



SLOVENSKI STANDARD

SIST EN 300 130-6 V1.3.4:2005

01-april-2005

8 [[]HJbc`ca fYy`Y`n`]bhY[f]fUb]a]gfcf]h] Ua]fG8 BŁ!`8 cdc`b] bUgfcf]hYj .
]XYbh]Z_ UY`U`n`cbUa YfbY[U_`]WUfA7 -8 Ł!`Dfcfc_c`X]]]HJbY`bUfc b]y`Y
g]] bU]nU]Y`Y`yH`%fB GG%Ł!* "XY. `5 VgUfU`_hb] dfYg_i yU]b]`b]n`f5 HGŁ]b`XcXUfbU
]bZ`fa UY`U`nUdfYg_i yUb`Y`XY`bY`]nj YXVY`dfcfc_c`UfD-Ł-Ł!`DfcZ`fa U
gdYW]Z_ UY`U`nU`ca fYy`Y`

Integrated Services Digital Network (ISDN); Malicious Call Identification (MCID) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 6: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for the network

<https://standards.iteh.ai/catalog/standards/sist/807e7e38-6708-46c7-b376-7b31ae9c9535/sist-en-300-130-6-v1-3-4-2005>

Ta slovenski standard je istoveten z: EN 300 130-6 Version 1.3.4

ICS:

33.080	Digitalno omrežje z integriranimi storitvami (ISDN)	Integrated Services Digital Network (ISDN)
--------	---	--

SIST EN 300 130-6 V1.3.4:2005 en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 300 130-6 V1.3.4:2005

<https://standards.iteh.ai/catalog/standards/sist/807e7e38-6708-46c7-b376-7b31ae9c9535/sist-en-300-130-6-v1-3-4-2005>

ETSI EN 300 130-6 V1.3.4 (1999-11)

European Standard (Telecommunications series)

**Integrated Services Digital Network (ISDN);
Malicious Call Identification (MCID) supplementary service;
Digital Subscriber Signalling System No. one (DSS1) protocol;
Part 6: Abstract Test Suite (ATS) and partial Protocol
Implementation eXtra Information for Testing (PIXIT)
proforma specification for the network**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 300 130-6 V1.3.4:2005](https://standards.iteh.ai/catalog/standards/sist/807e7e38-6708-46c7-b376-7b31ae9c9535/sist-en-300-130-6-v1-3-4-2005)

<https://standards.iteh.ai/catalog/standards/sist/807e7e38-6708-46c7-b376-7b31ae9c9535/sist-en-300-130-6-v1-3-4-2005>



Reference

REN/SPS-05162-6 (17di0j2o.PDF)

Keywords

ISDN, DSS1, supplementary services, MCID,
ATS, PIXIT, network

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-Prefecture de Grasse (06) N° 7803/88
<https://standards.etsi.org/standards/sist-en-300-130-6-v1-3-4-2005>
08-46c7-b376-7b31ae9c9535/sist-en-300-130-6-v1-3-4-2005

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

Important notice

This ETSI deliverable may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference should be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

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.....	6
Foreword	6
1 Scope	7
2 References	7
3 Definitions and abbreviations	8
3.1 Definitions	8
3.2 Abbreviations	8
4 Abstract Test Method (ATM)	9
4.1 Description of ATM used	9
4.1.1 Conventions for test components and PCOs	9
4.1.2 Conventions for variables and parameters	10
4.2 Alternative ATM	11
5 Untestable test purposes	12
6 ATS conventions	12
6.1 Declarations part	12
6.1.1 Type definitions	12
6.1.1.1 Simple type definitions	12
6.1.1.2 Structured type definitions	12
6.1.1.2.1 TTCN structured type definitions	12
6.1.1.2.2 ASN.1 structured type definitions	12
6.1.1.3 ASP type definitions	14
6.1.1.3.1 TTCN ASP type definitions	14
6.1.1.3.2 ASN.1 ASP type definitions	14
6.1.1.4 PDU type definitions	14
6.1.1.4.1 TTCN PDU type definitions	14
6.1.1.4.2 ASN.1 PDU type definitions	14
6.1.2 Test suite constants	14
6.1.3 Test suite parameters	14
6.1.4 Variables	15
6.1.4.1 Test suite variables	15
6.1.4.2 Test case variables	15
6.1.5 Test suite operation definitions	15
6.2 Constraints part	16
6.2.1 Structured type constraint declaration	16
6.2.2 ASN.1 type constraint declaration	16
6.2.2.1 Specification of encoding rules	17
6.2.3 ASP type constraint declaration	18
6.2.3.1 ASN.1 ASP type constraint declaration	18
6.2.3.2 TTCN ASP type constraint declaration	18
6.2.4 PDU type constraint declaration	18
6.2.4.1 ASN.1 PDU type constraint declaration	18
6.2.4.2 TTCN PDU type constraint declaration	18
6.2.5 Chaining of constraints	18
6.2.5.1 Static chaining	18
6.2.5.2 Dynamic chaining	18
6.2.6 Derived constraints	19
6.2.7 Parameterized constraints	19
6.2.8 Value assignment	19
6.2.8.1 Specific values	19
6.2.8.2 Matching values	19
6.3 Dynamic part	19
6.3.1 Test cases	19

6.3.2	Test steps	19
6.3.2.1	PTC1_IN	19
6.3.2.2	PTC1_OUT	19
6.3.3	Defaults	20
7	ATS to TP map	20
8	PCTR conformance	20
9	PIXIT conformance	20
10	ATS conformance	20
Annex A (normative): Protocol Conformance Test Report (PCTR) proforma		21
A.1	Identification summary	21
A.1.1	Protocol conformance test report	21
A.1.2	IUT identification	21
A.1.3	Testing environment	21
A.1.4	Limits and reservations	22
A.1.5	Comments	22
A.2	IUT conformance status	22
A.3	Static conformance summary	22
A.4	Dynamic conformance summary	22
A.5	Static conformance review report	23
A.6	Test campaign report	23
A.7	Observations	23
Annex B (normative): Partial PIXIT proforma		24
B.1	Identification summary	24
B.2	Abstract test suite summary	24
B.3	Test laboratory	24
B.4	Client (of the test laboratory)	25
B.5	System Under Test (SUT)	25
B.6	Protocol information	26
B.6.1	Protocol identification	26
B.6.2	Parameter values	26
B.6.3	Actions required to stimulate IUT	26
B.6.4	Configuration of IUT	27
B.6.5	Timer values	27
B.7	Basic call PIXIT items	28
B.7.1	Parameter values - information element codings	28

iTech STANDARD PREVIEW
(standards.itech.ai)

[SIST EN 300 130-6 V1.3.4:2005](https://standards.itech.ai/catalog/standards/sist/907e7e38-6708-46c7-b376-7b31ae9c9535/sist-en-300-130-6-v1-3-4-2005)

standards.itech.ai/catalog/standards/sist/907e7e38-6708-46c7-b376-7b31ae9c9535/sist-en-300-130-6-v1-3-4-2005

[7b31ae9c9535/sist-en-300-130-6-v1-3-4-2005](https://standards.itech.ai/catalog/standards/sist/907e7e38-6708-46c7-b376-7b31ae9c9535/sist-en-300-130-6-v1-3-4-2005)

Annex C (normative):	Abstract Test Suite (ATS)	29
C.1	The TTCN Graphical form (TTCN.GR).....	29
C.2	The TTCN Machine Processable form (TTCN.MP)	29
Annex D (informative):	General structure of ATS	30
Annex E (informative):	Change record	31
E.1	Changes with respect to EN 300 130-6 (V1.2)	31
E.2	Changes with respect to ETS 300 130-6 (Ed. 1).....	31
History	32

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 300 130-6 V1.3.4:2005](https://standards.iteh.ai/catalog/standards/sist/807e7e38-6708-46c7-b376-7b31ae9c9535/sist-en-300-130-6-v1-3-4-2005)

<https://standards.iteh.ai/catalog/standards/sist/807e7e38-6708-46c7-b376-7b31ae9c9535/sist-en-300-130-6-v1-3-4-2005>

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 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).

The present document is part 6 of a multi-part standard covering the Digital Subscriber Signalling System No. one (DSS1) protocol specification for the Integrated Services Digital Network (ISDN) Malicious Call Identification (MCID) supplementary service, as described below:

- Part 1: "Protocol specification";
- 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".**

National transposition dates

Date of adoption of this EN:	5 November 1999
Date of latest announcement of this EN (doa):	29 February 2000
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 August 2000
Date of withdrawal of any conflicting National Standard (dow):	31 August 2000

1 Scope

This sixth part of EN 300 130 specifies the Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma for the Network side of the T reference point or coincident S and T reference point (as defined in ITU-T Recommendation I.411 [11]) of implementations conforming to the stage three standard for the Malicious Call Identification (MCID) supplementary service for the pan-European Integrated Services Digital Network (ISDN) by means of the Digital Subscriber Signalling System No. one (DSS1) protocol, EN 300 130-1 [2].

EN 300 130-5 [4] specifies the Test Suite Structure and Test Purposes (TSS&TP) related to this ATS and partial PIXIT proforma specification. Other parts specify the TSS&TP and the ATS and partial PIXIT proforma for the User side of the T reference point or coincident S and T reference point of implementations conforming to EN 300 130-1 [2].

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.

- IT'S STANDARD PREVIEW
(standards.iteh.ai)
- [1] EN 300 403-1 (V1.2): "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 1: Protocol specification [ITU-T Recommendation Q.931 (1993), modified]".
<https://standards.iteh.ai/catalog/standards/sist/807e7e38-6708-46c7-b376->
- [2] EN 300 130-1 (V1.2): "Integrated Services Digital Network (ISDN); Malicious Call Identification (MCID) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [3] EN 300 130-2 (V1.2): "Integrated Services Digital Network (ISDN); Malicious Call Identification (MCID) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification".
- [4] EN 300 130-5 (V1.2): "Integrated Services Digital Network (ISDN); Malicious Call Identification (MCID) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 5: Test Suite Structure and Test Purposes (TSS&TP) specification for the network".
- [5] EN 300 196-1 (V1.2): "Integrated Services Digital Network (ISDN); Generic functional protocol for the support of supplementary services; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [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] ITU-T Recommendation I.411 (1993): "ISDN user-network interfaces - References configurations".
- [12] CCITT Recommendation X.209 (1988): "Specification of basic encoding rules for Abstract Syntax Notation One (ASN.1)".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

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

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

Lower Tester (LT): see ISO/IEC 9646-1 [6]

Point of Control and Observation (PCO): see ISO/IEC 9646-1 [6]

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

PICS proforma: see ISO/IEC 9646-1 [6]

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

PIXIT proforma: see ISO/IEC 9646-1 [6] [SIST EN 300 130-6 V1.3.4:2005](https://standards.iteh.ai/catalog/standards/sist/807e7e38-6708-46c7-b376-9646-1)
<https://standards.iteh.ai/catalog/standards/sist/807e7e38-6708-46c7-b376-9646-1>

System Under Test (SUT): see ISO/IEC 9646-1 [6] [SIST EN 300 130-6 V1.3.4:2005](https://standards.iteh.ai/catalog/standards/sist-en-300-130-6-v1-3-4-2005)
<https://standards.iteh.ai/catalog/standards/sist-en-300-130-6-v1-3-4-2005>

Upper Tester (UT): see ISO/IEC 9646-1 [6]

3.2 Abbreviations

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

ASP	Abstract Service Primitive
ATM	Abstract Test Method
ATS	Abstract Test Suite
BER	Basic Encoding Rules
CM	Co-ordination Message
CP	Co-ordination Point
ExTS	Executable Test Suite
IUT	Implementation Under Test
LT	Lower Tester
MCID	Malicious Call Identification
MOT	Means Of Testing
MTC	Main Test Component
PCO	Point of Control and Observation
PCTR	Protocol Conformance Test Report
PDU	Protocol Data Unit
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation eXtra Information for Testing
PTC	Parallel Test Component
SUT	System Under Test

TP	Test Purpose
TTCN	Tree and Tabular Combined Notation
UT	Upper Tester

4 Abstract Test Method (ATM)

4.1 Description of ATM used

The requirement for testing the network IUT is to focus on the behaviour of the network IUT at the user-network interface where a T reference point or coincident S and T reference point applies. Thus the IUT is the network DSS1 protocol entity at a particular user-network interface and is not the whole network.

It is possible to specify an ATS based on a Single party (remote) test method for such an IUT. However, it is considered that an ATS based on such an approach is of limited use as the only way to specify IUT generated PDUs is to use the "implicit send" statement. Many users of such an ATS would replace the "implicit send" statements with descriptions of the behaviour at other interfaces.

An ATS based on a multi-party test method is considered to be more useful in that it is closer to how a real test suite would be constructed. Such a test method specifies behaviour at multiple network interfaces. One very important limitation here is that tests are focused on one particular interface. Thus the test system is made up one Main Test Component (MTC) and one or more Parallel Test Components (PTC), see figure 1.

4.1.1 Conventions for test components and PCOs

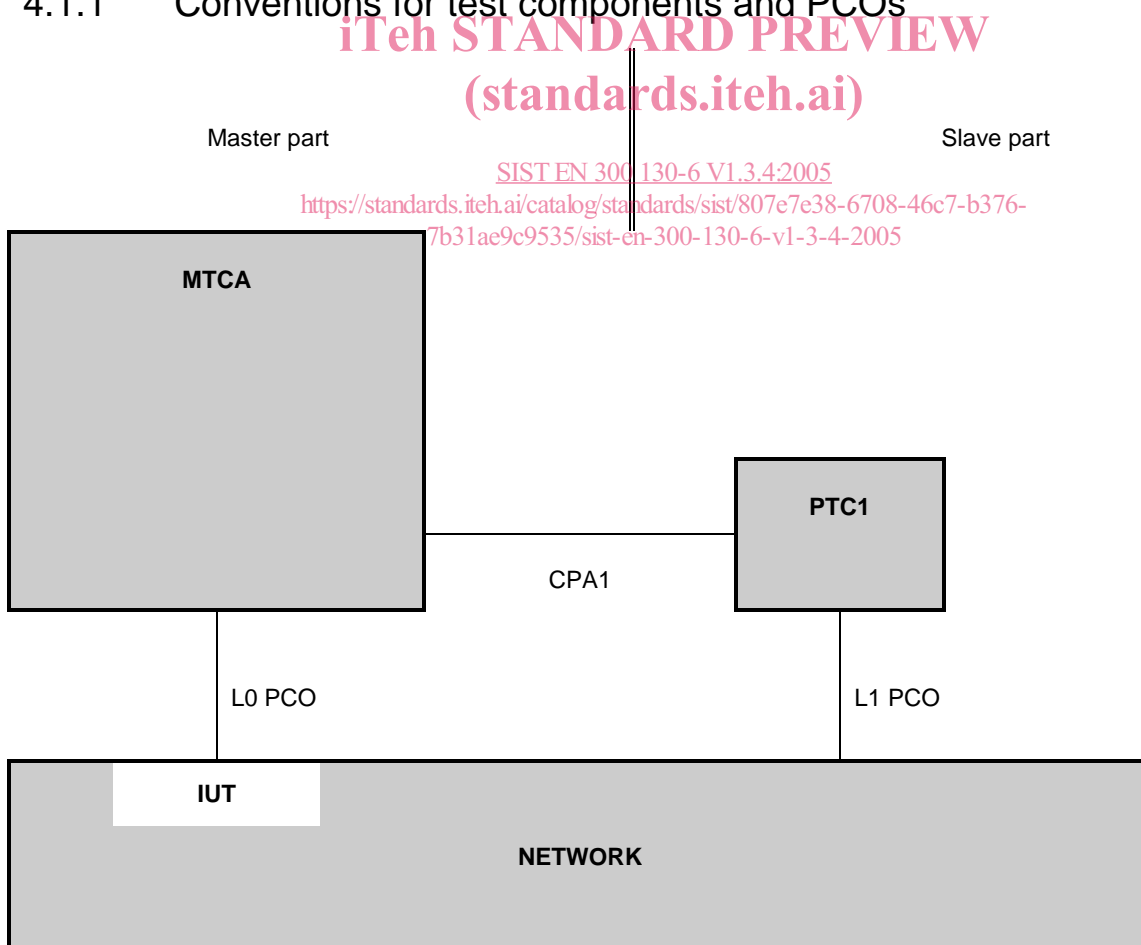


Figure 1: Multi-party test method

In a master/slave arrangement, the MTC is considered to be the master while the PTCs are the slaves. The "slave" testers are only an explicit description of how to deal with the "other" interfaces during the testing process, i.e. "how to make the IUT send the required message".

This means, in particular, that the verdict will only be assigned from the protocol aspects observed on the interface under test (i.e. by the "master" tester), as it would be observed by a terminal connected to this interface. A failure in the correlation between the protocol at the different interfaces to which the different testers are connected, i.e. in the mechanism of the functional service itself, will not cause a FAIL verdict. For instance, if the IUT fails to send a message on the tested interface after another interface has received the proper stimulus, the verdict will be INCONCLUSIVE.

The MTC MTCA has two functions in this configuration. Firstly, it has the MTC function of controlling the one or more PTCs. Thus it is responsible for starting the PTCs and afterwards co-ordinates activities by exchanging Co-ordination Messages (CM) with the PTCs. Secondly it is responsible for the behaviour of the Lower Tester (LT) at PCO L0.

A combination of the remote and multi-party test methods is applied. As can be seen from figure 1, several PCOs are used. All PCOs reside at the service access points between layers 2 and 3.

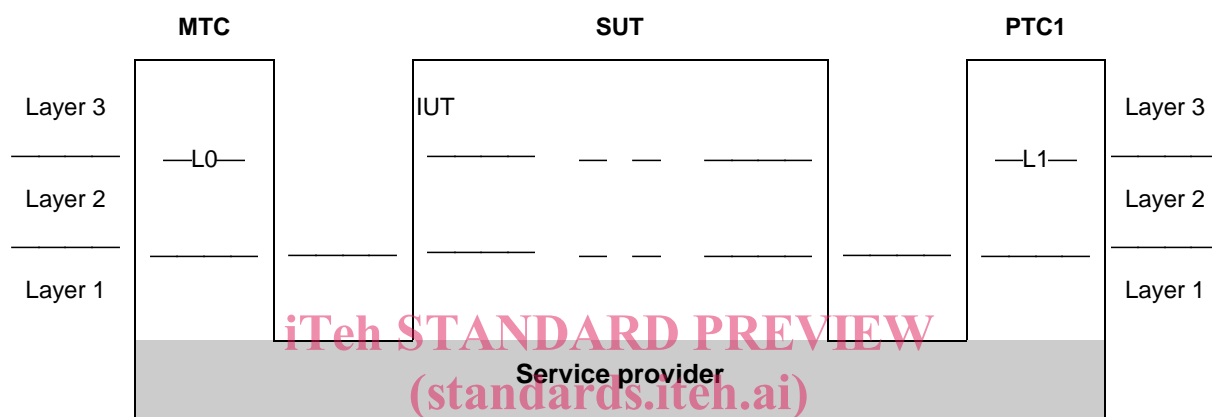


Figure 2: Combination of the remote and multi-party test methods

<https://standards.itech.ai/catalog/standards/sist/807e7e38-6708-46c7-b376-1e34ae093332/sist-en-300-130-6-v1-3-4-2005>

The MTC PCO is named "L0" ("L" for Lower). The L0 PCO is used to control and observe the behaviour of the IUT and test case verdicts are assigned depending on the behaviour observed at this PCO. The PTC PTC1 uses PCO L1. This PCO is used to control and, in a limited way, observe the behaviour of the network equipment at interfaces other than the one under test. No verdicts are assigned at this PCO.

As stated in a previous paragraph, the non-receipt of network generated messages at L0, which are stimulated by events at the L1, will result in INCONCLUSIVE rather than FAIL verdicts being assigned.

4.1.2 Conventions for variables and parameters

MTCA

call reference	CREF1	(to PTC1)
B channel (basic)	bch_num1	
channel nr (primary)	CH_NUM1	
PCO L0	IPN0, LIPN0	

PTC1

call reference	P1CREF
B channel (basic)	P1_bch_num
channel nr (primary)	P1_CH_NUM
PCO L1	IPN1, LIPN1