

**Private Integrated Services Network (PISN);
Inter-exchange signalling protocol;
Call transfer supplementary service
for the VPN "b" service entry point;
Part 1: Test Suite Structure and Test Purposes (TSS&TP)
specification**



Reference

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Services and Protocols for Advanced Networks (SPAN), and is now submitted for the Public Enquiry phase of the ETSI standards Two-step Approval Procedure.

The present document is part 1 of a multi-part EN covering the Private Integrated Services Network (PISN); Inter-exchange signalling protocol; Call transfer supplementary service for the VPN "b" service entry point, as identified below:

Part 1: "Test Suite Structure and Test Purposes (TSS&TP)";

Part 2: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma".

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
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1 Scope

The present document specifies the Test Suite Structure and Test Purposes (TSS&TP) for the Call Transfer supplementary service of the Inter-exchange signalling protocol for Private Integrated Services Networks (PISN).

The objective of this TSS and TPs specification is to provide conformance tests which give a greater probability of inter-operability. The TSS and TPs specification covers the procedures described in EN 300 261 [3].

The ISO standard for the methodology of conformance testing (ISO/IEC 9646-1 [4], ISO/IEC 9646-2 [5] and ISO/IEC 9646-3 [6]) is used as basis for the test methodology.

The Test Suite Structure and Test Purposes specified in this standard are only intended for VPN scenarios at the "b" service entry point.

The VPN "b" service entry point is defined in EN 301 060-1 [9] and ETR 172 [15].

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.

- [1] EN 300 172 (V1.4): "Private Integrated Services Network (PISN); Inter-exchange signalling protocol; Circuit-mode basic services [ISO/IEC 11572 (1996) modified]".
- [2] EN 300 239: "Private Integrated Services Network (PISN); Inter-exchange signalling protocol; Generic functional protocol for the support of supplementary services [ISO/IEC 11582 (1995), modified]".
- [3] EN 300 261: "Private Integrated Services Network (PISN); Inter-exchange signalling protocol; Call transfer supplementary service [ISO/IEC 13869 (1995) modified]".
- [4] ISO/IEC 9646-1 (1994): "Information technology; Open Systems Interconnection; Conformance testing methodology and framework; Part 1: General concepts".
- [5] ISO/IEC 9646-2 (1994): "Information technology; Open Systems Interconnection; Conformance testing methodology and framework; Part 2: Abstract test suite specification".
- [6] ISO/IEC 9646-3: "Information technology; Open Systems Interconnection; Conformance testing methodology and framework; Part 3: The Tree and Tabular Combined Notation (TTCN)".
- [7] ITU-T Recommendation I.112 (1993): "Vocabulary of terms for ISDNs".
- [8] ITU-T Recommendation I.210 (1993): "Principles of telecommunication services supported by an ISDN and the means to describe them".
- [9] EN 301 060-1 (1998): "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Basic call control; Enhancement at the "b" service entry point for Virtual Private Network (VPN) applications; Part 1: Protocol specification".
- [10] ETS 300 260: "Private Integrated Services Network (PISN); Specification, functional models and information flows; Call transfer supplementary service".

- [11] EN 300 171: "Private Integrated Services Network (PISN); Specification, functional models and information flows; Control aspects of circuit-mode basic services [ISO/IEC 11574 (1994) modified]".
- [12] ETS 300 238: "Private Integrated Services Network (PISN); Inter-exchange signalling protocol; Name identification supplementary services [ISO/IEC 13868 (1995) modified]".
- [13] ISO/IEC 11579-1: "Information technology; Telecommunications and information exchange between systems; Private integrated services network; Part 1: Reference configuration for PISN Exchanges (PINX)".
- [14] I-ETS 300 808: "Private Integrated Services Network (PISN); Cordless Terminal Mobility (CTM); Inter-exchange signalling protocol; Cordless terminal outgoing call additional network feature".
- [15] ETR 172: "Business TeleCommunications (BTC); Virtual Private Networking (VPN); Services and networking aspects; Standardization requirements and work items".

3 Definitions and abbreviations

3.1 Definitions

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

Abstract Test Suite (ATS): refer to ISO/IEC 9646-1 [4]

Implementation Under Test (IUT): refer to ISO/IEC 9646-1 [4]

Protocol Implementation Conformance Statement (PICS): refer to ISO/IEC 9646-1 [4]

PICS proforma: refer to ISO/IEC 9646-1 [4]

Test Purpose (TP): refer to ISO/IEC 9646-1 [4]

alerting: see EN 300 261 [3]

answered: see EN 300 261 [3]

Application Protocol Data Unit (APDU): see EN 300 239 [2]

basic service: see ITU-T Recommendation I.210 [8]

gateway PINX: see EN 300 172 [1]

interpretation APDU: see EN 300 239 [2]

originating PINX: see EN 300 239 [2]

primary call: see ETS 300 260 [10]

private: see ISO/IEC 11579-1 [13]

Private Integrated Services Network (PISN): see ISO/IEC 11579-1 [13]

Private Integrated Services Network Exchange (PINX): see ISO/IEC 11579-1 [13]

public ISDN: see ISO/IEC 11579-1 [13]

secondary call: see EN 300 261 [3]

signalling: see ITU-T Recommendation I.112 [7]

supplementary service: see ITU-T Recommendation I.210 [8]

supplementary services control entity: see EN 300 239 [2]

telecommunication network: see ISO/IEC 11579-1 [13]

terminal: see ISO/IEC 11579-1 [13]

terminating PINX: see EN 300 239 [2]

transfer by join: see EN 300 261 [3]

transfer by rerouting: see EN 300 261 [3]

transit PINX: see EN 300 239 [2]

user: see EN 300 171 [11]

user A: see EN 300 261 [3]

user B: see EN 300 261 [3]

user C: see EN 300 261 [3]

3.2 Abbreviations

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

APDU	Application Protocol Data Unit
ATS	Abstract Test Suite
ISDN	Integrated Services Digital Network
IUT	Implementation Under Test
PICS	Protocol Implementation Conformance Statement
PINX	Private Integrated Services Network eXchange
PISN	Private Integrated Services Network
SS-CT	Call Transfer Supplementary Service
TP	Test Purpose
TSS	Test Suite Structure
VPN	Virtual Private Network

4 Test Suite Structure (TSS)

Signalling procedures at the VPN b interface

	Group
Actions for transfer by join at the Transferring PINX	Trans01
Actions for transfer by rerouting at the Transferring PINX	Trans02
Actions for transfer by join at the Primary PINX	Primr01
Actions for transfer by rerouting at the Primary PINX	Primr02
Actions for transfer by join at the Secondary PINX	Secnd01
Actions for transfer by rerouting at the Secondary PINX	Secnd02
Subsequent actions at the Primary and the Secondary PINX	Subsq01
Protocol interactions between SS-CT and other supplementary services and ANFs	Inter01

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>_<group>_<nnn>			
<ss>	=	supplementary service:	"CT"
<group>	=	group	up to 8 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 300 261 [3].

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 CCNR

TP part	Text	Example
Header	<Identifier> <i>tab</i> <paragraph number in base ETS> <i>tab</i>	see table 1 subclause 0.0.0
Stimulus	Ensure that the IUT in the <basic call state> or <CT state> <trigger> <i>see below for message structure</i> or <goal>	state 3 or CT-Idle, 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 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 <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.	

5.1.4 Test strategy

As the base standard EN 300 261 [3] 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 300 261 [3]. The criteria applied include the following:

- only the requirements from the point of view of the VPN b service entry point are considered;
- whether or not a test case can be built from the TP is not considered.

5.2 TPs for SS-CT

All PICS items referred to in this subclause are as specified in ETS 300 261 [3] unless indicated otherwise by another numbered reference.

Unless specified:

- Only the requirements from the point of view of the VPN "b" service entry point are considered. This implies that the interactions with other networks are out of scope of this specification and causes that the corresponding Test Purposes are not included in this specification.
- 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 following wording convention was defined to make the test purposes more readable:

- When a message is to be sent or received on a call independent signalling connection, the message name shall be followed by a '(sc)', e.g. CONNECT (sc) means that the CONNECT message is conveyed on a call independent signalling connection.
- All the test purposes are valid for both user and network side of the VPN b interface. In order to simplify the text and to make the test purposes more readable, only the User side Call states (Ux) are indicated in the test purposes. For the network side of the VPNb interface, the mapping table below indicates which network call state (Ny) corresponds to the user call state used in the test purpose. Equivalent call state means there that the same message flow applies from the IUT point of view (e.g.: IUT sends a SETUP message gives the call state U1 or N6).

User side call state	equivalent network side call state
U04	N07
U07	N04
U10	N10

EXAMPLE:

Ensure that the IUT in the call state U1 ...

is equivalent to the following network side test purpose:

Ensure that the IUT in the call state N6 ...

5.2.1 SS-CT signalling procedures

5.2.1.1 Actions for transfer by join at the Transferring PINX

CT_Trans01_001 subclause 6.5.1

Ensure that the IUT in the state CT-Idle, on receipt of a valid callTransferInvoke request from User A and transfer is not allowed (primary call is not in protocol control state U10 or secondary call is not in protocol control state U10 or secondary call is not in protocol control state U04 or invalid request or because of failure),
 does not take any action,
 remains in state CT-Idle.

CT_Trans01_002 subclause 6.5.1.1

Ensure that the IUT in the state CT-Idle, on receipt of a valid callTransferInvoke request from User A and transfer is allowed (primary call is in protocol control state U10 and secondary call is in protocol control state U10 and User C is in an ISDN) and not rerouting (using transfer by join),
 sends a FACILITY message containing a callTransferComplete invoke APDU to Primary PINX with the data element endDesignation and optionally redirectionNumber, redirectionName and basicCallInfoElements in the argument,
 sends a FACILITY message containing a callTransferComplete invoke APDU to Secondary PINX with the data element endDesignation and optionally redirectionNumber, redirectionName and basicCallInfoElements in the argument,
 enters state CT-Idle.

CT_Trans01_003 subclause 6.5.1.1

Ensure that the IUT in the state CT-Idle, on receipt of a valid callTransferInvoke request from User A and transfer is allowed (primary call is in protocol control state U10 and secondary call is in protocol control state U04 and User C is in an ISDN) and not rerouting (using transfer by join),

sends a FACILITY message containing a callTransferComplete invoke APDU to Primary PINX with the data element endDesignation and data element callStatus with value alerting and optionally redirectionNumber, redirectionName and basicCallInfoElements in the argument,

sends a FACILITY message containing a callTransferComplete invoke APDU to Secondary PINX with the data element endDesignation and optionally redirectionNumber, redirectionName and basicCallInfoElements in the argument,

enters state CT-Await-Answer-From-UserC.

Selection: IUT supports sending of callTransferUpdate invoke APDU. PICS: D5.

CT_Trans01_004 subclause 6.5.1.1

Ensure that the IUT in the state CT-Await-Answer-From-UserC, receiving a FACILITY message containing a callTransferUpdate invoke APDU from Primary PINX,

sends a callTransferUpdate invoke APDU corresponding of the received FACILITY message to Secondary PINX,

remains in state CT-Await-Answer-From-UserC.

Selection: IUT supports sending of callTransferUpdate invoke APDU. PICS: D5.

CT_Trans01_005 subclause 6.5.1.1

Ensure that the IUT in the state CT-Await-Answer-From-UserC, receiving a FACILITY message containing a callTransferUpdate invoke APDU from Secondary PINX,

sends a callTransferUpdate invoke APDU corresponding of the received FACILITY message to Primary PINX, remains in state CT-Await-Answer-From-UserC.

Selection: IUT supports sending of subaddressTransfer invoke APDU. PICS: D7.

CT_Trans01_006 subclause 6.5.1.1

Ensure that the IUT in the state CT-Await-Answer-From-UserC, receiving a FACILITY message containing a subaddressesTransfer invoke APDU from Primary PINX,

sends a subaddressesTransfer invoke APDU corresponding of the received FACILITY message to Secondary PINX,

remains in state CT-Await-Answer-From-UserC.

Selection: IUT supports sending of subaddressTransfer invoke APDU. PICS: D7.

CT_Trans01_007 subclause 6.5.1.1

Ensure that the IUT in the state CT-Await-Answer-From-UserC, receiving a FACILITY message containing a subaddressesTransfer invoke APDU from Secondary PINX,

sends a subaddressesTransfer invoke APDU corresponding of the received FACILITY message to Primary PINX, remains in state CT-Await-Answer-From-UserC.

CT_Trans01_008 subclause 6.5.1.1

Ensure that the IUT in the state CT-Await-Answer-From-UserC, receiving CONNECT message from the Secondary PINX,

sends a FACILITY message containing a callTransferActive invoke APDU to Primary PINX with the data element basicCallInfoElements optionally included, associates primary and secondary call, enters state CT-Idle.

CT_Trans01_009 subclause 6.5.1.1

Ensure that the IUT in the state CT-Await-Answer-From-UserC, receiving CONNECT message from the Secondary PINX containing Facility information element with a connectedName invoke APDU as defined in ETS 300 238 [12],

sends a FACILITY message containing a callTransferActive invoke APDU to Primary PINX with the data element basicCallInfoElements and/or connectedName optionally included, associates primary and secondary call, enters state CT-Idle.

CT_Trans01_010 subclause 6.5.1.1

Ensure that the IUT in the state CT-Await-Answer-From-UserC, receiving a NOTIFY message from Primary PINX,

sends a NOTIFY message containing all Notification indicator information elements received towards the Secondary PINX,

enters state CT-Await-Answer-From-UserC.

CT_Trans01_011 **subclause 6.5.1.1**

Ensure that the IUT in the state CT-Await-Answer-From-UserC, receiving a NOTIFY message from Secondary PINX,
 sends a NOTIFY message containing all Notification indicator information elements received towards the Primary PINX,
 enters state CT-Await-Answer-From-UserC.

CT_Trans01_012 **subclause 6.5.1.1**

Ensure that the IUT in the state CT-Await-Answer-From-UserC, receiving a call clearing from Primary PINX,
 sends a call clearing towards the Secondary PINX
 enters state CT-Idle.

CT_Trans01_0013 **subclause 6.5.1.1**

Ensure that the IUT in the state CT-Await-Answer-From-UserC, receiving a call clearing from Secondary PINX,
 sends a call clearing towards the Primary PINX
 enters state CT-Idle.

5.2.1.2 **Actions for transfer by rerouting at the Transferring PINX**

Selection: IUT supports SS-CT by rerouting. PICS: A2.

CT_Trans02_001 **subclause 6.5.1.3**

Ensure that the IUT in the state CT-Idle, receiving of a valid callTransferInvoke request from User A and transfer is allowed (primary call is in protocol control state U10 and secondary call is in protocol control state U10 or U04 and User C is in an ISDN) and using transfer by rerouting,
 sends a FACILITY message containing a callTransferIdentify invoke APDU on secondary call,
 starts timer T1,
 enters state CT-Await-Identify-Response.

CT_Trans02_002 **subclause 6.5.1.3**

Ensure that the IUT in the state CT-Await-Identify-Response, receiving FACILITY message containing callTransferIdentify return result APDU from the Secondary PINX with the data element callIdentity and reroutingNumber in the argument,
 sends a FACILITY message containing callTransferInitiate invoke APDU to Primary PINX with the data element callIdentity and reroutingNumber received,
 starts timer T3,
 enters state CT-Await-Initiate-Response

CT_Trans02_003 **subclause 6.5.1.3**

Ensure that the IUT in the state CT-Await-Identify-Response, receiving a call clearing from Primary PINX,
 clears secondary call,
 enters state CT-Idle.

CT_Trans02_004 **subclause 6.5.1.3**

Ensure that the IUT in the state CT-Await-Identify-Response, receiving a call clearing from Secondary PINX,
 clears primary call,
 enters state CT-Idle.

CT_Trans02_005 **subclause 6.5.1.3**

Ensure that the IUT in the state CT-Await-Initiate-Response, receiving a call clearing from Primary PINX,
 clears secondary call,
 enters state CT-Idle.

CT_Trans02_006 **subclause 6.5.1.3**

Ensure that the IUT in the state CT-Await-Initiate-Response, receiving a call clearing from Secondary PINX,
 clears primary call,
 enters state CT-Idle.

CT_Trans02_007 **subclause 6.5.1.3**

Ensure that the IUT in the state CT-Await-Initiate-Response, receiving a DISCONNECT message from Primary PINX with a callTransferInitiate return result APDU,
 continues call clearing of primary call,
 clears secondary call,
 enters state CT-Idle.

CT_Trans02_008 **subclause 6.5.1.4**

Ensure that the IUT in the state CT-Await-Identify-Response, receiving FACILITY message containing callTransferIdentify return error APDU from the Secondary PINX, and call transfer may not be reinitiated using transfer by join procedures,
does not take any action,
enters state CT-Idle.

CT_Trans02_009 **subclause 6.5.1.4**

Ensure that the IUT in the state CT-Await-Identify-Response, receiving FACILITY message containing callTransferIdentify reject APDU from the Secondary PINX, and call transfer may not be reinitiated using transfer by join procedures,
does not take any action,
enters state CT-Idle.

CT_Trans02_010 **subclause 6.5.1.4**

Ensure that the IUT in the state CT-Await-Identify-Response, receiving FACILITY message containing callTransferIdentify return error APDU from the Secondary PINX, and call transfer may be reinitiated using transfer by join procedures, and secondary call is in protocol control state U10,
sends a FACILITY message containing a callTransferComplete invoke APDU to Primary PINX with the data element endDesignation and optionally redirectionNumber, redirectionName and basicCallInfoElements in the argument,
sends a FACILITY message containing a callTransferComplete invoke APDU to Secondary PINX with the data element endDesignation and optionally redirectionNumber, redirectionName and basicCallInfoElements in the argument,
enters state CT-Idle.

CT_Trans02_011 **subclause 6.5.1.4**

Ensure that the IUT in the state CT-Await-Identify-Response, receiving FACILITY message containing callTransferIdentify return error APDU from the Secondary PINX, and call transfer may be reinitiated using transfer by join procedures, and secondary call is in protocol control state U04,
sends a FACILITY message containing a callTransferComplete invoke APDU to Primary PINX with the data element endDesignation and data element callStatus with value alerting and optionally redirectionNumber, redirectionName and basicCallInfoElements in the argument,
sends a FACILITY message containing a callTransferComplete invoke APDU to Secondary PINX with the data element endDesignation and optionally redirectionNumber, redirectionName and basicCallInfoElements in the argument,
enters state CT-Await-Answer-From-UserC.

CT_Trans02_012 **subclause 6.5.1.4**

Ensure that the IUT in the state CT-Await-Identify-Response, receiving FACILITY message containing callTransferIdentify reject APDU from the Secondary PINX, and call transfer may be reinitiated using transfer by join procedures, and secondary call is in protocol control state U10,
sends a FACILITY message containing a callTransferComplete invoke APDU to Primary PINX with the data element endDesignation and optionally redirectionNumber, redirectionName and basicCallInfoElements in the argument,
sends a FACILITY message containing a callTransferComplete invoke APDU to Secondary PINX with the data element endDesignation and optionally redirectionNumber, redirectionName and basicCallInfoElements in the argument,
associates primary and secondary call,
enters state CT-Idle.

CT_Trans02_013 **subclause 6.5.1.4**

Ensure that the IUT in the state CT-Await-Identify-Response, receiving FACILITY message containing callTransferIdentify reject APDU from the Secondary PINX, and call transfer may be reinitiated using transfer by join procedures, and secondary call is in protocol control state U04,
sends a FACILITY message containing a callTransferComplete invoke APDU to Primary PINX with the data element endDesignation and data element callStatus with value alerting and optionally redirectionNumber, redirectionName and basicCallInfoElements in the argument,
sends a FACILITY message containing a callTransferComplete invoke APDU to Secondary PINX with the data element endDesignation and optionally redirectionNumber, redirectionName and basicCallInfoElements in the argument,
enters state CT-Await-Answer-From-UserC.

CT_Trans02_014 subclause 6.5.1.4

Ensure that the IUT in the state CT-Await-Identify-Response, on expiry of T1, and secondary call is in protocol control state U10,

- sends FACILITY message containing a callTransferAbandon invoke APDU to Secondary PINX,
- sends a FACILITY message containing a callTransferComplete invoke APDU to Primary PINX with the data element endDesignation in the argument,
- sends a FACILITY message containing a callTransferComplete invoke APDU to Secondary PINX with the data element endDesignation in the argument,
- enters state CT-Idle.

CT_Trans02_015 subclause 6.5.1.4

Ensure that the IUT in the state CT-Await-Identify-Response, on expiry of T1, and secondary call is in protocol control state U04,

- sends FACILITY message containing a callTransferAbandon invoke APDU to Secondary PINX,
- sends a FACILITY message containing a callTransferComplete invoke APDU to Primary PINX with the data element endDesignation and data element callStatus with value alerting in the argument,
- sends a FACILITY message containing a callTransferComplete invoke APDU to Secondary PINX with the data element endDesignation and in the argument,
- enters state CT-Await-Answer-From-UserC.

CT_Trans02_016 subclause 6.5.1.4

Ensure that the IUT in the state CT-Await-Initiate-Response, receiving FACILITY message containing callTransferInitiate return error APDU from the Primary PINX, and call transfer may not be reinitiated using transfer by join procedures, and secondary call has not been cleared yet,

- sends a FACILITY message containing a callTransferAbandon invoke APDU to Secondary PINX,
- enters state CT-Idle.

CT_Trans02_017 subclause 6.5.1.4

Ensure that the IUT in the state CT-Await-Initiate-Response, receiving FACILITY message containing callTransferInitiate reject APDU from the Primary PINX, and call transfer may not be reinitiated using transfer by join procedures, and secondary call has not been cleared yet,

- sends a FACILITY message containing a callTransferAbandon invoke APDU to Secondary PINX,
- enters state CT-Idle.

CT_Trans02_018 subclause 6.5.1.4

Ensure that the IUT in the state CT-Await-Initiate-Response, receiving FACILITY message containing callTransferInitiate return error APDU from the Primary PINX, and call transfer may be reinitiated using transfer by join procedures, and secondary call has not been cleared yet, and secondary call was in protocol control state U10,

- sends a FACILITY message containing a callTransferAbandon invoke APDU to Secondary PINX,
- sends a FACILITY message containing a callTransferComplete invoke APDU to Primary PINX with the data element endDesignation in the argument,
- sends a FACILITY message containing a callTransferComplete invoke APDU to Secondary PINX with the data element endDesignation in the argument,
- enters state CT-Idle.

CT_Trans02_019 subclause 6.5.1.4

Ensure that the IUT in the state CT-Await-Initiate-Response, receiving FACILITY message containing callTransferInitiate reject APDU from the Primary PINX, and call transfer may be reinitiated using transfer by join procedures, and secondary call has not been cleared yet, and secondary call was in protocol control state U10,

- sends a FACILITY message containing a callTransferAbandon invoke APDU to Secondary PINX,
- sends a FACILITY message containing a callTransferComplete invoke APDU to Primary PINX with the data element endDesignation in the argument,
- sends a FACILITY message containing a callTransferComplete invoke APDU to Secondary PINX with the data element endDesignation in the argument,
- enters state CT-Idle.

CT_Trans02_020 **subclause 6.5.1.4**

Ensure that the IUT in the state CT-Await-Initiate-Response, receiving FACILITY message containing callTransferInitiate return error APDU from the Primary PINX, and call transfer may be reinitiated using transfer by join procedures, and secondary call has not been cleared yet, and secondary call was in protocol control state U04,
sends a FACILITY message containing a callTransferAbandon invoke APDU to Secondary PINX,
sends a FACILITY message containing a callTransferComplete invoke APDU to Primary PINX with the data element endDesignation and data element callStatus with value alerting in the argument,
sends a FACILITY message containing a callTransferComplete invoke APDU to Secondary PINX with the data element endDesignation in the argument,
enters state CT-Await-Answer-From-UserC.

CT_Trans02_021 **subclause 6.5.1.4**

Ensure that the IUT in the state CT-Await-Initiate-Response, receiving FACILITY message containing callTransferInitiate reject APDU from the Primary PINX, and call transfer may be reinitiated using transfer by join procedures, and secondary call has not been cleared yet, and secondary call was in protocol control state U04,
sends a FACILITY message containing a callTransferAbandon invoke APDU to Secondary PINX,
sends a FACILITY message containing a callTransferComplete invoke APDU to Primary PINX with the data element endDesignation and data element callStatus with value alerting in the argument,
sends a FACILITY message containing a callTransferComplete invoke APDU to Secondary PINX with the data element endDesignation in the argument,
enters state CT-Await-Answer-From-UserC.

CT_Trans02_022 **subclause 6.5.1.4**

Ensure that the IUT in the state CT-Await-Initiate-Response, on expiry of T3, and call transfer may not be reinitiated using transfer by join procedures, and secondary call has not been cleared yet,
sends a FACILITY message containing a callTransferAbandon invoke APDU to Secondary PINX,
enters state CT-Idle.

CT_Trans02_023 **subclause 6.5.1.4**

Ensure that the IUT in the state CT-Await-Initiate-Response, on expiry of T3, and call transfer may be reinitiated using transfer by join procedures, and secondary call has not been cleared yet, and secondary call was in protocol control state U10,
sends a FACILITY message containing a callTransferAbandon invoke APDU to Secondary PINX,
sends a FACILITY message containing a callTransferComplete invoke APDU to Primary PINX with the data element endDesignation in the argument,
sends a FACILITY message containing a callTransferComplete invoke APDU to Secondary PINX with the data element endDesignation in the argument,
enters state CT-Idle.

CT_Trans02_024 **subclause 6.5.1.4**

Ensure that the IUT in the state CT-Await-Initiate-Response, on expiry of T3, and call transfer may be reinitiated using transfer by join procedures, and secondary call has not been cleared yet, and secondary call was in protocol control state U04,
sends a FACILITY message containing a callTransferAbandon invoke APDU to Secondary PINX,
sends a FACILITY message containing a callTransferComplete invoke APDU to Primary PINX with the data element endDesignation and data element callStatus with value alerting in the argument,
sends a FACILITY message containing a callTransfer invoke APDU to Secondary PINX with the data element endDesignation in the argument,
enters state CT-Await-Answer-From-UserC.

5.2.1.3 Actions for transfer by join at the Primary PINX

CT_Privr01_001 subclause 6.5.2.1

Ensure that the IUT in the state CT-Idle, and protocol control state is U10, receiving a FACILITY message containing a callTransferComplete invoke APDU from Transferring PINX with the data element endDesignation in the argument with the value primaryEnd,
 sends a FACILITY message containing a callTransferUpdate invoke APDU to Transferring PINX (optional) with the data element redirectionNumber and/or redirectionName and/or basicCallInfoElements containing information relating to User B,
 enters state CT-Idle.

CT_Privr01_002 subclause 6.5.2.1

Ensure that the IUT in the state CT-Idle, and protocol control state is U10, receiving a FACILITY message containing a callTransferActive invoke APDU from Transferring PINX,
 does not take any action,
 Remains in state CT-Idle.

5.2.1.4 Actions for transfer by rerouting at the Primary PINX

Selection: IUT supports SS-CT by rerouting. PICS: A2.

CT_Privr02_001 subclause 6.5.2.3

Ensure that the IUT in the state CT-Idle, and protocol control state is U10, receiving a FACILITY message containing a callTransferInitiate invoke APDU from Transferring PINX, with the data element reroutingNumber in the argument, and it can participate in the transfer,
 sends a SETUP message to Secondary PINX with the information elements
 Bearer capability,
 Called party number (containing the number received in reroutingNumber in the received argument),
 Facility with a callTransferSetup invoke APDU with the data element callIdentity in the argument with the data having the same value as in the argument that was received within the callTransferInitiate invoke APDU, and
 with a callTransferUpdate invoke APDU to Secondary PINX (optional) with the data element redirectionNumber and/or redirectionName and/or basic CallInfoElements containing information relating to User B (all are optional),
 enters state CT-Await-Setup-Response.

CT_Privr02_002 subclause 6.5.2.3

Ensure that the IUT in the state CT-Await-Setup-Response, and protocol control state is U10, receiving a CONNECT message containing a callTransferSetup return result APDU from Secondary PINX,
 sends a DISCONNECT message containing a callTransferInitiate return result APDU to Transferring PINX,
 enters state CT-Idle.

CT_Privr02_003 subclause 6.5.2.3

Ensure that the IUT in the state CT-Await-Setup-Response, and protocol control state is U10, receiving a CONNECT message containing a callTransferSetup return result APDU and with a callTransferUpdate invoke APDU with the data element redirectionNumber and/or redirectionName and/or basicCallInfoElements containing information relating to User B from Secondary PINX,
 sends a DISCONNECT message containing a callTransferInitiate return result APDU to Transferring PINX,
 enters state CT-Idle.

CT_Privr02_004 subclause 6.5.2.3

Ensure that the IUT in the state CT-Await-Setup-Response, and protocol control state is U10, receiving an ALERTING message containing a callTransferSetup return result APDU from Secondary PINX,
 sends a DISCONNECT message containing a callTransferInitiate return result APDU to Transferring PINX,
 enters state CT-Await-Connect.

CT_Privr02_005 subclause 6.5.2.3

Ensure that the IUT in the state CT-Await-Setup-Response, and protocol control state is U10, receiving an ALERTING message containing a callTransferSetup return result APDU and with a callTransferUpdate invoke APDU with the data element redirectionNumber and/or redirectionName and/or basicCallInfoElements containing information relating to User B from Secondary PINX,
 sends a DISCONNECT message containing a callTransferInitiate return result APDU to Transferring PINX,
 enters state CT-Await-Connect.

CT_Primer02_006 subclause 6.5.2.3

Ensure that the IUT in the state CT-Await-Connect, and protocol control state is U10, receiving a CONNECT message containing a callTransferSetup return result APDU from Secondary PINX,
does not take any action,
enters state CT-Idle.

CT_Primer02_007 subclause 6.5.2.4

Ensure that the IUT in the state CT-Idle, and protocol control state is U10, receiving a FACILITY message containing a callTransferInitiate invoke APDU from Transferring PINX, with the data element reroutingNumber in the argument, and it can not participate in the transfer,
sends a FACILITY message containing a callTransferInitiate return error APDU to Transferring PINX with the appropriate error data element in the argument,
enters state CT-Idle.

Selection: IUT supports timer 4. PICS: G4.

CT_Primer02_008 subclause 6.5.2.4

Ensure that the IUT in the state CT-Await-Setup-Response, and protocol control state is U10, on expiry of timer T4,
proceeds with call clearing of the new connection,
sends a FACILITY message containing a callTransferInitiate return error APDU to Transferring PINX with the data element establishmentFailure in the argument,
enters state CT-Idle.

CT_Primer02_009 subclause 6.5.2.4

Ensure that the IUT in the state CT-Await-Setup-Response, and protocol control state is U10, receiving a call clearing from Secondary PINX, containing a callTransferSetup return error APDU,
proceeds with call clearing of the new connection,
sends a FACILITY message containing a callTransferInitiate return error APDU to Transferring PINX with the value error appropriate to the callTransferSetup return error APDU received from Secondary PINX in the argument,
enters state CT-Idle.

CT_Primer02_010 subclause 6.5.2.4

Ensure that the IUT in the state CT-Await-Setup-Response, and protocol control state is U10, receiving a call clearing message on the call reference of the Primary call from Transferring PINX,
proceeds with call clearing of the primary call,
initiate call clearing of the new connection,
enters state CT-Idle.

CT_Primer02_011 subclause 6.5.2.4

Ensure that the IUT in the state CT-Await-Setup-Response, and protocol control state is U10, receiving a call clearing from User B,
proceeds with call clearing of the primary call,
initiate call clearing of the new connection,
enters state CT-Idle.

CT_Primer02_012 subclause 6.5.2.4

Ensure that the IUT in the state CT-Await-Connect, and protocol control state is U10, receiving a call clearing message from Secondary PINX on the call reference of the re-routed connection,
proceeds with call clearing of the re-routed connection,
enters state CT-Idle.

CT_Primer02_013 subclause 6.5.2.4

Ensure that the IUT in the state CT-Await-Connect, and protocol control state is U10, receiving a call clearing from User B,
proceeds with call clearing of the re-routed connection,
enters state CT-Idle.

5.2.1.5 Actions for transfer by join at the Secondary PINX

CT_Secnd01_001 subclause 6.5.3.1

Ensure that the IUT in the state CT-Idle, and protocol control state is U10, receiving a FACILITY message containing a callTransferComplete invoke APDU from Transferring PINX with the data element endDesignation in the argument with the value secondaryEnd,

sends a FACILITY message containing a callTransferUpdate invoke APDU to Primary PINX (optional) with the data element redirectionNumber and/or redirectionName and/or basicCallInfoElements containing information relating to User C,
enters state CT-Idle.

CT_Secnd01_002 subclause 6.5.3.1

Ensure that the IUT in the state CT-Idle, and protocol control state is U07, receiving a FACILITY message containing a callTransferComplete invoke APDU from Transferring PINX with the data element endDesignation in the argument with the value secondaryEnd,

sends a FACILITY message containing a callTransferUpdate invoke APDU to Primary PINX (optional) with the data element redirectionNumber and/or redirectionName and/or basicCallInfoElements containing information relating to User C,
enters state CT-Idle

CT_Secnd01_003 subclause 6.5.5

Ensure that the IUT in the state CT-Idle, and protocol control state is U07, receiving a FACILITY message containing a callTransferUpdate invoke APDU from Primary PINX,

does not take any action,
enters state CT-Idle.

5.2.1.6 Actions for transfer by rerouting at the Secondary PINX

Selection: IUT supports SS-CT by rerouting. PICS: A2.

CT_Secnd02_001 subclause 6.5.3.3

Ensure that the IUT in the state CT-Idle, and protocol control state is U10, receiving a FACILITY message containing a callTransferIdentify invoke APDU from Transferring PINX, and it can participate in the transfer,

sends a FACILITY message containing a callTransferIdentify return result APDU to Transferring PINX with the data element callIdentity with the value, which identifies the call on which SS-CT is being invoked and with the data element reroutingNumber with the value sufficient for routing to Secondary PINX,
starts timer T2,
enters state CT-Await-Setup.

CT_Secnd02_002 subclause 6.5.3.3

Ensure that the IUT in the state CT-Idle, and protocol control state is U07, receiving a FACILITY message containing a callTransferIdentify invoke APDU from Transferring PINX, and it can participate in the transfer,

sends a FACILITY message containing a callTransferIdentify return result APDU to Transferring PINX with the data element callIdentity with the value, which identifies the call on which SS-CT is being invoked and with the data element reroutingNumber with the value sufficient for routing to Secondary PINX,
starts timer T2,
enters state CT-Await-Setup.

CT_Secnd02_003 subclause 6.5.3.3

Ensure that the IUT in the state CT-Await-Setup, and protocol control state is U10, receiving a SETUP message containing a callTransferSetup invoke APDU from Primary PINX with the argument callIdentity, which matches the callIdentity of a call whose SS-CT control entity is in state CT-Await-Setup,

disconnects the secondary call,
sends a CONNECT message containing a callTransferSetup return result APDU and a callTransferUpdate invoke APDU (optional) with the data element redirectionNumber and/or redirectionName and/or basicCallInfoElements (all are optional) containing information relating to User C to Primary PINX,
enters state CT-Idle.

CT_Secnd02_004 subclause 6.5.3.3

Ensure that the IUT in the state CT-Await-Setup, and protocol control state is U10, receiving a SETUP message containing a callTransferSetup invoke APDU from Primary PINX with the argument callIdentity, which matches the callIdentity of a call whose SS-CT control entity is in state CT-Await-Setup, and containing a callTransferUpdate invoke APDU with the data element redirectionNumber and/or redirectionName and/or basicCallInfoElements containing information relating to User B from Primary PINX,

disconnects the secondary call,

sends a CONNECT message containing a callTransferSetup return result APDU and a callTransferUpdate invoke APDU (optional) with the data element redirectionNumber and/or redirectionName and/or

basicCallInfoElements (all are optional) containing information relating to User C to Primary PINX,

enters state CT-Idle.

CT_Secnd02_005 subclause 6.5.3.3

Ensure that the IUT in the state CT-Await-Setup, and protocol control state is U07, receiving a SETUP message containing a callTransferSetup invoke APDU from Primary PINX with the argument callIdentity, which matches the callIdentity of a call whose SS-CT control entity is in state CT-Await-Setup,

disconnects the secondary call,

sends an ALERTING message containing a callTransferSetup return result APDU and a callTransferUpdate invoke APDU (optional) with the data element redirectionNumber and/or redirectionName and/or

basicCallInfoElements (all are optional) containing information relating to User C to Primary PINX,

enters state CT-Idle.

CT_Secnd02_006 subclause 6.5.3.3

Ensure that the IUT in the state CT-Await-Setup, and protocol control state is U07, receiving a SETUP message containing a callTransferSetup invoke APDU from Primary PINX with the argument callIdentity, which matches the callIdentity of a call whose SS-CT control entity is in state CT-Await-Setup, and containing a callTransferUpdate invoke APDU with the data element redirectionNumber and/or redirectionName and/or basicCallInfoElements containing information relating to User B from Primary PINX,

disconnects the secondary call,

sends a ALERTING message containing a callTransferSetup return result APDU and a callTransferUpdate invoke APDU (optional) with the data element redirectionNumber and/or redirectionName and/or

basicCallInfoElements (all are optional) containing information relating to User C to Primary PINX,

enters state CT-Idle.

CT_Secnd02_007 subclause 6.5.3.4

Ensure that the IUT in the state CT-Idle, and protocol control state is U10, receiving a FACILITY message containing a callTransferIdentify invoke APDU from Transferring PINX, with the data element reroutingNumber in the argument, and it can not participate in the transfer,

sends a FACILITY message containing a callTransferIdentify return error APDU to Transferring PINX with the appropriate error data element in the argument,

enters state CT-Idle.

CT_Secnd02_008 subclause 6.5.3.4

Ensure that the IUT in the state CT-Idle, and protocol control state is U07, receiving a FACILITY message containing a callTransferIdentify invoke APDU from Transferring PINX, with the data element reroutingNumber in the argument, and it can not participate in the transfer,

sends a FACILITY message containing a callTransferIdentify return error APDU to Transferring PINX with the appropriate error data element in the argument,

enters state CT-Idle.

CT_Secnd02_009 subclause 6.5.3.4

Ensure that the IUT in the state CT-Await-Setup, and protocol control state is U10, receiving a FACILITY message containing a callTransferAbandon invoke APDU from Transferring PINX,

abort procedure for transfer by rerouting,

enters state CT-Idle.

CT_Secnd02_010 subclause 6.5.3.4

Ensure that the IUT in the state CT-Await-Setup, and protocol control state is U07, receiving a FACILITY message containing a callTransferAbandon invoke APDU from Transferring PINX,

abort procedure for transfer by rerouting,

enters state CT-Idle.

CT_Secnd02_011 subclause 6.5.3.4

Ensure that the IUT in the state CT-Await-Setup, and protocol control state is U10, receiving a call clearing message from Transferring PINX on the call reference of the secondary connection,
 proceeds with call clearing of the secondary connection,
 enters state CT-Idle.

CT_Secnd02_012 subclause 6.5.2.4

Ensure that the IUT in the state CT-Await-Setup, and protocol control state is U10, receiving a call clearing from User C,
 proceeds with call clearing of the secondary connection,
 enters state CT-Idle.

CT_Secnd02_013 subclause 6.5.3.4

Ensure that the IUT in the state CT-Await-Setup, and protocol control state is U07, receiving a call clearing message from Transferring PINX on the call reference of the secondary connection,
 proceeds with call clearing of the secondary connection,
 enters state CT-Idle.

CT_Secnd02_014 subclause 6.5.3.4

Ensure that the IUT in the state CT-Await-Setup, and protocol control state is U07, receiving a call clearing from User C,
 proceeds with call clearing of the secondary connection,
 enters state CT-Idle.

CT_Secnd02_015 subclause 6.5.3.4

Ensure that the IUT in the state CT-Await-Setup, and protocol control state is U10, on expiry of timer T2,
 abort procedure for transfer by rerouting,
 enters state CT-Idle.

CT_Secnd02_016 subclause 6.5.3.4

Ensure that the IUT in the state CT-Await-Setup, and protocol control state is U07, on expiry of timer T2,
 abort procedure for transfer by rerouting,
 enters state CT-Idle.

CT_Secnd02_017 subclause 6.5.3.4

Ensure that the IUT in the state CT-Await-Setup, and protocol control state is U10, receiving a SETUP message containing a callTransferSetup invoke APDU from Primary PINX with the argument callIdentity, which does not matches the callIdentity of a call whose SS-CT control entity is in state CT-Await-Setup,
 sends a DISCONNECT message containing a Cause information element with a suitable cause number, or containing a Cause information element with cause number 29 ("Facility rejected") and a return error APDU with the data error unrecognizedCallIdentity to Primary PINX,
 enters state CT-Idle.

5.2.1.7 Subsequent actions at the Primary and the Secondary PINX**CT_Subsq01_001 subclause 6.5.5**

Ensure that the IUT in the state CT-Idle, and protocol control state is U10, receiving a FACILITY message containing a callTransferUpdate invoke APDU,
 does not take any action,
 remains in state CT-Idle.

CT_Subsq01_002 subclause 6.5.5

Ensure that the IUT in the state CT-Idle, and protocol control state is U10, receiving a FACILITY message containing a subaddressTransfer invoke APDU,
 does not take any action,
 remains in state CT-Idle.

Selection: IUT supports sending of subaddressTransfer invoke APDU. PICS: D7

CT_Subsq01_003 subclause 6.5.5

Ensure that the IUT in the state CT-Idle, and protocol control state is U10, receiving a subaddressTransfer request from the local user's terminal,
 sends a FACILITY message containing a subaddressTransfer invoke APDU,
 enters state CT-Idle.

5.2.1.8 Protocol interactions between SS-CT and other supplementary services and ANFs

Selection: IUT supports actions at a Transferring PINX for rerouteing and SS-CFNR/SS-CDA Originating PINX. PICS: E5.

CT_Inter01_001 subclause 6.8.7.1

Ensure that the IUT in the state CT-Await-Identify-Response, and protocol control state is U04, receiving a FACILITY message containing a callRerouting invoke APDU,

sends a FACILITY message containing a callRerouting return error APDU to the SS-CFNR Served User PINX containing error value supplementaryServiceInteractionNotAllowed,
remains in state CT-Await-Identify-Response.

Selection: IUT supports actions at a Transferring PINX for join or rerouteing and SS-CFNR/SS-CDA Originating PINX. PICS: E6.

CT_Inter01_002 subclause 6.8.7.2

Ensure that the IUT in the state CT-Idle, while performing call forwarding by rerouteing and on receipt of a valid callTransferInvoke request from User A

does not take any action,
remains in state CT-Idle.

Selection: IUT supports actions at a Secondary PINX for rerouteing and SS-CFNR/SS-CDA Served User PINX. PICS: E7.

CT_Inter01_003 subclause 6.8.7.3

Ensure that the IUT in the state CT-Idle, and protocol control state is U07, after initiating a call forwarding by rerouteing on receiving a FACILITY message containing a callTransferIdentify invoke APDU from the Transferring PINX,

sends a FACILITY message containing a callTransferIdentify return error APDU to the Transferring PINX containing error value supplementaryServiceInteractionNotAllowed,
remains in state CT-Idle.

Selection: IUT supports actions at a Secondary PINX for rerouteing and SS-CFNR/SS-CDA Served User/Rerouteing PINX. PICS: E8.

CT_Inter01_004 subclause 6.8.7.4

Ensure that the IUT in the state CT-Idle, and protocol control state is U07, after initiating a call forwarding by forward switching on receiving a FACILITY message containing a callTransferIdentify invoke APDU from the Transferring PINX,

sends a FACILITY message containing a callTransferIdentify return error APDU to the Transferring PINX containing error value supplementaryServiceInteractionNotAllowed,
remains in state CT-Idle.

Selection: IUT supports actions at a Secondary PINX for join and SS-CFNR/SS-CDA Served User/Rerouteing PINX. PICS: E9.

CT_Inter01_005 subclause 6.8.7.5

Ensure that the IUT in the state CT-Idle, and protocol control state is U07, after initiating a call forwarding by forward switching on receiving a FACILITY message containing a callTransferComplete invoke APDU from the Transferring PINX,

does not take any action,
remains in state CT-Idle.

Selection: IUT supports actions at a Transferring PINX for join. PICS: E10.

CT_Inter01_006 subclause 6.8.7.6

Ensure that the IUT in the state CT-Await-Answer-From-User-C, on receiving a FACILITY message containing a divertingLegInformation1 invoke APDU from the Secondary PINX,

sends a FACILITY message containing a divertingLegInformation1 invoke APDU to the Primary PINX,
remains in state CT-Await-Answer-From-User-C.

Selection: IUT supports actions at a Transferring PINX for join. PICS: E10.

CT_Inter01_007 subclause 6.8.7.6

Ensure that the IUT in the state CT-Await-Answer-From-User-C, on receiving a CONNECT message containing a divertingLegInformation3 invoke APDU from the Secondary PINX,

sends a FACILITY message containing a divertingLegInformation3 invoke APDU to the Primary PINX,
remains in state CT-Await-Answer-From-User-C.

Selection: IUT supports interactions between SS-CT and ANF-PR at an ANF-PR Co-operating PINX. PICS: F4.

CT_Inter01_008 subclause 6.8.9.2.2

Ensure that the IUT in the state CT-Await-Identify-Response, on receiving a FACILITY message containing a pathReplacePropose invoke APDU from the Transit PINX,
sends a FACILITY message containing a pathReplacePropose return error APDU containing error value temporarilyUnviable to the Transit PINX,
remains in state CT-Await-Identify-Response.

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 5;
- 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 [5].

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 [5], shall be used by any organization claiming to provide a comprehensive testing service for network equipment claiming conformance to I-ETS 300 808 [14].

Bibliography

The following material, though not specifically referenced in the body of the present document (or not publicly available), gives supporting information.

- ETS 300 406 (1995): "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".
- ISO/IEC 13869 (1995): "Information technology; Telecommunications and information exchange between systems; Private Integrated Services Network; Inter-exchange signalling protocol; Call transfer supplementary service".

History

Document history			
V1.1.1	January 2000	Public Enquiry	PE 200018: 2000-01-05 to 2000-05-05