SLOVENSKI STANDARD
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Zasebno omreģje z integriranimi storitvami (PISN) ï Signalizacijski protokol med centralami ï Dodatna lastnost omreģja za odhodni klic brezvrviļ nega terminala (ANF-CTMI) za vstopno toļ ko VPN "b" storitve ï 1. del: Zgradba preskuģalnega niza in namen preskuģanja (TSS&TP) ï Specifikacija

Private Integrated Services Network (PISN); Inter-exchange signalling protocol; Cordless Terminal Incoming Call additional network feature (ANF-CTMI) for the VPN b service entry point; Part 1: Test Suite Structure and Test Purposes (TSS&TP) specification

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Foreword

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

The present document covers the Private Integrated Service Network (PISN) Inter-exchange signalling protocol - Cordless Terminal Incoming Call Additional Network Feature (ANF-CTMI) - Test Suite Structure and Test Purposes (TSS&TP) specification.

The present document is part 1 of a multi-part deliverable covering Inter-exchange signalling protocol, as identified below:

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

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

National transposition dates	
Date of adoption of this EN:	8 September 2000
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1 Scope

The present document specifies the Test Suite Structure and Test Purposes (TSS&TP) for the Cordless Terminal Incoming Call Additional Network Feature (ANF-CTMI) of the Interexchange signalling protocol for Private Integrated Services Networks (PISN).

The objective of the present document is to provide conformance tests, which give a greater probability of inter-operability. The TSS&TPs specification covers the procedures described in ETS 300 696 [5].

The ISO standard for the methodology of conformance testing (ISO/IEC 9646-1 [7], ISO/IEC 9646-2 [8] and ISO/IEC 9646-3 [9]) is used as basis for the test methodology.

The TSS&TPs specification standard is applicable for the support of the Cordless Terminal Incoming Call Additional Network Feature (ANF-CTMI) at the Q-reference point between Private Integrated Services Network Exchanges (PINXs) connected together within a PISN. The Test Suite Structure and Test Purposes specified in the present document are only intended for VPN scenarios at the "b" service entry point.

The Q-reference point is defined in ETS 300 475-1 [16].

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.

[1] ETSI EN 300 171 (V1.2): "Private Integrated Services Network (PISN); Specification, functional models and information flows; Control aspects of circuit-mode basic services [ISO/IEC 11574 (1994) modified]".

[2] ETSI EN 300 172 (V1.4): "Private Integrated Services Network (PISN); Inter-exchange signalling protocol; Circuit-mode basic services [ISO/IEC 11572 (1996) modified]".

[3] ETSI ETS 300 239 (1993): "Private Telecommunication Network (PTN); Inter-exchange signalling protocol; Generic functional protocol for the support of supplementary services".

[4] ETSI ETS 300 415 (1996): "Private Integrated Services Network (PISN); Terms and definitions".

[5] ETSI ETS 300 696 (1996): "Private Integrated Services Network (PISN); Inter-exchange signalling protocol; Cordless Terminal Incoming Call additional network feature".

[6] ETSI ETS 300 695 (1995): "Private Integrated Services Network (PISN); Cordless Terminal Mobility (CTM); Call handling additional network features; Functional capabilities and information flows".

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

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

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

[10] ISO/IEC 11571 (1994): "Information Technology – Telecommunication and information exchange between systems – Numbering and Sub-addressing in Private Integrated Services Network".

[11] ISO/IEC 11579-1 (1994): "Information Technology – Telecommunication and information exchange between systems – Private Integrated Services Network – Part 1: Reference configurations for PISN exchanges (PINX)".

[12] ITU-T Recommendation I.112 (1993): "Vocabulary of terms for ISDNs".

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

[14] ETSI ETS 300 406 (1995): "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".

[15] ETSI EN 301 060-1 (V1.2): "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".

[16] ETSI ETS 300 475-1 (1995): "Private Telecommunication Network (PTN); Reference configuration; Part 1: Reference configuration for PTN eXchanges (PTNX) [ISO/IEC 11579-1 (1994), modified]".

3 Definitions and abbreviations

3.1 Definitions

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

abstract test case: Refer to ISO/IEC 9646-1 [7].

Abstract Test Suite (ATS): Refer to ISO/IEC 9646-1 [7].

active test: 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 [7].

implicit send event: Refer to ISO/IEC 9646-3 [9].

lower tester: Refer to ISO/IEC 9646-1 [7].

passive test: 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 [7].

Protocol Implementation Conformance Statement (PICS): Refer to ISO/IEC 9646-1 [7].

PICS proforma: Refer to ISO/IEC 9646-1 [7].

Protocol Implementation eXtra Information for Testing (PIXIT): Refer to ISO/IEC 9646-1 [7].

PIXIT proforma: Refer to ISO/IEC 9646-1 [7].

system under test: Refer to ISO/IEC 9646-1 [7].

Test Purpose (TP): Refer to ISO/IEC 9646-1 [7].

Virtual Private Network (VPN): Refer to EN 301 060-1 [15].

Application Protocol Data Unit (APDU): See ETS 300 239 [3].

Basic Call: Instance of the use of a basic service.

Basic Service: See ITU-T Recommendation I.210 [13].

Call independent signalling connection: See ETS 300 239 [3], definition 4.7.

Call related: See ETS 300 239 [3], definition 4.9.

Complete Number: See ISO/IEC 11571 [10].

Co-ordination Function: See ETS 300 239 [3].

CTM user: See ETS 300 695 [6].

CTMI-detect PINX: PINX which detects that an incoming call is to a CTM user.

End PINX: See ETS 300 239 [3].

Gateway PINX: See EN 300 172 [2].

Home Data Base (HDB): See ETS 300 415 [4].

Home PINX: See ETS 300 695 [6].

Incoming call: See EN 300 172 [2], subclause 4.4.

Incoming Gateway PINX: See EN 300 172 [2], subclause 4.6.

Integrated Services Digital Network (ISDN): See ITU-T Recommendation I.112 [12], definition 308.

Invoke component: See ETS 300 239 [3], subclause 11.3.3.4.

Originating PINX: See EN 300 172 [2], subclause 4.5.

Private Integrated Services Network (PISN): See ISO/IEC 11579-1 [11].

Private Integrated Services Network Exchange (PINx): See ISO/IEC 11579-1 [11].

PISN Number: See ISO/IEC 11571 [10].

Rerouteing PINX: PINX which executes the rerouteing of the CTMI call to the current Visitor PINX.

Signalling: See ITU-T Recommendation I.112 [12].

Supplementary service: See ITU-T Recommendation I.210 [13], subclause 2.4.

Supplementary Services Control Entity: See ETS 300 239 [3].

Terminating PINX: See EN 300 172 [2], subclause 4.5.

Transit PINX: See EN 300 172 [2], subclause 4.5.

User: See EN 300 171 [1].

Visitor area: See ETS 300 415 [4].

Visitor Data Base (VDB): See ETS 300 415 [4].

Visitor PINX: See ETS 300 695 [6].

3.2 Abbreviations

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

ANF	Additional Network Feature
ANF-CTMI	Cordless Terminal Incoming Call Additional Network Feature
APDU	Application Protocol Data Unit
ATS	Abstract Test Suite
CTM	Cordless Terminal Mobility

HDB	Home Data Base
IE	Information Element
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
PIXIT	Protocol Implementation eXtra Information for Testing
PSS1	Private Integrated Signalling System Number 1
sc	call independent signalling connection
SS-CFU	Call Forwarding Unconditional supplementary service
SS-CI	Call Intrusion supplementary service
SS-CO	Call Offer supplementary service
T1	Timer T1
T2	Timer T2
TP	Test Purpose
TSS	Test Suite Structure
VDB	Visitor Data Base
VPN	Virtual Private Network

4 Test Suite Structure (TSS)

Signalling procedures at the VPN "b"service entry Point	**Group**
Actions at the Rerouteing PINX	Reroute01
Actions at the CTMI-detect PINX	
Normal procedures	Detect01
Exceptional procedures	Detect02
Rerouteing procedures	Detect03
Home procedures	Detect04
Actions at the Home PINX	Home01
Actions at the Visitor PINX	Visitor01
Procedures for interactions between ANF-CTMI and other supplementary services and ANFs	SS01

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:	"CTMI"
<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 ETS 300 696 [5].

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.