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Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; Connection characteristics; ATM transfer capability and traffic parameter indication; Part 5: Test Suite Structure and Test Purposes (TSS&TP) specification for the network

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European Standard (Telecommunications series)

**Broadband Integrated Services Digital Network (B-ISDN);
Digital Subscriber Signalling System No. two (DSS2) protocol;
Connection characteristics;
ATM transfer capability and traffic parameter indication;
Part 5: Test Suite Structure and Test Purposes (TSS&TP)
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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Services and Protocols for Advanced Networks (SPAN).

The present document is part 3 of a multi-part EN covering the Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; Connection characteristics; ATM transfer capability and traffic parameter indication, as identified below:

- Part 1: "Protocol specification [ITU-T Recommendations Q.2961.1 (1995), Q.2961.2 (1997), Q.2961.3 (1997), Q.2961.4 (1997), modified]";
- 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 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:	28 April 2000
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Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 January 2001
Date of withdrawal of any conflicting National Standard (dow):	31 January 2001

1 Scope

The present document specifies the network Test Suite Structure and Test Purposes (TSS&TP) for the T_B reference point or coincident S_B and T_B reference point (as defined in ITU-T Recommendation I.413 [5]) of implementations conforming to the standards for the signalling user-network layer 3 specification for ATM transfer capability and traffic parameter indication of the Digital Subscriber Signalling System No. two (DSS2) protocol for the pan-European Broadband Integrated Services Digital Network (B-ISDN), EN 301 068-1 [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.

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.

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- [1] ETSI EN 301 068-1: "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; Connection characteristics; ATM transfer capability and traffic parameter indication; Part 1: Protocol specification [ITU-T Recommendations Q.2961.1 (1995), Q.2961.2 (1997), Q.2961.3 (1997), Q.2961.4 (1997), modified]"; <http://standards.iteh.ai/catalog/standards/sist/ad280eed-5b34-484d-bf27-a12ba7fca9fd/sist-en-301-068-5-v1-1-2-2003>
- [2] ETSI EN 301 068-2: "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; Connection characteristics; ATM transfer capability and traffic parameter indication; 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] ITU-T Recommendation I.413 (1993): "B-ISDN user-network interface".
- [6] ETSI ETS 300 406: "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".
- [7] ETSI EN 300 443-1: "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; B-ISDN user-network interface layer 3 specification for basic call/bearer control; Part 1: Protocol specification [ITU-T Recommendation Q.2931 (1995), modified]".
- [8] ITU-T Recommendation Q.2961: "Digital subscriber signalling system No. 2 – Additional traffic parameters".
- [9] ITU-T Recommendation Q.2961.1: "Additional signalling capabilities to support traffic parameters for the tagging option and the sustainable cell rate parameter set".

- [10] ITU-T Recommendation Q.2961.2: "Digital subscriber signalling system No. 2 - Additional traffic parameters: Support of ATM transfer capability in the broadband bearer capability information element".
- [11] ITU-T Recommendation Q.2961.3: "Signalling capabilities to support traffic parameters for the available bit rate (ABR) ATM transfer capability".
- [12] ITU-T Recommendation Q.2961.4: "Signalling capabilities to support traffic parameters for the ATM Block Transfer (ABT) ATM transfer capability".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply, in addition to those given in EN 301 068-1 [1] and EN 300 443-1 [7].

3.1.1 Definitions related to conformance testing

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

Abstract Test Method (ATM): 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].

lower tester: 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].

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

3.1.2 Definitions related to EN 301 068-1

network: DSS2 protocol entity at the Network side of the user-network interface where a T_B reference point or coincident S_B and T_B reference point applies.

network (S_B/T_B): DSS2 protocol entity at the Network side of the user-network interface where a coincident S_B and T_B reference point applies.

network (T_B): DSS2 protocol entity at the Network side of the user-network interface where a T_B reference point applies (user is the private ISDN).

3.2 Abbreviations

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

ABT-IT	ATM block transfer with delayed transmission
ABT-DT	ATM block transfer with immediate transmission
ATM	Abstract Test Method
ATS	Abstract Test Suite
B-ISDN	Broadband Integrated Services Digital Network
DSS2	Digital Subscriber Signalling System No. two
ICR	Initial cell rate
IUT	Implementation Under Test
MBS	Maximum burst size
N0	Null call/connection state
N3	Outgoing Call Proceeding call/connection state
N6	Call Present call/connection state
N7	Call Received call/connection state
N9	Incoming Call Proceeding call/connection state
N10	Active call/connection state
PCR	Peak Cell Rate
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation eXtra Information for Testing
RDF	Rate decrease factor
RIF	Rate increase factor
RM	Resource management
TBE	ABR transient buffer exposure
TP	Test Purpose
TSS	Test Suite Structure

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4 Test Suite Structure (TSS)

- Signalling procedures at the coincident S_B/T_B and at the T_B reference points
 - Additional parameter procedures at the originating interface.
 - Sustainable cell rate parameter set (01)
 - Traffic management option for support of tagging (02)
 - Broadband bearer capability (03)
 - Available bit rate setup parameter (04)
 - ATM transfer block capability (05)
 - Handling of error conditions (06)
 - Additional parameter procedures at the destination interface.
 - Sustainable cell rate parameter set (07)
 - Traffic management option for support of tagging (08)
 - Broadband bearer capability (09)
 - Available bit rate setup parameter (10)
 - ATM transfer block capability (11)
 - Handling of error conditions (12)

Figure 1: Test suite structure