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Integrated Services Digital Network (ISDN); Completion of Calls on No Reply (CCNR) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 3: Test Suite Structure and Test Purposes (TSS&TP) specification for the user

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**Integrated Services Digital Network (ISDN);
Completion of Calls on No Reply (CCNR)
supplementary service;
Digital Subscriber Signalling System No. one (DSS1) protocol;
Part 3: Test Suite Structure and Test Purposes (TSS&TP)
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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
http://www.etsi.org

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Contents

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Signalling Protocols and Switching (SPS).

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) Completion of Calls on No Reply (CCNR) 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	
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1   Scope

This third part of EN 301 065 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 Completion of Calls on No Reply (CCNR) supplementary service for the pan-European Integrated Services Digital Network (ISDN) by means of the Digital Subscriber Signalling System No. one (DSS1) protocol, EN 301 065-1 [1].

A further part of the present document specifies the Abstract Test Suite (ATS) and partial 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 301 065-1 [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 301 065-1 (V1.1): "Integrated Services Digital Network (ISDN); Completion of Calls on No Reply (CCNR) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".

[2]   EN 301 065-2 (V1.1): "Integrated Services Digital Network (ISDN); Completion of Calls on No Reply (CCNR) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification".

[3]   ISO/IEC 9646-1 (1994): "Information technology; Open Systems Interconnection; Conformance testing methodology and framework; Part 1: General concepts".

[4]   ISO/IEC 9646-2 (1994): "Information technology; Open Systems Interconnection; Conformance testing methodology and framework; Part 2: Abstract test suite specification".

[5]   ISO/IEC 9646-3 (1992): "Information technology; Open Systems Interconnection; Conformance testing methodology and framework; Part 3: The Tree and Tabular Combined Notation (TTCN)".

[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 (1993): "Vocabulary of terms for ISDNs".

[10]   CCITT Recommendation E.164 (1997): "The international public telecommunication numbering plan".

[11]   ITU-T Recommendation I.210 (1993): "Principles of the telecommunication services supported by an ISDN and the means to describe them".

[12]   EN 300 403-3: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 3: Protocol Implementation Conformance Statement (PICS) proforma specification".

3   Definitions and abbreviations

3.1   Definitions

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

3.1.1   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].

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 (IUT): refer to ISO/IEC 9646-1 [3].

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

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Lower Tester (LT): refer to ISO/IEC 9646-1 [3].

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passive test: a test case where the IUT is required to respond to a protocol event (e.g. received message) with another protocol event (e.g. send message) which normally does not require any special operator intervention as associated with the implicit send event.
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d68c9d5cb29a/sist-en-301-065-3-2001

Point of Control and Observation (PCO): 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 (SUT): refer to ISO/IEC 9646-1 [3].

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

3.1.2   Definitions related to EN 301 065-1

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

dummy call reference: see EN 300 403-1 [8], subclause 4.3.

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.

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

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

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

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

3.2   Abbreviations

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

ATS	Abstract Test Suite
CCNR	Completion of Calls on No Reply
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
U0	Null call state
U3	Outgoing Call Proceeding call state
U4	Call Delivered call state
U7	Call Received call state
U10	Active call state
U11	Disconnect Request call state
U19	Release Request call state
U31	Bearer Independent Transport call state

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4 Test Suite Structure (TSS)

Signalling procedures at the coincident S and T reference point	**Group**
Activation	U01
Deactivation	U02
General interrogation	U03
Specific interrogation	U04
Recall indication	U05
CCNR call request	U06
Network initiated deactivation procedure	U07
B free but A busy procedure	U08
User A monitoring procedure	U09
Call information retention	U10
Procedures for interworking with private ISDNs	
Procedures for the originating T reference point	U11
Procedures for the destination T reference point	U12

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 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:	"CCNR"
<iut>	=	type of IUT:	U User N Network
<group>	=	group	2 digit field representing group reference according to TSS
<nnn>	=	sequential number	(001-999)

5.1.2 Source of TP definition

The TPs are based on EN 301 065-1 [1].