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Part 3: Protocol Implementation Conformance Statement (PICS)
proforma specification

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Contents

Foreword

This draft Interim European Telecommunication Standard (I-ETS) has been produced by the Terminal Equipment (TE) Technical Committee of the European Telecommunications Standards Institute (ETSI), and is now submitted for the Public Enquiry phase of the ETSI standards approval procedure.

An ETSI standard may be given I-ETS status either because it is regarded as a provisional solution ahead of a more advanced standard, or because it is immature and requires a "trial period". The life of an I-ETS is limited to three years after which it can be converted into an ETS, have it's life extended for a further two years, be replaced by a new version, or be withdrawn.

This I-ETS is part 3 of a multipart standard covering "Integrated Services Digital Network (ISDN); audiovisual services in-band signalling testing" as described below:

Part 1:   "Test Suite Structure and Test Purpose (TSS and TP)";

Part 2:   "Abstract Test Suite (ATS) and partial Protocol Implementation Conformance Statement (PICS) proforma";

Part 3:   "Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification".

Proposed announcement date	
Date of latest announcement of this I-ETS (doa):	3 months after ETSI publication

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1 Scope

This Interim European Telecommunication Standard (I-ETS) is part 3 of a three part I-ETS dealing with conformance testing of Integrated Services Digital Network (ISDN) Videotelephony terminals. Part 1 contains the Test Suite Structure and Test Purposes (TSS & TP) while part 2 contains the Abstract Test Suite (ATS) in Tree and Tabular Combined Notation (TTCN) and the partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma. Part 3 provides the Protocol Implementation Conformance Statement (PICS) proforma for the inband signalling aspects of an ISDN Videotelephony terminal which uses one or two B channels, and which implements the frame structure and associated syntax as specified in ETS 300 144 [2] and the inband signalling procedures as specified in ETS 300 143 [1], in accordance with the relevant guidance given in ISO/IEC 9646-7 [6].

The supplier of an implementation of a Videophone that is claimed to conform to ETS 300 143 [1] and ETS 300 144 [2] is required to complete a copy of the I-ETS Protocol ICS proforma provided in annex A.

2 Normative references

This I-ETS incorporates by dated and undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this I-ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

[1]   ETS 300 143 (1994): "Integrated Services Digital Network (ISDN); Audiovisual services, Inband signalling procedures for audiovisual terminals using digital channels up to 2 048 kbit/s".

[2]   ETS 300 144 Edition 1 (1994): "Integrated Services Digital Network (ISDN); Audiovisual services, Frame structure for a 64 kbit/s to 1 920 kbit/s channel and associated syntax for inband signalling".

[3]   ETS 300 145 (1994): "Integrated Services Digital Network (ISDN); Audiovisual services, Videotelephone systems and terminal equipment operating on one or two 64 kbit/s channels".

[4]   ETS 300 144 Edition 2 (1996): "Integrated Services Digital Network (ISDN); Audiovisual services, Frame structure for a 64 kbit/s to 1 920 kbit/s channel and associated syntax for inband signalling".

[5]   ISO/IEC 9646-1 (1994): "Information technology - Open systems interconnection - Conformance testing methodology and framework - Part 1: General concepts".

[6]   ISO/IEC 9646-7 (1994): "Information technology - Open systems interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".

[7]   CCITT Recommendation G.711 (1990); "Pulse code modulation (PCM) of voice frequencies".

[8]   CCITT Recommendation G.722 (1988): "7 KHz audio-coding within 64kbit/s".

[9]   CCITT Recommendation G.728 (1988): "Coding of speech at 16 kbit/s using low-delay code excited linear prediction".

[10]   ITU-T Recommendation H.261 (1993): "Video codec for audiovisual services at p x 64kbit/s".

3   Definitions

For the purposes of this I-ETS, the following definitions apply:

> NOTE: In addition to the terms defined in this clause, the terms defined in ETS 300 143 [1], ETS 300 144 [2] and ETS 300 145 [3], ISO/IEC 9646-1 [5] and in ISO/IEC 9646-7 [6] also apply.

additional channel: The second or subsequent channel established in a videophone call.

Audio Indicate Muted (AIM): This symbol is used to indicate that the content of the audio channel does not represent a normal audio signal. The audio encoder may be without audio input or an electronically-generated tone may have been substituted.

Audio Indicate Active (AIA): Complementary to AIM.

bit-rate allocation signal: Bit position within the frame structure to transmit commands, control and indication signals, capabilities.

capability marker, Cap marker: The first code in a capability set.

capability set, Cap set: A sequence of capability codes started by the capability marker code.

ECS channel: Optional 800 kbit/s channel for use in encryption.

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

initial channel: The first channel established in a videophone call.

Implementation Conformance Statement (ICS): a statement made by the supplier of an implementation or system claimed to conform to a given specification, stating which capabilities have been implemented. The ICS can take several forms: protocol ICS, profile ICS, profile specific ICS, information object ICS, etc.

mode 0F: Transmission mode in which the initial channel contains framing, and 7-bit CCITT Recommendation G.711 [7] audio signal is being transmitted.

mode 0U: Transmission mode in which the initial channel does not contain framing, and 8-bit CCITT Recommendation G.711 [7] audio is being transmitted.

Multipoint Command Visualisation-Forcing (MCV): Transmitted by a terminal to force an associated MCU to broadcast its video signal. (Used to transmit the picture of a chairman or VIP, alternatively to hold a picture source during the transmission of graphics).

Multipoint Indication Visualisation (MIV): Transmitted by an MCU to indicate to a terminal that its video signal is being seen by other terminals (otherwise known as "On-air" indication).

Multipoint Command Conference (MCC): Transmitted by an MCU to a terminal. The terminal receiving MCC shall make its outgoing transfer rate equal to its incoming transfer rate, and its outgoing audio rate equal to its incoming audio rate.

Multipoint Command Symmetrical (MCS) Data-transmission: Transmitted by an MCU when setting up data broadcasting. On receipt, a terminal shall prepare itself for data reception and ensure, by mode change if necessary, that its outgoing data channel occupies the same capacity as its incoming data channel. A terminal in receipt of MCS cannot initiate data broadcasting

Multipoint Indication Secondary-status (MIS): Transmitted by an MCU to a terminal for information, with the meaning that since other terminals of higher capability are participating in the conference-call, this terminal does not necessarily receive all the signals that are sent to those other terminals (see annex B).

Multipoint Indication Zero-communication (MIZ): Transmitted by an MCU to a terminal for information, with the meaning that no other terminals are yet connected to the MCU.

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

remote terminal: The terminal with which the IUT is communicating, i.e. the test tool.

Video Indicate Suppressed (VIS): This symbol is used to indicate that the content of the video channel does not represent a normal camera image. The video encoder may be without video input or an electronically-generated pattern may have been substituted.

Video Indicate Active VIA: Complementary to VIS. The video source is the only one, or, in the case that more video sources are to be distinguished, it is that designated "video No. 1".

VIA2: Equivalent to VIA, but designating "video No. 2" as the source.

VIA3: Equivalent to VIA, but designating "video No. 3" as the source.

Video Indicate Ready-to-Activate (VIR): This symbol is transmitted by a terminal whose user has decided not to send video unless video from the other end will also be received.

4   Abbreviations

For the purposes of this I-ETS, the following abbreviations apply:

> NOTE: In addition to the abbreviations in clause 4, the abbreviations in ETS 300 143 [1], ETS 300 144 [2], ETS 300 145 [3] and ISO/IEC 9646-1 [5] also apply.

BAS	Bit rate Allocation Signal
C&I	Control and Indication
CIF	Common Intermidiate Format (picture format defined in ITU-T Recommendation H.261 [10])
ECS	Encryption Control Signal
FAW	Frame Alignment Word
FAS	Frame Alignment Signal
H-MLP	High speed Multi Layer Protocol
HSD	High Speed Data
IUT	Implementation Under Test
ISDN	Integrated Services Digital Network
LCA	Loopback Command "Audio loop request"
LCD	Loopback Command "Digital loop request"
LCO	Loopback Command "Loop off request"
LCV	Loopback Command "Video loop request"
LSD	Low Speed Data
MBE	Multiple Byte Extension
MCC	Multipoint Command Conference
MLP	Multi Layer Protocol
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation eXtra Information for Testing
QCIF	Quarter Common Intermediate Format (picture format defined in ITU-T Recommendation H.261 [10])
SBE	Single Byte Extension
SUT	System Under Test
TTCN	Tree and Tabular Combined Notation
VCF	Video Command "Freeze-picture request"
VCU	Video Command "fast-Update request"

5 Conformance to this PICS proforma specification

If conformance is claimed to this I-ETS, the actual Protocol Implementation Conformance Statement (PICS) proforma to be filled in by a supplier shall be technically equivalent to the text of the PICS proforma in annex A, and shall preserve the numbering/naming and ordering of the protocol proforma items.

A PICS which conforms to this I-ETS shall be a conforming PICS proforma completed in accordance with the instructions for completion given in clause A.1.

Annex A (normative): PICS proforma for ISDN 1B or 2B Videotelephony in-band signalling

A.1 Instructions for completing the PICS proforma

The supplier of the implementation shall complete the PICS proforma in each of the spaces provided. If necessary, the supplier may provide additional comments separately.

A.1.1 Purposes and structure

The purpose of this PICS proforma is to provide a mechanism whereby a supplier of a terminal implementing the requirements defined in ETS 300 143 [1] and ETS 300 144 [2] may provide information about the implementation in a standardized manner.

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

- instructions for completing the PICS proforma;
- identification of the implementation;
- identification of the ISDN 1B or 2B Videotelephone;
- ICS proforma tables (containing the global statement of conformance).

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 [6].

Item column

Contains a number which identifies the item in the table.

Item description column

Describes each respective item (e.g. parameters, timers, etc.).

Reference column

Gives reference to ETS 300 143 [1] and ETS 300 144 [2], except where explicitly stated otherwise.

Status column

The following notations, defined in ISO/IEC 9646-7 [6], are used for the status column:

- m: mandatory - the capability is required to be supported;

- n/a: not applicable - in the given context, it is impossible to use the capability. No answer in the support column is required;

- o: optional - the capability may or may not be supported;

- o.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 and the logic of their selection which is defined immediately following the table;

- ci: conditional - the requirement on the capability ("m", "o" or "n/a") depends on the support of other optional or conditional items. "i" is an integer identifying an unique conditional status expression which is defined immediately following the table. For nested conditional expressions, the syntax "IF ... THEN (IF ... THEN ... ELSE...) ELSE ..." shall be used to avoid ambiguities. If an ELSE clause is omitted, "ELSE n/a" shall be implied.

  NOTE: Support of a capability means that the capability is implemented in conformance to ETS 300 143 [1] and ETS 300 144 [2].

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 [6], are used for the support column:

- Y or y: supported by the implementation;

- N or n: not supported by the implementation;

- N/A or —: no answer required (allowed only if the status is N/A, directly or after evaluation of a conditional status).

References to items

For each possible item answer (answer in the support column) within the PICS proforma there exists a unique reference. This is defined as the table identifier, followed by a solidus character "/", followed by the item number in the table. If there is more than one support column in a table, the columns shall be discriminated by letters (a, b, etc.), respectively.

EXAMPLE 1: A.5/4 is the reference to the answer of item 4 in table 5 of annex A.

EXAMPLE 2: A.6/3b is the reference to the second answer (i.e. in the second support column) of item 3 in table 6 of annex A.

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 client information should both be filled in if they are different.

A person who can answer queries regarding information supplied in the ICS 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:

....

....

....

Operating system:

....

A.2.4 Product supplier

Name:

....

Address:

....

....

....

Telephone number:

....

Facsimile number:

....

Additional information:

....

....

....

A.2.5   Client

Name:

....

Address:

....

....

....

Telephone number:

....

Facsimile number:

....

Additional information:

....

....

....

A.2.6   ICS contact person

Name:

....

Telephone number:

....

Facsimile number:

....

Additional information:

....

....

....

A.3   Identification of the ISDN 1B or 2B Videotelephone

This PICS proforma applies to the following ETSs:

- ETS 300 143 (1994) [1]: "Integrated Services Digital Network (ISDN); Audiovisual services, Inband signalling procedures for audiovisual terminals using digital channels up to 2 048 kbit/s";

- ETS 300 144 (1994) [2]: "Integrated Services Digital Network (ISDN); Audiovisual services, Frame structure for a 64 kbit/s to 1 920 kbit/s channel and associated syntax for inband signalling";

- ETS 300 145 (1994) [3]: "Integrated Services Digital Network (ISDN); Audiovisual services, Videotelephone systems and terminal equipment operating on one or two 64 kbit/s channels".

A.4   PICS proforma tables

A.4.1   Global statement of conformance

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

> NOTE: Answering "No" to this question indicates non-conformance to the ISDN 1B or 2B Videotelephone specification. Non-supported mandatory capabilities are to be identified in the PICS, with an explanation of why the implementation is non-conforming.

A.4.2   Terminal type

Table A.1: Terminal type

Item	Terminal Type	Reference	Status	Support
1	Xa	[3] table 1	o.1	_____
2	Xb1	[3] table 1	o.1	_____
3	Xb2/3	[3] table 1	o.1	_____
4	Xb4	[3] table 1	o.1	_____
5	Xb5	[3] table 1	o.1	_____
6	Maintenance	[3] table 2	o	_____
Comments: o.1: it is mandatory to support at least one of these types.				

A.4.3   Communication mode

Table A.2: Number of B-channels

Item	Transfer Capability	Reference	Status	Support
1	1B	[3] table 4	m	_____
2	2B	[3] table 4	c1	_____
Comments: c1: if (A1.3 or A1.4 or A1.5) then m else o.				

Table A.3: Terminal communication mode

Item	mode	Reference	Status	Support
1	a0	[3] table 1	m	_____
2	a1	[3] table 1	c2	_____
3	b1	[3] table 1	c3	_____
4	b2	[3] table 1	c4	_____
5	b3	[3] table 1	c5	_____
Comments:				
c2: if (A1.1 or A1.2 or A1.3) then m else o.				
c3: if (A1.2 or A1.3 or A1.4 or A1.5) then m else o.				
c4: if (A1.3 or A1.5) then m else o.				
c5: if (A1.2 or A1.3) then m else o.				

A.4.4   Frame structure

A.4.4.1   Frame structure supported

A.4.4.1.1   Initial channel

Table A.4: Frame structure supported in the initial channel

Item	Frame structure	Reference	Sending		Receiving	
			Status	Support	Status	Support
1	Frame Alignment Signal (FAS)	[2] 6.1	m	_____	m	_____
2	Frame Alignment Word (FAW)	[2] 6.1	m	_____	m	_____
3	Cyclic Redundancy	[2] 6.1	o	_____	o	_____

Table A.5: Multiframe structure supported in the initial channel

Item	Multiframe structure	Reference	Sending		Receiving	
			Status	Support	Status	Support
1	Multiframe alignment signal	[2] 6.2	m	_____	c6	_____
2	Multiframe numbering	[2] 6.2	c6	_____	m	_____
3	Channel numbering	[2] 6.2	c6	_____	m	_____
4	Terminal Equipment Alarm	[2] 6.2	o	_____	o	_____
Comments :						
c6: if A2.2 then m else o.						

A.4.4.1.2   Additional channel

Table A.6: Frame structure supported in the additional channel

Item	Frame structure	Reference	Sending		Receiving	
			Status	Support	Status	Support
1	FAS	[2] 6.1	c7	_____	c7	_____
2	FAW	[2] 6.1	c7	_____	c7	_____
3	Cyclic Redundancy	[2] 6.1	c8	_____	c8	_____
Comments:						
c7: if A2.2 then m else n/a.						
c8: if A2.2 then o else n/a.						

Table A.7: Multiframe structure supported in the additional channel

Item	Multiframe structure	Reference	Sending		Receiving	
			Status	Support	Status	Support
1	Multiframe alignment signal	[2] 6.2	c7	_____	c7	_____
2	Multiframe numbering	[2] 6.2	c7	_____	c7	_____
3	Channel numbering	[2] 6.2	c7	_____	c7	_____
4	Terminal Equipment Alarm	[2] 6.2	c8	_____	c8	_____
Comments:						
c7: if A2.2 then m else n/a.						
c8: if A2.2 then o else n/a.						

A.4.4.2 Check for alignment

A.4.4.2.1 Initial channel

Table A8 : Check for alignment in the initial channel

Item	Check for alignment	Reference	Status	Support
1	Check for frame alignment	[2] 6.3	m	_____
1.1	Search for FAS with the sequential method	[2] 6.5.3	c:o.2	_____
1.2	Search for FAS with the parallel method	[2] 6.5.3	c:o.2	_____
2	Check for multiframe alignment	[2] 6.4	c6	_____
3	Additional monitoring for incorrect frame alignment	[2] 9.2.2	c9	_____
Comments:				
c6: if A2.2 then m else o.				
o.2: It is mandatory to implement one of these methods.				
c9: if A4.3.Receiving then o else n/a.				

A.4.4.2.2 Additional channel

Table A.9: Check for alignment in the additional channel

Item	Check for alignment	Reference	Status	Support
1	Check for frame alignment	[2] 6.3	c7	_____
1.1	Search for FAS with the sequential method	[2] 6.5.3	c:o.3	_____
1.2	Search for FAS with the parallel method	[2] 6.5.3	c:o.3	_____
2	Check for multiframe alignment	[2] 6.4	c7	_____
3	Additional monitoring for incorrect frame alignment	[2] 9.2.2	c10	_____
Comments:				
c7: if A2.2 then m else n/a.				
o.3: it is mandatory to implement one of these methods.				
c10: if A6.3.Receiving then o else n/a.				

A.4.5 Audio

A.4.5.1 Audio capabilities

Table A.10: Audio capabilities

Item	Audio capability	Reference	Sending	
			Status	Support
1	A-law (100)[1]	[2] 10.1.5	m	_____
2	μ-law (100)[2]	[2] 10.1.5	m	_____
3	CCITT Rec. G722 [8]-48 (100)[4]	[2] 10.1.5	c4	_____
4	CCITT Rec. G.728 [9] (100)[5]	[2] 10.1.5	c2	_____
Comments:				
CCITT Rec. = CCITT Recommendation.				
c2: if (A1.1 or A1.2 or A1.3) then m else o.				
c4: if (A1.3 or A1.5) then m else o.				

A.4.5.2 Audio commands

Table A.11: Audio mode supported in unrestricted case

Item	Audio mode	Reference	Sending		Receiving	
			Status	Support	Status	Support
1	Neutral	[2] 10.1.1.1	x	_____	m	_____
2	A-law,OU (000)[4]	[2] 10.1.1.1	m	_____	m	_____
3	A-law,OF(000)[18]	[2] 10.1.1.1	m	_____	m	_____
4	μ-law,OU (000)[5]	[2] 10.1.1.1	m	_____	m	_____
5	μ-law,OF (000)[19]	[2] 10.1.1.1	m	_____	m	_____
6	CCITT Rec. G.722 [8], m2 (000)[24]	[2] 10.1.1.1	o	_____	c11	_____
7	CCITT Rec. G.722 [8], m3 (000)[25]	[2] 10.1.1.1	o	_____	c11	_____
8	CCITT Rec. G.728 [9] (000)[29]	[2] 10.1.1.1	o	_____	c12	_____
9	Au-off,F (000)[31]	[2] 10.1.1.1	o	_____	m	_____
10	Au-off,U (000)[7]	[2] 10.1.1.1 [3] 6.4.1	m	_____	m	_____
Comments:						
CCITT Rec. = CCITT Recommendation.						
c11: if A10.3 then m else n/a						
c12: if A10.4 then m else n/a						

A.4.6 Transfer rate

A.4.6.1 Transfer rate capabilities

Table A.12: Transfer rate capabilities

Item	Transfer rate capability	Reference	Sending	
			Status	Support
1	1B (100)[16]	[2] 10.1.6	m	_____
2	2B (100)[17]	[2] 10.1.6	c7	_____
Comments:				
c7: if A2.2 then m else n/a				

A.4.6.2 Transfer rate commands

Table A.13: Transfer rate commands

Item	Transfer rate command	Reference	Sending		Receiving	
			Status	Support	Status	Support
1	64 (001)[0]	[2] 10.1.2	o	_____	m	_____
2	2*64 (001)[1]	[2] 10.1.2	c13	_____	c13	_____
3	loss i.c. (001)[17]	[2] 10.1.2	o	_____	o	_____
4	ch#2. (001)[18]	[2] 10.1.2	c13	_____	c13	_____
Comments:						
c13: if A12.2 then m else n/a						

A.4.7 Video, Multiple Byte Extension (MBE) and encryption

A.4.7.1 Video, MBE and encryption capabilities

Table A.14: Quarter Common Intermediate Format (QCIF) video capabilities

Item	Video QCIF capability	Reference	Sending	
			Status	Support
1	QCIF (101)[20]	[2] 10.1.7 and [3] table 1	o.4	_____
1.1	1/29,97 (101)[22] for QCIF	[2] 10.1.7	c:o.5	_____
1.2	2/29,97 (101)[23] for QCIF	[2] 10.1.7	c:o.5	_____
1.3	3/29,97 (101)[24] for QCIF	[2] 10.1.7	c:o.5	_____
1.4	4/29,97 (101)[25] for QCIF	[2] 10.1.7	c:o.5	_____
Comments:				
o.4: It is mandatory to support at least one of these capabilities (A14-1 or A15-1)				
o.5: It is mandatory to support at least one of these capabilities				

Table A.15: Common Intermidiate Format (CIF) video capabilities

Item	Video CIF capability	Reference	Sending	
			Status	Support
1	CIF (101)[21]	[2] 10.1.7 and [3] table 1	o.4	_____
1.1	1/29,97 (101)[22] for CIF	[2] 10.1.7	c:o.6	_____
1.2	2/29,97 (101)[23] for CIF	[2] 10.1.7	c:o.6	_____
1.3	3/29,97 (101)[24] for CIF	[2] 10.1.7	c:o.6	_____
1.4	4/29,97 (101)[25] for CIF	[2] 10.1.7	c:o.6	_____
Comments:				
o.4: It is mandatory to support at least one of these capabilities (A14-1 or A15-1)				
o.6: It is mandatory to support at least one of these capabilities				

Table A.16: Other video, MBE and encryption capabilities

Item	Video, MBE and encryption capability	Reference	Sending	
			Status	Support
1	Video-ISO (101)[27]	[2] 10.1.7	o	_____
2	MBE-cap (101)[31]	[2] 10.1.7	o	_____
3	Encryp (101)[30]	[2] 10.1.7	o	_____
4	NS-cap (111)[30]	[2] 10.1.9	o	_____

A.4.7.2 Video and encryption command

Table A.17: Specific behaviour for video

Item	Specific Behaviour for video	Reference	Status	Support
1	The IUTcan decode video at a rate less than or equal to 4,8 kbit/s	[3] table 2 (note 3)	o	_____
2	The IUTcan decode video at a rate greater than or equal to 124 kbit/s	[3] table 2 (note 3)	o	_____
3	The IUTcan decode video at a rate less than or equal to 6,4 kbit/s	[3] table 2 (note 3)	o	_____

Table A.18: Video and encryption commands

Item	Video and encryption command	Reference	Sending Status	Sending Support	Receiving Status	Receiving Support
1	Video-off (010)[0]	[2] 10.1.3	m	_____	m	_____
2	ITU-T Rec. H.261 [10] (010)[1]	[2] 10.1.3	m	_____	m	_____
3	Video-ISO (010)[3]	[2] 10.1.3	o	_____	c14	_____
4	(010)[16]	[2] 10.1.3 and table 9	o	_____	m	_____
5	VCU (010)[17]	[2] 10.1.3 and table 9	c15	_____	m	_____
6	Encryp-on (010)[6]	[2] 10.1.3	o	_____	c16	_____
7	Encryp-off (010)[7]	[2] 10.1.3	o	_____	m	_____
Comments: ITU-T Rec. = ITU-T Recommendation. VCF = Video Command "Freeze-picture request". VCU = Video Command "last Update request". c14: if A16.1 then m else n/a c15: if (A17.1 or A17.2) then m else o c16: if A16.4 then m else n/a						

A.4.8 Maintenance command

Table A.19:Maintenance commands

Item	Maintenance command	Reference	Sending Status	Sending Support	Receiving Status	Receiving Support
9	LCA (010)[18]	[2] 10.1.3 and table 9, [3] table 2	n/a	_____	o	_____
10	LCV (010)[19]	[2] 10.1.3 and table 9 and 10.2.2, [3] table 2	n/a	_____	o	_____
11	LCD (010)[20]	[2] 10.1.3 and table 9 and 10.2.2, [3] table 2	c17	_____	m	_____
12	LCO (010)[21]	[2] 10.1.3 and table 9 and 10.2.2, [3] table 2	c17	_____	m	_____
Comments: LCA = Loopback Command "Audio loop request" LCV = Loopback Command "Video loop request" LCD = Loopback Command "Digital loop request" LCO = Loopback Command "Loop off request" c17: if A1.6 then m else n/a						

A.4.9 Escape table value

Table A.20: Escape table values

Item	Escape value	Reference	Sending		Receiving	
			Status	**Support**	**Status**	**Support**
1	cap-mark (111)[24]	[2] 10.1.9	m	_____	m	_____
2	Aggregate (111)[15] (see note)	[4] 10.1.9	o	_____	m	_____
3	Escape_16 (111)[16] (see note)	[4] 10.1.9	o	_____	m	_____
4	Control and Indication (C&I) (111)[17]	[2] 10.1.9	m	_____	m	_____
5	Data-apps (111)[18] (see note)	[4] 10.1.9	o	_____	m	_____
6	NUM (111)[19] (see note)	[4] 10.1.9	o	_____	m	_____
7	CHAR (111)[20] (see note)	[4] 10.1.9	o	_____	m	_____
NOTE:	The IUT shall accept the first Single Byte Extension (SBE) code (Escape code) and interpret or at least ignore the following code (Escaped value)					

A.4.10 Control and Indication

Table A.21: Terminal specific behaviour for control and indication

Item	Specific Behaviour for C&I	Reference	Status	Support
1	The IUT can mute audio without switching off the audio channel	[3] table 2 (note 7)	o	_____
2	The IUT can cut video without switching off the video channel	[3] table 2 (note 7)	o	_____
3	The IUT does not turn video on until it receives the video-on command from the remote terminal	[3] table 2 (note 8)	o	_____

Table A 22 : C&I related to video (111)[17]

Item	Control and Indication	Reference	Sending		Receiving	
			Status	**Support**	**Status**	**Support**
1	VIS (000)[16]	[2] table 11 and [3] table 2	c18	_____	c18	_____
2	VIA (000)[17]	[2] table 11 and [3] table 2	c18	_____	c18	_____
3	VIA2 (000)[18]	[2] table 11 and [3] table 2	c18	_____	c18	_____
4	VIA3 (000)[19]	[2] table 11 and [3] table 2	c18	_____	c18	_____
5	VIR (000)[31]	[2] table 11 and [3] table 2	c19	_____	c19	_____

Comments:
c18: if A21.2 then m else n/a
c19: if A21.3 then m else o

Table A.23: C&I related to audio (111)[17]

Item	Control and Indication	Reference	Sending		Receiving	
			Status	Support	Status	Support
1	AIM (000)[2]	[2] table 11 and [3] table 2	c20	_____	c20	_____
2	AIA (000)[3]	[2] table 11 and [3] table 2	c20	_____	c20	_____
Comments: c20: if A21.1 then m else n/a					

Table A.24: C&I related to simple multipoint conferences not using Multi Layer Protocol (MLP) (111)[17]

Item	Control and Indication	Reference	Sending		Receiving	
			Status	Support	Status	Support
1	MCV (001)[16]	[2] table 11 and [3] table 2	o	_____	n/a	_____
2	Cancel-MCV (001)[17]	[2] table 11 and [3] table 2	o	_____	n/a	_____
3	MIV (001)[18]	[2] table 11 and [3] table 2	n/a	_____	o	_____
4	Cancel-MIV (001)[19]	[2] table 11 and [3] table 2	n/a	_____	o	_____
5	MCC (001)[0]	[2] table 11 and [3] table 2	n/a	_____	m	_____
6	Cancel-MCC (001)[1]	[2] table 11 and [3] table 2	n/a	_____	m	_____
7	MIZ (001)[2]	[2] table 11 and [3] table 2	n/a	_____	m	_____
8	Cancel-MIZ (001)[3]	[2] table 11 and [3] table 2	n/a	_____	m	_____
9	MIS (001)[2]	[2] table 11 and [3] table 2	n/a	_____	m	_____
10	Cancel-MIS (001)[3]	[2] table 11 and [3] table 2	n/a	_____	m	_____
11	MCS (001)[20]	[4] table 11	n/a	_____	c.34	_____
12	Cancel-MCS (001)[21]	[4] table 11	n/a	_____	c.34	_____
Comments: MCC = Multipoint Command Conference c.34: if IUT can transmit Low Speed Data (LSD), MLP, High Speed Data (HSD) or High speed Multi Layer Protocol (H-MLP) then m						

A.4.11 Application in data channel

Table A.25: Capabilities (111)[18]-(101)

Item	Capability code	Reference	Sending	
			Status	Support
1	Nil_Data	[1] table 2 and [4] table 12	o	_____

A.4.12 Recovery procedures

Table A26: Recovery procedures

Item	Recovery procedure	Reference	Status	Support
1	R0 procedure	[1] 8.1	m	_____
2	R1 procedure	[1] 8.1	c21	_____
3	R2 procedure	[1] 8.1	c22	_____
4	R3 procedure	[1] 8.1	c23	_____
5	R4 procedure	[1] 8.1	c24	_____
6	R5 procedure	[1] 8.1	c24	_____
Comments: c21: if A26.3 then o else m c22: if (A2.2 or A26.2) then m else (if (A26.4 or not A8.2) then o else m) c23: if A8.2 then m else o c24: if (A2.2 and not A26.3) then m else o				

Table A.27: Choice of recovery procedures

Item	Behaviour in recovery procedures	Reference	Status	Support
1	On receipt of an incoming A bit equal to 1 in the initial channel, an unsuccessful R0 procedure is followed by an R1 procedure	[1] 8.2.1	o.7	_____
2	On receipt of an incoming A bit equal to 1 in the initial channel, an unsuccessful R0 procedure is followed by an R2 procedure	[1] 8.2.1	o.7	_____
3	During a mode mismatch procedure due to an incoming Bit rate Allocation Signal (BAS) command that does not correspond to the transmitted capabilities, an unsuccessful R0 procedure is followed by an R1 procedure	[1] 8.3	o.8	_____
4	During a mode mismatch procedure due to an incoming BAS command that does not correspond to the transmitted capabilities, an unsuccessful R0 procedure is followed by an R2 procedure	[1] 8.3	o.8	_____
5	During a mode mismatch procedure implemented when the contents of one or more of the information signals does not agree with the BAS commands, an unsuccessful R0 procedure is followed by an R1 procedure	[1] 8.3	o.9	_____
6	During a mode mismatch procedure implemented when the contents of one or more of the information signals does not agree with the BAS commands, an unsuccessful R0 procedure is followed by an R2 procedure	[1] 8.3	o.9	_____
7	On an unexpected loss of frame alignment in the initial channel, an unsuccessful R0 procedure is followed by an R1 procedure	[1] 8.4.1	o.10	_____
8	On an unexpected loss of frame alignment in the initial channel, an unsuccessful R0 procedure is followed by an R2 procedure	[1] 8.4.1	o.10	_____
9	On loss of multiframe alignment in initial channel, when the IUT is the calling terminal and information is carried by more than one channel, the R2 procedure is implemented	[1] 8.4.2	c25	_____

(continued)

Table A.28 (concluded): Choice of recovery procedures

Item	Behaviour in recovery procedures	Reference	Status	Support
10	On loss of multiframe alignment in initial channel, when the IUT is the calling terminal and information is carried by more than one channel, the R3 procedure is implemented	[1] 8.4.2	c26	_____
11	On loss of the only additional channel, the R2 procedure is implemented	[1] 8.5.2	c27	_____
12	On loss of the only additional channel, the R5 procedure is implemented	[1] 8.5.2	c28	_____
13	On loss of the initial channel only when two channels are established, the R2 procedure is implemented	[1] 8.5.4	c29	_____
14	On loss of the initial channel only when two channels are established, the R4 procedure is implemented	[1] 8.5.4	c30	_____
Comments: o.7: It is mandatory to support at least one of these behaviours. o.8: It is mandatory to support at least one of these behaviours. o.9: It is mandatory to support at least one of these behaviours. o.10: It is mandatory to support at least one of these behaviours. c25: if A27.10 then x else (if A2.2 then m else n/a). c26: if A27.9 then x else (if A2.2 then m else n/a). c27: if A27.12 then x else (if A2.2 then m else n/a). c28: if A27.11 then x else (if A2.2 then m else n/a). c29: if A27.14 then x else (if A2.2 then m else n/a). c30: if A27.13 then x else (if A2.2 then m else n/a).				

A.4.13   Timers

Table A29: Timers

Item	Timer	Reference	Status	Support
1	Timer T1 (10 seconds)	[1] 6.1.1	m	_____
2	Timer T2 (10 seconds)	[1] 7.1.2	c7	_____
3	Timer T3 (1 second)	[1] 8.3	m	_____
Comments: c7: if A2.2 then m else n/a.				

Annex B (informative): Bibliography

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