Draft **EN 300 130-3** V1.2.3 (1998-02)

European Standard (Telecommunications series)

**Integrated Services Digital Network (ISDN);
Malicious Call Identification (MCID) supplementary service;
Digital Subscriber Signalling System No. one (DSS1) protocol;
Part 3: Test Suite Structure and Test Purposes (TSS&TP)
specification for the user**

ETSI

European Telecommunications Standards Institute

Reference
_____
REN/SPS-05145-N-3 (17cr0iq0.PDF)

Keywords
_____
ISDN, DSS1, supplementary service, MCID,
testing, TSS&TP, user

ETSI Secretariat

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

X.400
_____
c= fr; a=atlas; p=etsi; s=secretariat

Internet
_____
secretariat@etsi.fr
http://www.etsi.fr

Contents

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 ETR 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.fr/ipr).

Pursuant to the ETSI Interim 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 ETR 314 (or the updates on http://www.etsi.fr/ipr) 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 ETSI standards One-step Approval Procedure.

The present document is part 3 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".

The present version updates the references to the basic call specifications.

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 300 130 specifies the Test Suite Structure and Test Purposes (TSS&TP) for the User side of the T reference point or coincident S and T reference point (as defined in ITU-T Recommendation I.411 [7]) 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 [1].

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. Other parts specify the TSS&TP and the ATS and partial PIXIT proforma for the Network side of the T reference point or coincident S and T reference point of implementations conforming to EN 300 130-1 [1].

2   Normative references

References may be made to:

    a) specific versions of publications (identified by date of publication, edition number, version number, etc.), in which case, subsequent revisions to the referenced document do not apply; or

    b) all versions up to and including the identified version (identified by "up to and including" before the version identity); or

    c) all versions subsequent to and including the identified version (identified by "onwards" following the version identity); or

    d) publications without mention of a specific version, in which case 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]   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".

[2]   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".

[3]   ISO/IEC 9646-1: "Information Technology - OSI Conformance Testing Methodology and Framework; Part 1: General Concepts".

[4]   ISO/IEC 9646-2: "Information Technology - OSI Conformance Testing Methodology and Framework; Part 2: Abstract Test Suite specification".

[5]   ISO/IEC 9646-3: "Information Technology - OSI Conformance Testing Methodology and Framework; Part 3: The Tree and Tabular Combined Notation".

[6]   EN 300 196-1: "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".

[7]   ITU-T Recommendation I.411 (1993): "ISDN user-network interfaces - Reference configurations".

[8]   EN 300 403-1: "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]".

[9]   ITU-T Recommendation I.112: "Vocabulary and terms for ISDNs".

[10]   CCITT Recommendation E.164: "Numbering plan for the ISDN era".

[11]   ITU-T Recommendation I.210: "Principles of the telecommunication services supported by an ISDN and the means to describe them".

3   Definitions

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

3.1   Definitions related to conformance testing

abstract test case: Refer to ISO/IEC 9646-1 [3].

Abstract Test Suite (ATS): Refer to ISO/IEC 9646-1 [3].

Implementation Under Test (IUT): Refer to ISO/IEC 9646-1 [3].

implicit send event: Refer to ISO/IEC 9646-3 [5].

lower tester: Refer to ISO/IEC 9646-1 [3].

point of control and observation: Refer to ISO/IEC 9646-1 [3].

Protocol Implementation Conformance Statement (PICS): Refer to ISO/IEC 9646-1 [3].

PICS proforma: Refer to ISO/IEC 9646-1 [3].

Protocol Implementation eXtra Information for Testing (PIXIT): Refer to ISO/IEC 9646-1 [3].

PIXIT proforma: Refer to ISO/IEC 9646-1 [3].

system under test: Refer to ISO/IEC 9646-1 [3].

Test Purpose (TP): Refer to ISO/IEC 9646-1 [3].

3.2   Definitions related to EN 300 130-1

component: See EN 300 196-1 [6], subclause 11.2.2.1.

Integrated Services Digital Network (ISDN): See ITU-T Recommendation I.112 [9], definition 308.

ISDN number: A number conforming to the numbering and structure specified in CCITT Recommendation E.164 [10].

invoke component: See EN 300 196-1 [6], subclause 11.2.2.1.

return error component: See EN 300 196-1 [6], subclause 11.2.2.1.

return result component: See EN 300 196-1 [6], subclause 11.2.2.1.

served user: The served user is the user who invokes the MCID supplementary service.

service; telecommunication service: See ITU-T Recommendation I.112 [9], definition 201.

supplementary service: See ITU-T Recommendation I.210 [11], subclause 2.4.

user: The DSS1 protocol entity at the User side of the user-network interface where a T reference point or coincident S and T reference point applies.

user (S/T): The DSS1 protocol entity at the User side of the user-network interface where a coincident S and T reference point applies.
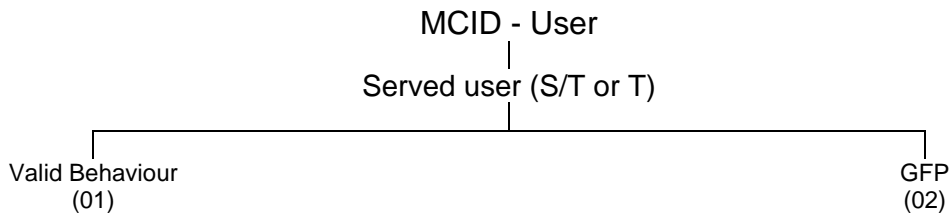
user (T): The DSS1 protocol entity at the User side of the user-network interface where a T reference point applies (User is the Private ISDN).

4   Abbreviations

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

ATM	Abstract Test Method
ATS	Abstract Test Suite
DSS1	Digital Subscriber Signalling System No. one
GFP	Generic Functional Protocol
ISDN	Integrated Services Digital Network
IUT	Implementation Under Test
MCID	Malicious Call Identification
TP	Test Purpose
TSS	Test Suite Structure
U10	Active call state
U12	Disconnect Indication call state
U19	Release Request call state

5   Test Suite Structure (TSS)

MCID - User

Served user (S/T or T)

Valid Behaviour   GFP
(01)   (02)

NOTE: Numbers in brackets represent group numbers and are used in TP identifiers.

Figure 1: Test suite structure

6   Test Purposes (TP)

6.1   Introduction

For each test requirement a TP is defined.

6.1.1   TP naming convention

TPs are numbered, starting at 001, within each group. Groups are organised according to the TSS. Additional references are added to identify the actual test suite and whether it applies to the network or the user (see table 1).

Table 1: TP identifier naming convention scheme

Identifier: **<ss>_<iut><group>_<nnn>**				
<ss>	=	supplementary service: e.g. "MCID"		
<iut>	=	type of IUT:	U	User
			N	Network
<group>	=	group	2 digit field representing group reference according to TSS	
<nnn>	=	sequential number	(001-999)	

6.1.2   Source of TP definition

The TPs are based on EN 300 130-1 [1] and on clause 8 of EN 300 196-1 [6].

6.1.3   TP structure

Each TP has been written in a manner which is consistent with all other TPs. The intention of this is to make the TPs more readable and checkable. A particular structure has been used and this is illustrated in table 2. This table should be read in conjunction with any TP, i.e. use a TP as an example to fully understand the table.

Table 2: Structure of a single TP

TP part	Text	Example
Header	<Identifier> *tab* <paragraph number in base ETS> *tab* <type of test> *tab* <condition> *CR.*	see table 1 subclause 0.0.0 valid, invalid, inopportune mandatory, optional, conditional
Stimulus	Ensure that the IUT in the <basic call state> <trigger> *see below for message structure* *or* <goal>	 U00, U10, etc. receiving a XXXX message to request a ...
Reaction	<action> <conditions> *if the action is sending* *see below for message structure* <next action>, *etc.* and remains in the same state *or* and enters state <state>	sends, saves, does, etc. using en-bloc sending, ...
Message structure	<message type> message containing a *a)* <info element> information element with *b)* a <field name> encoded as *or* including <coding of the field> and *back to a or b,*	SETUP, FACILITY, CONNECT, ... Bearer capability, Facility, ...
NOTE: Text in italics will not appear in TPs and text between <> is filled in for each TP and may differ from one TP to the next.		

6.1.4   Test strategy

As the base standard EN 300 130-1 [1] 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 300 130-2 [2]. The criteria applied included the following:

-    only the requirements from the point of view of the T or coincident S and T reference point are considered;

-    whether or not a test case can be built from the TP is not considered.

6.2   User TPs for MCID

6.2.1   Served user (S/T or T)

6.2.1.1   Valid behaviour

MCID_U01_001   subclause 9.2.1, 1st paragraph   valid   mandatory
Ensure that the IUT in the Active call state U10,
     sends a FACILITY message with a Facility information element containing a mCIDRequest invoke component
     and remains in the same call state.

MCID_U01_002   **subclause 9.2.1, 1st paragraph**   **valid**   **mandatory**
Ensure that the IUT in the Disconnect Indication call state U12,
>   sends a FACILITY message with a Facility information element containing a mCIDRequest invoke component
>   and remains in the same call state.

MCID_U01_003   **subclause 9.2.1**   **valid**   **mandatory**
Ensure that the IUT in the Active call state U10, on receipt of a FACILITY message with a Facility information element
containing a mCIDRequest return result component in response to a FACILITY message with a Facility information
element containing a mCIDRequest invoke component,
>   does not respond and remains in the same call state.

MCID_U01_004   **subclause 9.2.1**   **valid**   **mandatory**
Ensure that the IUT in the Disconnect Indication call state U12, on receipt of a FACILITY message with a Facility
information element containing a mCIDRequest return result component in response to a FACILITY message with a
Facility information element containing a mCIDRequest invoke component,
>   is able to accept the message and continue normal call clearing.

MCID_U01_005   **subclause 9.2.2**   **inopportune**   **mandatory**
Ensure that the IUT in the Active call state U10, on receipt of a FACILITY message with a Facility information element
containing a mCIDRequest return error component in response to a FACILITY message with a Facility information
element containing a mCIDRequest invoke component,
>   does not respond and remains in the same call state.

MCID_U01_006   **subclause 9.2.2**   **inopportune**   **mandatory**
Ensure that the IUT in the Disconnect Indication call state U12, on receipt of a FACILITY message with a Facility
information element containing a mCIDRequest return error component in response to a FACILITY message with a
Facility information element containing a mCIDRequest invoke component,
>   is able to accept the message and continue normal call clearing.

6.2.1.2   GFP

MCID_U02_001   **[6] subclause 8.2.2.4**   **invalid**   **mandatory**
Ensure that the IUT in the Active call state U10, on receipt of a FACILITY message with a Facility information element
containing an invalid mCIDRequest return result component in response to a FACILITY message with a Facility
information element containing a mCIDRequest invoke component,
>   transmits a FACILITY message containing a Facility information element with a reject component including the
>   invoke identifier associated with the mCIDRequest operation and remains in the same call state.

MCID_U02_002   **[6] subclause 8.2.2.4**   **invalid**   **mandatory**
Ensure that the IUT in the Disconnect Indication call state U12, on receipt of a FACILITY message with a Facility
information element containing an invalid mCIDRequest return result component in response to a FACILITY message
with a Facility information element containing a mCIDRequest invoke component,
>   transmits a FACILITY message containing a Facility information element with a reject component including the
>   invoke identifier associated with the mCIDRequest operation and remains in the same call state,
>   or
>   transmits a RELEASE message containing a Facility information element with a reject component including the
>   invoke identifier associated with the mCIDRequest operation and enters call state U19.

MCID_U02_003   **[6] subclause 8.2.2.4**   **invalid**   **mandatory**
Ensure that the IUT in the Active call state U10, on receipt of a FACILITY message with a Facility information element
containing an invalid mCIDRequest return error component in response to a FACILITY message with a Facility
information element containing a mCIDRequest invoke component,
>   transmits a FACILITY message containing a Facility information element with a reject component including the
>   invoke identifier associated with the mCIDRequest operation and remains in the same call state.

MCID_U02_004   [6] subclause 8.2.2.4   invalid   mandatory

Ensure that the IUT in the Disconnect Indication call state U12, on receipt of a FACILITY message with a Facility information element containing an invalid mCIDRequest return error component in response to a FACILITY message with a Facility information element containing a mCIDRequest invoke component,

> transmits a FACILITY message containing a Facility information element with a reject component including the invoke identifier associated with the mCIDRequest operation and remains in the same call state,
> or
> transmits a RELEASE message containing a Facility information element with a reject component including the invoke identifier associated with the mCIDRequest operation and enters call state U19.

MCID_U02_005   [6] subclause 8.3.1.1.2   invalid   mandatory

Ensure that the IUT in the Active call state U10, on receipt of a FACILITY message containing no Facility information element in response to a FACILITY message with a Facility information element containing a mCIDRequest invoke component,

> ignores the message contents, remains in the same state and transmits a STATUS message containing a Cause information element with value #96 "mandatory information element is missing".

MCID_U02_006   [6] subclause 8.3.1.1.2   invalid   mandatory

Ensure that the IUT in the Active call state U10, on receipt of a FACILITY message with a Facility information element containing an invalid protocol profile and a mCIDRequest return result component in response to a FACILITY message with a Facility information element containing a mCIDRequest invoke component,

> ignores the message contents, remains in the same state and transmits a STATUS message containing a Cause information element with value #100 "invalid information element contents".

7   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 6;

   b) use a TSS which is an appropriate subset of the whole of the TSS specified in clause 5;

   c) use the same naming conventions for the test groups and test cases;

   d) maintain the relationship specified in clause 6 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 [4].

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 6 shall be included in a compliant ATS.

8   Requirements for a comprehensive testing service

As a minimum the Remote test method, as specified in ISO/IEC 9646-2 [4], shall be used by any organization claiming to provide a comprehensive testing service for user equipment claiming conformance to EN 300 130-1 [1].

Annex A (informative):
Changes with respect to the previous ETS 300 130-3

The following changes have been done:

- conversion to EN layout;

- substitution of non-specific references to basic standards where the intention is to refer to the latest version.

History

Document history		
Edition 1	October 1996	Publication as ETS 300 130-3
V1.2.3	February 1998	One-step Approval Procedure OAP 9824: 1998-02-13 to 1998-06-12