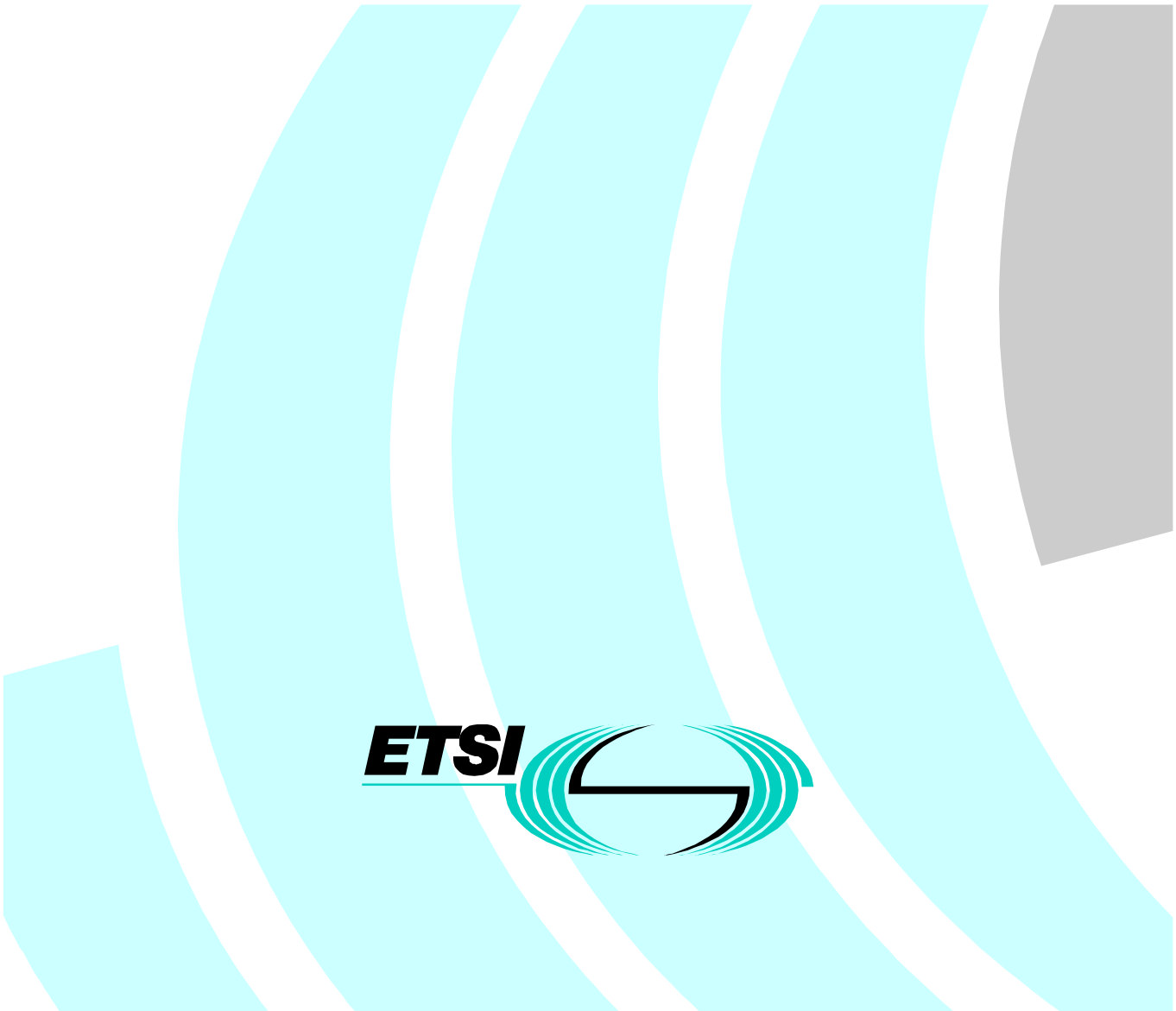
EN 301 001-5 V1.1.3 (1998-10)

European Standard (Telecommunications series)

Integrated Services Digital Network (ISDN); Outgoing Call Barring (OCB) supplementary services; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 5: Test Suite Structure and Test Purposes (TSS&TP) specification for the network



Reference
DEN/SPS-05107-5 (99p90ie0.PDF)

Keywords
ISDN, DSS1, supplementary service, testing,
TSS&TP, network

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

Contents

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 SR 000 314: *"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 or http://www.etsi.org/ipr).

Pursuant to the ETSI 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 SR 000 314 (or the updates on the ETSI Web server) 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).

The present document 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); Outgoing Call Barring (OCB) 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	
Date of adoption of this EN:	2 October 1998
Date of latest announcement of this EN (doa):	31 January 1999
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 July 1999
Date of withdrawal of any conflicting National Standard (dow):	31 July 1999

1 Scope

This fifth part of EN 301 001 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 the Outgoing Call Barring (OCB) supplementary service for the pan-European Integrated Services Digital Network (ISDN) by means of the Digital Subscriber Signalling System No. one (DSS1) protocol, EN 301 001-1 [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 User side of the T reference point or coincident S and T reference point of implementations conforming to EN 301 001-1 [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 301 001-1: "Integrated Services Digital Network (ISDN); Outgoing Call Barring (OCB) supplementary services; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".

[2] EN 301 001-2: "Integrated Services Digital Network (ISDN); Outgoing Call Barring (OCB) supplementary services; 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 (1991): "Numbering plan for the ISDN era".

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

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].

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 (e.g. send message) which normally does not require any special operator intervention as 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 (TP): Refer to ISO/IEC 9646-1 [3].

3.1.2 Definitions related to EN 301 001-1

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
ISDN	Integrated Services Digital Network
IUT	Implementation Under Test
OCB	Outgoing Call Barring
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation eXtra Information for Testing
TP	Test Purpose
TSS	Test Suite Structure

4 Test Suite Structure (TSS)

	Group
Signalling procedures at the coincident S and T reference point and for interworking with private ISDN	
Activation	N01
Deactivation	N02
Interrogation	N03
Invocation and operation	N04

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:	"OCB"	
<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 301 001-1 [1].

5.1.3 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 for OCB

TP part	Text	Example
Header	**<Identifier>** *tab* **<paragraph number in base ETS>** *tab* **<condition>** *CR.*	see table 1 **subclause 0.0.0** **mandatory, optional (see note 1)**
Stimulus	Ensure that the IUT in the <basic call state> or <OCB state> <trigger> *see below for message structure* *or* <goal>	 U10 etc. receiving a XXXX message to request a ...
Reaction	<action> <conditions> *if the action is sending* *see below for message structure* <next action>, *etc.* and remains in the same state *or* and enters state <state>	sends, saves, does, etc. using en bloc sending, ...
Message structure	<message type> message containing a *a)* <info element> information element with *b)* a <field name> encoded as *or* including <coding of the field> and *back to a or b,*	SETUP, FACILITY, CONNECT, ... Bearer capability, Facility, ...
NOTE 1: Mandatory test purpose are always applicable. Optional test purposes are applicable according to the configuration options of the IUT. If the configuration option is covered by a PICS item, a selection criteria is indicated, else the selection of the corresponding test cases will depend on test suite parameters (PIXIT) in the ATS. NOTE 2: 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.		

5.1.4 Test strategy

As the base standard EN 301 001-1 [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 301 001-2 [2]. The criteria applied include 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.

5.2 Network TPs for OCB

All PICS items referred to in this subclause are as specified in EN 301 001-2 [2] unless indicated otherwise by another numbered reference.

Unless specified:

- The messages indicated are valid and contain at least the mandatory information elements and possibly optional information elements.
- The information elements indicated are valid and contain at least the mandatory parameters and possibly optional parameters.
- The FACILITY messages are transmitted using the point to point connectionless bearer independent transport mechanism (dummy call reference, DL-DATA-REQUEST) as specified in EN 300 196-1 [6], subclause 8.3.2.2. Where the broadcast connectionless bearer independent transport mechanism applies (dummy call reference, DL-UNIT DATA-REQUEST), the indication of the corresponding subclause of EN 300 196-1 [6] is given (i.e. subclause 8.3.2.4).

5.2.1 Signalling procedures at the coincident S and T reference point and for interworking with private ISDN

NOTE: The signalling procedures use mainly the bearer-independent connectionless transport mechanism with the dummy call reference. To augment the readability of the test purposes, basic call states are only mentioned where significant.

5.2.1.1 Activation

Selection: IUT supports the OCB-UC activation procedures. PICS: MC 9.

Unless specified, to check the activation of the OCB supplementary service, the IUT is supposed to have no instance of the OCB service activated before to start the execution of the test.

OCB_N01_001 subclause 9.1.1.1 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component including the basicService parameter set to "allServices",
sends a FACILITY message containing a Facility information element with an ActivationOcb return result component, if a multipoint configuration applies sends a FACILITY message (subclause 8.3.2.4 of EN 300 196-1 [6]) with an Activation StatusNotificationOcb invoke component, activates the OCB supplementary service and enters the OCB Idle state.

OCB_N01_002 subclause 9.1.1.1 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component including the basicService parameter set to a specific basic service for which the OCB supplementary service is subscribed to,
sends a FACILITY message containing a Facility information element with an ActivationOcb return result component, if a multipoint configuration applies sends a FACILITY message (subclause 8.3.2.4 of EN 300 196-1 [6]) with an Activation StatusNotificationOcb invoke component, activates the OCB supplementary service and enters the OCB Idle state.

OCB_N01_003 subclause 9.1.1.1 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component, with a pin parameter including a PIN registered for the single ISDN number of the access, without servedUserNr parameter, and the value of the subscription option "OCB provision on access/number basis" is either: "on access basis", or "on ISDN number basis" and the MSN supplementary is not provided,

sends a FACILITY message containing a Facility information element with an ActivationOcb return result component, if a multipoint configuration applies sends a FACILITY message (subclause 8.3.2.4 of EN 300 196-1 [6]) with an Activation StatusNotificationOcb invoke component, activates the OCB supplementary service and enters the OCB Idle state.

OCB_N01_004 subclause 9.1.1.1 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component, with a pin parameter including a PIN registered for the single ISDN number of the access, with a servedUserNr parameter set to "individualNumbers" including an invalid number, and the value of the subscription option "OCB provision on access/number basis" is either: "on access basis", or "on ISDN number basis" and the MSN supplementary is not provided,

sends a FACILITY message containing a Facility information element with an ActivationOcb return result component, if a multipoint configuration applies sends a FACILITY message (subclause 8.3.2.4 of EN 300 196-1 [6]) with an Activation StatusNotificationOcb invoke component, activates the OCB supplementary service and enters the OCB Idle state.

NOTE: According to EN 301 001-1 [1], the network shall ignore the value of the servedUserNr parameter.

OCB_N01_005 subclause 9.1.1.1 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component with a servedUserNr parameter set to "individualNumbers" including a valid number, with a pin parameter including a PIN registered for the indicated ISDN number, and the value of the subscription option "OCB provision on access/number basis" is "on ISDN number basis" and the MSN supplementary is provided,

sends a FACILITY message containing a Facility information element with an ActivationOcb return result component, if a multipoint configuration applies sends a FACILITY message (subclause 8.3.2.4 of EN 300 196-1 [6]) with an Activation StatusNotificationOcb invoke component, activates the OCB supplementary service and enters the OCB Idle state.

Selection: IUT supports the provision of OCB on ISDN number basis. PICS: MC 7.2.

OCB_N01_006 subclause 9.1.1.1 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component with a servedUserNr parameter set to "allNumbers", with a pin parameter including a PIN registered for the default ISDN number on the access, with the value of the subscription option "OCB provision on access/number basis" set on "on ISDN number basis" and the MSN supplementary is provided, with the value of the subscription option "activation and deactivation for all ISDN numbers on the same access" set on "yes"

sends a FACILITY message containing a Facility information element with an ActivationOcb return result component, if a multipoint configuration applies sends a FACILITY message (subclause 8.3.2.4 of EN 300 196-1 [6]) with an Activation StatusNotificationOcb invoke component, activates the OCB supplementary service and enters the OCB Idle state.

Selection: IUT supports the activation of OCB for all ISDN numbers on the same access. PICS: MC 8.

OCB_N01_007 subclause 9.1.1.1 mandatory
Ensure that the IUT in the OCB Idle state, with an instance of OCB supplementary service being activated for a specific barring program, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component with a barringProgram parameter including an other barring program value (reactivation procedure),

sends a FACILITY message containing a Facility information element with an ActivationOcb return result component, if a multipoint configuration applies sends a FACILITY message (subclause 8.3.2.4 of EN 300 196-1 [6]) with an Activation StatusNotificationOcb invoke component indicating the new barring program value, deactivates the OCB supplementary service instance with the previous barring program value, activates the OCB supplementary service with the new barring program value and enters the OCB Idle state.

OCB_N01_008 subclause 9.1.1.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component including the basicService parameter set to a specific basic service which is not subscribed to,

sends a FACILITY message containing a Facility information element with an ActivationOcb return error component indicating "basicServiceNotProvided" do not activate the OCB supplementary service and enters the OCB Idle state.

OCB_N01_009 subclause 9.1.1.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component including the basicService parameter set to a specific basic service for which the OCB supplementary service is not available,

sends a FACILITY message containing a Facility information element with an ActivationOcb return error component indicating "notAvailable" do not activate the OCB supplementary service and enters the OCB Idle state.

OCB_N01_010 subclause 9.1.1.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component including the basicService parameter set to a specific basic service for which the OCB supplementary service is not subscribed to,

sends a FACILITY message containing a Facility information element with an ActivationOcb return error component indicating "notSubscribed" do not activate the OCB supplementary service and enters the OCB Idle state.

OCB_N01_011 subclause 9.1.1.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component with a servedUserNr parameter set to "individualNumbers" including an invalid number, and the value of the subscription option "OCB provision on access/number basis" is "on ISDN number basis" and the MSN supplementary is provided,

sends a FACILITY message containing a Facility information element with an ActivationOcb return error component indicating "invalidServedUserNr" do not activate the OCB supplementary service and enters the OCB Idle state.

Selection: IUT supports the provision of OCB on ISDN number basis. PICS: MC 7.2.

OCB_N01_012 subclause 9.1.1.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component without servedUserNr parameter, and the value of the subscription option "OCB provision on access/number basis" is "on ISDN number basis" and the MSN supplementary is provided,

sends a FACILITY message containing a Facility information element with an ActivationOcb return error component indicating "invalidServedUserNr" do not activate the OCB supplementary service and enters the OCB Idle state.

Selection: IUT supports the provision of OCB on ISDN number basis. PICS: MC 7.2.

OCB_N01_013 subclause 9.1.1.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component with a servedUserNr parameter set to "allNumbers", with the value of the subscription option "OCB provision on access/number basis" set on "on ISDN number basis" and the MSN supplementary is provided, with the value of the subscription option "activation and deactivation for all ISDN numbers on the same access" set on "no"

sends a FACILITY message containing a Facility information element with an ActivationOcb return error component indicating "invalidServedUserNr" do not activate the OCB supplementary service and enters the OCB Idle state.

Selection: IUT does not support the activation of OCB for all ISDN numbers on the same access. PICS: NOT MC 8.

OCB_N01_014 subclause 9.1.1.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component with a pin parameter including a PIN value which does not match the registered PIN,

sends a FACILITY message containing a Facility information element with an ActivationOcb return error component indicating "invalidPin" do not activate the OCB supplementary service and enters the OCB Idle state.

OCB_N01_015 subclause 9.1.1.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component with a pin parameter including a PIN value which matches the registered PIN but is marked as being expired,

sends a FACILITY message containing a Facility information element with an ActivationOcb return error component indicating "changeOfPinRequired" do not activate the OCB supplementary service and enters the OCB Idle state.

OCB_N01_016 subclause 9.1.1.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component with a pin parameter including a valid PIN value, but the number of times an invalid PIN can be specified has been exceeded,

sends a FACILITY message containing a Facility information element with an ActivationOcb return error component indicating "userControlBlocked" do not activate the OCB supplementary service and enters the OCB Idle state.

OCB_N01_017 subclause 9.1.1.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component with a barringProgram parameter including a barring program value which is not available,

sends a FACILITY message containing a Facility information element with an ActivationOcb return error component indicating "invalidBarringProgram" do not activate the OCB supplementary service and enters the OCB Idle state.

OCB_N01_018 subclause 9.1.1.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component without a barringProgram parameter and more than one barring program is available,

sends a FACILITY message containing a Facility information element with an ActivationOcb return error component indicating "noBarringProgram" do not activate the OCB supplementary service and enters the OCB Idle state.

OCB_N01_019 subclause 9.1.1.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component and the resources required to perform the OCB supplementary service are not available,

sends a FACILITY message containing a Facility information element with an ActivationOcb return error component indicating "resourceUnavailable" do not activate the OCB supplementary service and enters the OCB Idle state.

OCB_N01_020 subclause 9.1.1.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an ActivationOcb invoke component and the provision of the OCB supplementary service are not available is precluded by the supplementary services interactions procedures,

sends a FACILITY message containing a Facility information element with an ActivationOcb return error component indicating "supplementaryServiceInteractionNotAllowed" do not activate the OCB supplementary service and enters the OCB Idle state.

5.2.1.2 Deactivation

Selection: IUT supports the OCB-UC deactivation procedures. PICS: MC 10.

Unless specified, to check the deactivation of the OCB supplementary service, the IUT is supposed to have activated, according to the test purpose, a corresponding instance of the OCB service before to start the execution of the test.

OCB_N02_001 subclause 9.1.2.1 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with a deactivationOcb invoke component including the basicService parameter set to "allServices",
sends a FACILITY message containing a Facility information element with a deactivationOcb return result component, if a multipoint configuration applies sends a FACILITY message (subclause 8.3.2.4 of EN 300 196-1 [6]) with a deactivation StatusNotificationOcb invoke component, deactivates the OCB supplementary service and enters the OCB Idle state.

OCB_N02_002 subclause 9.1.2.1 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with a deactivationOcb invoke component including the basicService parameter set to a specific basic service,
sends a FACILITY message containing a Facility information element with a deactivationOcb return result component, if a multipoint configuration applies sends a FACILITY message (subclause 8.3.2.4 of EN 300 196 1 [6]) with a deactivation StatusNotificationOcb invoke component, deactivates the OCB supplementary service and enters the OCB Idle state.

OCB_N02_003 subclause 9.1.2.1 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with a deactivationOcb invoke component, with a pin parameter including a PIN registered for the single ISDN number of the access, without servedUserNr parameter, and the value of the subscription option "OCB provision on access/number basis" is either: "on access basis", or "on ISDN number basis" and the MSN supplementary is not provided,
sends a FACILITY message containing a Facility information element with a deactivationOcb return result component, if a multipoint configuration applies sends a FACILITY message (subclause 8.3.2.4 of EN 300 196-1 [6]) with a deactivation StatusNotificationOcb invoke component, deactivates the OCB supplementary service and enters the OCB Idle state.

OCB_N02_004 subclause 9.1.2.1 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with a deactivationOcb invoke component, with a pin parameter including a PIN registered for the single ISDN number of the access, with a servedUserNr parameter set to "individualNumbers" including an invalid number, and the value of the subscription option "OCB provision on access/number basis" is either: "on access basis", or "on ISDN number basis" and the MSN supplementary is not provided,
sends a FACILITY message containing a Facility information element with a deactivationOcb return result component, if a multipoint configuration applies sends a FACILITY message (subclause 8.3.2.4 of EN 300 196-1 [6]) with a deactivation StatusNotificationOcb invoke component, deactivates the OCB supplementary service and enters the OCB Idle state.

NOTE: According to EN 301 001-1 [1], the network shall ignore the value of the servedUserNr parameter.

OCB_N02_005 subclause 9.1.2.1 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with a deactivationOcb invoke component with a servedUserNr parameter set to "individualNumbers" including a valid number, with a pin parameter including a PIN registered for the indicated ISDN number, and the value of the subscription option "OCB provision on access/number basis" is "on ISDN number basis" and the MSN supplementary is provided,
sends a FACILITY message containing a Facility information element with a deactivationOcb return result component, if a multipoint configuration applies sends a FACILITY message (subclause 8.3.2.4 of EN 300 196-1 [6]) with a deactivation StatusNotificationOcb invoke component, deactivates the OCB supplementary service and enters the OCB Idle state.

Selection: IUT supports the provision of OCB on ISDN number basis. PICS: MC 7.2.

OCB_N02_006 subclause 9.1.2.1 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with a deactivationOcb invoke component with a servedUserNr parameter set to "allNumbers", with a pin parameter including a PIN registered for the default ISDN number on the access, with the value of the subscription option "OCB provision on access/number basis" set on "on ISDN number basis" and the MSN supplementary is provided, with the value of the subscription option "deactivation and dedeactivation for all ISDN numbers on the same access" set on "yes"

sends a FACILITY message containing a Facility information element with a deactivationOcb return result component, if a multipoint configuration applies sends a FACILITY message (subclause 8.3.2.4 of EN 300 196-1 [6]) with a deactivation StatusNotificationOcb invoke component, deactivates the OCB supplementary service and enters the OCB Idle state.

Selection: IUT supports the activation of OCB for all ISDN numbers on the same access. PICS: MC 8.

OCB_N02_007 subclause 9.1.2.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with a deactivationOcb invoke component including the basicService parameter set to a specific basic service which is not subscribed to,

sends a FACILITY message containing a Facility information element with a deactivationOcb return error component indicating "basicServiceNotProvided" do not deactivate the OCB supplementary service and enters the OCB Idle state.

OCB_N02_008 subclause 9.1.2.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with a deactivationOcb invoke component including the basicService parameter set to a specific basic service for which the OCB supplementary service is not available,

sends a FACILITY message containing a Facility information element with a deactivationOcb return error component indicating "notAvailable" do not deactivate the OCB supplementary service and enters the OCB Idle state.

OCB_N02_009 subclause 9.1.2.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with a deactivationOcb invoke component including the basicService parameter set to a specific basic service for which the OCB supplementary service is not subscribed to,

sends a FACILITY message containing a Facility information element with a deactivationOcb return error component indicating "notSubscribed" do not deactivate the OCB supplementary service and enters the OCB Idle state.

OCB_N02_010 subclause 9.1.2.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with a deactivationOcb invoke component with a servedUserNr parameter set to "individualNumbers" including an invalid number, and the value of the subscription option "OCB provision on access/number basis" is "on ISDN number basis" and the MSN supplementary is provided,

sends a FACILITY message containing a Facility information element with a deactivationOcb return error component indicating "invalidServedUserNr" do not deactivate the OCB supplementary service and enters the OCB Idle state.

Selection: IUT supports the provision of OCB on ISDN number basis. PICS: MC 7.2.

OCB_N02_011 subclause 9.1.2.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with a deactivationOcb invoke component without servedUserNr parameter, and the value of the subscription option "OCB provision on access/number basis" is "on ISDN number basis" and the MSN supplementary is provided,

sends a FACILITY message containing a Facility information element with a deactivationOcb return error component indicating "invalidServedUserNr" do not deactivate the OCB supplementary service and enters the OCB Idle state.

Selection: IUT supports the provision of OCB on ISDN number basis. PICS: MC 7.2.

OCB_N02_012 subclause 9.1.2.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with a deactivationOcb invoke component with a servedUserNr parameter set to "allNumbers", with the value of the subscription option "OCB provision on access/number basis" set on "on ISDN number basis" and the MSN supplementary is provided, with the value of the subscription option "deactivation and deactivation for all ISDN numbers on the same access" set on "no"

sends a FACILITY message containing a Facility information element with a deactivationOcb return error component indicating "invalidServedUserNr" do not deactivate the OCB supplementary service and enters the OCB Idle state.

Selection: IUT does not support the activation of OCB for all ISDN numbers on the same access. PICS: NOT MC 8.

OCB_N02_013 subclause 9.1.2.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with a deactivationOcb invoke component with a pin parameter including a PIN value which does not match the registered PIN,

sends a FACILITY message containing a Facility information element with a deactivationOcb return error component indicating "invalidPin" do not deactivate the OCB supplementary service and enters the OCB Idle state.

OCB_N02_014 subclause 9.1.2.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with a deactivationOcb invoke component with a pin parameter including a PIN value which matches the registered PIN but is marked as being expired,

sends a FACILITY message containing a Facility information element with a deactivationOcb return error component indicating "changeOfPinRequired" do not deactivate the OCB supplementary service and enters the OCB Idle state.

OCB_N02_015 subclause 9.1.2.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with a deactivationOcb invoke component with a pin parameter including a valid PIN value, but the number of times an invalid PIN can be specified has been exceeded,

sends a FACILITY message containing a Facility information element with a deactivationOcb return error component indicating "userControlBlocked" do not deactivate the OCB supplementary service and enters the OCB Idle state.

OCB_N02_016 subclause 9.1.2.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with a deactivationOcb invoke component and the OCB supplementary service is not activated,

sends a FACILITY message containing a Facility information element with a deactivationOcb return error component indicating "notActivated" do not deactivate the OCB supplementary service and enters the OCB Idle state.

5.2.1.3 Interrogation

Selection: IUT supports the OCB-UC interrogation procedures. PICS: MC 11.

Unless specified, to check the interrogation of the OCB supplementary service, the IUT is supposed to have, according to the test purpose, a corresponding instance of the OCB service activated before to start the execution of the test.

OCB_N03_001 subclause 9.1.3.1 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an interrogationOcb invoke component including the basicService parameter set to "allServices",

sends a FACILITY message containing a Facility information element with an interrogationOcb return result component.

OCB_N03_002 subclause 9.1.3.1 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an interrogationOcb invoke component including the basicService parameter set to a specific basic service,

sends a FACILITY message containing a Facility information element with an interrogationOcb return result component.

OCB_N03_003 subclause 9.1.3.1 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an interrogationOcb invoke component, without servedUserNr parameter, and the value of the subscription option "OCB provision on access/number basis" is either: "on access basis", or "on ISDN number basis" and the MSN supplementary is not provided,

sends a FACILITY message containing a Facility information element with an interrogationOcb return result component.

OCB_N03_004 subclause 9.1.3.1 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an interrogationOcb invoke component, with a servedUserNr parameter set to "individualNumbers" including an invalid number, and the value of the subscription option "OCB provision on access/number basis" is either: "on access basis", or "on ISDN number basis" and the MSN supplementary is not provided,

sends a FACILITY message containing a Facility information element with an interrogationOcb return result component.

NOTE: According to EN 301 001-1 [1], the network shall ignore the value of the servedUserNr parameter.

OCB_N03_005 subclause 9.1.3.1 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an interrogationOcb invoke component with a servedUserNr parameter set to "individualNumbers" including a valid number, and the value of the subscription option "OCB provision on access/number basis" is "on ISDN number basis" and the MSN supplementary is provided,

sends a FACILITY message containing a Facility information element with an interrogationOcb return result component.

Selection: IUT supports the provision of OCB on ISDN number basis. PICS: MC 7.2.

OCB_N03_006 subclause 9.1.3.1 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an interrogationOcb invoke component and the OCB supplementary service is not provided,

sends a FACILITY message containing a Facility information element with an interrogationOcb return result component with an intOcbResult having a size zero.

OCB_N03_007 subclause 9.1.3.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an interrogationOcb invoke component including the basicService parameter set to a specific basic service which is not subscribed to,

sends a FACILITY message containing a Facility information element with an interrogationOcb return error component indicating "basicServiceNotProvided".

OCB_N03_008 subclause 9.1.3.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an interrogationOcb invoke component including the basicService parameter set to a specific basic service for which the OCB supplementary service is not available,

sends a FACILITY message containing a Facility information element with an interrogationOcb return error component indicating "notAvailable".

OCB_N03_009 subclause 9.1.3.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an interrogationOcb invoke component including the basicService parameter set to a specific basic service for which the OCB supplementary service is not subscribed to,

sends a FACILITY message containing a Facility information element with an interrogationOcb return error component indicating "notSubscribed".

OCB_N03_010 subclause 9.1.3.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an interrogationOcb invoke component with a servedUserNr parameter set to "individualNumbers" including an invalid number, and the value of the subscription option "OCB provision on access/number basis" is "on ISDN number basis" and the MSN supplementary is provided,

sends a FACILITY message containing a Facility information element with an interrogationOcb return error component indicating "invalidServedUserNr".

Selection: IUT supports the provision of OCB on ISDN number basis. PICS: MC 7.2.

OCB_N03_011 subclause 9.1.3.2 mandatory
Ensure that the IUT in the OCB Idle state, on receipt of a FACILITY message containing a Facility information element with an interrogationOcb invoke component without servedUserNr parameter, and the value of the subscription option "OCB provision on access/number basis" is "on ISDN number basis" and the MSN supplementary is provided,

sends a FACILITY message containing a Facility information element with an interrogationOcb return error component indicating "invalidServedUserNr".

Selection: IUT supports the provision of OCB on ISDN number basis. PICS: MC 7.2.

5.2.1.4 Invocation and operation

Selection: IUT supports the OCB invocation and operation procedures. PICS: MC 12.

Unless specified, to check the invocation of the OCB supplementary service, the IUT is supposed to have, according to the test purpose, a corresponding instance of the OCB service activated before to start the execution of the test.

OCB_N04_001 subclause 9.2.1 mandatory
Ensure that the IUT in the Null call state N0 and OCB Idle state, on receipt of a SETUP message containing a Bearer capability and a High layer compatibility information element corresponding to a basic service for which the OCB supplementary service is not activated,

sends a SETUP ACKNOWLEDGE or a CALL PROCEEDING message and enters the Overlap sending N2 or the Outgoing call proceeding N3 call state.

OCB_N04_002 subclause 9.2.1 mandatory
Ensure that the IUT in the Null call state N0 and OCB Idle state, on receipt of a SETUP message containing a Bearer capability and a High layer compatibility information element corresponding to a basic service for which the OCB supplementary service is activated, and the call is not to be barred according to the barring program,

sends a SETUP ACKNOWLEDGE or a CALL PROCEEDING message and enters the Overlap sending N2 or the Outgoing call proceeding N3 call state.

OCB_N04_003 subclause 9.2.1 mandatory
Ensure that the IUT in the Null call state N0 and OCB Idle state, on receipt of a SETUP message containing a Bearer capability and a High layer compatibility information element corresponding to a basic service for which the OCB supplementary service is activated, and the call is to be barred according to the barring program and the content of the SETUP message,

sends a call clearing message containing the cause #31 "normal, unspecified" and an OcbInvoked invoke component and enters the corresponding call state.

OCB_N04_004 subclause 9.2.1 mandatory
Ensure that the IUT in the Null call state N2 and OCB Idle state, on receipt of an INFORMATION message, and the call is to be barred according to the barring program and the content of the INFORMATION message,

sends a call clearing message containing the cause #31 "normal, unspecified" and an OcbInvoked invoke component and enters the corresponding call state.

OCB_N04_005 subclause 9.2.1 mandatory
Ensure that the IUT in the Null call state N0 and OCB Idle state, on receipt of a SETUP message containing a Bearer capability and a High layer compatibility information element corresponding to a basic service for which the OCB supplementary service is activated, including a Facility information element with a DisableOcb invoke component, and the call is to be barred according to the barring program and the content of the SETUP message,

sends a SETUP ACKNOWLEDGE or a CALL PROCEEDING message and enters the Overlap sending N2 or the Outgoing call proceeding N3 call state.

Selection: IUT supports the disabling procedure. PICS: MC 5.

OCB_N04_006 subclause 9.2.2 mandatory
Ensure that the IUT in the Null call state N0 and OCB Idle state, on receipt of a SETUP message containing a Bearer capability and a High layer compatibility information element corresponding to a basic service for which the OCB supplementary service is activated, including a Facility information element with a DisableOcb invoke component, and the call is to be barred according to the barring program and the content of the SETUP message, and the disabling procedure is not allowed,

sends a call clearing message containing the cause #31 "normal, unspecified" and a DisableOcb return error component indicating the error value "notImplemented" and enters the corresponding call state.

Selection: IUT does not supports the disabling procedure. PICS: NOT MC 5.

OCB_N04_007 subclause 9.2.2 mandatory
Ensure that the IUT in the Null call state N0 and OCB Idle state, on receipt of a SETUP message containing a Bearer capability and a High layer compatibility information element corresponding to a basic service for which the OCB supplementary service is activated, including a Facility information element with a DisableOcb invoke component with an invalid PIN value, and the call is to be barred according to the barring program and the content of the SETUP message,

sends a call clearing message containing the cause #31 "normal, unspecified" and a DisableOcb return result component indicating the error value "invalidPin" and enters the corresponding call state.

Selection: IUT supports the disabling procedure. PICS: MC 5.

OCB_N04_008 subclause 9.2.2 mandatory
Ensure that the IUT in the Null call state N0 and OCB Idle state, on receipt of a SETUP message containing a Bearer capability and a High layer compatibility information element corresponding to a basic service for which the OCB supplementary service is activated, including a Facility information element with a DisableOcb invoke component with a PIN value being expired, and the call is to be barred according to the barring program and the content of the SETUP message,

sends a call clearing message containing the cause #31 "normal, unspecified" and a DisableOcb return result component indicating the error value "changeOfPinRequired" and enters the corresponding call state.

Selection: IUT supports the disabling procedure. PICS: MC 5.

OCB_N04_009 subclause 9.2.2 mandatory
Ensure that the IUT in the Null call state N0 and OCB Idle state, on receipt of a SETUP message containing a Bearer capability and a High layer compatibility information element corresponding to a basic service for which the OCB supplementary service is activated, including a Facility information element with a DisableOcb invoke component with an invalid PIN value, and the call is to be barred according to the barring program and the content of the SETUP message,

sends a call clearing message containing the cause #31 "normal, unspecified" and a DisableOcb return result component indicating the error value "invalidPin" and enters the corresponding call state.

Selection: IUT supports the disabling procedure. PICS: MC 5.

OCB_N04_010 subclause 9.2.2 mandatory
Ensure that the IUT in the Null call state N0 and OCB Idle state, on receipt of a SETUP message containing a Bearer capability and a High layer compatibility information element corresponding to a basic service for which the OCB supplementary service is activated, including a Facility information element with a DisableOcb invoke component but the number of times an invalid PIN can be specified has been exceeded, and the call is to be barred according to the barring program and the content of the SETUP message,

sends a call clearing message containing the cause #31 "normal, unspecified" and a DisableOcb return result component indicating the error value "userControlBlocked" and enters the corresponding call state.

Selection: IUT supports the disabling procedure. PICS: MC 5.

6 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 4;

c) use the same naming conventions for the test groups and test cases;

d) maintain the relationship specified in clause 5 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 5 shall be included in a compliant ATS.

7 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 network equipment claiming conformance to EN 301 001-1 [1].

History

Document history				
V1.1.1	January 1998	Public Enquiry	PE 9822:	1998-01-30 to 1998-05-29
V1.1.2	July 1998	Vote	V 9839:	1998-07-28 to 1998-09-25
V1.1.3	October 1998	Publication		

ISBN 2-7437-2560-5
Dépôt légal : Octobre 1998