

Final draft **ETSI EN 301 003-3** v1.1.2 (1999-08)

European Standard (Telecommunications series)

**Broadband Integrated Services Digital Network (B-ISDN);
Digital Subscriber Signalling System No. two (DSS2) protocol;
Connection characteristics;
Peak cell rate modification by the connection owner;
Part 3: Test Suite Structure and Test Purposes (TSS&TP)
specification for the user**



Reference

DEN/SPS-05152-3 (9acr0idc.PDF)

Keywords

ATM, B-ISDN, DSS2, ISDN, TSS&TP, user, UNI,
broadband

ETSI

Postal address

F-06921 Sophia Antipolis Cedex - FRANCE

Office address

650 Route des Lucioles - Sophia Antipolis
Valbonne - FRANCE
Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16
Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Internet

secretariat@etsi.fr

Individual copies of this ETSI deliverable
can be downloaded from

<http://www.etsi.org>

If you find errors in the present document, send your
comment to: editor@etsi.fr

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 1999.
All rights reserved.

Contents

Intellectual Property Rights.....	4
Foreword	4
1 Scope.....	5
2 References.....	5
3 Definitions and abbreviations	6
3.1 Definitions.....	6
3.1.1 Definitions related to conformance testing.....	6
3.1.2 Definitions related to EN 301 003-1.....	6
3.2 Abbreviations	6
4 Test Suite Structure (TSS).....	7
5 Test Purposes (TP).....	7
5.1 Introduction.....	7
5.1.1 TP naming convention.....	7
5.1.2 Source of TP definition	7
5.1.3 Test strategy.....	8
5.1.4 Test of call states	8
5.2 TPs for the Peak cell rate modification, user.....	8
5.2.1 Signalling procedures at the coincident S_B/T_B and at the T_B reference points.....	8
5.2.1.1 Modification procedures at the requesting entity.....	8
5.2.1.1.1 Valid behaviour (01)	8
5.2.1.1.2 Timers (02).....	9
5.2.1.1.3 Handling of error conditions (03).....	9
5.2.1.2 Modification procedures at the responding entity	12
5.2.1.2.1 Valid behaviour (04)	12
5.2.1.2.2 Timers (05).....	12
5.2.1.2.3 Handling of error conditions (06).....	12
6 Compliance	16
7 Requirements for a comprehensive testing service.....	17
Bibliography.....	18
History.....	19

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available **free of charge** from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://www.etsi.org/ipr>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Signalling Protocols and Switching (SPS), and is now submitted for the Voting phase of the ETSI standards Two-step Approval Procedure.

The present document is part 3 of a multi-part standard covering the Digital Subscriber Signalling System No. 2 (DSS2) protocol specification for the B-ISDN Peak cell rate modification by the connection owner, as identified below:

- Part 1: "Protocol specification [ITU-T Recommendation Q.2963.1 [8] (1996), modified]";
- Part 2: "Protocol Implementation Conformance Statement (PICS) proforma specification";
- Part 3: "Test Suite Structure and Test Purposes (TSS&TP) specification for the user";**
- Part 4: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for the user";
- Part 5: "Test Suite Structure and Test Purposes (TSS&TP) specification for the network";
- Part 6: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for the network".

Proposed national transposition dates	
Date of latest announcement of this EN (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	6 months after doa

1 Scope

This third part of EN 301 003 specifies the user Test Suite Structure and Test Purposes (TSS&TP) for the T_B reference point or coincident S_B and T_B reference point (as defined in ITU-T Recommendation I.413 [5]) of implementations conforming to the standards for the signalling user-network layer 3 specification for Peak cell rate modification by the connection owner of the Digital Subscriber Signalling System No. 2 (DSS2) protocol for the pan-European Broadband Integrated Services Digital Network (B-ISDN), EN 301 003-1 [3].

A further part of the present document specifies the Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma based on the present document.

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, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.
- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

- [1] ETS 300 406: "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".
- [2] EN 300 443-1 (V1.3): "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; B-ISDN user-network interface layer 3 specification for basic call/bearer control; Part 1: Protocol specification [ITU-T Recommendation Q.2931 (1995), modified]".
- [3] EN 301 003-1 (V1.1): "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; Connection characteristics; Peak cell rate modification by the connection owner; Part 1: Protocol specification [ITU-T Recommendation Q.2963.1 (1996), modified]".
- [4] EN 301 003-2 (V1.1): "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; Connection characteristics; Peak cell rate modification by the connection owner; Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification".
- [5] ITU-T Recommendation I.413 (1993): "B-ISDN user-network interface".
- [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] ITU-T Recommendation Q.2963.1: "Digital Subscriber Signalling System No. 2 – Connection modification: Peak cell rate modification by the connection owner".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in EN 301 003-1 [3] and EN 300 443-1 [2] and the following apply:

3.1.1 Definitions related to conformance testing

abstract test case: refer to ISO/IEC 9646-1 [6].

Abstract Test Method (ATM): refer to ISO/IEC 9646-1 [6].

Abstract Test Suite (ATS): refer to ISO/IEC 9646-1 [6].

Implementation Under Test (IUT): refer to ISO/IEC 9646-1 [6].

lower tester: refer to ISO/IEC 9646-1 [6].

Protocol Implementation Conformance Statement (PICS): refer to ISO/IEC 9646-1 [6].

PICS proforma: refer to ISO/IEC 9646-1 [6].

Protocol Implementation eXtra Information for Testing (PIXIT): refer to ISO/IEC 9646-1 [6].

PIXIT proforma: refer to ISO/IEC 9646-1 [6].

Test Purpose (TP): refer to ISO/IEC 9646-1 [6].

3.1.2 Definitions related to EN 301 003-1

user: DSS2 protocol entity at the User side of the user-network interface where a T_B reference point or coincident S_B and T_B reference point applies.

user (S_B/T_B): DSS2 protocol entity at the User side of the user-network interface where a coincident S_B and T_B reference point applies.

user (T_B): DSS2 protocol entity at the User side of the user-network interface where a T_B reference point applies (user is a private ISDN).

3.2 Abbreviations

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

ATM	Abstract Test Method
ATS	Abstract Test Suite
CR	Call Reference
IE_AI	Information element action indicator
IE_flag	Information element instruction indicator flag
IUT	Implementation Under Test
PCR	Peak Cell Rate
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation eXtra Information for Testing
TP	Test Purpose
TSS	Test Suite Structure
U0	Null link state
U1	Call Initiated link state
U10	Active link state
U12	Disconnect Indication call state

U13	Modify Requested call state
U3	Outgoing Call Proceeding link state
U4	Call Delivered link state
U6	Call Present link state
U7	Call Received link state
U8	Connect Request link state
U9	Incoming Call Proceeding link state

4 Test Suite Structure (TSS)

Signalling procedures at the coincident S_B/T_B and at the T_B reference points

Modification procedures at the requesting entity.

Valid behaviour.....	(01)
Handling of error conditions	(02)
Timers	(03)

Modification procedures at the responding entity.

Valid behaviour.....	(04)
Handling of error conditions	(05)
Timers	(06)

Figure 1: Test suite structure

5 Test Purposes (TP)

5.1 Introduction

For each test requirement a TP is defined.

5.1.1 TP naming convention

Tps are numbered, starting at 01, within each group. Groups are organized according to the TSS. Additional references are added to identify the actual test suite (see table 1).

Table 1: TP identifier naming convention scheme

Identifier:	<suite_id>_<group>_<nnn>		
<suite_id>	=	layer + type of IUT:	"MODU" for MOD ification, IUT = U ser
<group>	=	group number:	two character field representing the group reference according to TSS
<nn>	=	sequential number:	(01-99)

5.1.2 Source of TP definition

The TPs are based on EN 301 003-1 [3].

5.1.3 Test strategy

As the base standard EN 301 003-1 [3] contains no explicit requirements for testing, the TPs were generated as a result of an analysis of the base standard and the PICS specification EN 301 003-2 [4].

The TPs are only based on conformance requirements related to the externally observable behaviour of the IUT, and are limited to conceivable situations to which a real implementation is likely to be faced (ETS 300 406 [1]).

5.1.4 Test of call states

Many TPs include a reference to the IUT's final call state after the realization of the TP. In these cases the TP includes the requirement to ensure that the IUT has entered this particular final call state. Ensuring that the IUT is in a particular call state shall be realized by following the procedures described in subclause 5.6.11 of EN 300 443-1 [2]. According to these procedures, the IUT on receipt of a STATUS ENQUIRY message, shall respond with a STATUS message indicating, in the fifth octet of the Call state information element, the current call state of the IUT. This exchange of messages is not mentioned explicitly in each TP but is considered to be implicit in the reference to the final call state. This way of phrasing the TPs has been used to avoid over-complicating the text and structure of the TPs and to improve the readability.

5.2 TPs for the Peak cell rate modification, user

All PICS items referred to in this subclause are as specified in EN 301 003-2 [4] unless indicated otherwise by another numbered reference.

Unless specified:

- the messages indicated are valid and contain at least the mandatory information elements and possibly optional information elements.
- the information elements indicated are valid and contain at least the mandatory parameters and possibly optional parameters.

5.2.1 Signalling procedures at the coincident S_B/T_B and at the T_B reference points

NOTE: Unless otherwise specified, the connection defined by the requested ATM traffic descriptor is available for use.

5.2.1.1 Modification procedures at the requesting entity.

Test purposes for EN 301 003-1 [3] subclause 9.1.

Selection: The IUT support the requirements for the modification requesting entity. PICS: R 2.1

5.2.1.1.1 Valid behaviour (01)

MODU_01_01

Ensure that the IUT in U10, in order to initiate a PCR modification request,

- sends a MODIFY REQUEST message and enters U13.

MODU_01_02

Ensure that the IUT in U13, on receipt of a MODIFY ACKNOWLEDGE message including a Broadband report type information element indicating "modification confirmation",

- sends a CONNECTION AVAILABLE message and enters U10.

MODU_01_03

Ensure that the IUT in U13, on receipt of a MODIFY ACKNOWLEDGE message without Broadband report type information element",

- sends no message and enters U10.

MODU_01_04

Ensure that the IUT in U13, on receipt of a MODIFY REJECT message,
- sends no message and enters U10.

MODU_01_05

Ensure that the IUT in U13, on receipt of a STATUS message (call state: 10, cause value: 97 or 101, diagnostic
""identifying of the MODIFY REQUEST message),
- sends no message and enters U10.

MODU_01_06

Ensure that the IUT in U13, on receipt of a STATUS message (call state: 10, cause value: 97 or 101, without diagnostic
""identifying of the MODIFY REQUEST message),
- sends a STATUS ENQUIRY message and remains in U13.

MODU_01_07

Ensure that the IUT in U13, (having sent a STATUS ENQUIRY message), on receipt of a STATUS message (call
state: 14),
- sends no message and remains in U13.

MODU_01_08

Ensure that the IUT in U13, (having sent a STATUS ENQUIRY message), on receipt of a STATUS message (call
state: 10),
- sends no message and enters U10.

MODU_01_09

Ensure that the IUT in U13, on receipt of a RELEASE message,
- enters U12.

MODU_01_10

Ensure that the IUT in U13, to indicate the receipt of a clearing indication,
- sends a RELEASE message and enters U11.

5.2.1.1.2 Timers (02)**MODU_02_01**

Ensure that the IUT in U13, on expiry of timer T360,
- sends a RELEASE message (cause value: 102) and enters U11.

5.2.1.1.3 Handling of error conditions (03)**MODU_03_01**

Ensure that the IUT in U13, on receipt of a MODIFY ACKNOWLEDGE message with a protocol discriminator other
than '09'0,
- sends no message and remains in U13.

MODU_03_02

Ensure that the IUT in U13, on receipt of a MODIFY ACKNOWLEDGE message with an unused Call Reference (CR),
- sends a RELEASE COMPLETE message (CR of the MODIFY ACKNOWLEDGE message, cause value: 81)
and remains in U13.

MODU_03_03

Ensure that the IUT in U13, on receipt of a MODIFY ACKNOWLEDGE message with a non mandatory IE content
error (Broadband report type; IE_flag = 0),
- sends a STATUS message (cause value: 100, call state: 10) and enters U10.

MODU_03_04

Ensure that the IUT in U13, on receipt of a MODIFY ACKNOWLEDGE message with a non mandatory IE content
error (Broadband report type, IE_flag = 1, IE_AI = clear call),
- sends a RELEASE message (cause value: 100) and enters U11.

MODU_03_05

Ensure that the IUT in U13, on receipt of a MODIFY ACKNOWLEDGE message with a non mandatory IE content error (Broadband report type, IE_flag = 1, IE_AI = discard message and report status),

- sends a STATUS message (cause value: 100, call state: 13) and remains in U13.

MODU_03_06

Ensure that the IUT in U13, on receipt of a MODIFY ACKNOWLEDGE message with an unrecognized IE (IE_flag = 0,)

- sends a STATUS message (cause value: 99, call state: 10) and enters in U10.

MODU_03_07

Ensure that the IUT in U13, on receipt of a MODIFY ACKNOWLEDGE message with an unrecognized IE (IE_flag = 1, IE_AI = clear call),

- sends a RELEASE message (cause value: 99) and enters U11.

MODU_03_08

Ensure that the IUT in U13, on receipt of a MODIFY ACKNOWLEDGE message with an unrecognized IE (IE_flag = 1, IE_AI = discard message and report status),

- sends a STATUS message (cause value: 99, call state: 13) and remains in U13.

MODU_03_09

Ensure that the IUT in U13, on receipt of a MODIFY ACKNOWLEDGE message with an unrecognized IE (IE_flag = 1, IE_AI = discard message and ignore),

- sends no message and remains in U13.

MODU_03_10

Ensure that the IUT in U13, on receipt of a MODIFY ACKNOWLEDGE message with an unrecognized IE (IE_flag = 1, IE_AI = discard IE, proceed and report),

- sends a STATUS message (cause:99, call state: 10), and enters U10.

MODU_03_11

Ensure that the IUT in U13, on receipt of a MODIFY ACKNOWLEDGE message with an unrecognized IE (IE_flag = 1, IE_AI = discard IE, and proceed),

- sends no message and enters U10.

MODU_03_12

Ensure that the IUT in U13, on receipt of a MODIFY REJECT message with a protocol discriminator other than '09'O,

- sends no message and remains in U13.

MODU_03_13

Ensure that the IUT in U13, on receipt of a MODIFY REJECT message with an unused CR,

- sends a RELEASE COMPLETE message (CR of the MODIFY REJECT message, cause value: 81) and remains in U13.

MODU_03_14

Ensure that the IUT in U13, on receipt of a MODIFY REJECT message with a mandatory IE content error (Cause IE, IE_flag = 0),

- sends a STATUS message (cause value: 100, call state: 13) and remains in U13.

MODU_03_15

Ensure that the IUT in U13, on receipt of a MODIFY REJECT message with a mandatory IE missing (Cause IE),

- sends a STATUS message (cause value: 96, call state: 13) and remains in U13.

MODU_03_16

Ensure that the IUT in U13, on receipt of a MODIFY REJECT message with a mandatory IE content error (Cause IE; IE_flag = 1, IE_AI = clear call),

- sends a RELEASE message (cause value: 100) and enters U11.

MODU_03_17

Ensure that the IUT in U13, on receipt of a MODIFY REJECT message with a mandatory IE content error (Cause IE; IE_flag = 1, IE_AI = discard message and report status),

- sends a STATUS message (cause value: 100, call state: 13) and remains in U13.

MODU_03_18

Ensure that the IUT in U13, on receipt of a MODIFY REJECT message with an unrecognized IE (IE_flag = 0),

- sends a STATUS message (cause value: 99, call state: 10) and enters U10.

MODU_03_19

Ensure that the IUT in U13, on receipt of a MODIFY REJECT message with an unrecognized IE (IE_flag = 1, IE_AI = clear call),

- sends a RELEASE message (cause value: 99) and enters U11.

MODU_03_20

Ensure that the IUT in U13, on receipt of a MODIFY REJECT message with an unrecognized IE (IE_flag = 1, IE_AI = discard message and report status),

- sends a STATUS message (cause value: 99, call state: 13) and remains in U13.

MODU_03_21

Ensure that the IUT in U13, on receipt of a MODIFY REJECT message with an unrecognized IE (IE_flag = 1, IE_AI = discard message and ignore),

- sends no message and remains in U13.

MODU_03_22

Ensure that the IUT in U10 on receipt of a MODIFY ACKNOWLEDGE message (MSG_flag= 0),

- sends a STATUS message (cause value = 101, call state value = 10) and remains in U10.

MODU_03_23

Ensure that the IUT in U10, on receipt of a MODIFY ACKNOWLEDGE message (MSG_flag = 1; MSG_AI = clear call),

- sends a RELEASE message (cause value = 101) and enters U11.

MODU_03_24

Ensure that the IUT in U10, for an outgoing call, on receipt of a MODIFY ACKNOWLEDGE message (MSG_flag = 1; MSG_AI = discard message and ignore),

- sends no message and remains in U10.

MODU_03_25

Ensure that the IUT in U10 on receipt of a MODIFY REJECT message (MSG_flag= 0),

- sends a STATUS message (cause value = 101, call state value = 10) and remains in U10.

MODU_03_26

Ensure that the IUT in U10, on receipt of a MODIFY REJECT message (MSG_flag= 1; MSG_AI = clear call),

- sends a RELEASE message (cause:97 or 101) and enters U12.

MODU_03_27

Ensure that the IUT in U10, on receipt of a MODIFY REJECT message (MSG_flag= 1; MSG_AI = discard message and ignore),

- sends no message and remains in U10.

MODU_03_28

Ensure that the IUT in U13, on receipt of a MODIFY ACKNOWLEDGE message with a non mandatory IE content error (Broadband report type, IE_flag = 1, IE_AI = discard message and ignore),

- sends no message and remains in U13.

MODU_03_29

Ensure that the IUT in U13, on receipt of a MODIFY ACKNOWLEDGE message with a non mandatory IE content error (Broadband report type, IE_flag = 1, IE_AI = discard IE, proceed and report),

- sends a STATUS message (cause value: 100, call state: 10) and enters U10.

MODU_03_30

Ensure that the IUT in U13, on receipt of a MODIFY ACKNOWLEDGE message with a non mandatory IE content error (Broadband report type, IE_flag = 1, IE_AI = discard IE and proceed),

- sends no message and enters N10."

MODU_03_31

Ensure that the IUT in U13, on receipt of a MODIFY REJECT message with a mandatory IE content error (Cause IE, IE_flag = 1, IE_AI = discard message and ignore),

- sends no message and remains in U13.

MODU_03_32

Ensure that the IUT in U13, on receipt of a MODIFY REJECT message with a mandatory IE content error (Cause IE, IE_flag = 1, IE_AI = discard IE, proceed and report),

- sends a STATUS message (cause value: 100, call state: 10) and enters N10.

MODU_03_33

Ensure that the IUT in U13, on receipt of a MODIFY REJECT message with a mandatory IE content error (Cause IE, IE_flag = 1, IE_AI = discard IE and proceed),

- sends no message and enters U10."

5.2.1.2 Modification procedures at the responding entity

Test purposes for EN 301 003-1 [3] subclause 9.2.

Selection: The iut support the requirements for the modification requesting entity. PICS: R 2.2.

5.2.1.2.1 Valid behaviour (04)

MODU_04_01

Ensure that the IUT in U10, on receipt of a MODIFY REQUEST message with an incompatible combination of parameters in the ATM traffic descriptor information element,

- sends a MODIFY REJECT message (cause value: 73) and re-enters U10.

MODU_04_02

Ensure that the IUT in U10, on receipt of a MODIFY REQUEST message with compatible parameters in the ATM traffic descriptor information element,

- sends a MODIFY ACKNOWLEDGE message and re-enters U10.

MODU_04_03

Ensure that the IUT in U10, having sent a MODIFY ACKNOWLEDGE message including a Broadband report type information element requesting confirmation, on receipt of a CONNECTION AVAILABLE message,

- sends no message and remains in U10.

MODU_04_04

Ensure that the IUT in U14, on receipt of a RELEASE message,

- enters U12.

MODU_04_05

Ensure that the IUT in U14, to indicate the receipt of a clearing indication,

- sends a RELEASE message and enters U11.

5.2.1.2.2 Timers (05)

MODU_05_01

Ensure that the IUT in U10, having sent a MODIFY ACKNOWLEDGE message including a Broadband report type information element requesting confirmation, on expiry of timer T361,

- sends no message and remains in U10.

5.2.1.2.3 Handling of error conditions (06)

MODU_06_01

Ensure that the IUT in U10, on receipt of a MODIFY REQUEST message with a protocol discriminator other than '09'0,

- sends no message and remains in U10.

MODU_06_02

Ensure that the IUT in U10, on receipt of a MODIFY REQUEST message with an unused CR,

- sends a RELEASE COMPLETE message (CR of the MODIFY REQUEST message, cause value: 81) and remains in U10.

MODU_06_03

Ensure that the IUT in U10, on receipt of a MODIFY REQUEST message with a mandatory IE missing (ATM traffic descriptor IE),

- sends a STATUS message (cause value: 96, call state: 10) and remains in U10.

MODU_06_04

Ensure that the IUT in U10, on receipt of a MODIFY REQUEST message with a mandatory IE content error (ATM traffic descriptor IE; IE_flag = 0),

- sends a STATUS message (cause value: 100, call state: 10) and remains in U10.

MODU_06_05

Ensure that the IUT in U10, on receipt of a MODIFY REQUEST message with a mandatory IE content error (ATM traffic descriptor IE; IE_flag = 1, IE_AI = clear call),

- sends a RELEASE message (cause value: 100) and enters U11.

MODU_06_06

Ensure that the IUT in U10, on receipt of a MODIFY REQUEST message with a mandatory IE content error (ATM traffic descriptor IE; IE_flag = 1, IE_AI = discard message and report status),

- sends a STATUS message (cause value: 100, call state: 10) and remains in U10.

MODU_06_07

Ensure that the IUT in U10, on receipt of a MODIFY REQUEST message with a mandatory IE content error (ATM traffic descriptor IE; IE_flag = 1, IE_AI = discard message and ignore),

- sends no message and remains in U10.

MODU_06_08

Ensure that the IUT in U10, on receipt of a MODIFY REQUEST message with a mandatory IE content error (ATM traffic descriptor IE; IE_flag = 1, IE_AI = discard IE and proceed),

- sends a MODIFY REJECT message (cause value = 100) and remains in U10.

MODU_06_09

Ensure that the IUT in U0, on receipt of a MODIFY REQUEST message (MSG_flag = 0),

- sends a RELEASE COMPLETE message (cause: 81) and remains in U0.

MODU_06_10

Ensure that the IUT in U1, on receipt of a MODIFY REQUEST message(MSG_flag = 0),

- sends a STATUS message (cause value = 101, call state value = 1) and remains in U1.

MODU_06_11

Ensure that the IUT in U3, on receipt of a MODIFY REQUEST message (MSG_flag = 0),

- sends a STATUS message (cause value = 101, call state value = 3) and remains in U3.

MODU_06_12

Ensure that the IUT in U4, on receipt of a MODIFY REQUEST message (MSG_flag = 0),

- sends a STATUS message (cause value = 101, call state value = 4) and remains in U4.

MODU_06_13

Ensure that the IUT in U6, on receipt of a MODIFY REQUEST message, (MSG_flag = 0),

- sends a STATUS message (cause value = 101) and remains in U6.

MODU_06_14

Ensure that the IUT in U7, on receipt of a MODIFY REQUEST message (MSG_flag = 0),

- sends a STATUS message (cause value = 101, call state value = 7) and remains in U7.

MODU_06_15

Ensure that the IUT in U8, on receipt of a MODIFY REQUEST message (MSG_flag = 0),

- sends a STATUS message (cause value =101, call state value = 8) and remains in U8.

MODU_06_16

Ensure that the IUT in U9, on receipt of a MODIFY REQUEST message (MSG_flag = 0),

- sends a STATUS message (cause value = 101, call state value = 9) and remains in U9.

MODU_06_17

Ensure that the IUT in U11, on receipt of a MODIFY REQUEST message (MSG_flag = 0),

- sends a STATUS message (cause value = 101, call state value = 11) and remains in U11.

MODU_06_18

Ensure that the IUT in U10, for an outgoing call, on receipt of a MODIFY REQUEST message (MSG_flag = 0),

- sends a STATUS message (cause value = 97 or 101, call state value = 10) and remains in U10.

MODU_06_19

Ensure that the IUT in U0, on receipt of a MODIFY REQUEST message (MSG_flag = 1; MSG_AI = clear call),

- sends a RELEASE COMPLETE message (cause: 81) and remains in U0.

MODU_06_20

Ensure that the IUT in U1, on receipt of a MODIFY REQUEST message (MSG_flag = 1; MSG_AI = clear call),

- sends a RELEASE message (cause value = 101) and enters U11.

MODU_06_21

Ensure that the IUT in U3, on receipt of a MODIFY REQUEST message (MSG_flag = 1; MSG_AI = clear call),

- sends a RELEASE message (cause value = 101) and enters U11.

MODU_06_22

Ensure that the IUT in U4, on receipt of a MODIFY REQUEST message (MSG_flag = 1; MSG_AI = clear call),

- sends a RELEASE message (cause value = 101) and enters U11.

MODU_06_23

Ensure that the IUT in U6, on receipt of a MODIFY REQUEST message, (MSG_flag = 1; MSG_AI = clear call),

- sends a RELEASE message (cause value = 101) and enters U11.

MODU_06_24

Ensure that the IUT in U7, on receipt of a MODIFY REQUEST message (MSG_flag = 1; MSG_AI = clear call),

- sends a RELEASE message (cause value = 101) and enters U11.

MODU_06_25

Ensure that the IUT in U8, on receipt of a MODIFY REQUEST message (MSG_flag = 1; MSG_AI = clear call),

- sends a RELEASE message (cause value = 101) and enters U11.

MODU_06_26

Ensure that the IUT in U9, on receipt of a MODIFY REQUEST message (MSG_flag = 1; MSG_AI = clear call),

- sends a RELEASE message (cause value = 101) and enters U11.

MODU_06_27

Ensure that the IUT in U11, on receipt of a MODIFY REQUEST message (MSG_flag = 1; MSG_AI = clear call),

- sends no message and remains in U11.

MODU_06_28

Ensure that the IUT in U0, on receipt of a MODIFY REQUEST message (MSG_flag = 1; MSG_AI = discard message and ignore),

- sends a RELEASE COMPLETE message (cause value = 81) and remains in U0.

MODU_06_29

Ensure that the IUT in U0, on receipt of a MODIFY REQUEST message (MSG_flag = 1; MSG_AI = discard message and report status),

- sends a RELEASE COMPLETE message (cause value = 81) and remains in U0.

MODU_06_30

Ensure that the IUT in U1, on receipt of a MODIFY REQUEST message (MSG_flag = 1; MSG_AI = discard message and ignore),

- sends no message and remains in U1.

MODU_06_31

Ensure that the IUT in U1, on receipt of a MODIFY REQUEST message(MSG_flag= 1; MSG_AI = discard message and report status),

- sends a STATUS message (cause value = 101, call state value = 1) and remains in U1.

MODU_06_32

Ensure that the IUT in U3, on receipt of a MODIFY REQUEST message(MSG_flag= 1; MSG_AI = discard message and ignore),

- sends no message and remains in U3.

MODU_06_33

Ensure that the IUT in U3, on receipt of a MODIFY REQUEST message(MSG_flag= 1; MSG_AI = discard message and report status),

- sends a STATUS message (cause value = 101, call state value = 3) and remains in U3.

MODU_06_34

Ensure that the IUT in U4, on receipt of a MODIFY REQUEST message(MSG_flag= 1; MSG_AI = discard message and ignore),

- sends no message and remains in U4.

MODU_06_35

Ensure that the IUT in U4, on receipt of a MODIFY REQUEST message(MSG_flag= 1; MSG_AI = discard message and report status),

- sends a STATUS message (cause value = 101, call state value = 4) and remains in U4.

MODU_06_36

Ensure that the IUT in U6, on receipt of a MODIFY REQUEST message(MSG_flag= 1; MSG_AI = discard message and ignore),

- sends no message and remains in U6.

MODU_06_37

Ensure that the IUT in U6, on receipt of a MODIFY REQUEST message(MSG_flag= 1; MSG_AI = discard message and report status),

- sends a STATUS message (cause value = 101, call state value = 6) and remains in U6.

MODU_06_38

Ensure that the IUT in U7, on receipt of a MODIFY REQUEST message(MSG_flag = 1; MSG_AI = discard message and ignore),

- sends no message and remains in U7.

MODU_06_39

Ensure that the IUT in U7, on receipt of a MODIFY REQUEST message(MSG_flag = 1; MSG_AI = discard message and report status),

- sends a STATUS message (cause value = 101, call state value = 7) and remains in U7.

MODU_06_40

Ensure that the IUT in U7, on receipt of a MODIFY REQUEST message(MSG_flag = 1; MSG_AI = reserved),

- sends a STATUS message (cause value = 101, call state value = 7) and remains in U7.

MODU_06_41

Ensure that the IUT in U9, on receipt of a MODIFY REQUEST message(MSG_flag = 1; MSG_AI = discard message and ignore),

- sends no message and remains in U9.

MODU_06_42

Ensure that the IUT in U9, on receipt of a MODIFY REQUEST message(MSG_flag = 1; MSG_AI = discard message and report status),

- sends a STATUS message (cause value = 101, call state value = 9) and remains in U9.

MODU_06_43

Ensure that the IUT in U9, on receipt of a MODIFY REQUEST message(MSG_flag = 1; MSG_AI = reserved),

- sends a STATUS message (cause value = 101, call state value = 9) and remains in U9.

MODU_06_44

Ensure that the IUT in U11, on receipt of a MODIFY REQUEST message(MSG_flag= 1; MSG_AI = discard message and ignore),

- sends no message and remains in U11.

MODU_06_45

Ensure that the IUT in U11, on receipt of a MODIFY REQUEST message(MSG_flag= 1; MSG_AI = discard message and report status),

- sends a STATUS message (cause value = 101, call state value = 11) and remains in U11.

MODU_06_46

Ensure that the IUT in U10, on receipt of a CONNECTION AVAILABLE message with a protocol discriminator other than '09'0,

- sends no message and remains in U10.

MODU_06_47

Ensure that the IUT in U10, on receipt of a CONNECTION AVAILABLE message with a unused CR,

- sends a RELEASE COMPLETE message (CR of the CONNECTION AVAILABLE message, cause value: 81) and remains in U10.

MODU_06_48

Ensure that the IUT in U10, on receipt of a CONNECTION AVAILABLE message with an unrecognized IE (IE_flag = 1, IE_AI = clear call),

- sends a RELEASE message (cause value: 99) and enters U11.

MODU_06_49

Ensure that the IUT in U10, on receipt of a CONNECTION AVAILABLE message with an unrecognized IE (IE_flag = 1, IE_AI = discard message and report status),

- sends a STATUS message (cause value: 99, call state: 10) and remains in U10.

MODU_06_50

Ensure that the IUT in U10, on receipt of a CONNECTION AVAILABLE message with an unrecognized IE (IE_flag = 1, IE_AI = discard message and ignore),

- sends no message and remains in U10.

MODU_06_51

Ensure that the IUT in U10, on receipt of a CONNECTION AVAILABLE message with an unrecognized IE (IE_flag = 1, IE_AI = discard IE, proceed and report),

- sends a STATUS message (cause: 99, call state: 10), and remains in U10.

MODU_06_52

Ensure that the IUT in U10, on receipt of a CONNECTION AVAILABLE message with an unrecognized IE (IE_flag = 1, IE_AI = discard IE, and proceed),

- sends no message and remains in U10.

6 Compliance

An ATS which complies with this TSS&TP specification shall:

- a) consist of a set of test cases corresponding to the set or to a subset of the TPs specified in clause 5;
- b) use a TSS which is an appropriate subset of the whole of the TSS specified in clause 4;
- c) use the same naming conventions for the test groups and test cases;
- d) maintain the relationship specified in clause 5 between the test groups and TPs and the entries in the PICS proforma to be used for test case deselection;
- e) comply with ISO/IEC 9646-2 [7].

In the case of a) or b) above, a subset shall be used only where a particular Abstract Test Method (ATM) makes some TPs untestable. All testable TPs from clause 5 shall be included in a compliant ATS.

7 Requirements for a comprehensive testing service

As a minimum the Remote test method, as specified in ISO/IEC 9646-2 [7], shall be used by any organization claiming to provide a comprehensive testing service for network equipment claiming conformance to EN 301 003-1 [3].

Bibliography

The following material, though not specifically referenced in the body of the present document (or not publicly available), gives supporting information.

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

History

Document history				
V1.1.1	December 1998	Public Enquiry	PE 9917:	1998-12-25 to 1999-04-23
V1.1.2	August 1999	Vote	V 9945:	1999-08-24 to 1999-10-22