

Draft **EN 300 097-3** V1.2.3 (1998-02)

European Standard (Telecommunications series)

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



European Telecommunications Standards Institute

Reference

REN/SPS-05145-L-3 (0wcr0iq0.PDF)

Keywords

ISDN, DSS1, supplementary service, COLP,
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>

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.

Contents

Intellectual Property Rights.....	4
Foreword	4
1 Scope.....	5
2 Normative references	5
3 Definitions.....	6
3.1 Definitions related to conformance testing	6
3.2 Definitions related to EN 300 097-1	6
4 Abbreviations	7
5 Test Suite Structure (TSS)	7
6 Test Purposes (TP).....	7
6.1 Introduction.....	7
6.1.1 TP naming convention.....	7
6.1.2 Source of TP definition	8
6.1.3 TP structure	8
6.1.4 Test strategy	8
6.2 User TPs for COLP.....	9
6.2.1 Called user (S/T or T)	9
6.2.1.1 Valid behaviour	9
7 Compliance	9
8 Requirements for a comprehensive testing service.....	9
Annex A (informative): Additional test purposes for the served user (S/T or T)	10
Annex B (informative): Changes with respect to the previous ETS 300 097-3	12
History	13

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) Connected Line Identification Presentation (COLP) 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 300 097 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 [6]) of implementations conforming to the stage three standard for the Connected Line Identification Presentation (COLP) supplementary service for the pan-European Integrated Services Digital Network (ISDN) by means of the Digital Subscriber Signalling System No. one (DSS1) protocol, EN 300 097-1 [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 300 097-1 [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 300 097-1 (V1.2): "Integrated Services Digital Network (ISDN); Connected Line Identification Presentation (COLP) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [2] EN 300 097-2 (V1.2): "Integrated Services Digital Network (ISDN); Connected Line Identification Presentation (COLP) 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] ITU-T Recommendation I.411 (1993): "ISDN user-network interfaces - Reference configurations".
- [7] 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]".
- [8] ITU-T Recommendation I.112: "Vocabulary and terms for ISDNs".
- [9] CCITT Recommendation E.164: "Numbering plan for the ISDN era".
- [10] 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 300 097-1

calling user: The user that initiated an incoming call at the served user. The calling user need not have subscribed to the CLIP supplementary service.

Integrated Services Digital Network (ISDN): See ITU-T Recommendation I.112 [8], definition 308.

ISDN number: A number conforming to the numbering and structure specified in CCITT Recommendation E.164 [9].

international number: An ISDN number structured as specified in subclause 3.2 (in the paragraphs relating to international number) of CCITT Recommendation E.164 [9].

national number; national significant number: An ISDN number structured as specified in subclause 3.2 (in the paragraphs relating to national significant number) of CCITT Recommendation E.164 [9].

served user: The user of a particular ISDN number who has subscribed to the presentation of the connected line identification information in association with outgoing calls. The served user is also known as the calling user.

service; telecommunication service: See ITU-T Recommendation I.112 [8], definition 201.

subscriber number: An ISDN number structured as specified in subclause 3.2 (in the paragraphs relating to subscriber number) of CCITT Recommendation E.164 [9].

supplementary service: See ITU-T Recommendation I.210 [10], 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.

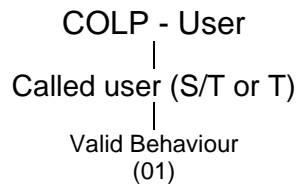
user (T): The DSS1 protocol entity at the User side of the user-network interface where a T reference point applies (User is the Private ISDN).

4 Abbreviations

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

ATM	Abstract Test Method
ATS	Abstract Test Suite
COLP	Connected Line Identification Presentation
DSS1	Digital Subscriber Signalling System No. one
ISDN	Integrated Services Digital Network
IUT	Implementation Under Test
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation eXtra Information for Testing
TP	Test Purpose
TSS	Test Suite Structure
U03	Outgoing Call Proceeding call state
U06	Call Present call state
U07	Call Received call state
U09	Incoming Call Proceeding call state

5 Test Suite Structure (TSS)



NOTE 1: Numbers in brackets represent group numbers and are used in TP identifiers.

NOTE 2: This TSS reflects only the normative part of the present document.

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

The TPs 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 (see table 1).

Table 1: TP identifier naming convention scheme

Identifier: <ss>_<iut><group>_<nnn>			
<ss>	=	supplementary service: e.g. "COLP"	
<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 300 097-1 [1].

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> <i>tab</i> <paragraph number in base EN> <i>tab</i> <PICS reference> <i>tab</i> <condition> <i>CR</i> .	see table 1 subclause 0.0.0 XY 0.0 mandatory, optional, conditional
Stimulus	Ensure that the IUT in the <basic call state> <trigger> <i>see below for message structure</i> <i>or</i> <goal>	U00, U10, etc. receiving a XXXX message to request a ...
Reaction	<action> <conditions> <i>if the action is sending</i> <i>see below for message structure</i> <next action>, etc. and remains in the same state <i>or</i> and enters state <state>	sends, saves, does, etc. using en-bloc sending, ...
Message structure	<message type> message containing a <i>a)</i> <info element> information element with <i>b)</i> the <field name> encoded as <i>or</i> including <coding of the field> and <i>back to a or b</i> ,	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 300 097-1 [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 300 097-2 [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 COLP

All PICS items referred to in this subclause are as specified in EN 300 097-2 [2] unless indicated otherwise by another numbered reference.

6.2.1 Called user (S/T or T)

6.2.1.1 Valid behaviour

COLP_U01_001 **subclause 9.2.1** **SC 1.1** **optional**

Ensure that the IUT in the Call present call state U06 or in the Call received call state U07 or in the Incoming call proceeding call state U09, in order to present a complete calling party number,

sends a CONNECT message containing a valid Connected number information element with the numbering plan identification encoded as "unknown" or "ISDN/telephony numbering plan" and the type of number encoded as "subscriber number", "national number" or "international number"; or the type of number encoded as "national number" or "international number" if a special arrangement exists.

COLP_U01_002 **subclause 9.2.1** **SC 1.2** **optional**

Ensure that the IUT in the Call present call state U06 or in the Call received call state U07 or in the Incoming call proceeding call state U09, in order to present a partial calling party number,

sends a CONNECT message containing a valid Connected number information element with the numbering plan identification encoded as "unknown" or "ISDN/telephony numbering plan" and the type of number encoded as "unknown".

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 300 097-1 [1].

Annex A (informative): Additional test purposes for the served user (S/T or T)

EN 300 097-1 [1] places no requirements on the calling terminal on how it should treat received Connected number and Connected subaddress information elements.

While, for conformance, only the tests in the main body of the present document need to be performed, the TPs below may prove useful in ascertaining behaviour over and above the requirements of EN 300 097-1 [1].

COLP_U02_001 subclause 9.5.1

Ensure that the IUT in the Outgoing call proceeding call state U03, receiving a valid CONNECT message containing a Connected number information element with the presentation indicator encoded as "number not available due to interworking",

accepts the call following the basic call procedures.

COLP_U02_002 subclause 9.5.1

Ensure that the IUT in the Outgoing call proceeding call state U03, receiving a valid CONNECT message containing a Connected number information element with the presentation indicator encoded as "presentation restricted",

accepts the call following the basic call procedures.

COLP_U02_003 subclause 9.5.1

Ensure that the IUT in the Outgoing call proceeding call state U03, receiving a valid CONNECT message containing a Connected number information element with the type of number and numbering plan identification both encoded as "unknown",

accepts the call following the basic call procedures.

COLP_U02_004 subclause 9.5.1

Ensure that the IUT in the Outgoing call proceeding call state U03, receiving a valid CONNECT message containing a Connected number information element with the numbering plan identification encoded as "ISDN telephony",

accepts the call following the basic call procedures.

COLP_U02_005 subclause 9.5.1

Ensure that the IUT in the Outgoing call proceeding call state U03, receiving a valid CONNECT message containing a Connected number information element with the numbering plan identification encoded as "reserved for extension",

accepts the call following the basic call procedures.

COLP_U02_006 subclause 9.5.1

Ensure that the IUT in the Outgoing call proceeding call state U03, receiving a valid CONNECT message containing a Connected number information element with the type of number encoded as "international number",

accepts the call following the basic call procedures.

COLP_U02_007 subclause 9.5.1

Ensure that the IUT in the Outgoing call proceeding call state U03, receiving a valid CONNECT message containing a Connected number information element with the type of number encoded as "national number",

accepts the call following the basic call procedures.

COLP_U02_008 subclause 9.5.1

Ensure that the IUT in the Outgoing call proceeding call state U03, receiving a valid CONNECT message containing a Connected number information element with the type of number encoded as "reserved for extension",

accepts the call following the basic call procedures.

COLP_U02_009 subclause 9.5.1

Ensure that the IUT in the Outgoing call proceeding call state U03, receiving a valid CONNECT message containing a Connected number information element with the presentation indicator encoded as "presentation allowed",

accepts the call following the basic call procedures.

COLP_U02_010 subclause 9.5.1

Ensure that the IUT in the Outgoing call proceeding call state U03, receiving a valid CONNECT message containing a Connected number information element with the presentation indicator encoded as "reserved",

accepts the call following the basic call procedures.

COLP_U02_011 subclause 9.5.1

Ensure that the IUT in the Outgoing call proceeding call state U03, receiving a valid CONNECT message containing a Connected number information element with the screening indicator encoded as "user provided, not screened", accepts the call following the basic call procedures.

COLP_U02_012 subclause 9.5.1

Ensure that the IUT in the Outgoing call proceeding call state U03, receiving a valid CONNECT message containing a Connected number information element with the screening indicator encoded as "user provided, verified and passed", accepts the call following the basic call procedures.

COLP_U02_013 subclause 9.5.1

Ensure that the IUT in the Outgoing call proceeding call state U03, receiving a valid CONNECT message containing a Connected number information element with the screening indicator encoded as "user provided, verified and failed", accepts the call following the basic call procedures.

COLP_U02_014 subclause 9.5.1

Ensure that the IUT in the Outgoing call proceeding call state U03, receiving a valid CONNECT message containing a Connected number information element with the screening indicator encoded as "network provided", accepts the call following the basic call procedures.

COLP_U02_015 subclause 9.5.1

Ensure that the IUT in the Outgoing call proceeding call state U03, receiving a valid CONNECT message containing a Connected subaddress information element with the type of subaddress encoded as "NSAP", accepts the call following the basic call procedures.

COLP_U02_016 subclause 9.5.1

Ensure that the IUT in the Outgoing call proceeding call state U03, receiving a valid CONNECT message containing a Connected subaddress information element with the type of subaddress encoded as "user specified", accepts the call following the basic call procedures.

COLP_U02_017 subclause 9.5.1

Ensure that the IUT in the Outgoing call proceeding call state U03, receiving a valid CONNECT message containing a Connected subaddress information element with the type of subaddress encoded as "reserved", accepts the call following the basic call procedures.

COLP_U02_018 subclause 9.5.1

Ensure that the IUT in the Outgoing call proceeding call state U03, receiving a valid CONNECT message containing a Connected subaddress information element with the odd/even indicator encoded as "odd", accepts the call following the basic call procedures.

Annex B (informative): Changes with respect to the previous ETS 300 097-3

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 300 097-3
V1.2.3	February 1998	One-step Approval Procedure OAP 9824: 1998-02-13 to 1998-06-12