ETSI TS 101 804-3 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 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma

Reference

RTS/MTS-00095-3

Keywords

ATS, gatekeeper, gateway, H.323, IP, PIXIT, supplementary service, terminal, testing, TTCN, VoIP

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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 3 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".**

1 Scope

The present document specifies the Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma for the H.225.0 protocol for Terminal, Gatekeeper and Gateway.

The objective of the present document is to provide conformance tests that give a greater probability of inter-operability. The ATS & PIXIT specification covers the procedures described in ITU-T Recommendations H.323 [3] and H.225.0 [4].

The ISO standard for the methodology of conformance testing (ISO/IEC 9646-1 [6], ISO/IEC 9646-2 [7] and ISO/IEC 9646-3 [8]) is used as basis for the test methodology.

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] ETSI TS 101 804-1: "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".

[2] Void.

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

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

[5] ITU-T Recommendation Q.931: "ISDN user-network interface layer 3 specification for basic call control".

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

[7] ISO/IEC 9646-2: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract Test Suite specification".

[8] ISO/IEC 9646-3: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 3: The Tree and Tabular Combined Notation (TTCN)".

[9] ISO/IEC 9646-4: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 4: Test realization".

[10] ISO/IEC 9646-5: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 5: Requirements on test laboratories and clients for the conformance assessment process".

[11] ETSI TR 101 666: "Information technology; Open Systems Interconnection Conformance testing methodology and framework; The Tree and Tabular Combined Notation (TTCN) (Ed. 2++)".

[12] ITU-T Recommendation E.164: "The international public telecommunication numbering plan".

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 [3], ITU-T Recommendation H.225.0 [4], ISO/IEC 9646-1 [6], ISO/IEC 9646-2 [7], ISO/IEC 9646-3 [8] and the following apply:

Basic Call Control (BCC): signalling protocol associated with the DSS1 - ISDN Basic Call control procedures of ITU-T Recommendation Q.931

inopportune: test purpose covering a signalling procedure where an inopportune message (type of message not expected in the IUT current state) is sent to the IUT

syntactically invalid: test purpose covering a signalling procedure where a valid (expected in the current status of the IUT) but not correctly encoded (unknown or incorrect parameter values) message is sent to the IUT, which shall react correctly and eventually reject the message

valid: test purpose covering a signalling procedure where all the messages sent to or received from the IUT are valid (expected in the current status of the IUT) and correctly encoded

3.2 Abbreviations

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

ARQ	Admission ReQuest
ATS	Abstract Test Suite
BCC	Basic Call Control
BRQ	Bandwidth ReQuest
DGK	Destination GateKeeper
DRQ	Disengage ReQuest
DSS1	Digital Signalling System 1
ETS	Executable Test Suite
GK	GateKeeper
GRQ	Gatekeeper ReQuest
I	Inopportune
IP	Internet Protocol
IRQ	Information ReQuest
IRR	Information Request Response
ISDN	Integrated Services Digital Network
IUT	Implementation Under Test
LRQ	Location ReQuest
MOT	Mean Of Testing
MTC	Main Test Component
PCO	Point of Control and Observation
PCTR	Protocol Conformance Test Report
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation eXtra Information for Testing
PTC	Parallel Test Component
RAS	Registration, Admission and Status
RRQ	Registration ReQuest
S	Syntactically invalid
SUT	System Under Test
TCP	Transmission Control Protocol
TE	TErminal
TP	Test Purpose
TSS	Test Suite Structure
TTCN	Testing and Test Control Notation
UDP	User Datagram Protocol
URQ	Unregister ReQuest

UUIE   User-User Information Element

4   Abstract test method

The remote test method is applied for this ATS.
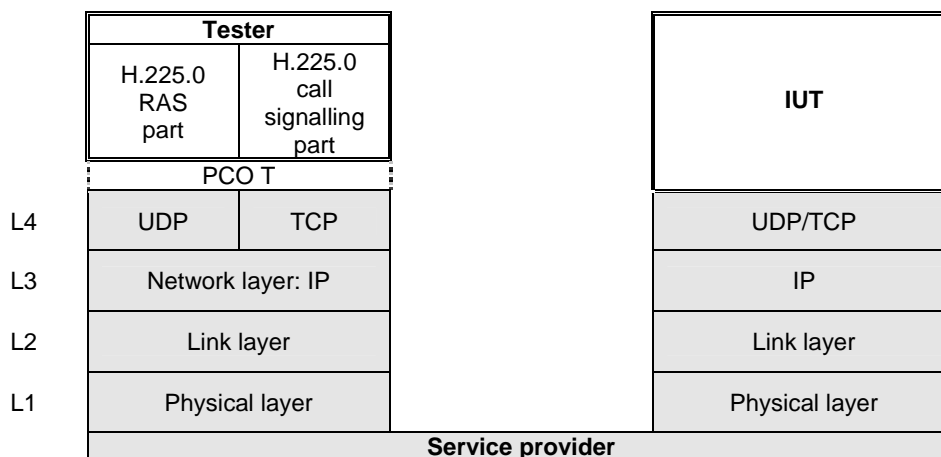
Figure 1: Remote test method with PCO T

A Point of Control and Observation (PCO) resides between the layer 4 and the tester, which executes the signalling procedures corresponding to the test case dynamic behaviour. This PCO is named "T" because it is located above the transport layer. The L PCO is used to control and observe the behaviour of the Implementation Under Test (IUT) using the layers of the Service provider.

5   ATS conventions

5.1   Version of TTCN used

The version of TTCN used is that defined in TR 101 666 [11].

6   ATS to TP map

The identifiers used for the TPs are reused as test case names. Thus there is a straightforward one-to-one mapping.

7   PCTR conformance

A test laboratory, when requested by a client to produce a PCTR, is required, as specified in ISO/IEC 9646-5 [10], to produce a PCTR conformant with the PCTR template given in annex B of ISO/IEC 9646-5 [10].

Furthermore, a test laboratory, offering testing for the ATS specification contained in annex C, when requested by a client to produce a PCTR, is required to produce a PCTR conformant with the PCTR proforma contained in annex A.

A PCTR which conforms to this PCTR proforma specification shall preserve the content and ordering of the clauses contained in annex A. Clause A.6 of the PCTR may contain additional columns. If included, these shall be placed to the right of the existing columns. Text in italics may be retained by the test laboratory.

8   PIXIT conformance

A test realizer, producing an executable test suite for the ATS specification contained in annex C, is required, as specified in ISO/IEC 9646-4 [9], to produce an augmented partial PIXIT proforma conformant with this partial PIXIT proforma specification.

An augmented partial PIXIT proforma which conforms to this partial PIXIT proforma specification shall, as a minimum, have contents which are technically equivalent to annex B. The augmented partial PIXIT proforma may contain additional questions that need to be answered in order to prepare the Means Of Testing (MOT) for a particular IUT.

A test laboratory, offering testing for the ATS specification contained in annex C, is required, as specified in ISO/IEC 9646-5 [10], to further augment the augmented partial PIXIT proforma to produce a PIXIT proforma conformant with this partial PIXIT proforma specification.

A PIXIT proforma which conforms to this partial PIXIT proforma specification shall, as a minimum, have contents which are technically equivalent to annex B. The PIXIT proforma may contain additional questions that need to be answered in order to prepare the test laboratory for a particular IUT.

9   ATS conformance

The test realizer, producing MOT and ETS for this ATS specification, shall comply with the requirements of ISO/IEC 9646-4 [9]. In particular, these concern the realization of an ETS based on each ATS. The test realizer shall provide a statement of conformance of the MOT to this ATS specification.

An ETS which conforms to this ATS specification shall contain test groups and test cases which are technically equivalent to those contained in the ATS in annex C. All sequences of test events comprising an abstract test case shall be capable of being realized in the executable test case. Any further checking which the test system might be capable of performing is outside the scope of this ATS specification and shall not contribute to the verdict assignment for each test case.

Test laboratories running conformance test services using this ATS shall comply with ISO/IEC 9646-5 [10].

A test laboratory which claims to conform to this ATS specification shall use an MOT which conforms to this ATS.

Annex A (normative):
Protocol Conformance Test Report (PCTR) proforma

Notwithstanding the provisions of the copyright clause related to the text of the present document, ETSI grants that users of the present document may freely reproduce the PCTR proforma in this annex so that it can be used for its intended purposes and may further publish the completed PCTR.

A.1 Identification summary

A.1.1 Protocol conformance test report

PCTR number:	
PCTR date:	
Corresponding SCTR number:	
Corresponding SCTR date:	
Test laboratory identification:	
Test laboratory manager:	
Signature:	

A.1.2 IUT identification

Name:	
Version:	
Protocol specification:	ITU-T Recommendation H.225.0 [4]
PICS:	
Previous PCTRs (if any):	

A.1.3 Testing environment

PIXIT reference number:	
ATS specification:	TS 101 804-3
Abstract test method:	Multi-party test method (see ISO/IEC 9646-2 [7])
Means of testing identification:	
Dates of testing:	
Conformance log reference(s):	
Retention date for log reference(s):	

A.1.4   Limits and reservations

Additional information relevant to the technical contents or further use of the test report, or to the rights and obligations of the test laboratory and the client, may be given here. Such information may include restriction on the publication of the report.

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A.1.5   Comments

Additional comments may be given by either the client or the test laboratory on any of the contents of the PCTR, for example, to note disagreement between the two parties.

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A.2   IUT conformance status

This IUT has/has not been shown by conformance assessment to be non-conforming to the specified protocol specification.

Strike the appropriate words in this sentence. If the PICS for this IUT is consistent with the static conformance requirements (as specified in clause A.3) and there are no "FAIL" verdicts to be recorded (in clause A.6) strike the words "has", otherwise strike the words "has not".

A.3   Static conformance summary

The PICS for this IUT is/is not consistent with the static conformance requirements in the specified protocol.

Strike the appropriate words in this sentence.

A.4   Dynamic conformance summary

The test campaign did/did not reveal errors in the IUT.

Strike the appropriate words in this sentence. If there are no "FAIL" verdicts to be recorded (in clause A.6) strike the word "did", otherwise strike the words "did not".

Summary of the results of groups of tests:

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A.5 Static conformance review report

If clause A.3 indicates non-conformance, this clause itemizes the mismatches between the PICS and the static conformance requirements of the specified protocol specification.

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A.6 Test campaign report

ATS reference	Selected? (Y/N)	Run? (Y/N)	Verdict	Observations
RAS testing - terminal				
RAS_TE_GDR_001				
RAS_TE_GDR_002				
RAS_TE_GDR_003				
RAS_TE_GDR_004				
RAS_TE_GDR_005				
RAS_TE_GDR_006				
RAS_TE_GDR_007				
RAS_TE_REG_001				
RAS_TE_REG_002				
RAS_TE_REG_003				
RAS_TE_REG_004				
RAS_TE_REG_005				
RAS_TE_REG_006				
RAS_TE_REG_007				
RAS_TE_ADM_001				
RAS_TE_ADM_002				
RAS_TE_ADM_003				
RAS_TE_ADM_004				
RAS_TE_ADM_005				
RAS_TE_ADM_006				
RAS_TE_ADM_007				
RAS_TE_ADM_008				
RAS_TE_ADM_009				
RAS_TE_ADM_010				
RAS_TE_LOC_001				
RAS_TE_LOC_002				
RAS_TE_LOC_003				
RAS_TE_LOC_004				
RAS_TE_LOC_005				
RAS_TE_LOC_006				
RAS_TE_BND_001				
RAS_TE_BND_002				
RAS_TE_BND_003				
RAS_TE_BND_004				
RAS_TE_BND_005				
RAS_TE_BND_006				
RAS_TE_BND_007				
RAS_TE_BND_008				
RAS_TE_URG_001				
RAS_TE_URG_002				

ATS reference	Selected? (Y/N)	Run? (Y/N)	Verdict	Observations
RAS_TE_URG_003				
RAS_TE_URG_004				
RAS_TE_URG_005				
RAS_TE_URG_006				
RAS_TE_URG_007				
RAS_TE_DIS_001				
RAS_TE_DIS_002				
RAS_TE_DIS_003				
RAS_TE_DIS_004				
RAS_TE_DIS_005				
RAS_TE_DIS_006				
RAS_TE_DIS_007				
RAS_TE_DIS_008				
RAS_TE_DIS_009				
RAS_TE_STA_001				
RAS_TE_STA_002				
RAS_TE_STA_003				
RAS_TE_STA_004				
RAS_TE_STA_005				
RAS_TE_STA_006				
RAS_TE_STA_007				
RAS_TE_RIP_001				
RAS_TE_RIP_002				
RAS_TE_RIP_003				
RAS_TE_RIP_004				
RAS_TE_RIP_005				
RAS_TE_RIP_006				
RAS_TE_RIP_007				
RAS_TE_RIP_008				
RAS_TE_RIP_009				
RAS_TE_RIP_010				
RAS_TE_RIP_011				
RAS_TE_RIP_012				
RAS_TE_RIP_013				
RAS_TE_RIP_014				
RAS_TE_RIP_015				
RAS_TE_RIP_016				
RAS_TE_RIP_017				
RAS_TE_RIP_018				
RAS_TE_RIP_019				
RAS_TE_RIP_020				
RAS_TE_RIP_021				
RAS_TE_RIP_022				
RAS_TE_RIP_023				
RAS_TE_RIP_024				
RAS testing - gatekeeper				
RAS_GK_GDR_001				
RAS_GK_GDR_002				
RAS_GK_GDR_003				
RAS_GK_GDR_004				
RAS_GK_GDR_005				
RAS_GK_GDR_006				
RAS_GK_REG_001				
RAS_GK_REG_002				
RAS_GK_REG_003				
RAS_GK_REG_004				
RAS_GK_REG_005				
RAS_GK_REG_006				
RAS_GK_REG_007				
RAS_GK_REG_008				
RAS_GK_REG_009				
RAS_GK_REG_010				

ATS reference	Selected? (Y/N)	Run? (Y/N)	Verdict	Observations
RAS_GK_REG_011				
RAS_GK_REG_012				
RAS_GK_ADM_001				
RAS_GK_ADM_002				
RAS_GK_LOC_001				
RAS_GK_LOC_002				
RAS_GK_LOC_003				
RAS_GK_LOC_004				
RAS_GK_LOC_005				
RAS_GK_LOC_006				
RAS_GK_LOC_007				
RAS_GK_LOC_008				
RAS_GK_LOC_009				
RAS_GK_BND_001				
RAS_GK_BND_002				
RAS_GK_BND_003				
RAS_GK_BND_004				
RAS_GK_BND_005				
RAS_GK_BND_006				
RAS_GK_BND_007				
RAS_GK_URG_001				
RAS_GK_URG_002				
RAS_GK_URG_003				
RAS_GK_URG_004				
RAS_GK_URG_005				
RAS_GK_URG_006				
RAS_GK_URG_007				
RAS_GK_DIS_001				
RAS_GK_DIS_002				
RAS_GK_DIS_003				
RAS_GK_DIS_004				
RAS_GK_DIS_005				
RAS_GK_DIS_006				
RAS_GK_STA_001				
RAS_GK_STA_002				
RAS_GK_STA_003				
RAS_GK_STA_004				
RAS_GK_RIP_001				
RAS_GK_RIP_002				
RAS_GK_RIP_003				
RAS_GK_RIP_004				
RAS_GK_RIP_005				
RAS_GK_RIP_006				
RAS_GK_RIP_007				
RAS_GK_RIP_008				
RAS_GK_RIP_009				
Basic call testing - terminal				
BCC_TE_PHA_01				
BCC_TE_PHA_02				
BCC_TE_PHA_03				
BCC_TE_PHA_04				
BCC_TE_PHA_05				
BCC_TE_PHA_06				
BCC_TE_PHA_07				
BCC_TE_PHA_08				
BCC_TE_PHA_09				
BCC_TE_PHA_10				
BCC_TE_PHA_11				
BCC_TE_PHA_12				
BCC_TE_PHA_13				
BCC_TE_PHA_14				
BCC_TE_PHA_15				

ATS reference	Selected? (Y/N)	Run? (Y/N)	Verdict	Observations
BCC_TE_PHA_16				
BCC_TE_PHA_17				
BCC_TE_PHA_18				
BCC_TE_PHA_19				
BCC_TE_PHA_20				
BCC_TE_PHA_21				
BCC_TE_PHA_22				
BCC_TE_PHA_23				
BCC_TE_PHA_24				
BCC_TE_PHA_25				
BCC_TE_PHA_26				
BCC_TE_PHA_27				
BCC_TE_PHA_28				
BCC_TE_PHA_29				
BCC_TE_PHA_30				
BCC_TE_PHA_31				
BCC_TE_PHA_32				
BCC_TE_PHE_01				
BCC_TE_PHE_02				
BCC_TE_I_U00_01				
BCC_TE_I_U00_02				
BCC_TE_I_U00_03				
BCC_TE_I_U00_04				
BCC_TE_I_U00_05				
BCC_TE_I_U01_01				
BCC_TE_I_U01_02				
BCC_TE_I_U01_03				
BCC_TE_I_U01_04				
BCC_TE_I_U02_01				
BCC_TE_I_U02_02				
BCC_TE_I_U02_03				
BCC_TE_I_U02_04				
BCC_TE_I_U03_01				
BCC_TE_I_U03_02				
BCC_TE_I_U03_03				
BCC_TE_I_U03_04				
BCC_TE_I_U04_01				
BCC_TE_I_U04_02				
BCC_TE_I_U04_03				
BCC_TE_I_U04_04				
BCC_TE_I_U07_01				
BCC_TE_I_U07_02				
BCC_TE_I_U07_03				
BCC_TE_I_U07_04				
BCC_TE_I_U10_01				
BCC_TE_I_U10_02				
BCC_TE_I_U10_03				
BCC_TE_S_U00_01				
BCC_TE_S_U00_02				
BCC_TE_S_U00_03				
BCC_TE_S_U00_04				
BCC_TE_S_U00_05				
BCC_TE_S_U00_06				
BCC_TE_S_U00_07				
BCC_TE_S_U00_08				
BCC_TE_S_U00_09				
BCC_TE_S_U00_10				
BCC_TE_S_U01_01				
BCC_TE_S_U01_02				
BCC_TE_S_U01_03				
BCC_TE_S_U01_04				
BCC_TE_S_U01_05				

ATS reference	Selected? (Y/N)	Run? (Y/N)	Verdict	Observations
BCC_TE_S_U01_06				
BCC_TE_S_U01_07				
BCC_TE_S_U01_08				
BCC_TE_S_U01_09				
BCC_TE_S_U01_10				
BCC_TE_S_U01_11				
BCC_TE_S_U01_12				
BCC_TE_S_U01_13				
BCC_TE_S_U01_14				
BCC_TE_S_U01_15				
BCC_TE_S_U01_16				
BCC_TE_S_U01_17				
BCC_TE_S_U02_01				
BCC_TE_S_U02_02				
BCC_TE_S_U02_03				
BCC_TE_S_U02_04				
BCC_TE_S_U02_05				
BCC_TE_S_U02_06				
BCC_TE_S_U02_07				
BCC_TE_S_U02_08				
BCC_TE_S_U02_09				
BCC_TE_S_U02_10				
BCC_TE_S_U02_11				
BCC_TE_S_U02_12				
BCC_TE_S_U02_13				
BCC_TE_S_U03_01				
BCC_TE_S_U03_02				
BCC_TE_S_U03_03				
BCC_TE_S_U03_04				
BCC_TE_S_U03_05				
BCC_TE_S_U03_06				
BCC_TE_S_U03_07				
BCC_TE_S_U03_08				
BCC_TE_S_U03_09				
BCC_TE_S_U04_01				
BCC_TE_S_U04_02				
BCC_TE_S_U04_03				
BCC_TE_S_U04_04				
BCC_TE_S_U04_05				
BCC_TE_S_U04_06				
BCC_TE_S_U04_07				
BCC_TE_S_U04_08				
BCC_TE_S_U04_09				
BCC_TE_S_U07_01				
BCC_TE_S_U07_02				
BCC_TE_S_U07_03				
BCC_TE_S_U07_04				
BCC_TE_S_U07_05				
BCC_TE_S_U07_06				
BCC_TE_S_U07_07				
BCC_TE_S_U07_08				
BCC_TE_S_U07_09				
BCC_TE_S_U10_01				
BCC_TE_S_U10_02				
BCC_TE_S_U10_03				
BCC_TE_S_U10_04				
BCC_TE_S_U10_05				
BCC_TE_S_U10_06				
BCC_TE_S_U10_07				
BCC_TE_S_U10_08				
BCC_TE_S_U10_09				
Basic call testing - gatekeeper				

ATS reference	Selected? (Y/N)	Run? (Y/N)	Verdict	Observations
BCC_GK_PHA_01				
BCC_GK_PHA_02				
BCC_GK_PHA_03				
BCC_GK_PHA_04				
BCC_GK_PHA_05				
BCC_GK_PHA_06				
BCC_GK_PHA_07				
BCC_GK_PHA_08				
BCC_GK_PHA_09				
BCC_GK_PHA_10				
BCC_GK_PHA_11				
BCC_GK_PHA_12				
BCC_GK_PHA_13				
BCC_GK_PHA_14				
BCC_GK_PHE_01				
BCC_GK_PHE_02				
BCC_GK_I_U00_01				
BCC_GK_I_U00_02				
BCC_GK_I_U00_03				
BCC_GK_I_U00_04				
BCC_GK_I_U00_05				
BCC_GK_I_U07_01				
BCC_GK_I_U07_02				
BCC_GK_I_U07_03				
BCC_GK_I_U07_04				
BCC_GK_I_U09_01				
BCC_GK_I_U09_02				
BCC_GK_I_U09_03				
BCC_GK_I_U09_04				
BCC_GK_I_U10_01				
BCC_GK_I_U10_02				
BCC_GK_I_U10_03				
BCC_GK_S_U00_01				
BCC_GK_S_U00_02				
BCC_GK_S_U00_03				
BCC_GK_S_U00_04				
BCC_GK_S_U00_05				
BCC_GK_S_U00_06				
BCC_GK_S_U00_07				
BCC_GK_S_U00_08				
BCC_GK_S_U00_09				
BCC_GK_S_U00_10				
BCC_GK_S_U07_01				
BCC_GK_S_U07_02				
BCC_GK_S_U07_03				
BCC_GK_S_U07_04				
BCC_GK_S_U07_05				
BCC_GK_S_U07_06				
BCC_GK_S_U07_07				
BCC_GK_S_U07_08				
BCC_GK_S_U07_09				
BCC_GK_S_U09_01				
BCC_GK_S_U09_02				
BCC_GK_S_U09_03				
BCC_GK_S_U09_04				
BCC_GK_S_U09_05				
BCC_GK_S_U09_06				
BCC_GK_S_U09_07				
BCC_GK_S_U09_08				
BCC_GK_S_U09_09				
BCC_GK_S_U10_01				
BCC_GK_S_U10_02				

ATS reference	Selected? (Y/N)	Run? (Y/N)	Verdict	Observations
BCC_GK_S_U10_03				
BCC_GK_S_U10_04				
BCC_GK_S_U10_05				
BCC_GK_S_U10_06				
BCC_GK_S_U10_07				
BCC_GK_S_U10_08				
BCC_GK_S_U10_09				
Basic call testing - destination gatekeeper				
BCC_DGK_PHA_01				
BCC_DGK_PHA_02				
BCC_DGK_PHA_03				
BCC_DGK_PHA_04				
BCC_DGK_PHA_05				
BCC_DGK_PHA_06				
BCC_DGK_PHA_07				
BCC_DGK_PHA_08				
BCC_DGK_PHA_09				
BCC_DGK_PHA_10				
BCC_DGK_PHA_11				
BCC_DGK_PHA_12				
BCC_DGK_PHA_13				
BCC_DGK_PHE_01				
BCC_DGK_PHE_02				
BCC_DGK_I_U00_01				
BCC_DGK_I_U00_02				
BCC_DGK_I_U00_03				
BCC_DGK_I_U00_04				
BCC_DGK_I_U00_05				
BCC_DGK_I_U01_01				
BCC_DGK_I_U01_02				
BCC_DGK_I_U01_03				
BCC_DGK_I_U01_04				
BCC_DGK_I_U03_01				
BCC_DGK_I_U03_02				
BCC_DGK_I_U03_03				
BCC_DGK_I_U03_04				
BCC_DGK_I_U04_01				
BCC_DGK_I_U04_02				
BCC_DGK_I_U04_03				
BCC_DGK_I_U04_04				
BCC_DGK_I_U10_01				
BCC_DGK_I_U10_02				
BCC_DGK_I_U10_03				
BCC_DGK_S_U00_01				

ATS reference	Selected? (Y/N)	Run? (Y/N)	Verdict	Observations
BCC_DGK_S_U01_01				
BCC_DGK_S_U01_02				
BCC_DGK_S_U01_03				
BCC_DGK_S_U01_04				
BCC_DGK_S_U01_05				
BCC_DGK_S_U01_06				
BCC_DGK_S_U01_07				
BCC_DGK_S_U01_08				
BCC_DGK_S_U01_09				
BCC_DGK_S_U01_10				
BCC_DGK_S_U01_11				
BCC_DGK_S_U01_12				
BCC_DGK_S_U01_13				
BCC_DGK_S_U01_14				
BCC_DGK_S_U01_15				
BCC_DGK_S_U01_16				
BCC_DGK_S_U01_17				
BCC_DGK_S_U03_01				
BCC_DGK_S_U03_02				
BCC_DGK_S_U03_03				
BCC_DGK_S_U03_04				
BCC_DGK_S_U03_05				
BCC_DGK_S_U03_06				
BCC_DGK_S_U03_07				
BCC_DGK_S_U03_08				
BCC_DGK_S_U03_09				
BCC_DGK_S_U03_10				
BCC_DGK_S_U03_11				
BCC_DGK_S_U03_12				
BCC_DGK_S_U03_13				
BCC_DGK_S_U04_01				
BCC_DGK_S_U04_02				
BCC_DGK_S_U04_03				
BCC_DGK_S_U04_04				
BCC_DGK_S_U04_05				
BCC_DGK_S_U04_06				
BCC_DGK_S_U04_07				
BCC_DGK_S_U04_08				
BCC_DGK_S_U04_09				
BCC_DGK_S_U10_01				
BCC_DGK_S_U10_02				
BCC_DGK_S_U10_03				
BCC_DGK_S_U10_04				
BCC_DGK_S_U10_05				
BCC_DGK_S_U10_06				
BCC_DGK_S_U10_07				
BCC_DGK_S_U10_08				
BCC_DGK_S_U10_09				

A.7   Observations

Additional information relevant to the technical content of the PCTR are given here.

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Annex B (normative):
Partial PIXIT proforma

Notwithstanding the provisions of the copyright clause related to the text of the present document, ETSI grants that users of the present document may freely reproduce the partial PIXIT proforma in this annex so that it can be used for its intended purposes and may further publish the completed PIXIT.

B.1   Identification summary

PIXIT number:

....

Test laboratory name:

....

Date of issue:

....

Issued to:

....

B.2   Abstract Test Suite summary

Protocol specification: ITU-T Recommendation H.225.0 [4]

ATS specification: TS 101 804-3

Abstract test method: Remote test method (see ISO/IEC 9646-2 [7])

B.3   Test laboratory

Test laboratory identification:

....

Accreditation status of the test service:

....

Accreditation reference:

....

Test laboratory manager:

....

Test laboratory contact:

....

Means of testing:

....

Test laboratory instructions for completion:

....

B.4   Client (of the test laboratory)

Client identification:

....

Client test manager:

....

Client contact:

....

Test facilities required:

....

B.5   System Under Test (SUT)

Name:

....

Version:

....

SCS reference:

....

Machine configuration:

....

Operating system identification:

....

IUT identification:

....

PICS (all layers):

....

Limitations of the SUT:

....

Environmental conditions:

....

B.6   Protocol information

NOTE: The types referred to in the tables of this clause are defined in annex H of ITU-T Recommendation H.225.0 [4].

B.6.1   Protocol identification

Specification reference: ITU-T Recommendation H.225.0 [4]

Protocol version: V4

PICS reference: TS 101 804-1 [1]

B.6.2   Parameters for RAS testing

B.6.2.1   IP port and address information

Table B.1: IP ports and addresses

Item	Give a value for the …	Type	Value
IP ports			
1.1.1	initial IP port for unicast communication (recommended: 1719).	INTEGER(0 .. 65535)	
1.1.2	initial IP port (well-known discovery multicast port) for multicast communication (recommended: 1718).	INTEGER(0 .. 65535)	
IP addresses at the tester's access related to the main (MTC for TE testing) or first Parallel Test Component (PTC1 for GK testing)			
1.2.1	IP address of the tester for unicast communication.	OCTETSTRING(SIZE(4))	
1.2.2	IP address (well-known discovery multicast address) of the tester for multicast communication.	OCTETSTRING(SIZE(4))	
IP addresses at the tester's access related to the second Parallel Test Component (PTC2)			
1.3.1	IP address of the tester for unicast communication.	OCTETSTRING(SIZE(4))	
1.3.2	IP address (well-known discovery multicast address) of the tester for multicast communication.	OCTETSTRING(SIZE(4))	
IP addresses for the IUT			
1.4.1	initial IP address of the IUT for unicast communication.	OCTETSTRING(SIZE(4))	
1.4.2	IP address (well-known discovery multicast address) of the IUT for multicast communication.	OCTETSTRING(SIZE(4))	

B.6.2.2   Addresses and identifiers

Table B.2: Addresses and identifiers

Item	Give a value for the …	Type	Value
Gatekeeper identifier			
2.1	gatekeeper identifier of the tester with the IUT in the terminal role.	GatekeeperIdentifier	
2.2	alternative gatekeeper identifier of the tester with the IUT in the terminal role.	GatekeeperIdentifier	
2.3	gatekeeper identifier of the IUT in the gatekeeper role.	GatekeeperIdentifier	
RAS and callSignalTransport addresses			
2.4	RAS transport address of the IUT.	TransportAddress	
2.5	call signal address of the IUT.	TransportAddress	
2.6	RAS transport address of the tester with the IUT.	TransportAddress	
2.7	call signal address of the tester with the IUT.	TransportAddress	
2.8	RAS transport address of the tester (PTC) with the IUT in the gatekeeper role.	TransportAddress	
2.9	call signal address of the tester (PTC) with the IUT in the gatekeeper role.	TransportAddress	

Item		Give a value for the …	Type	Value
2.10		alternative gatekeeper RAS transport address of the tester (PTC).	TransportAddress	
2.11		alternative gatekeeper call signal address of the tester (PTC).	TransportAddress	
2.12		alternative terminal call signal address.	TransportAddress	
2.13		call signal address for a terminal not allowed to register with the IUT in the gatekeeper role.	TransportAddress	
IP addresses				
2.14		alternative gatekeeper IP address on the tester side	OCTETSTRING(SIZE(4))	
2.15		alternative gatekeeper IP multicast address on the tester side.	OCTETSTRING(SIZE(4))	
Endpoint identifier				
2.16		endpoint identifier provided to the IUT in the terminal role.	EndpointIdentifier	
2.17		endpoint type on the tester side for a terminal not allowed to register with the IUT in the gatekeeper role.	EndpointType	
Alias address				
2.18		alias address provided to the IUT in the gatekeeper role.	AliasAddress	
2.19		alias address for a called address that will make the IUT send an LRQ in unicast mode.	AliasAddress	
2.20		alias address for a called address that will make the IUT send an LRQ in multicast mode.	AliasAddress	
2.21		alias address for a called address that will make the IUT send an LRQ in any (uni- or multicast) mode.	AliasAddress	
Frequency				
2.22		irrFrequency that can be sent to the IUT in an ACF message.	INTEGER	

B.6.2.3   Bandwidth information

Table B.3: Bandwidth information

Item	Give a value for the …	Type	Value
3.1	bandwidth that can be requested in ARQ messages from the IUT in the gatekeeper role.	Bandwidth	
3.2	bandwidth that is above the allowed bandwidth.	Bandwidth	
3.3	bandwidth that is below the allowed bandwidth.	Bandwidth	

B.6.2.4   RAS timers

Table B.4: RAS timers

Item	RAS Timer Give a value for the timer that is used to wait for...	Value (in seconds)
4.1	the test operator to cause the IUT in the terminal role to send a GRQ message.	
4.2	the test operator to cause the IUT in the terminal role to send a RRQ message.	
4.3	the test operator to cause the IUT in the terminal role to send a LRQ message.	
4.4	the test operator to cause the IUT in the terminal role to send a BRQ message.	
4.5	the test operator to cause the IUT in the terminal role to send a URQ message.	
4.6	the test operator to cause the IUT in the terminal role to send an IRQ message.	
4.7	the IUT to repeat the GRQ message.	
4.8	the IUT to repeat the RRQ message.	
4.9	the IUT to repeat the ARQ message.	

Item	RAS Timer Give a value for the timer that is used to wait for...	Value (in seconds)
4.10	the IUT to repeat the LRQ message.	
4.11	the IUT to repeat the BRQ message.	
4.12	the IUT to repeat the URQ message.	
4.13	the IUT to repeat the DRQ message.	
4.14	the IUT to repeat the IRR message.	
4.15	the establishment of an incoming call.	

B.6.2.5   RAS configuration details

Table B.5: Configuration details

Item	Configuration details	Supported Y/N
5.1	Is the gatekeeper discovery done manually?	
5.2	Is the GRQ sent in unicast mode?	
5.3	Is the RRQ sent automatically after the GRQ?	
5.4	Can only a test operator force the IUT in the terminal role to send a GRQ?	
5.5	Can only a test operator force the IUT in the terminal role to send a URQ?	
5.6.1	Can only a test operator force the IUT in the terminal role to send a LRQ?	
5.6.2	Is the LRQ then sent in unicast mode?	
5.7	Can only a test operator force the IUT in the terminal role to send a BRQ?	
5.8	Can only a test operator force the IUT in the terminal role to send an IRQ?	
5.9	Can only a test operator force the IUT in the terminal role to start a call?	
5.10	Can only a test operator force the IUT in the terminal role to release a call?	
NOTE:	The above questions refer to actions/adjustment at the IUT that have to be done by the test operator.	

B.6.3   Parameters for basic call control testing

B.6.3.1   Basic call control configuration details

Table B.6: Configuration details

Item	Configuration details	Supported Y/N
Stability of states		
6.1	Is the IUT stable in the Call Received call/connection state U7 (i.e. CONNECT messages are not sent automatically)?	
6.2	Is the IUT stable in the Incoming Call Proceeding call/connection state U9 (i.e. ALERTING and CONNECT messages are not sent automatically)?	
Ip port range		
6.3	Give the minimum IP port value for sending basic call control messages to the IUT.	
6.4	Give the maximum IP port value for sending basic call control messages to the IUT.	

B.6.3.2   Information element values

Table B.7: Information element values

Item	Give a coding of a …	Value
7.1	bearer capability information element, which the IUT is compatible with, for the purpose of accepting calls.	
7.2	complete Called party number information element to be sent to IUT in terminal role.	
7.3	complete Called party number information element to be sent to IUT in gatekeeper role.	
7.4	erroneous protocol discriminator, coded other than "00001000"B.	
7.5	unrecognized message type.	

B.6.3.3   UUIE parameter values

Table B.8: UUIE parameter values

Item	Give a value for the …	Type	Value
8.1	preferred call identifier.	CallIdentifier	
8.2	destination address.	AliasAddress	
8.3	source info.	EndpointType	
8.4	E.164 source address.	IA5String	
8.5	H.323 ID source address.	BPMString	
8.6	URL-ID source address.	IA5String	
8.7	transport ID source address.	TransportAddress	
8.8	Email ID source address.	IA5String	
8.9	party number source address.	PartyNumber	
8.10	destination info.	EndpointType	
8.11	E.164 destination address.	IA5String	
8.12	H.323 ID destination address.	BPMString	
8.13	URL-ID destination address.	IA5String	
8.14	transport ID destination address.	TransportAddress	
8.15	Email ID destination address.	IA5String	
8.16	party number destination address.	PartyNumber	
8.17	active MC flag.	BOOLEAN	
8.18	conference ID.	ConferenceIdentifier	
8.19	conference goal.	ConferenceGoal	
8.20	call type.	CallType	
8.21	media wait for connect flag.	BOOLEAN	
8.22	can overlap send flag.	BOOLEAN	
8.23	multiple calls flag.	BOOLEAN	
8.24	maintain connection flag.	BOOLEAN	
8.25	presentation indicator.	PresentationIndicator	
8.26	screening indicator.	ScreeningIndicator	
8.27	initial fastStart field.	OCTET STRING	
NOTE: The values shall be accepted when sent to the IUT.			

B.6.4   Test management timers

Table B.9: Timer values

Item	Timer Give a value for the timer that is used ...	Value (in seconds)
9.1	to control the synchronization between the test components for RAS testing (TSYNC).	
9.2	to wait for the test operator to perform an implicit send action (TWAIT).	
9.3	to wait for the IUT to respond to a stimulus sent by the tester (TAC).	
9.4	to control that the IUT does not respond to a stimulus sent by the tester (TNOAC).	
9.5	to control the synchronization between the test components for basic call control testing (MTC_TWAIT > TWAIT!).	
9.6	to guard and ensure that a test case finishes after a defined time (T_GUARD, minimum 30 s).	
9.7	to test protocol timer T301 (default value = 180 s).	
9.8	to test protocol timer T303 (default value = 4 s).	
9.9	to allow the necessary set-up time for the TCP connection.	
NOTE:	The IUT provider may fill in a value range rather than a fixed value for the test management timers. During test execution the test laboratory will choose specific values for the timers dependant on the means of testing used. These specific values may even be beyond the range given by the IUT provider, if this is necessary for achieving satisfactory test results.	

Annex C (normative):
Abstract Test Suite (ATS)

This ATS has been produced using the Tree and Tabular Combined Notation (TTCN) according to ISO/IEC 9646-3 [8].

The ATS was developed on a separate TTCN software tool and therefore the TTCN tables are not completely referenced in the table of contents. The ATS itself contains a test suite overview part which provides additional information and references.

C.1   The TTCN Graphical form (TTCN.GR)

The TTCN.GR representation of this ATS is contained in an Adobe Portable Document Format™ file h225_09.pdf contained in archive ts_10180403v020101p0.zip) which accompanies the present document.

C.2   The TTCN Machine Processable form (TTCN.MP)

The TTCN.MP representation corresponding to this ATS is contained in an ASCII file (h225_09.mp contained in archive ts_10180403v020101p0.zip) which accompanies the present document.

> NOTE: Where an ETSI Abstract Test Suite (in TTCN) is published in both .GR and .MP format these two forms shall be considered equivalent. In the event that there appears to be syntactical or semantic differences between the two then the problem shall be resolved and the erroneous format (whichever it is) shall be corrected.

Annex D (informative):
Bibliography

ETSI ETS 300 406: "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".

ETSI TS 101 804-2: "Methods for Testing and Specification (MTS); Conformance Test Specification for ITU-T H.225.0 (Terminal, Gatekeeper and Gateway); Part 2: Test Suite Structure and Test Purposes (TSS&TP)".

History

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