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**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**

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Foreword

This draft European Telecommunication Standard (ETS) has been produced by the Signalling Protocols and Switching (SPS) Technical Committee of the European Telecommunications Standards Institute (ETSI), and is now submitted for the Public Enquiry phase of the ETSI standards approval procedure.

This ETS is part 5 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: "TSS&TP specification for the network";

Part 6: "ATS and partial PIXIT proforma specification for the network".

Proposed transposition dates	
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Date of withdrawal of any conflicting National Standard (dow):	6 months after doa

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1 Scope

This fifth part of ETS 300 130 specifies the Test Suite Structure and Test Purposes (TSS&TP) for the Network 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 Malicious Call Identification (MCID) supplementary service for the pan-European Integrated Services Digital Network (ISDN) by means of Digital Subscriber Signalling System No. one (DSS1) protocol.

A further part of this ETS specifies the Abstract Test Suite (ATS) and partial PIXIT proforma based on this ETS. 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 ETS 300 130-1 [1].

2 Normative references

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

- [1] ETS 300 130-1 (1992): "Integrated Services Digital Network (ISDN); Malicious Call Identification (MCID) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".

NOTE: ETS 300 130-1 (1992) was initially published as ETS 300 130 (1992).

- [2] ETS 300 130-2 (1995): "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] ETS 300 196-1 (1993): "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".

NOTE: ETS 300 196-1 (1993) was initially published as ETS 300 196 (1993).

- [7] CCITT Recommendation I.411 (1988): "ISDN user-network interfaces - Reference configurations".

- [8] ETS 300 102-1: "Integrated Services Digital Network (ISDN); User-network interface layer 3; Specifications for basic call control".

- [9] CCITT Recommendation I.112 (1988): "Vocabulary and terms for ISDNs".

- [10] CCITT Recommendation E.164 (1988): "Numbering plan for the ISDN era".

- [11] CCITT Recommendation I.210 (1988): "Principles of the telecommunication services supported by an ISDN and the means to describe them".

3 Definitions

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

3.1 Definitions related to conformance testing

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

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

active test: A test case where the IUT is required to send a particular message, but not in reaction to a received message. This would usually involve the use of PIXIT information to see how this message can be generated and quite often is specified in an ATS using an Implicit Send event.

implementation under test: 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].

passive test: A test case where the IUT is required to respond to a protocol event (e.g. received message) with another protocol event (sends message) and normally does not require an any special operator intervention such as is associated with the Implicit Send event.

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

3.2 Definitions related to ETS 300 130-1

call reference: See ETS 300 102-1 [8], subclause 4.3.

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

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

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

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

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

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

network (T): The DSS1 protocol entity at the Network side of the user-network interface where a T reference point applies (Network connected to Private ISDN).

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

return result component: See ETS 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.

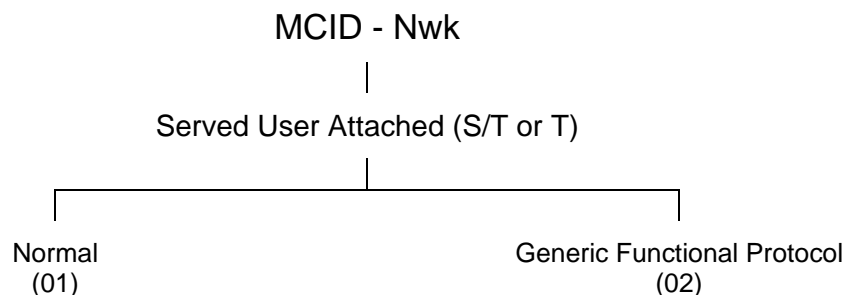
supplementary service: See CCITT Recommendation I.210 [11], subclause 2.4.

4 Abbreviations

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

(Held)	Call Held Auxiliary state
(Idle)	Idle Auxiliary state
CR1	Call Reference for a call in the Call Held auxiliary state.
CR2	Call Reference for a call in the Idle auxiliary state.
CR3	Call Reference for a second call in the Idle auxiliary state.
IUT	Implementation Under Test
MCID	Malicious Call Identification
N00	Null Call state
N01	Call Initiated Call state
N02	Overlap Sending Call state
N03	Outgoing Call Proceeding Call state
N04	Call Delivered Call state
N06	Call Present Call state
N07	Call Received Call state
N08	Connect Request Call state
N09	Incoming Call Proceeding Call state
N10	Active Call state
N12	Disconnect Indication Call state
N19	Release Request Call state
N25	Overlap Receiving Call state
TP	Test Purpose
TSS	Test Suite Structure

5 Test Suite Structure (TSS)



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

Figure 1: Test suite structure

6 Test Purposes (TP)

6.1 Introduction

For each test requirement a Test Purpose (TP) is defined.

6.1.1 Test Purpose (TP) naming convention

Test Purposes are numbered, starting at 001, within each group. Groups are organized according to the TSS. Additional references are added to identify the actual Test Suite and whether it applies to the Network or the User side (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 side
		N	Network side.
<group>	group		2 digit field representing group reference according to TSS
<nnn> =	sequential number		(001-999)

6.1.2 Source of test purpose definition

The test purposes were developed based on ETS 300 130-1 [1], clauses 9, 10 and 14.

6.1.3 Test purpose 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.

MCID_N01_004 **subclause 9.2.2, 1st paragraph** **inopportune** **mandatory**
Ensure that the IUT, while in the Outgoing Call Proceeding call state N03, on receipt of a FACILITY message with a Facility information element containing a mCIDRequest invoke component, responds with a FACILITY message with a Facility information element containing a mCIDRequest return error component indicating "invalidCallState".

MCID_N01_005 **subclause 9.2.2, 1st paragraph** **inopportune** **mandatory**
Ensure that the IUT, while in the Call Delivered call state N04, on receipt of a FACILITY message with a Facility information element containing a mCIDRequest invoke component, responds with a FACILITY message with a Facility information element containing a mCIDRequest return error component indicating "invalidCallState".

MCID_N01_006 **subclause 9.2.2, 1st paragraph** **inopportune** **mandatory**
Ensure that the IUT, while in the Call Present call state N06, on receipt of a FACILITY message with a Facility information element containing a mCIDRequest invoke component, responds with a FACILITY message with a Facility information element containing a mCIDRequest return error component indicating "invalidCallState".

MCID_N01_007 **subclause 9.2.2, 1st paragraph** **inopportune** **mandatory**
Ensure that the IUT, while in the Call Received call state N07, on receipt of a FACILITY message with a Facility information element containing a mCIDRequest invoke component, responds with a FACILITY message with a Facility information element containing a mCIDRequest return error component indicating "invalidCallState".

MCID_N01_008 **subclause 9.2.2, 1st paragraph** **inopportune** **mandatory**
Ensure that the IUT, while in the Incoming Call Proceeding call state N09, on receipt of a FACILITY message with a Facility information element containing a mCIDRequest invoke component, responds with a FACILITY message with a Facility information element containing a mCIDRequest return error component indicating "invalidCallState".

MCID_N01_009 **subclause 9.2.2, 1st paragraph** **inopportune** **mandatory**
Ensure that the IUT, while in the Release Request call state N19, on receipt of a FACILITY message with a Facility information element containing a mCIDRequest invoke component, responds with a FACILITY message with a Facility information element containing a mCIDRequest return error component indicating "invalidCallState".

MCID_N01_010 **subclause 9.2.2, 1st paragraph** **inopportune** **mandatory**
Ensure that the IUT, while in the Overlap Receiving call state N25, on receipt of a FACILITY message with a Facility information element containing a mCIDRequest invoke component, responds with a FACILITY message with a Facility information element containing a mCIDRequest return error component indicating "invalidCallState".

MCID_N01_011 **subclause 9.2.2, 2nd paragraph** **inopportune** **mandatory**
Ensure that the IUT while in the Active call state N10, and if the supplementary service MCID is not subscribed to, on receipt of a FACILITY message with a Facility information element containing a mCIDRequest invoke component, responds with a FACILITY message with a Facility information element containing a mCIDRequest return error component indicating "notSubscribed".

MCID_N01_012 **subclause 9.2.2, 2nd paragraph** **inopportune** **mandatory**
Ensure that the IUT while in the Disconnect Indication call state N12, and if the supplementary service MCID is not subscribed to, on receipt of a FACILITY message with a Facility information element containing a mCIDRequest invoke component, responds with a FACILITY message with a Facility information element containing a mCIDRequest return error component indicating "notSubscribed".

MCID_N01_013 **subclause 9.2.2, 3rd paragraph** **inopportune** **mandatory**
Ensure that the IUT while in the Active call state N10, and if the supplementary service MCID is invoked for an outgoing call, on receipt of a FACILITY message with a Facility information element containing a mCIDRequest invoke component, responds with a FACILITY message with a Facility information element containing a mCIDRequest return error component indicating "notIncomingCall".

MCID_N01_014 **subclause 9.2.2, 3rd paragraph** **inopportune** **mandatory**

Ensure that the IUT while in the Disconnect Indication call state N12, and if the supplementary service MCID is invoked for an outgoing call, on receipt of a FACILITY message with a Facility information element containing a mCIDRequest invoke component,
 responds with a FACILITY message with a Facility information element containing a mCIDRequest return error component indicating "notIncomingCall".

MCID_N01_015 **subclause 9.2.2, 5th paragraph** **inopportune** **mandatory**

Ensure that the IUT, while in the Active call state N10, and if it is not possible to register any call information, on receipt of a FACILITY message with a Facility information element containing a mCIDRequest invoke component,
 responds with a FACILITY message with a Facility information element containing a mCIDRequest return error component indicating "notAvailable".

MCID_N01_016 **subclause 9.2.2, 5th paragraph** **inopportune** **mandatory**

Ensure that the IUT, while in the Disconnect Indication call state N12, and if it is not possible to register any call information, on receipt of a FACILITY message with a Facility information element containing a mCIDRequest invoke component,
 responds with a FACILITY message with a Facility information element containing a mCIDRequest return error component indicating "notAvailable".

MCID_N01_017 **subclause 9.2.2, 6th paragraph** **inopportune** **optional**

Ensure that the IUT, while in the Active call state N10, and another supplementary service has already been invoked when interaction between these two services is not allowed, on receipt of a FACILITY message with a Facility information element containing a mCIDRequest invoke component,
 responds with a FACILITY message with a Facility information element containing a mCIDRequest return error component indicating "supplementaryServiceInteractionNotAllowed".

Selection: Another supplementary service which is not allowed to work along with MCID is supported.

MCID_N01_018 **subclause 9.2.2, 6th paragraph** **inopportune** **optional**

Ensure that the IUT, while in the Disconnect Indication call state N12, and another supplementary service has already been invoked when interaction between these two services is not allowed, on receipt of a FACILITY message with a Facility information element containing a mCIDRequest invoke component,
 responds with a FACILITY message with a Facility information element containing a mCIDRequest return error component indicating "supplementaryServiceInteractionNotAllowed".

Selection: Another supplementary service which is not allowed to work along with MCID is supported.

6.2.1.2 **Generic functional protocol part****MCID_N02_001** **subclause 9.2.1, 2nd paragraph & ETS 300 196-1 8.2.2.4** **valid**
mandatory

Ensure that the IUT, while in the Active call state N10, on receipt of a FACILITY message with a Facility information element containing a mCIDRequest return reject component after it has sent a FACILITY message with a Facility information element containing a mCIDRequest return result component,
 is able to accept the message and continue normal call handling.

MCID_N02_002 **subclause 9.2.1, 2nd paragraph & ETS 300 196-1 8.2.2.4** **valid**
mandatory

Ensure that the IUT, while in the Disconnect Indication call state N12, on receipt of a FACILITY message with a Facility information element containing a mCIDRequest return reject component after it has sent a FACILITY message with a Facility information element containing a mCIDRequest return result component,
 is able to accept the message and continue normal call handling.

MCID_N02_003 **ETS 300 196-1 8.3.1.1.2** **invalid** **mandatory**

Ensure that the IUT, while in the Active call state U10, on receipt of a FACILITY message containing no Facility information element,
 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_N02_004 ETS 300 196-1 8.3.1.1.2 invalid mandatory

Ensure that the IUT, while in the Active call state U10, on receipt of a FACILITY message with a Facility information element containing an invalid protocol profile,
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".

History

Document history	
October 1995	Public Enquiry PE 94: 1995-10-23 to 1996-02-16
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