

ü]fc_cdUgcj bc`X][]HJbc`ca fYÿ`Y`n`]bhY[f]fUbj]a]`gfcf]hj Ua]`f6 !-G8 BŁ]b
ý]fc_cdUgcj bc`nUgYVbc`ca fYÿ`Y`n`]bhY[f]fUbj]a]`gfcf]hj Ua]`f6 !D-GBŁĚ`8][]HJbU
bUfc b]ý_Ug][bU]nUWY`U`ýH`+`f8 GG&Łžý]fc_cdUgcj bUg][bU]nUWY`U`a YX`WbhfU`Ua]
f6 !E G= Ł]b`g][bU]nUWY`U`ýH`+`f8 G+ŁĚ`DfYXdc[U`Ub`Y`Ě` "XY`N[fUXVU
dfYg_i ýU`bY[U`b]nU]b`bUa Yb`dfYg_i ýU`b`U`fHGG` HDŁĚ`GdYWZ`_UWY`U

Broadband Integrated Services Digital Network (B-ISDN) and Broadband Private Integrated Services Network (B-PISN); Digital Subscriber Signalling System No. two (DSS2), Broadband Inter-Exchange Signalling (B-QSIG), and Signalling System No. 7 (SS7); Prenegotiation; Part 3: Test Suite Structure and Test Purposes (TSS&TP) specification

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European Standard (Telecommunications series)

**Broadband Integrated Services Digital Network (B-ISDN) and
Broadband Private Integrated Services Network (B-PISN);
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Contents

Intellectual Property Rights	4
Foreword	4
1 Scope	5
2 References	5
3 Definitions and abbreviations	6
3.1 Definitions	6
3.2 Abbreviations	6
4 Test Suite Structure (TSS)	6
5 Test Purposes (TP)	7
5.1 Introduction	7
5.1.1 TP naming convention	7
5.1.2 Source of TP definition	7
5.1.3 Test strategy	7
5.2 TPs for the prenegotiation	7
5.2.1 Signalling procedures at an originating or terminating CC entity	7
5.2.1.1 Originating CC entity	7
5.2.1.2 Terminating CC entity	8
5.2.1.3 Originating or terminating CC entity	8
5.2.1.3.1 Initiator	8
5.2.1.3.2 Responder	9
6 Compliance	10
7 Requirements for a comprehensive testing service	10
Bibliography	11
History	12

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[SIST EN 302 091-3 V1.1.1:2005](https://standards.iteh.ai/catalog/standards/sist/12bc6654-419b-4095-85ed-cae7aac00348/sist-en-302-091-3-v1-1-1-2005)

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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 standard covering the Digital Subscriber Signalling System No. 2 (DSS2), Broadband Inter-Exchange Signalling (B-QSIG), and Signalling System No. 7 (SS7) protocol specification for Broadband Integrated Services Digital Network (B-ISDN) and Broadband Private Integrated Services Network (B-PISN) Prenegotiation, 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&IP) specification";**
- Part 4: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification".

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1 Scope

The present document specifies the Test Suite Structure and Test Purposes (TSS&TP) for the Q_B , S_B , T_B and co-incident S_B/T_B reference point (as defined in ITU-T Recommendation I.413 [5]) of implementations conforming to the standards for the Digital Subscriber Signalling System No. 2 (DSS2), Broadband Inter-Exchange Signalling (B-QSIG), and Signalling System No. 7 (SS7) protocol specification for Broadband Integrated Services Digital Network (B-ISDN) and Broadband Private Integrated Services Network (B-PISN) Prenegotiation, EN 302 091-1 [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 302 091-1 (V1.1): "Broadband Integrated Services Digital Network (B-ISDN) and Broadband Private Integrated Services Network (B-PISN); Digital Subscriber Signalling System No. two (DSS2), Broadband Inter-Exchange Signalling (B-QSIG), and Signalling System No.7 (SS7); Prenegotiation; Part 1: Protocol specification".
- [2] ETSI EN 302 091-2 (V1.1): "Broadband Integrated Services Digital Network (B-ISDN) and Broadband Private Integrated Services Network (B-PISN); Digital Subscriber Signalling System No. two (DSS2), Broadband Inter-Exchange Signalling (B-QSIG), and Signalling System No.7 (SS7); Prenegotiation; Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification".
- [3] ISO/IEC 9646-1: "Information Technology - Open Systems Interconnection - Conformance Testing Methodology and Framework; Part 1: General Concepts".
- [4] ISO/IEC 9646-2: "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".

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 302 091-1 [1]:

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]

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3.2 Abbreviations (standards.iteh.ai)

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

APDU	Application Protocol Data Unit
ATM	Abstract Test Method
ATS	Abstract Test Suite
CC	Call Control
DSS2	Digital Subscriber Signalling System No. two
B-ISDN	Broadband 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

4 Test Suite Structure (TSS)

- Signalling procedures at an originating or terminating Call Control (CC) entity
 - Originating CC entity (01)
 - Terminating CC entity (02)
 - Originating or terminating CC entity
 - Initiator (03)
 - Responder (04)

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 01, within each group. Groups are organized according to the TSS. Additional references are added to identify the actual test suite (see table 1).

Table 1: TP identifier naming convention scheme

Identifier: <suite_id>_<group>_<nnn>
<suite_id> = layer + type of IUT: "L3PR" for Layer 3 PR enegotiation
<group> = group number: two character field representing the group reference according to TSS
<nn> = sequential number: (01-99)

5.1.2 Source of TP definition

The TPs are based on EN 302 091-1 [1].

5.1.3 Test strategy

As the base standard EN 302 091-1 [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 302 091-2 [2].

The TPs are only based on conformance requirements related to the externally observable behaviour of the IUT, and are limited to conceivable situations with which a real implementation is likely to be faced (ETS 300 406 [6]).

5.2 TPs for the prenegotiation

Unless specified:

The messages indicated are valid and contain at least the mandatory parameters and possibly optional parameters.

The parameters indicated are valid and contain at least the mandatory fields and possibly optional fields.

5.2.1 Signalling procedures at an originating or terminating CC entity

Test purposes for EN 302 091-1 [1], subclause 9.2.

5.2.1.1 Originating CC entity

L3PR_01_01

Ensure that the IUT in the Idle call control state, to invoke prenegotiation concurrently with the call establishment, sends a preNegotiate invoke Application Protocol Data Unit (APDU) together with the callEstablish invoke APDU.

Selection: IUT supports prenegotiation together with call establishment as originating CC. PICS: MC1