of the PICS)

Name:

.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....

.....

.....

A.3 PICS/System Conformance Statement (SCS)

Provide the relationship of the PICS with the SCS for the system.

A.4 Identification of the protocol

The PICS proforma applies to the following standards:

ITU-T Recommendation H.323 (2000): "Framework and wire-protocol for multiplexed call signalling transport";

ITU-T Recommendation H.225.0 (2000): "Call signalling protocols and media stream packetization for packet-based multimedia communication systems".

A.5 Global statement of conformance

Are all mandatory capabilities implemented? (Yes/No).

NOTE: Answering "No" to this question indicates non-conformance to the protocol specification. Non-supported mandatory capabilities are to be identified in the PICS, with an explanation of why the implementation is non-conforming, on pages attached to the PICS proforma.

A.6 H.323 entities

Table A.1: H.323 entities

Item	H.323 entities	Reference	Status	Support
HE 1	Terminal		O.1.1	
HE 2	Gatekeeper		O.1.1	
HE 3	Gateway		O.1.1	
Comments: O.1.1: It is mandatory to support at least one of the items.				

A.7 Terminal or Gateway role

This clause contains the PICS proforma tables related to the terminal and gateway role. It concerns exchange between a terminal or a gateway and its gatekeeper. The following tables need to be completed only for a Terminal or a Gateway.

Prerequisite: A.1/HE1 OR A.1/HE3 item

A.7.1 Capabilities

A.7.1.1 Call signalling capabilities

Table A.2: Call signalling capabilities

Item	Subsidiary capabilities Does the IUT support …	Reference	H.323 Status	Support
T_CSC 1.1	the use of one Network address?	7.1.1 [1]	M	
T_CSC 1.2	the use of different Network addresses for different channels? (note)	7.1.1 [1]	O	
T_CSC 2	the use of several TSAP identifiers?	7.1.2 [1]	O	
T_CSC 3	the use of alias addresses?	7.1.3 [1]	O	
T_CSC 4	the use of URL schemes?	7.1.4 [1]	O	
T_CSC 5	sending of RIP messages?	7.2 [1]	O	
T_CSC 6.1	manual gatekeeper discovery?	7.2.1 [1]	O.2.1	
T_CSC 6.2	automatic gatekeeper discovery?	7.2.1 [1]	O.2.1	
T_CSC 6.2.1	multicast GRQ messages for gatekeeper discovery?	7.2.1 [1]	C.2.2	
T_CSC 6.2.1.1	repetition of unanswered GRQ requests?	7.2.1 [1]	C.2.3	
T_CSC 6.2.1.2	periodic repetition of GRQ requests?	7.2.1 [1]	C.2.3	
T_CSC 6.2.2	H.225 Appendix IV procedures for gatekeeper discovery?	7.2.1 [1], Appendix IV [2]	C2.2	
T_CSC 6.2.3	unicast GRQ messages for gatekeeper discovery?	7.2.1 [1]	O	
T_CSC 7.1	initiation of endpoint registration requests?	7.2.2 [1]	M	
T_CSC 7.1.1	periodic repetition of endpoint registration requests?	7.2.2 [1]	O	
T_CSC 7.1.2	indication of alternative Transport addresses in RRQ messages?	7.2.2 [1]	O	
T_CSC 7.2.1	initiation of endpoint un-registration requests?	7.2.2 [1]	O	
T_CSC 7.2.2	processing of endpoint un-registration requests?	7.2.2 [1]	M	
T_CSC 8	the use of lightweight RRQ?	7.2.2.1 [1]	O	
T_CSC 9	the use of additive registrations?	7.2.2.2 [1]	O	
T_CSC 10	endpoint location?	7.2.3 [1]	O	
T_CSC 11.1	sending of ARQ messages?	7.2.4, 8.1 [1]	O	
T_CSC 11.2	sending of BRQ messages?	7.2.4 [1], 8.4.1 [1]	O	
T_CSC 11.3	sending of DRQ messages?	7.2.4 [1], 8.5 [1]	M	
T_CSC 12	use of access tokens?	7.2.5 [1]	O	
T_CSC 13	alternate gatekeeper procedures?	7.2.6 [1]	O	
T_CSC 14	usage information reporting?	7.2.7 [1]	O	
T_CSC 14.1	advertising usage information reporting capabilities?	7.2.7.1 [1]	C.2.4	
T_CSC 14.2.1	of usage information reports in BRQ messages?	7.2.7.3 [1]	C.2.4	
T_CSC 14.2.2	of usage information reports in IRR messages?	7.2.7.3 [1]	C.2.4	
T_CSC 14.2.3	of usage information reports in DRQ messages?	7.2.7.3 [1]	C.2.4	
T_CSC 14.2.4	of usage information reports in DCF messages?	7.2.7.3 [1]	C.2.4	
T_CSC 15	call credit-related capabilities	7.2.8 [1]	O	
T_CSC 16	alternate transport addresses	7.2.9 [1]	O	
T_CSC 17.1	call signalling between endpoints without a gatekeeper?	7.3 [1]	O.2.5	
T_CSC 17.2	call signalling between endpoints with a gatekeeper?	7.3 [1]	O.2.5	
T_CSC 17.2.1	gatekeeper routed call signalling?	7.3.1 [1]	O	

Item	Subsidiary capabilities Does the IUT support …	Reference	H.323 Status	Support
T_CSC 17.2.2	direct endpoint call signalling?	7.3.1 [1]	O	
T_CSC 17.2.3	gatekeeper routed control channel routing?	7.3.2 [1]	O	
T_CSC 17.2.4	direct endpoint control channel routing?	7.3.2 [1]	O	
T_CSC 18.1	use of the Call Reference Value in RAS messages?	7.4 [1]	M	
T_CSC 18.2	use of the Call Reference Value in call signalling messages?	7.4 [1]	M	
T_CSC 19	use of Call ID?	7.5 [1]	M	
T_CSC 20	use of Conference ID and conference goal?	7.6 [1]	M	
T_CSC 21.1	indication of the endpoint's call capacity during registration?	7.7 [1]	O	
T_CSC 21.2	indication of the endpoint's call capacity on a per-call basis?	7.7 [1]	O	
T_CSC 22.1.1	the inclusion of the calling party address (presentation allowed)?	7.8.1.1 [1]	O	
T_CSC 22.1.2	the inclusion of the calling party address (presentation restricted)?	7.8.1.2 [1]	O	
T_CSC 22.1.3	the inclusion of the calling party address in the Calling Party Number information element?	7.8.2.1 [1]	C.2.6	
T_CSC 22.1.4	the inclusion of the calling party address in ASN.1 parameters?	7.8.2.1 [1]	C.2.6	
T_CSC 22.2.1	the inclusion of the connected party address (presentation allowed)?	7.8.1.3 [1]	O	
T_CSC 22.2.2	the inclusion of the connected party address (presentation restricted)?	7.8.1.4 [1]	O	
T_CSC 22.2.3	the inclusion of the connected party address in the Connected Party Number information element?	7.8.2.2 [1]	C.2.7	
T_CSC 22.2.4	the inclusion of the connected party address in ASN.1 parameters?	7.8.2.2 [1]	C.2.7	
T_CSC 22.3.1	the inclusion of the called (alerting) party address (presentation allowed)?	7.8.1.5 [1]	O	
T_CSC 22.3.2	the inclusion of the called (alerting) party address (presentation restricted)?	7.8.1.6 [1]	O	
T_CSC 22.4.1	the inclusion of the busy party address (presentation allowed)?	7.8.1.7 [1]	O	
T_CSC 22.4.2	the inclusion of the busy party address (presentation restricted)?	7.8.1.8 [1]	O	
T_CSC 23.1	use of the generic extensible framework for the carriage of opaque data within H.225.0 messages?	7.9 [1]	O	
T_CSC 23.2	use of the generic extensible framework for the negotiation of supported features?	7.9 [1]	O	

Comments:
NOTE: If only one Network address is supported, multiple TSAP identifiers are needed.
O.2.1: At least one item has to be supported.
C.2.2: At least one item has to be supported, if A.2/T_SC 6.2.
C.2.3: If A.2/T_CSC6.2.1, then O else N/A.
C.2.4: If A.2/T_CSC14, then O else N/A.
O.2.5: At least one item has to be supported.
C.2.6: At least one item has to be supported, if A.2/T_CSC 22.1.1 or A.2/T_CSC 22.1.2.
C.2.7: At least one item has to be supported, if A.2/T_CSC 22.2.1 or A.2/T_CSC 22.2.2.

A.7.1.2 Call signalling procedure capabilities

Table A.3: Call signalling procedure capabilities

Item	Subsidiary capabilities Does the IUT support …	Reference	H.323 Status	Support
Phase A - Call setup, clause 8.1 [1]				
T_CSP 1	basic call setup without gatekeeper?	8.1.1 [1]	O	
T_CSP 2	basic call setup with gatekeeper using direct signalling?	figures 30, 32, 34, 36, 37, 38/H.323 [1]	O.3.1	
T_CSP 3	basic call setup with gatekeeper using gatekeeper routed signalling?	figures 31, 33, 35, 39/H.323 [1]	O.3.1	
T_CSP 4	optional called endpoint signalling?	figure 40/H.323 [1]	O	
T_CSP 5	the fast connect procedure?	8.1.7 [1]	O	
T_CSP 5.1	the reception/transmission of media during call set-up (i.e. when the mediaWaitforConnect element in the SETUP message was set to FALSE)?	8.1.7 [1]	O	
T_CSP 5.2.1	H.245 tunnelling?	8.1.7.2, 8.2.1 [1]	O	
T_CSP 5.2.2	separate H.245 connections?	8.1.7.2, 8.2.3 [1]	O	
T_CSP 5.3.1	provision of in-band-generated tones announcements when being at the terminating side of the call?	8.1.7.4 [1]	O	
T_CSP 5.3.2	provision of locally-generated tones announcements when being at the originating side of the call?	8.1.7.4 [1]	M	
T_CSP 6.1	gateway in-bound call setup?	8.1.8.1 [1]	C.3.2	
T_CSP 6.2	gateway out-bound call setup?	8.1.8.2 [1]	C.3.2	
T_CSP 7	call setup with an MCU?	8.1.9 [1]	O	
T_CSP 8	call forwarding?	8.1.10 [1]	O	
T_CSP 9	broadcast call setup?	8.1.11 [1]	O	
T_CSP 10	overlapped sending?	8.1.12 [1]	O	
T_CSP 11	conference calls?	8.1.13 [1]	O	
T_CSP 12	the modification of destination addresses?	8.1.14 [1]	O	
T_CSP 13	the indication of desired protocols?	8.1.15 [1]	O	
Phase B - Initial communication and capability exchange, clause 8.2 [1]				
T_CSP 14	the capabilities exchange procedure of H.245?	8.2, 6.2.8.1 [1]	M	
T_CSP 15	the master-slave determination procedure of H.245?	8.2, 6.2.8.1 [1]	M	
T_CSP 16	H.245 tunnelling in parallel with fast connect?	8.2.4 [1]	O	
Phase C - Establishment of audiovisual communication, clause 8.3 [1]				
T_CSP 17	procedures for the establishment of audiovisual communications? (note 1)	8.3 [1]	M	
Phase D - Call services, clause 8.4 [1]				
T_CSP 18.1	initiation of requests for bandwidth changes by sending BRQ messages?	8.4.1 [1]	O	
T_CSP 18.2	processing of requests for bandwidth changes when receiving BRQ messages?	8.4.1 [1]	M	
T_CSP 19.1	processing of requests for status information when receiving IRQ messages?	8.4.2 [1]	M	
T_CSP 19.2.1	initiation of requests for status information by sending Status Enquiry messages?	8.4.2 [1]	O	
T_CSP 19.2.2	processing of requests for status information when receiving Status Enquiry messages?	8.4.2 [1]	M	

Item	Subsidiary capabilities Does the IUT support …	Reference	H.323 Status	Support
T_CSP 20	the procedures for ad hoc conference expansion?	8.4.3 [1]	C.3.3	
T_CSP 21	supplementary services? (note 2)	8.4.4 [1]	O	
T_CSP 22	multipoint cascading?	8.4.5 [1]	C.3.3	
T_CSP 23	third party initiated pause and re-routing?	8.4.6 [1]	O	
Phase E - Call termination, clause 8.5 [1]				
T_CSP 24	initiation of call termination?	8.5.2 [1]	M	
T_CSP 25	acceptance of call termination by the gatekeeper?	8.5.3 [1]	M	
Protocol failure handling, clause 8.6 [1]				
T_CSP 26	termination of calls on detection of a protocol failure?	8.6 [1]	O.3.4	
T_CSP 27	re-establishment of calls on detection of a protocol failure?	8.6 [1]	O.3.4	
T_CSP 28	determination of the functional status of a remote endpoint by sending a H.245 roundTripDelayRequest message?	8.6 [1]	O	
Comments: NOTE 1: Details of the procedures should be covered by the H.245 PICS. NOTE 2: Details of the procedures should be covered by the H.450 PICS. O.3.1: At least one item has to be supported. C.3.2: If A.1/HE 3, then M else N/A. C.3.3: If A3/T_CSP 11, then O else N/A. O.3.4: At least one item has to be supported.				

A.7.1.3 Miscellaneous capabilities

Table A.4: Miscellaneous capabilities

Item	Subsidiary capabilities Does the IUT support …	Reference	H.323 Status	Support
T_MIC 1	encryption?	10.1 [1]	O	
T_MIC 2	multipoint operation?	10.2 [1]	O	
T_MIC 3	call linkage?	10.3 [1]	O	
T_MIC 4	tunnelling of non-H.323 signalling messages?	10.4 [1]	O	
T_MIC 5	the use of RTP payload for DTMF digits?	10.5 [1]	O	
T_MIC 5.1	sending of DTMF digits in H.245 UserInputIndication messages?	10.5 [1]	C.4.1	
T_MIC 5.2	sending of DTMF digits using the RTP payload?	10.5 [1]	C.4.2	
Comments: C.4.1: If A4/MIC 5, then M else N/A. C.4.2: If A4/MIC 5, then O else N/A.				

A.7.2 RAS Messages

Table A.5: RAS Messages

Item	RAS Message	Reference	H.225/H.323 Status		Support	
			Sending	Receiving	Sending	Receiving
T_RM 1.1	GRQ	7.7 [2], 7.8.1 [2]	O	N/A		
T_RM 1.2	GCF	7.7 [2], 7.8.2 [2]	N/A	O		
T_RM 1.3	GRJ	7.7 [2], 7.8.3 [2]	N/A	O		
T_RM 2.1	RRQ	7.7 [2], 7.9.1 [2]	M	N/A		
T_RM 2.2	RCF	7.7 [2], 7.9.2 [2]	N/A	M		
T_RM 2.3	RRJ	7.7 [2], 7.9.3 [2]	N/A	M		
T_RM 3.1	URQ	7.7 [2], 7.10.1 [2]	O	M		
T_RM 3.2	UCF	7.7 [2], 7.10.2 [2]	M	O		
T_RM 3.3	URJ	7.7 [2], 7.10.3 [2]	O	O		
T_RM 4.1	ARQ	7.7 [2], 7.11.1 [2]	M	N/A		
T_RM 4.2	ACF	7.7 [2], 7.11.2 [2]	N/A	M		
T_RM 4.3	ARJ	7.7 [2], 7.11.3 [2]	N/A	M		
T_RM 5.1	BRQ	7.7 [2], 7.12.1 [2]	M	M		
T_RM 5.2	BCF	7.7 [2], 7.12.2 [2]	M	M		
T_RM 5.3	BRJ	7.7 [2], 7.12.3 [2]	M	M		
T_RM 6.1	LRQ	7.7 [2], 7.13.1 [2]	O	N/A		
T_RM 6.2	LRQ	7.7 [2], 7.13.2 [2]	N/A	O		
T_RM 6.3	LRQ	7.7 [2], 7.13.3 [2]	N/A	O		
T_RM 7.1	DRQ	7.7 [2], 7.14.1 [2]	M	M		
T_RM 7.2	DCF	7.7 [2], 7.14.2 [2]	M	M		
T_RM 7.3	DRJ	7.7 [2], 7.14.3 [2]	M	M		
T_RM 8	Status request messages	7.7 [2], 7.15 [2]	M	M		
T_RM 9	Non Standard messages	7.7 [2], 7.16 [2]	O	O		
T_RM 10	Message not Understood	7.7 [2], 7.17 [2]	O	N/A		
T_RM 11	Gateway Resource Availability messages	7.7 [2], 7.18 [2]	O	N/A		
T_RM 12	Ras timers and RIP messages	7.7 [2], 7.19 [2]	O	M		
Comments:						

A.7.3 RAS Parameters

Only the messages that can be sent by an endpoint are listed below. When receiving a message for which the receiving status in table A.5 has been set to "yes", the following shall be assumed:

- all mandatory parameters are understood and acted upon, as described in the base text of H.323 [1] and H.225 [2];

- all optional parameters are either ignored or, if the optional procedure requiring the specific parameter is implemented, are acted upon accordingly.

NOTE: As stated in ISO/IEC 9646-7 [4], support for a received PDU requires the ability to parse all valid parameters of that PDU. Supporting a PDU while having no ability to parse a valid parameter is non-conformant.

A.7.3.1 Parameters for Gatekeeper Request

Prerequisite: A.5/T_RM 1.1 item -- GRQ message, sending

Table A.6: Parameters for Gatekeeper Request

Item	Parameters for GRQ	H.225/H.323 Status	Support
T_GRQ 1	requestSeqNum	M	
T_GRQ 2	ProtocolIdentifier	M	
T_GRQ 3	nonStandardData	O	
T_GRQ 4	RasAddress	M	
T_GRQ 5	endpointType	M	
T_GRQ 6	gatekeeperIdentifier	O	
T_GRQ 7	callServices	O	
T_GRQ 8	endpointAlias	O	
T_GRQ 9	alternateEndpoints	O	
T_GRQ 10	tokens	O	
T_GRQ 11	cryptoTokens	O	
T_GRQ 12	authenticationCapability	O	
T_GRQ 13	algorithmOID	O	
T_GRQ 14	integrity	O	
T_GRQ 15	integrityCheckValue	O	
T_GRQ 16	supportsAltGK	O	
T_GRQ 17	featureSet	O	
T_GRQ 18	genericData	O	
Comments: Reference: clause 7.8.1 and annex H of [2].			

A.7.3.2 Parameters for Registration Request

Table A.7: Parameters for Registration Request

Item	Parameters for RRQ	H.225/H.323 Status	Support
T_RRQ 1	requestSeqNum	M	
T_RRQ 2	ProtocolIdentifier	M	
T_RRQ 3	nonStandardData	O	
T_RRQ 4	discoveryComplete	M	
T_RRQ 5	callSignalAddress	M	
T_RRQ 6	rasAddress	M	
T_RRQ 7	terminalType	M	
T_RRQ 8	terminalAlias	O	
T_RRQ 9	gatekeeperIdentifier	O	
T_RRQ 10	endpointVendor	M	
T_RRQ 11	alternateEndpoints	O	
T_RRQ 12	timeToLive	O	
T_RRQ 13	tokens	O	
T_RRQ 14	cryptoTokens	O	
T_RRQ 15	integrityCheckValue	O	
T_RRQ 16	keepAlive	M	
T_RRQ 17	endpointIdentifier	O	
T_RRQ 18	willSupplyUUIEs	M	
T_RRQ 19	maintainConnection	M	
T_RRQ 20	alternateTransportAddresses	M	
T_RRQ 21	additiveRegistration	O	
T_RRQ 22	terminalAliasPattern	O	
T_RRQ 23	supportsAltGK	O	
T_RRQ 24	usageReportingCapability	O	
T_RRQ 25	multipleCalls	O	
T_RRQ 26	SupportedH248Packages	O	
T_RRQ 27	callCreditCapability	O	

Item	Parameters for RRQ	H.225/H.323 Status	Support
T_RRQ 28	capacityReportingCapability	O	
T_RRQ 29	capacity	O	
T_RRQ 30	featureSet	O	
T_RRQ 31	genericData	O	
Comments: Reference: clause 7.9.1 and annex H of [2].			

A.7.3.3 Parameters for Unregistration Request

Prerequisite: A.5/T_RM 3.1 item -- URQ message, sending

Table A.8: Parameters for Unregistration Request

Item	Parameters for URQ	H.225/H.323 Status	Support
T_URQ 1	requestSeqNum	M	
T_URQ 2	callSignalAddress	M	
T_URQ 3	endpointAlias	O	
T_URQ 4	nonStandardData	O	
T_URQ 5	endpointIdentifier	O	
T_URQ 6	alternateEndpoints	O	
T_URQ 7	gatekeeperIdentifier	O	
T_URQ 8	tokens	O	
T_URQ 9	cryptoTokens	O	
T_URQ 10	integrityCheckValue	O	
T_URQ 11	reason	O	
T_URQ 12	endpointAliasPattern	O	
T_URQ 13	supportedPrefixes	O	
T_URQ 14	alternateGatekeeper	O	
T_URQ 15	genericData	O	
Comments: Reference: clause 7.10.1 and annex H of [2].			

A.7.3.4 Parameters for Unregistration Confirm

Table A.9: Parameters for Unregistration Confirm

Item	Parameters for UCF	H.323 Status	Support
T_UCF 1	requestSeqNum	M	
T_UCF 2	nonStandardData	O	
T_UCF 3	tokens	O	
T_UCF 4	cryptoTokens	O	
T_UCF 5	integrityCheckValue	O	
T_UCF 6	genericData	O	
Comments: Reference: clause 7.10.2 and annex H of [2].			

A.7.3.5 Parameters for Unregistration Reject

Table A.10: Parameters for Unregistration Reject

Item	Parameters for URJ	H.323 Status	Support
T_RRJ 1	requestSeqNum	M	
T_URJ 2	rejectReason	M	
T_URJ 3	nonStandardData	O	
T_URJ 4	altGKInfo	O	
T_URJ 5	tokens	O	
T_URJ 6	cryptoTokens	O	
T_URJ 7	integrityCheckValue	O	
T_URJ 8	genericData	O	
Comments: Reference: clause 7.10.3 and annex H of [2].			

A.7.3.6 Parameters for Request in Progress

Prerequisite: A.5/T_RM 10 item -- RIP message, sending

Table A.11: Parameters for Request in Progress

Item	Parameters for URJ	H.225/H.323 Status	Support
T_RIP 1	requestSeqNum	M	
T_RIP 2	nonStandardData	O	
T_RIP 3	tokens	O	
T_RIP 4	cryptoTokens	O	
T_RIP 5	integrityCheckValue	O	
T_RIP 6	delay	M	
Comments: Reference: clause 7.19 and annex H of [2].			

A.7.4 BCC Messages

Table A.12: BCC Messages

Item	BCC Message	Reference	H.225/H.323 Status		Support	
			Sending	Receiving	Sending	Receiving
T_BM 1	Alerting	table 4, 7.3.1 [2]	M	M		
T_BM 2	Call Proceeding	table 4, 7.3.2 [2]	O	C (note)		
T_BM 3	Connect	table 4, 7.3.3 [2]	M	M		
T_BM 4	Information	table 4, 7.3.6 [2]	O	C (note)		
T_BM 5	Progress	table 4, 7.3.7 [2]	O	C (note)		
T_BM 6	Release Complete	table 4, 7.3.9 [2]	M	M		
T_BM 7	Setup	table 4, 7.3.10 [2]	M	M		
T_BM 8	Setup Acknowledge	table 4, 7.3.11 [2]	O	O		
T_BM 9	Status	table 4, 7.3.12 [2]	M	M		
T_BM 10	Status Inquiry	table 4, 7.3.13 [2]	O	M		
T_BM 11	Facility	table 4, 7.4.1 [2]	M	M		
T_BM 12	Notify	table 4, 7.4.2 [2]	O	O		
T_BM 13	User Information	table 4 [2]	O	O		
Comments: NOTE: Mandatory, if optional features (e.g. H.245 tunnelling) that use these messages are supported.						

A.7.5 BCC Parameters

A.7.5.1 Parameters for Alerting

Table A.13: Parameters for Alerting

Item	Parameters for Alerting	H.225/H.323 Status	Support
T_AL 1	Protocol discriminator	M	
T_AL 2	Call reference	M	
T_AL 3	Message type	M	
T_AL 4	Bearer capability	O	
T_AL 5	Extended Facility	O	
T_AL 6	Facility	O	
T_AL 7	Progress indicator	O	
T_AL 8	Notification indicator	O	
T_AL 9	Display	O	
T_AL 10	Signal	O	
T_AL 11	User-user	M	
UUIE parameters			
T_AL 12	protocolIdentifier	M	
T_AL 13	destinationInfo	M	
T_AL 14	h245Address	O	
T_AL 15	callIdentifier	M	
T_AL 16	h245SecurityMode	O	
T_AL 17	tokens	O	
T_AL 18	cryptoTokens	O	
T_AL 19	fastStart	O	
T_AL 20	multipleCalls	M	
T_AL 21	maintainConnection	M	
T_AL 22	alertingAddress	O	
T_AL 23	presentationIndicator	O	
T_AL 24	screeningIndicator	O	
T_AL 25	fastConnectRefused	O	
T_AL 26	serviceControl	O	
T_AL 27	capacity	O	
T_AL 28	featureSet	O	
Comments: Reference: clause 7.3.1 and annex H of [2].			

A.7.5.2 Parameters for Call Proceeding

Prerequisite: A.12/T_BM 2 item - Call Proceeding message, sending

Table A.14: Parameters for Call Proceeding

Item	Parameters for Call Proceeding	H.225/H.323 Status	Support
T_CP 1	Protocol discriminator	M	
T_CP 2	Call reference	M	
T_CP 3	Message type	M	
T_CP 4	Bearer capability	O	
T_CP 5	Extended Facility	O	
T_CP 6	Facility	O	
T_CP 7	Progress indicator	O	
T_CP 8	Notification indicator	O	
T_CP 9	Display	O	
T_CP 10	User-user	M	
UUIE parameters			
T_CP 11	protocolIdentifier	M	
T_CP 12	destinationInfo	M	
T_CP 13	h245Address	O	
T_CP 14	callIdentifier	M	
T_CP 15	h245SecurityMode	O	
T_CP 16	tokens	O	
T_CP 17	cryptoTokens	O	
T_CP 18	fastStart	O	
T_CP 19	multipleCalls	M	
T_CP 20	maintainConnection	M	
T_CP 21	fastConnecRefused	O	
T_CP 22	featureSet	O	
Comments: Reference: clause 7.3.2 and annex H of [2].			

A.7.5.3 Parameters for Connect

Table A.15: Parameters for Connect

Item	Parameters for Connect	H.225/H.323 Status	Support
T_CO 1	Protocol discriminator	M	
T_CO 2	Call reference	M	
T_CO 3	Message type	M	
T_CO 4	Bearer capability	O	
T_CO 5	Extended Facility	O	
T_CO 6	Facility	O	
T_CO 7	Progress indicator	O	
T_CO 8	Notification indicator	O	
T_CO 9	Display	O	
T_CO 10	Date/Time	O	
T_CO 11	Connected Number	O	
T_CO 12	Connected Subaddress	O	
T_CO 13	User-user	M	
UUIE parameters			
T_CO 14	protocolIdentifier	M	
T_CO 15	h245Address	O	
T_CO 16	destinationInfo	M	
T_CO 17	conferenceID	M	
T_CO 18	callIdentifier	M	
T_CO 19	h245Address	O	
T_CO 20	h245SecurityMode	O	
T_CO 21	tokens	O	
T_CO 22	cryptoTokens	O	
T_CO 23	fastStart	O	
T_CO 24	multipleCalls	M	
T_CO 25	maintainConnection	M	
T_CO 26	language	O	
T_CO 27	connectedAddress	O	
T_CO 28	presentationIndicator	O	
T_CO 29	screeningIndicator	O	
T_CO 30	fastConnectRefused	O	
T_CO 31	serviceControl	O	
T_CO 32	capacity	O	
T_CO 33	featureSet	O	
Comments: Reference: clause 7.3.3 and annex H of [2].			

A.7.5.4 Parameters for Information

Prerequisite: A.12/T_BM 4 item - Information message, sending

Table A.16: Parameters for Information

Item	Parameters for Information	H.225/H.323 Status	Support
T_IN 1	Protocol discriminator	M	
T_IN 2	Call reference	M	
T_IN 3	Message type	M	
T_IN 4	Sending complete	O	
T_IN 5	Display	O	
T_IN 6	Keypad Facility	O	
T_IN 7	Signal	O	
T_IN 8	Called party number	O	
T_IN 9	User-to-User	M	
UUIE parameters			
T_IN 10	protocolIdentifier	M	
T_IN 11	callIdentifier	M	
T_IN 12	tokens	O	
T_IN 13	cryptoTokens	O	
T_IN 14	fastStart	O	
T_IN 15	fastConnectRefused	O	
T_IN 16	circuitInfo	O	
Comments: Reference: clause 7.3.6 and annex H of [2].			

A.7.5.5 Parameters for Progress

Prerequisite: A.12/T_BM 5 item - Progress message, sending

Table A.17: Parameters for Progress

Item	Parameters for Progress	H.225/H.323 Status	Support
T_PG 1	Protocol discriminator	M	
T_PG 2	Call reference	M	
T_PG 3	Message type	M	
T_PG 4	Bearer capability	O	
T_PG 5	Cause	O	
T_PG 6	Extended Facility	O	
T_PG 7	Facility	O	
UUIE parameters			
T_PG 8	Progress indicator	M	
T_PG 9	Notification indicator	O	
T_PG 10	Display	O	
T_PG 11	User-user	M	
T_PG 12	protocolIdentifier	M	
T_PG 13	destinationInfo	M	
T_PG 14	h245Address	O	
T_PG 15	callIdentifier	M	
T_PG 16	h245SecurityMode	O	
T_PG 17	tokens	O	
T_PG 18	cryptoTokens	O	
T_PG 19	fastStart	O	
T_PG 20	multipleCalls	M	
T_PG 21	maintainConnection	M	
T_PG 22	fastConnectRefused	O	
Comments: Reference: clause 7.3.7 and annex H of [2].			

A.7.5.6 Parameters for Release Complete

Table A.18: Parameters for Release Complete

Item	Parameters for Release Complete	H.225/H.323 Status	Support
T_RC 1	Protocol discriminator	M	
T_RC 2	Call reference	M	
T_RC 3	Message type	M	
T_RC 4	Cause	O.18.1	
T_RC 5	Facility	O	
T_RC 6	Notification indicator	O	
T_RC 7	Display	O	
T_RC 8	Signal	O	
T_RC 9	User-user	M	
UUIE parameters			
T_RC 10	protocolIdentifier	M	
T_RC 11	reason	O.18.1	
T_RC 12	callIdentifier	M	
T_RC 13	tokens	O	
T_RC 14	cryptoTokens	O	
T_RC 15	busyAddress	O	
T_RC 16	presentationIndicator	O	
T_RC 17	screeningIndicator	O	
T_RC 18	capacity	O	
T_RC 19	serviceControl	O	
T_RC 20	featureSet	O	
Comments: Reference: clause 7.3.9 and annex H of [2]. O.18.1: One and only one of these parameters shall be present.			

A.7.5.7 Parameters for Setup

Table A.19: Parameters for Setup

Item	Parameters for Setup	H.225/H.323 Status	Support
T_SU 1	Protocol discriminator	M	
T_SU 2	Call reference	M	
T_SU 3	Message type	M	
T_SU 4	Sending complete	O	
T_SU 5	Bearer capability	M	
T_SU 6	Extended Facility	O	
T_SU 7	Facility	O	
T_SU 8	Notification indicator	O	
T_SU 9	Display	O	
T_SU 10	Keypad facility	O	
T_SU 11	Signal	O	
T_SU 12	Calling party number	O	
T_SU 13	Calling party subaddress	O	
T_SU 14	Called party number	O	
T_SU 15	Called party subaddress	O	
T_SU 16	User-user	M	
UUIE parameters			
T_SU 17	protocolIdentifier	M	
T_SU 18	h245Address	O	
T_SU 19	sourceAddress	O	
T_SU 20	sourceInfo	M	
T_SU 21	destinationAddress	O	
T_SU 22	destCallSignalAddress	O	
T_SU 23	destExtraCallInfo	O	
T_SU 24	destExtraCRV	O	
T_SU 25	activeMC	M	
T_SU 26	conferenceID	M	
T_SU 27	conferenceGoal	M	
T_SU 28	callServices	O	
T_SU 29	callType	M	
T_SU 30	sourceCallSignalAddress	O	
T_SU 31	remoteExtensionAddress	O	
T_SU 32	callIdentifier	M	
T_SU 33	h245SecurityCapability	O	
T_SU 34	tokens	O	
T_SU 35	cryptoTokens	O	
T_SU 36	fastStart	O	
T_SU 37	mediaWaitForConnect	M	
T_SU 38	canOverlapSend	M	
T_SU 39	endpointIdentifier	O	
T_SU 40	multipleCalls	O	
T_SU 41	maintainConnection	O	
T_SU 42	connectionParameters	O	
T_SU 43	language	O	
T_SU 44	presentationIndicator	O	
T_SU 45	screeningIndicator	O	
T_SU 46	serviceControl	O	
T_SU 47	symmetricOperationRequired	O	
T_SU 48	capacity	O	
T_SU 49	circuitInfo	O	
T_SU 50	desiredProtocols	O	
T_SU 51	neededFeatures	O	
T_SU 52	desiredFeatures	O	
T_SU 53	supportedFeatures	O	
T_SU 54	parallelH245Control	O	
T_SU 55	additionalSourceAddresses	O	
Comments: Reference: clause 7.3.10 and annex H of [2].			

A.7.5.8 Parameters for Setup Acknowledge

Table A.20: Parameters for Setup Acknowledge

Item	Parameters for Setup Acknowledge	H.225/H.323 Status	Support
T_SA 1	Protocol discriminator	M	
T_SA 2	Call reference	M	
T_SA 3	Message type	M	
T_SA 4	Progress Indicator	O	
T_SA 5	Display	O	
T_SA 6	Signal	O	
T_SA 7	User-user	M	
UUIE parameters			
T_SA 8	protocolIdentifier	M	
T_SA 9	callIdentifier	M	
T_SA 10	tokens	O	
T_SA 11	cryptotoTokenstokens	O	
Comments: Reference: clause 7.3.11 and annex H of [2].			

A.7.5.9 Parameters for Status

Table A.21: Parameters for Status

Item	Parameters for Status	H.225/H.323 Status	Support
T_ST 1	Protocol discriminator	M	
T_ST 2	Call reference	M	
T_ST 3	Message type	M	
T_ST 4	Cause	M	
T_ST 5	Call state	M	
T_ST 6	Display	O	
T_ST 7	User-user	M	
UUIE parameters			
T_ST 8	protocolIdentifier	M	
T_ST 9	callIdentifier	M	
T_ST 10	tokens	O	
T_ST 11	cryptotoTokenstokens	O	
Comments: Reference: clause 7.3.12 and annex H of [2].			

A.7.5.10 Parameters for Status Inquiry

Table A.22: Parameters for Status Inquiry

Item	Parameters for Status Inquiry	H.225/H.323 Status	Support
T_SI 1	Protocol discriminator	M	
T_SI 2	Call reference	M	
T_SI 3	Message type	M	
T_SI 4	Display	O	
T_SI 5	User-user	M	
UUIE parameters			
T_SI 6	protocolIdentifier	M	
T_SI 7	callIdentifier	M	
T_SI 8	tokens	O	
T_SI 9	cryptotoTokenstokens	O	
Comments: Reference: clause 7.3.13 and annex H of [2].			

A.7.5.11 Parameters for Facility

Table A.23: Parameters for Facility

Item	Parameters for Facility	H.225/H.323 Status	Support
T_FA 1	Protocol discriminator	M	
T_FA 2	Call reference	M	
T_FA 3	Message type	M	
T_FA 4	Extended facility	C (note)	
T_FA 5	Facility	C (note)	
T_FA 6	Notification indicator	O	
T_FA 7	Display	O	
T_FA 8	User-To-User	M	
UUIE parameters			
T_FA 9	protocolIdentifier	M	
T_FA 10	alternativeAddress	O	
T_FA 11	alternativeAliasAddress	O	
T_FA 12	conferenceId	O	
T_FA 13	reason	M	
T_FA 14	callIdentifier	M	
T_FA 15	destExtraCallInfo	O	
T_FA 16	remoteExtensionAddress	O	
T_FA 17	tokens	O	
T_FA 18	cryptoTokens	O	
T_FA 19	conferences	O	
T_FA 20	h245Address	O	
T_FA 21	fastStart	O	
T_FA 22	multipleCalls	M	
T_FA 23	maintainConnection	M	
T_FA 24	fastConnectRefused	O	
T_FA 25	serviceControl	O	
T_FA 26	circuitInfo	O	
T_FA 27	featureSet	O	
T_FA 28	destinationInfo	O	
T_FA 29	H245SecurityMode	O	
Comments: Reference: clause 7.4.1 and annex H of [2]. NOTE: One of these parameters shall be present when the Facility message is used for control of Q.95x supplementary services.			

A.7.6 RAS Timer

Table A.24: RAS Timer

Item	Parameters for RRJ	H.225/H.323 Status	Support
T_TI 1	GRQ timer	O	
T_TI 2	RRQ timer	O	
T_TI 3	URQ timer	O	
T_TI 4	ARQ timer	O	
T_TI 5	BRQ timer	O	
T_TI 6	IRQ timer	N/A	
T_TI 7	IRR timer	O	
T_TI 8	DRQ timer	O	
T_TI 9	LRQ timer	O	
T_TI 10	RAI timer	O	
T_TI 11	SCI timer	O	
Comments: Reference: clause 7.19 of [2].			

A.8 Gatekeeper network role

This clause contains the PICS proforma tables related to the Gatekeeper role. It concerns exchanges of a Gatekeeper and Terminals. The following tables need to be completed only for a gatekeeper.

Prerequisite: A.1/HE2 item

A.8.1 Capabilities

A.8.1.1 Call signalling capabilities

Table A.25: Call signalling capabilities

Item	Subsidiary capabilities Does the IUT support …	Reference	H.323 Status	Support
G_CSC 1	the use of one Network address?	7.1.1 [1]	M	
G_CSC 2	the use of several TSAP identifiers?	7.1.2 [1]	O	
G_CSC 3	the use of alias addresses?	7.1.3 [1]	O	
G_CSC 4	the use of URL schemes?	7.1.4 [1]	O	
G_CSC 5	sending of RIP messages?	7.2 [1]	O	
G_CSC 6.1	processing of gatekeeper requests?	7.2.1 [1]	M	
G_CSC 6.2	indication of alternate gatekeepers in GCF messages?	7.2.1 [1]	O	
G_CSC 6.3	indication of alternate gatekeepers in RCF messages?	7.2.1 [1]	O	
G_CSC 7.1	processing of endpoint registration requests?	7.2.2 [1]	M	
G_CSC 7.1.1	inclusion of the preGrantedARQ parameter in ACF messages?	7.2.2 [1], 7.9.2 [2]	O	
G_CSC 7.1.2	acceptance of registration requests containing the same alias address as an active registration and a different transport address?	7.2.2 [1]	O	
G_CSC 7.3.1	processing of endpoint un-registration requests?	7.2.2 [1]	M	
G_CSC 7.3.2	initiation of endpoint un-registration requests?	7.2.2 [1]	O	
G_CSC 8.1	the use of lightweight RRQ?	7.2.2.1 [1]	O	
G_CSC 8.2	initiation of an endpoint un-registration requests on the expiry of the time-to-live timer?	7.2.2.1 [1]	C.25.1	
G_CSC 9	the use of additive registrations?	7.2.2.2 [1]	O	
G_CSC 10	endpoint location?	7.2.3 [1]	O	
G_CSC 11.1	processing of ARQ messages?	7.2.4, 8.1 [1]	O	
G_CSC 11.2	processing of BRQ messages?	7.2.4 [1], 8.4.1 [1]	O	
G_CSC 11.3	processing of DRQ messages?	7.2.4 [1], 8.5 [1]	M	
G_CSC 12	use of access tokens?	7.2.5 [1]	O	
G_CSC 13	alternate gatekeeper procedures?	7.2.6 [1]	O	
G_CSC 14	usage information reporting?	7.2.7 [1]	O	
G_CSC 14.2.1	of usage information requests in RCF messages?	7.2.7.2 [1]	C.25.2	
G_CSC 14.2.2	of usage information requests in ARQ messages?	7.2.7.2 [1]	C.25.2	
G_CSC 14.2.3	of usage information requests in IRQ messages?	7.2.7.2 [1]	C.25.2	
G_CSC 15	call credit-related capabilities?	7.2.8 [1]	O	
G_CSC 16	alternate transport addresses?	7.2.9 [1]	O	
G_CSC 16.1	provision alternate transport addresses in RCF messages?	7.2.9 [1]	C.25.3	
G_CSC 16.2	provision alternate transport addresses in ACF messages?	7.2.9 [1]	C.25.3	

Item	Subsidiary capabilities Does the IUT support …	Reference	H.323 Status	Support
G_CSC 16.3	provision alternate transport addresses in LCF messages?	7.2.9 [1]	C.25.3	
G_CSC 17	call signalling between endpoints with a gatekeeper?	7.3 [1]	M	
G_CSC 17.1	gatekeeper routed call signalling?	7.3.1 [1]	C.25.4	
G_CSC 17.2	direct endpoint call signalling?	7.3.1 [1]	C.25.4	
G_CSC 17.3	gatekeeper routed control channel routing?	7.3.2 [1]	C.25.5	
G_CSC 17.4	direct endpoint control channel routing?	7.3.2 [1]	C.25.5	
G_CSC 18.1	use of the Call Reference Value in RAS messages?	7.4 [1]	M	
G_CSC 18.2	use of the Call Reference Value in call signalling messages?	7.4 [1]	M	
G_CSC 19	use of Call ID?	7.5 [1]	M	
G_CSC 20	use of Conference ID and conference goal?	7.6 [1]	M	
G_CSC 21	request of the endpoint's call capacity?	7.7 [1]	O	
G_CSC 22.1.1	the inclusion of the calling party address (presentation allowed)?	7.8.1.1 [1]	O	
G_CSC 22.1.2	screening of received calling party addresses?	7.8.1.1 [1]	O	
G_CSC 22.1.3	provision of a calling party address, if the endpoint provides no or invalid calling address information?	7.8.1.1 [1]	O	
G_CSC 22.1.4	the inclusion of the calling party address (presentation restricted)?	7.8.1.2 [1]	O	
G_CSC 22.1.5	the inclusion of the calling party address in the Calling Party Number information element?	7.8.2.1 [1]	O	
G_CSC 22.1.6	the inclusion of the calling party address in ASN.1 parameters?	7.8.2.1 [1]	O	
G_CSC 22.2.1	the inclusion of the connected party address (presentation allowed)?	7.8.1.3 [1]	O	
G_CSC 22.2.2	screening of received connected party addresses?	7.8.1.3 [1]	O	
G_CSC 22.2.3	provision of a connected party address, if the endpoint provides no or invalid connected address information?	7.8.1.3 [1]	O	
G_CSC 22.2.4	the inclusion of the connected party address (presentation restricted)?	7.8.1.4 [1]	O	
G_CSC 22.2.5	the inclusion of the connected party address in the Connected Party Number information element?	7.8.2.2 [1]	O	
G_CSC 22.2.6	the inclusion of the connected party address in ASN.1 parameters?	7.8.2.2 [1]	O	
G_CSC 22.3.1	the inclusion of the called (alerting) party address (presentation allowed)?	7.8.1.5 [1]	O	
G_CSC 22.3.2	screening of received called (alerting) party addresses?	7.8.1.5 [1]	O	
G_CSC 22.3.3	provision of a called (alerting) party address, if the endpoint provides no or invalid called (alerting) address information?	7.8.1.5 [1]	O	
G_CSC 22.3.4	the inclusion of the called (alerting) party address (presentation restricted)?	7.8.1.6 [1]	O	
G_CSC 22.4.1	the inclusion of the busy party address (presentation allowed)?	7.8.1.7 [1]	O	
G_CSC 22.4.2	screening of received busy party addresses?	7.8.1.7 [1]	O	
G_CSC 22.4.3	provision of a busy party address, if the endpoint provides no or invalid busy address information?	7.8.1.7 [1]	O	
G_CSC 22.4.4	the inclusion of the busy party address (presentation restricted)?	7.8.1.8 [1]	O	

Item	Subsidiary capabilities Does the IUT support …	Reference	H.323 Status	Support
G_CSC 23.1	use of the generic extensible framework for the carriage of opaque data within H.225.0 messages?	7.9 [1]	O	
G_CSC 23.2	use of the generic extensible framework for the negotiation of supported features?	7.9 [1]	O	
Comments: C.25.1: If A.25/G_CSC 8.1, then O else N/A. C.25.2: If A.25/G_CSC14, then O else N/A. C.25.3: If A.25/G_CSC16, then O else N/A. C.25.4: At least one item has to be supported. C.25.5: At least one item has to be supported.				

A.8.1.2 Call signalling procedure capabilities

Table A.26: Call signalling procedure capabilities

Item	Subsidiary capabilities Does the IUT support …	Reference	H.323 Status	Support
Phase A - Call setup, clause 8.1 [1]				
G_CSP 1	basic call setup with gatekeeper using direct signalling?	figures 30, 32, 34, 36, 37, 38/H.323 [1]	O.26.1	
G_CSP 2	basic call setup with gatekeeper using gatekeeper routed signalling?	figures 31, 33, 35, 39/H.323 [1]	O.26.1	
G_CSP 3	optional called endpoint signalling?	figure 40/H.323 [1]	O	
G_CSP 4	the fast connect procedure?	8.1.7 [1]	O	
G_CSP 4.1.1	H.245 tunnelling?	8.1.7.2, 8.2.1 [1]	O	
G_CSP 4.1.2	separate H.245 connections?	8.1.7.2, 8.2.3 [1]	O	
G_CSP 5.1	gateway in-bound call setup?	8.1.8.1 [1]	O	
G_CSP 5.2	gateway out-bound call setup?	8.1.8.2 [1]	O	
G_CSP 6	call setup with an MCU?	8.1.9 [1]	O	
G_CSP 7	broadcast call setup?	8.1.11 [1]	O	
G_CSP 8	overlapped sending?	8.1.12 [1]	O	
G_CSP 9	conference calls?	8.1.13 [1]	O	
G_CSP 10	the modification of destination addresses?	8.1.14 [1]	O	
G_CSP 11	the indication of desired protocols?	8.1.15 [1]	O	
G_CSP 12	the request for tones and announcements?	8.1.16 [1]	O	

Item	Subsidiary capabilities Does the IUT support …	Reference	H.323 Status	Support
Phase B - Initial communication and capability exchange, clause 8.2 [1]				
G_CSP 13	H.245 tunnelling in parallel with fast connect?	8.2.4 [1]	O	
Phase C - Establishment of audiovisual communication, clause 8.3 [1]				
G_CSP 14	procedures for the establishment of audiovisual communications? (note 1)	8.3 [1]	M	
Phase D - Call services, clause 8.4 [1]				
G_CSP 15.1	initiation of requests for bandwidth changes by sending BRQ messages?	8.4.1 [1]	O	
G_CSP 15.2	processing of requests for bandwidth changes when receiving BRQ messages?	8.4.1 [1]	M	
G_CSP 16.1	initiation of requests for status information by sending IRQ messages?	8.4.2 [1]	O	
G_CSP 16.2.1	initiation of requests for status information by sending Status Enquiry messages?	8.4.2 [1]	O	
G_CSP 16.2.2	processing of requests for status information when receiving Status Enquiry messages?	8.4.2 [1]	M	
G_CSP 17	the procedures for ad hoc conference expansion?	8.4.3 [1]	C.26.2	
G_CSP 18	supplementary services? (note 2)	8.4.4 [1]	O	
G_CSP 19	third party initiated pause and re-routing?	8.4.6 [1]	O	
Phase E - Call termination, clause 8.5 [1]				
G_CSP 20	initiation of call termination?	8.5.2	O	
G_CSP 21	acceptance of call termination by the endpoint?	8.5.3	M	
Protocol failure handling, clause 8.6 [1]				
G_CSP 22	re-establishment of calls on detection of a protocol failure?	8.6 [1]	M	
G_CSP 23	initiation of the status procedure after re-establishment of calls on detection of a protocol failure?	8.6 [1]	O	
Comments: NOTE 1: Details of the procedures should be covered by the H.450 PICS. NOTE 2: Details of the procedures should be covered by the H.450 PICS. O.26.1: At least one item has to be supported. C.26.2: If A26/G_CSP 9, then O else N/A.				

A.8.1.3 Miscellaneous capabilities

Table A.27: Miscellaneous capabilities

Item	Subsidiary capabilities Does the IUT support …	Reference	H.323 Status	Support
G_MIC 1	encryption?	10.1 [1]	O	
G_MIC 2	multipoint operation?	10.2 [1]	O	
G_MIC 3	call linkage?	10.3 [1]	O	
G_MIC 4	tunnelling of non-H.323 signalling messages?	10.4 [1]	O	
G_MIC 5	the use of RTP payload for DTMF digits?	10.5 [1]	O	
Comments:				

A.8.2 RAS Messages

Table A.28: RAS Messages

Item	RAS Message	Reference	H.225/H.323 Status		Support	
			Sending	Receiving	Sending	Receiving
G_RM 1.1	GRQ	7.7 [2], 7.8.1 [2]	N/A	M		
G_RM 1.2	GCF	7.7 [2], 7.8.2 [2]	M	N/A		
G_RM 1.3	GRJ	7.7 [2], 7.8.3 [2]	M	N/A		
G_RM 2.1	RRQ	7.7 [2], 7.9.1 [2]	N/A	M		
G_RM 2.2	RCF	7.7 [2], 7.9.2 [2]	M	N/A		
G_RM 2.3	RRJ	7.7 [2], 7.9.3 [2]	M	N/A		
G_RM 3.1	URQ	7.7 [2], 7.10.1 [2]	O	M		
G_RM 3.2	UCF	7.7 [2], 7.10.2 [2]	M	M		
G_RM 3.3	URJ	7.7 [2], 7.10.3 [2]	M	M		
G_RM 4.1	ARQ	7.7 [2], 7.11.1 [2]	N/A	M		
G_RM 4.2	ACF	7.7 [2], 7.11.2 [2]	M	N/A		
G_RM 4.3	ARJ	7.7 [2], 7.11.3 [2]	M	N/A		
G_RM 5.1	BRQ	7.7 [2], 7.12.1 [2]	O	M		
G_RM 5.2	BCF	7.7 [2], 7.12.2 [2]	M	O		
G_RM 5.3	BRJ	7.7 [2], 7.12.3 [2]	M	O		
G_RM 6.1	LRQ	7.7 [2], 7.13.1 [2]	O	M		
G_RM 6.2	LRQ	7.7 [2], 7.13.2 [2]	M	O		
G_RM 6.3	LRQ	7.7 [2], 7.13.3 [2]	M	O		
G_RM 7.1	DRQ	7.7 [2], 7.14.1 [2]	O	M		
G_RM 7.2	DCF	7.7 [2], 7.14.2 [2]	M	M		
G_RM 7.3	DRJ	7.7 [2], 7.14.3 [2]	M	M		
G_RM 8	Status request messages	7.7 [2], 7.15 [2]	O	M		
G_RM 9	Non Standard messages	7.7 [2], 7.16 [2]	O	O		
G_RM 10	Message not Understood	7.7 [2], 7.17 [2]	M	M		
G_RM 11	Gateway Resource Availability messages	7.7 [2], 7.18 [2]	N/A	M		
G_RM 12	Ras timers and RIP messages	7.7 [2], 7.19 [2]	O	M		
Comments:						

A.8.3 RAS Parameters

Only the messages that can be sent by a gatekeeper are listed below. When receiving a message for which the receiving status in table A.5 has been set to "yes", the following shall be assumed:

- all mandatory parameters are understood and acted upon, as described in the base text of H.323 [1] and H.225 [2];

- all optional parameters are either ignored or, if the optional procedure requiring the specific parameter is implemented, are acted upon accordingly.

NOTE: As stated in ISO/IEC 9646-7 [4], support for a received PDU requires the ability to parse all valid parameters of that PDU. Supporting a PDU while having no ability to parse a valid parameter is non-conformant.

A.8.3.1 Parameters for Gatekeeper Request

Table A.29: Parameters for Gatekeeper Request

Item	Parameters for GRQ	H.225/H.323 Status	Support
G_GRQ 1	requestSeqNum	M	
G_GRQ 2	ProtocolIdentifier	M	
G_GRQ 3	nonStandardData	O	
G_GRQ 4	RasAddress	M	
G_GRQ 5	endpointType	M	
G_GRQ 6	gatekeeperIdentifier	O	
G_GRQ 7	callServices	O	
G_GRQ 8	endpointAlias	O	
G_GRQ 9	alternateEndpoints	O	
G_GRQ 10	tokens	O	
G_GRQ 11	cryptoTokens	O	
G_GRQ 12	authenticationCapability	O	
G_GRQ 13	algorithmOID	O	
G_GRQ 14	integrity	O	
G_GRQ 15	integrityCheckValue	O	
G_GRQ 16	supportsAltGK	O	
G_GRQ 17	featureSet	O	
G_GRQ 18	genericData	O	
Comments: Reference: clause 7.8.1 and annex H of [2].			

A.8.3.2 Parameters for Gatekeeper Confirm

Table A.30: Parameters for Gatekeeper Confirm

Item	Parameters for GCF	H.323 Status	Support
G_GCF 1	requestSeqNum	M	
G_GCF 2	protocolIdentifier	M	
G_GCF 3	nonStandardData	O	
G_GCF 4	gatekeeperIdentifier	O	
G_GCF 5	rasAddress	M	
G_GCF 6	alternateGatekeeper	O	
G_GCF 7	authenticationMode	O	
G_GCF 8	tokens	O	
G_GCF 9	cryptoTokens	O	
G_GCF 10	algorithmOID	O	
G_GCF 11	integrity	O	
G_GCF 12	integrityCheckValue	O	
G_GCF 13	featureSet	O	
G_GCF 14	genericData	O	
Comments: Reference: clause 7.8.2 and annex H of [2].			

A.8.3.3 Parameters for Gatekeeper Reject

Table A.31: Parameters for Gatekeeper Reject

Item	Parameters for GRJ	H.323 Status	Support
G_GRJ 1	requestSeqNum	M	
G_GRJ 2	protocolIdentifier	M	
G_GRJ 3	rejectReason	M	
G_GRJ 4	nonStandardData	O	
G_GRJ 5	gatekeeperIdentifier	O	
G_GRJ 6	altGKInfo	O	
G_GRJ 7	tokens	O	
G_GRJ 8	cryptoTokens	O	
G_GRJ 9	integrityCheckValue	O	
G_GRJ 10	featureSet	O	
G_GRJ 11	genericData	O	
Comments: Reference: clause 7.8.3 and annex H of [2].			

A.8.3.4 Parameters for Registration Request

Table A.32: Parameters for Registration Request

Item	Parameters for RRQ	H.225/H.323 Status	Support
G_RRQ 1	requestSeqNum	M	
G_RRQ 2	ProtocolIdentifier	M	
G_RRQ 3	nonStandardData	O	
G_RRQ 4	discoveryComplete	M	
G_RRQ 5	callSignalAddress	M	
G_RRQ 6	rasAddress	M	
G_RRQ 7	terminalType	M	
G_RRQ 8	terminalAlias	O	
G_RRQ 9	gatekeeperIdentifier	O	
G_RRQ 10	endpointVendor	M	
G_RRQ 11	alternateEndpoints	O	
G_RRQ 12	timeToLive	O	
G_RRQ 13	tokens	O	
G_RRQ 14	cryptoTokens	O	
G_RRQ 15	integrityCheckValue	O	
G_RRQ 16	keepAlive	M	
G_RRQ 17	endpointIdentifier	O	
G_RRQ 18	willSupplyUUIEs	M	
G_RRQ 19	maintainConnection	M	
G_RRQ 20	alternateTransportAddresses	M	
G_RRQ 21	additiveRegistration	O	
G_RRQ 22	terminalAliasPattern	O	
G_RRQ 23	supportsAltGK	O	
G_RRQ 24	usageReportingCapability	O	
G_RRQ 25	multipleCalls	O	
G_RRQ 26	SupportedH248Packages	O	
G_RRQ 27	callCreditCapability	O	
G_RRQ 28	capacityReportingCapability	O	
G_RRQ 29	capacity	O	
G_RRQ 30	featureSet	O	
G_RRQ 31	genericData	O	
Comments: Reference: clause 7.9.1 and annex H of [2].			

A.8.3.5 Parameters for Registration Confirm

Table A.33: Parameters for Registration Confirm

Item	Parameters for RCF	H.323 Status	Support
G_RCF 1	requestSeqNum	M	
G_RCF 2	protocolIdentifier	M	
G_RCF 3	nonStandardData	O	
G_RCF 4	callSignalAddress	M	
G_RCF 5	terminalAlias	O	
G_RCF 6	gatekeeperIdentifier	O	
G_RCF 7	endpointIdentifier	M	
G_RCF 8	alternateGatekeeper	O	
G_RCF 9	timeToLive	O	
G_RCF 10	tokens	O	
G_RCF 11	cryptoTokens	O	
G_RCF 12	integrityCheckValue	O	
G_RCF 13	willRespondToIRR	M	
G_RCF 14	preGrantedARQ	O	
G_RCF 15	maintainConnection	M	
G_RCF 16	serviceControl	O	
G_RCF 17	supportAdditiveRegistration	O	
G_RCF 18	terminalAliasPattern	O	
G_RCF 19	supportedPrefixes	O	
G_RCF 20	usageSpec	O	
G_RCF 21	featureServerAlias	O	
G_RCF 22	capacityReportingSpec	O	
G_RCF 23	featureSet	O	
G_RCF 24	genericData	O	
Comments: Reference: clause 7.9.2 and annex H of [2].			

A.8.3.6 Parameters for Registration Reject

Table A.34: Parameters for Registration Reject

Item	Parameters for RRJ	H.323 Status	Support
G_RRJ 1	requestSeqNum	M	
G_RRJ 2	protocolIdentifier	M	
G_RRJ 3	nonStandardData	O	
G_RRJ 4	rejectReason	M	
G_RRJ 5	gatekeeperIdentifier	O	
G_RRJ 6	altGKInfo	O	
G_RRJ 7	tokens	O	
G_RRJ 8	cryptoTokens	O	
G_RRJ 9	integrityCheckValue	O	
G_RRJ 10	featureSet	O	
G_RRJ 11	genericData	O	
Comments: Reference: clause 7.9.3 and annex H of [2].			

A.8.3.7 Parameters for Unregistration Request

Table A.35: Parameters for Unregistration Request

Item	Parameters for URQ	H.225/H.323 Status	Support
G_URQ 1	requestSeqNum	M	
G_URQ 2	callSignalAddress	M	
G_URQ 3	endpointAlias	O	
G_URQ 4	nonStandardData	O	
G_URQ 5	endpointIdentifier	O	
G_URQ 6	alternateEndpoints	O	
G_URQ 7	gatekeeperIdentifier	O	
G_URQ 8	tokens	O	
G_URQ 9	cryptoTokens	O	
G_URQ 10	integrityCheckValue	O	
G_URQ 11	reason	O	
G_URQ 12	endpointAliasPattern	O	
G_URQ 13	supportedPrefixes	O	
G_URQ 14	alternateGatekeeper	O	
G_URQ 15	genericData	O	
Comments: Reference: clause 7.10.1 and annex H of [2].			

A.8.3.8 Parameters for Unregistration Confirm

Table A.36: Parameters for Unregistration Confirm

Item	Parameters for UCF	H.323 Status	Support
G_UCF 1	requestSeqNum	M	
G_UCF 2	nonStandardData	O	
G_UCF 3	tokens	O	
G_UCF 4	cryptoTokens	O	
G_UCF 5	integrityCheckValue	O	
G_UCF 6	genericData	O	
Comments: Reference: clause 7.10.2 and annex H of [2].			

A.8.3.9 Parameters for Unregistration Reject

Table A.37: Parameters for Unregistration Reject

Item	Parameters for URJ	H.323 Status	Support
G_RRJ 1	requestSeqNum	M	
G_URJ 2	rejectReason	M	
G_URJ 3	nonStandardData	O	
G_URJ 4	altGKInfo	O	
G_URJ 5	tokens	O	
G_URJ 6	cryptoTokens	O	
G_URJ 7	integrityCheckValue	O	
G_URJ 8	genericData	O	
Comments: Reference: clause 7.10.3 and annex H of [2].			

A.8.3.10 Parameters for Request in Progress

Prerequisite: A28/G_RM 10 item -- RIP message, sending

Table A.38: Parameters for Request in Progress

Item	Parameters for URJ	H.225/H.323 Status	Support
G_RIP 1	requestSeqNum	M	
G_RIP 2	nonStandardData	O	
G_RIP 3	tokens	O	
G_RIP 4	cryptoTokens	O	
G_RIP 5	integrityCheckValue	O	
G_RIP 6	delay	M	
Comments: Reference: clause 7.19 and annex H of [2].			

A.8.4 BCC Messages

Table A.39: BCC Messages

Item	BCC Message	Reference	H.225/H.323 Status		Support	
			Sending	Receiving	Sending	Receiving
G_BM 1	Alerting	table 4 and clause 7.3.1 [2]	M	M		
G_BM 2	Call Proceeding	table 4 and clause 7.3.2 [2]	O	C (note)		
G_BM 3	Connect	table 4 and clause 7.3.3 [2]	M	M		
G_BM 4	Information	table 4 and clause 7.3.6 [2]	O	C (note)		
G_BM 5	Progress	table 4 and clause 7.3.7 [2]	O	C (note)		
G_BM 6	Release Complete	table 4 and clause 7.3.9 [2]	M	M		
G_BM 7	Setup	table 4 and clause 7.3.10 [2]	M	M		
G_BM 8	Setup Acknowledge	table 4 and clause 7.3.11 [2]	O	O		
G_BM 9	Status	table 4 and clause 7.3.12 [2]	M	M		
G_BM 10	Status Inquiry	table 4 and clause 7.3.13 [2]	O	M		
G_BM 11	Facility	table 4 and clause 7.4.1 [2]	M	M		
G_BM 12	Notify	table 4 and clause 7.4.2 [2]	O	O		
G_BM 13	User Information	table 4 [2]	O	O		
Comments: NOTE: Mandatory, if optional features (e.g. H.245 tunnelling) that use these messages are supported.						

A.8.5 BCC Parameters

A.8.5.1 Parameters for Alerting

Table A.40: Parameters for Alerting

Item	Parameters for Alerting	H.225/H.323 Status	Support
G_AL 1	Protocol discriminator	M	
G_AL 2	Call reference	M	
G_AL 3	Message type	M	
G_AL 4	Bearer capability	O	
G_AL 5	Extended Facility	O	
G_AL 6	Facility	O	
G_AL 7	Progress indicator	O	
G_AL 8	Notification indicator	O	
G_AL 9	Display	O	
G_AL 10	Signal	O	
G_AL 11	User-user	M	
UUIE parameters			
G_AL 12	protocolIdentifier	M	
G_AL 13	destinationInfo	M	
G_AL 14	h245Address	O	
G_AL 15	callIdentifier	M	
G_AL 16	h245SecurityMode	O	
G_AL 17	tokens	O	
G_AL 18	cryptoTokens	O	
G_AL 19	fastStart	O	
G_AL 20	multipleCalls	M	
G_AL 21	maintainConnection	M	
G_AL 22	alertingAddress	O	
G_AL 23	presentationIndicator	O	
G_AL 24	screeningIndicator	O	
G_AL 25	fastConnectRefused	O	
G_AL 26	serviceControl	O	
G_AL 27	capacity	O	
G_AL 28	featureSet	O	
Comments: Reference: clause 7.3.1 and annex H of [2].			

A.8.5.2 Parameters for Call Proceeding

Table A.41: Parameters for Call Proceeding

Item	Parameters for Call Proceeding	H.225/H.323 Status	Support
G_CP 1	Protocol discriminator	M	
G_CP 2	Call reference	M	
G_CP 3	Message type	M	
G_CP 4	Bearer capability	O	
G_CP 5	Extended Facility	O	
G_CP 6	Facility	O	
G_CP 7	Progress indicator	O	
G_CP 8	Notification indicator	O	
G_CP 9	Display	O	
G_CP 10	User-user	M	
UUIE parameters			
G_CP 11	protocolIdentifier	M	
G_CP 12	destinationInfo	M	
G_CP 13	h245Address	O	
G_CP 14	callIdentifier	M	
G_CP 15	h245SecurityMode	O	
G_CP 16	tokens	O	
G_CP 17	cryptoTokens	O	
G_CP 18	fastStart	O	
G_CP 19	multipleCalls	M	
G_CP 20	maintainConnection	M	
G_CP 21	fastConnecRefused	O	
G_CP 22	featureSet	O	
Comments: Reference: clause 7.3.2 and annex H of [2].			

A.8.5.3 Parameters for Connect

Table A.42: Parameters for Connect

Item	Parameters for Connect	H.225/H.323 Status	Support
G_CO 1	Protocol discriminator	M	
G_CO 2	Call reference	M	
G_CO 3	Message type	M	
G_CO 4	Bearer capability	O	
G_CO 5	Extended Facility	O	
G_CO 6	Facility	O	
G_CO 7	Progress indicator	O	
G_CO 8	Notification indicator	O	
G_CO 9	Display	O	
G_CO 10	Date/Time	O	
G_CO 11	Connected Number	O	
G_CO 12	Connected Subaddress	O	
G_CO 13	User-user	M	
UUIE parameters			
G_CO 14	protocolIdentifier	M	
G_CO 15	h245Address	O	
G_CO 16	destinationInfo	M	
G_CO 17	conferenceID	M	
G_CO 18	callIdentifier	M	
G_CO 19	h245Address	O	
G_CO 20	h245SecurityMode	O	
G_CO 21	tokens	O	
G_CO 22	cryptoTokens	O	
G_CO 23	fastStart	O	
G_CO 24	multipleCalls	M	
G_CO 25	maintainConnection	M	
G_CO 26	language	O	
G_CO 27	connectedAddress	O	
G_CO 28	presentationIndicator	O	
G_CO 29	screeningIndicator	O	
G_CO 30	fastConnectRefused	O	
G_CO 31	serviceControl	O	
G_CO 32	capacity	O	
G_CO 33	featureSet	O	
Comments: Reference: clause 7.3.3 and annex H of [2].			

A.8.5.4 Parameters for Information

Table A.43: Parameters for Information

Item	Parameters for Information	H.225/H.323 Status	Support
G_IN 1	Protocol discriminator	M	
G_IN 2	Call reference	M	
G_IN 3	Message type	M	
G_IN 4	Sending complete	O	
G_IN 5	Display	O	
G_IN 6	Keypad Facility	O	
G_IN 7	Signal	O	
G_IN 8	Called party number	O	
G_IN 9	User-to-User	M	
UUIE parameters			
G_IN 10	protocolIdentifier	M	
G_IN 11	callIdentifier	M	
G_IN 12	tokens	O	
G_IN 13	cryptoTokens	O	
G_IN 14	fastStart	O	
G_IN 15	fastConnectRefused	O	
G_IN 16	circuitInfo	O	
Comments: Reference: clause 7.3.6 and annex H of [2].			

A.8.5.5 Parameters for Progress

Table A.44: Parameters for Progress

Item	Parameters for Progress	H.225/H.323 Status	Support
G_PG 1	Protocol discriminator	M	
G_PG 2	Call reference	M	
G_PG 3	Message type	M	
G_PG 4	Bearer capability	O	
G_PG 5	Cause	O	
G_PG 6	Extended Facility	O	
G_PG 7	Facility	O	
G_PG 8	Progress indicator	M	
G_PG 9	Notification indicator	O	
G_PG 10	Display	O	
G_PG 11	User-user	M	
UUIE parameters			
G_PG 12	protocolIdentifier	M	
G_PG 13	destinationInfo	M	
G_PG 14	h245Address	O	
G_PG 15	callIdentifier	M	
G_PG 16	h245SecurityMode	O	
G_PG 17	tokens	O	
G_PG 18	cryptoTokens	O	
G_PG 19	fastStart	O	
G_PG 20	multipleCalls	M	
G_PG 21	maintainConnection	M	
G_PG 22	fastConnectRefused	O	
Comments: Reference: clause 7.3.7 and annex H of [2].			

A.8.5.6 Parameters for Release Complete

Table A.45: Parameters for Release Complete

Item	Parameters for Release Complete	H.225/H.323 Status	Support
G_RC 1	Protocol discriminator	M	
G_RC 2	Call reference	M	
G_RC 3	Message type	M	
G_RC 4	Cause	O.45.1	
G_RC 5	Facility	O	
G_RC 6	Notification indicator	O	
G_RC 7	Display	O	
G_RC 8	Signal	O	
G_RC 9	User-user	M	
UUIE parameters			
G_RC 10	protocolIdentifier	M	
G_RC 11	reason	O.45.1	
G_RC 12	callIdentifier	M	
G_RC 13	tokens	O	
G_RC 14	cryptoTokens	O	
G_RC 15	busyAddress	O	
G_RC 16	presentationIndicator	O	
G_RC 17	screeningIndicator	O	
G_RC 18	capacity	O	
G_RC 19	serviceControl	O	
G_RC 20	featureSet	O	
Comments: Reference: clause 7.3.9 and annex H of [2]. O.45.1: One and only one of these parameters shall be present.			

A.8.5.7 Parameters for Setup

Table A.46: Parameters for Setup

Item	Parameters for Setup	H.225/H.323 Status	Support
G_SU 1	Protocol discriminator	M	
G_SU 2	Call reference	M	
G_SU 3	Message type	M	
G_SU 4	Sending complete	O	
G_SU 5	Bearer capability	M	
G_SU 6	Extended Facility	O	
G_SU 7	Facility	O	
G_SU 8	Notification indicator	O	
G_SU 9	Display	O	
G_SU 10	Keypad facility	O	
G_SU 11	Signal	O	
G_SU 12	Calling party number	O	
G_SU 13	Calling party subaddress	O	
G_SU 14	Called party number	O	
G_SU 15	Called party subaddress	O	
G_SU 16	User-user	M	
UUIE parameters			
G_SU 17	protocolIdentifier	M	
G_SU 18	h245Address	O	
G_SU 19	sourceAddress	O	
G_SU 20	sourceInfo	M	
G_SU 21	destinationAddress	O	
G_SU 22	destCallSignalAddress	O	
G_SU 23	destExtraCallInfo	O	
G_SU 24	destExtraCRV	O	
G_SU 25	activeMC	M	
G_SU 26	conferenceID	M	
G_SU 27	conferenceGoal	M	
G_SU 28	callServices	O	
G_SU 29	callType	M	
G_SU 30	sourceCallSignalAddress	O	
G_SU 31	remoteExtensionAddress	O	
G_SU 32	callIdentifier	M	
G_SU 33	h245SecurityCapability	O	
G_SU 34	tokens	O	
G_SU 35	cryptoTokens	O	
G_SU 36	fastStart	O	
G_SU 37	mediaWaitForConnect	M	
G_SU 38	canOverlapSend	M	
G_SU 39	endpointIdentifier	O	
G_SU 40	multipleCalls	O	
G_SU 41	maintainConnection	O	
G_SU 42	connectionParameters	O	
G_SU 43	language	O	
G_SU 44	presentationIndicator	O	
G_SU 45	screeningIndicator	O	
G_SU 46	serviceControl	O	
G_SU 47	symmetricOperationRequired	O	
G_SU 48	capacity	O	
G_SU 49	circuitInfo	O	
G_SU 50	desiredProtocols	O	
G_SU 51	neededFeatures	O	
G_SU 52	desiredFeatures	O	
G_SU 53	supportedFeatures	O	
G_SU 54	parallelH245Control	O	
G_SU 55	additionalSourceAddresses	O	
Comments: Reference: clause 7.3.10 and annex H of [2].			

A.8.5.8 Parameters for Setup Acknowledge

Table A.47: Parameters for Setup Acknowledge

Item	Parameters for Setup Acknowledge	H.225/H.323 Status	Support
G_SA 1	Protocol discriminator	M	
G_SA 2	Call reference	M	
G_SA 3	Message type	M	
G_SA 4	Progress Indicator	O	
G_SA 5	Display	O	
G_SA 6	Signal	O	
G_SA 7	User-user	M	
UUIE parameters			
G_SA 8	protocolIdentifier	M	
G_SA 9	callIdentifier	M	
G_SA 10	tokens	O	
G_SA 11	cryptotoTokenstokens	O	
Comments: Reference: clause 7.3.11 and annex H of [2].			

A.8.5.9 Parameters for Status

Table A.48: Parameters for Status

Item	Parameters for Status	H.225/H.323 Status	Support
G_ST 1	Protocol discriminator	M	
G_ST 2	Call reference	M	
G_ST 3	Message type	M	
G_ST 4	Cause	M	
G_ST 5	Call state	M	
G_ST 6	Display	O	
G_ST 7	User-user	M	
UUIE parameters			
G_ST 8	protocolIdentifier	M	
G_ST 9	callIdentifier	M	
G_ST 10	tokens	O	
G_ST 11	cryptotoTokenstokens	O	
Comments: Reference: clause 7.3.12 and annex H of [2].			

A.8.5.10 Parameters for Status Inquiry

Table A.49: Parameters for Status Inquiry

Item	Parameters for Status Inquiry	H.225/H.323 Status	Support
G_SI 1	Protocol discriminator	M	
G_SI 2	Call reference	M	
G_SI 3	Message type	M	
G_SI 4	Display	O	
G_SI 5	User-user	M	
UUIE parameters			
G_SI 6	protocolIdentifier	M	
G_SI 7	callIdentifier	M	
G_SI 8	tokens	O	
G_SI 9	cryptotoTokenstokens	O	
Comments: Reference: clause 7.3.13 and annex H of [2].			

A.8.5.11 Parameters for Facility

Table A.50: Parameters for Facility

Item	Parameters for Facility	H.225/H.323 Status	Support
G_FA 1	Protocol discriminator	M	
G_FA 2	Call reference	M	
G_FA 3	Message type	M	
G_FA 4	Extended facility	C (note)	
G_FA 5	Facility	C (note)	
G_FA 6	Notification indicator	O	
G_FA 7	Display	O	
G_FA 8	User-To-User	M	
UUIE parameters			
G_FA 9	protocolIdentifier	M	
G_FA 10	alternativeAddress	O	
G_FA 11	alternativeAliasAddress	O	
G_FA 12	conferenceId	O	
G_FA 13	reason	M	
G_FA 14	callIdentifier	M	
G_FA 15	destExtraCallInfo	O	
G_FA 16	remoteExtensionAddress	O	
G_FA 17	tokens	O	
G_FA 18	cryptoTokens	O	
G_FA 19	conferences	O	
G_FA 20	h245Address	O	
G_FA 21	fastStart	O	
G_FA 22	multipleCalls	M	

Item	Parameters for Facility	H.225/H.323 Status	Support
G_FA 23	maintainConnection	M	
G_FA 24	fastConnectRefused	O	
G_FA 25	serviceControl	O	
G_FA 26	circuitInfo	O	
G_FA 27	featureSet	O	
G_FA 28	destinationInfo	O	
G_FA 29	H245SecurityMode	O	
Comments: Reference: clause 7.4.1 and annex H of [2]. NOTE: One of these parameters shall be present when the Facility message is used for control of Q.95x supplementary services.			

A.8.6 RAS Timer

Table A.51: RAS Timer

Item	Parameters for RRJ	H.225/H.323 Status	Support
G_TI 1	GRQ timer	N/A	
G_TI 2	RRQ timer	N/A	
G_TI 3	URQ timer	O	
G_TI 4	ARQ timer	N/A	
G_TI 5	BRQ timer	O	
G_TI 6	IRQ timer	N/A	
G_TI 7	IRR timer	N/A	
G_TI 8	DRQ timer	O	
G_TI 9	LRQ timer	O	
G_TI 10	RAI timer	N/A	
G_TI 11	SCI timer	O	
Comments: Reference: clause 7.19 [2].			

History

Document history		
V1.1.1	February 2002	Publication
V2.1.1	November 2004	Publication