



SLOVENSKI STANDARD
SIST ETS 300 007:1996
01-XYWVa VYf-1996

Digitalno omrežje z integriranimi storitvami (ISDN) - Podpora ISDN za terminalsko opremo paketnega načina

Integrated Services Digital Network (ISDN); Support of packet-mode terminal equipment by an ISDN

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Ta slovenski standard je istoveten z: ^{SIST ETS 300 007:1996}**ETS 300 007 Edition 1**
<https://standards.iteh.ai/catalog/standards/sist/bae156af-54ee-4715-adea-3ff6ba8e48cd/sist-ets-300-007-1996>

ICS:

33.080	Digitalno omrežje z integriranimi storitvami (ISDN)	Integrated Services Digital Network (ISDN)
--------	-----------------------------------------------------	--------------------------------------------

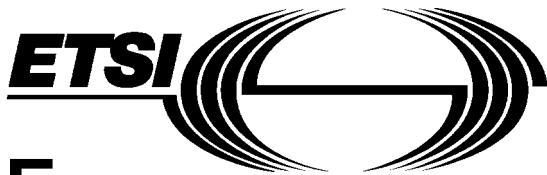
SIST ETS 300 007:1996

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST ETS 300 007:1996](#)

<https://standards.iteh.ai/catalog/standards/sist/bae15baf-54ee-47f5-adea-3ff6ba8e48cd/sist-ets-300-007-1996>



EUROPEAN
TELECOMMUNICATION
STANDARD

ETS 300 007

November 1991

Source: ETSI TC-SPS

Reference: T/S 46-50

ICS: 33.080

Key words: ISDN, packet-mode

iTeh STANDARD PREVIEW

(standards.iteh.ai)

Integrated Services Digital Network (ISDN);

Support of packet-mode terminal equipment by an ISDN

<https://standards.iteh.ai/catalog/standards/sist/bae15baf-54ce-47f5-adea-3ff6ba8e48cd/sist-ets-300-007-1996>

ETSI

European Telecommunications Standards Institute

ETSI Secretariat

Postal address: F-06921 Sophia Antipolis CEDEX - FRANCE

Office address: 650 Route des Lucioles - Sophia Antipolis - Valbonne - FRANCE

X.400: c=fr, a=atlas, p=etsi, s=secretariat - **Internet:** secretariat@etsi.fr

Tel.: +33 92 94 42 00 - Fax: +33 93 65 47 16

Copyright Notification: No part may be reproduced except as authorized by written permission. The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 1991. All rights reserved.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST ETS 300 007:1996](https://standards.iteh.ai/catalog/standards/sist/bae15baf-54ee-47f5-adea-3ff6ba8e48cd/sist-ets-300-007-1996)

<https://standards.iteh.ai/catalog/standards/sist/bae15baf-54ee-47f5-adea-3ff6ba8e48cd/sist-ets-300-007-1996>

Contents

Foreword	7
Introduction	7
Normative references	8
1 Scope	10
2 General service aspects	10
3 Reference configurations	11
3.1 Configuration when accessing PSPDN services (Case A)	11
3.2 Configuration for the ISDN virtual circuit service (Case B)	13
4 Service aspects	16
4.1 Access to PSPDN services (Case A)	16
4.1.1 Service characteristics	16
4.1.2 User access capabilities	16
4.1.3 Basic rules	16
4.1.4 Notification classes	17
4.2 Access to the ISDN virtual circuit service (Case B)	17
4.2.1 Service characteristics	17
4.2.2 User access capabilities	17
4.2.2.1 Access through the B-Channel	17
4.2.2.2 Access through the D-Channel	18
4.2.3 Notification classes for incoming calls	18
4.2.3.1 No notification class	18
4.2.3.2 Conditional notification class	19
4.2.3.3 Unconditional notification class	19
4.2.3.4 Information mapping from the CCITT Recommendation X.25 incoming call packet to the ETS 300 102-1 message	19
4.3 Compatibility checking	19
5 Addressing and routing aspects	20
5.1 Terminal interface selection	20
5.2 Access to PSPDN services (Case A)	20
5.2.1 Channel type selection	20
5.2.2 Addressing scheme for outgoing calls	20
5.3 Access to the ISDN virtual circuit service (Case B)	21
5.3.1 Channel type selection	21
5.3.2 Addressing scheme for outgoing calls	21
6 Interworking with dedicated networks	21
6.1 Circuit-mode access to PSPDN services (Case A)	21
6.2 Access to PSPDNs via virtual circuit service (Case B)	21
7 Packet communications at the S/T reference point	22
7.1 Outgoing access	22
7.1.1 Circuit-switched access to PSPDN services (Case A)	23
7.1.2 Access to the ISDN virtual circuit service (Case B)	24
7.1.2.1 B-Channel	24
7.1.2.2 D-channel	25
7.2 Incoming access	25
7.2.1 Access from PSPDN services (Case A)	25
7.2.1.1 General	25
7.2.1.2 Channel negotiation	26
7.2.2 Access from the ISDN virtual circuit service (Case B)	27

	7.2.2.1	B-Channel	27
	7.2.2.2	D-Channel	28
	7.2.2.3	Call offering.....	28
7.3		Virtual call establishment and release.....	32
	7.3.1	Link layer establishment and release.....	32
	7.3.2	Packet layer virtual call SETUP and RELEASE	33
7.4		Call clearing.....	33
	7.4.1	B-Channel.....	33
	7.4.2	D-Channel.....	34
	7.4.3	Additional error handling information.....	34
	7.4.4	Cause mappings.....	35
	7.4.4.1	Access to/from PSPDN services (Case A).....	35
	7.4.4.2	Access to/from the ISDN virtual circuit service (Case B)	35
7.5		Access collision.....	35
8		Terminal adaptor functionalities.....	39
8.1		General	39
8.2		Physical interfaces	40
8.3		Access through the B-channel	40
	8.3.1	General	40
	8.3.2	Rate adaption	40
	8.3.3	Signalling	41
	8.3.3.1	Outgoing call	41
	8.3.3.2	Incoming call	46
	8.3.3.3	Call clearing	46
	8.3.4	Synchronisation	48
8.4		Access through the D-Channel.....	48
	8.4.1	General.....	48
	8.4.2	LAPB-LAPD mapping.....	48
	8.4.2.1	Mapping by full link layer termination	48
	8.4.2.2	Mapping by minimum link layer termination.....	50
	8.4.3	Signalling.....	50
	8.4.3.1	Outgoing call.....	50
	8.4.3.2	Incoming call.....	51
	8.4.3.3	Data link disconnection.....	52
8.5		Access through the B- and D- channel.....	52
	8.5.1	General	52
	8.5.2	Outgoing call.....	53
	8.5.3	Incoming call.....	53
8.6		Test loops	53
	8.6.1	Test loops for TA with access through the B-channel.....	53
	8.6.1.1	Test loop reference configuration	53
	8.6.1.2	Test loop characteristics	54
	8.6.1.3	Loop activation/deactivation mechanism.....	54
	8.6.1.4	Coding of activation/deactivation control messages	54
Appendix.....		I (informative): B-channel TA acting on layer 2 and 3 of CCITT Recommendation X.25	56
I.1		Introduction.....	56
I.2		Call control.....	56
	I.2.1	Idle phase.....	57
	I.2.1.1	Transferring to the establishment phase	57
	I.2.2	Establishment phase.....	58
	I.2.2.1	Outgoing call.....	58
	I.2.2.2	Incoming call.....	59
	I.2.2.3	Changing to the data transfer phase	60
	I.2.3	Data transfer phase.....	60
	I.2.3.1	Transferring to the clearing phase	60
	I.2.4	Clearing phase	61

I.2.4.1	Detection by the user.....	61
I.2.4.2	Detection by the network	62
Appendix II (informative): Interconnection of packet-mode TE2s which use the circuit-mode bearer service of the ISDN		
		63
Appendix III (informative): Example message flow diagrams and example conditions for cause mapping .		
		64
III.1	Example message flow diagrams	64
III.1.1	Key to the figures.....	64
III.1.2	Example message flow diagrams	66
III.2	Example conditions for cause mapping.....	73
Appendix IV (informative): D-channel TAs requiring full protocol termination in the TA.....		
		77
IV.1	Introduction.....	77
IV.2	Call control	77
IV.2.1	Idle phase	77
IV.2.1.1	Transferring to the establishment phase.....	78
IV.2.2	Establishment phase	79
IV.2.2.1	Outgoing call initiated via a call request packet or an I frame.....	79
IV.2.2.2	Incoming call.....	80
IV.2.3	Data transfer phase	80
IV.2.3.1	Transferring to the clearing phase.....	81
IV.2.4	Clearing phase.....	81
IV.2.4.1	Detection by the PH.....	82
Annex A (informative): States applicable to packet mode access connection (case B services)		
		83
A.1	Access connection states at the user side of the interface.....	83
A.1.1	Null state (U0).....	83
A.1.2	Call initiated (U1).....	83
A.1.3	Outgoing call proceeding (U3)	83
A.1.4	Call present (U6).....	83
A.1.5	Call received (U7)	83
A.1.6	Connect request (U8)	83
A.1.7	Incoming call proceeding (U9)	83
A.1.8	Active (U10).....	83
A.1.9	Disconnect request (U11)	84
A.1.10	Disconnect indication (U12)	84
A.1.11	Release request (U19)	84
A.2	Access connection states at the network side of the interface.....	84
A.2.1	Null state (N0).....	84
A.2.2	Call initiated (N1).....	84
A.2.3	Outgoing call proceeding (N3)	84
A.2.4	Call present (N6).....	84
A.2.5	Call received (N7)	84
A.2.6	Connect request (N8)	84
A.2.7	Incoming call proceeding (N9)	84
A.2.8	Active (N10).....	85
A.2.9	Disconnect request (N11)	85
A.2.10	Disconnect indication (N12)	85
A.2.11	Release request (N19)	85
A.2.12	Call Abort (N22).....	85
Annex B (normative): Messages for control of packet-mode access connections.....		
		86

B.1	Alerting.....	86
B.2	Call proceeding.....	87
B.3	Connect.....	88
B.4	Connect acknowledge.....	88
B.5	Disconnect.....	89
B.6	Progress.....	89
B.7	Release.....	90
B.8	Release complete.....	91
B.9	Setup.....	92
B.10	Status.....	94
B.11	Status enquiry.....	94
Annex C (normative):	Information elements for the control of packet-mode access connections.....	95
C.1	Protocol discriminator.....	95
C.2	Call reference.....	95
C.3	Message type.....	95
C.4	Other information elements.....	95
C.5	Redirecting number.....	97
Annex D (informative):	Example of ISDN CCITT Recommendation X.25 packet-mode bearer service access on the D-channel through a NT2 with frame handling functions.....	100
History.....		103

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST ETS 300 007:1996](https://standards.iteh.ai/catalog/standards/sist/bae15baf-54ee-47f5-adea-3ff6ba8e48cd/sist-ets-300-007-1996)

<https://standards.iteh.ai/catalog/standards/sist/bae15baf-54ee-47f5-adea-3ff6ba8e48cd/sist-ets-300-007-1996>

Foreword

This European Telecommunication Standard (ETS) has been produced by the Signalling Protocols & Switching (SPS) Technical Committee of the European Telecommunications Standards Institute (ETSI).

Introduction

This standard was drafted on the basis of CCITT Recommendation X.31 [15], incorporating also enhancements made to that document during early years of the study period 1988-1992.

As a consequence this document:

- (a) incorporates service aspects useful to understand the context of this standard;
- (b) does not necessarily fully align with the available stage 1 description, which is still under preparation. Therefore, several stage 1 aspects may not be covered here or are covered in a different manner;
- (c) is not based on a stage 2 description as there was no stage 2 draft ETS available;
- (d) does not necessarily seek alignment with draft ETS 300 099 [25] since it introduces limitations when the Packet Handler (PH) is remotely located;
- (e) includes a description of terminal adaptor functions which are required to support a CCITT Recommendation X.25 [14] DTE (Data Terminal Equipment) which is normally outside the scope of any comparable stage 3 access protocol specification.

In producing this draft standard, the following considerations have been taken into account:

- (a) DTEs conforming to CCITT Recommendation X.25 [14] shall be used, at least during the evolution of Integrated Services Digital Networks (ISDN) and possibly thereafter, in conjunction with Packet Mode Bearer Services (PMBS) provided on an ISDN or via an ISDN using circuit switched bearer service to Packet Switched Public Data Networks (PSPDNs);
- (b) the packet mode TE1s conforming to ETS 300 012 [23] and ETS 300 011 [22] at reference points S and T shall be used in conjunction with PMBS provided by an ISDN or via an ISDN using circuit switched bearer service to PSPDNs;
- (c) the functions and protocol defined by this draft ETS shall allow the provision of the network service defined in CCITT Recommendation X.213 [18];
- (d) the interworking function between an ISDN and a PSPDN is defined in CCITT Recommendation X.325 [21];
- (e) the demand access to PSPDNs is defined in CCITT Recommendation X.32 [16];
- (f) the dedicated access to PSPDNs is defined in CCITT Recommendation X.25 [14].

Normative references

This ETS incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to, or revisions of any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- [1] CCITT Recommendation E.163 (1988): "Numbering plan for the international telephone service".
- [2] CCITT Recommendation E.164 (1988): "Numbering plan for the ISDN era".
- [3] CCITT Recommendation E.166 (1988): "Numbering plan interworking in the ISDN era".
- [4] CCITT Recommendation I.130 (1988): "Method for the characterisation of telecommunication services supported by an ISDN and network capabilities of an ISDN".
- [5] CCITT Recommendation I.330 (1988): "ISDN Numbering and addressing principles".
- [6] CCITT Recommendation I.411 (1988): "ISDN user-network interfaces - Reference configurations".
- [7] CCITT Recommendation I.430 (1988): "Basic user-network interface - Layer 1 specification".
- [8] CCITT Recommendation Q.931 (1988): "ISDN user-network interface layer 3 specification for basic call control".
- [9] CCITT Recommendation V.25 *bis* (1988): "Automatic calling and/or answering equipment on the General Switched Telephone Network (GSTN) using the 100-series interchange circuits".
- [10] CCITT Recommendation X.1 (1988): "International user classes of service in public data networks and Integrated Services Digital Networks (ISDNs)".
- [11] CCITT Recommendation X.10 (1988): "Categories of access for Data Terminal Equipment (DTE) to public data transmission services".
- [12] CCITT Recommendation X.21 (1988): "Interface between Data Terminal Equipment (DTE) and Data Circuit-terminating Equipment (DCE) for synchronous operation on public data networks".
- [13] CCITT Recommendation X.21 *bis* (1988): "Use on public data networks of Data Terminal Equipment (DTE) which is designed for interfacing to synchronous V-series modems".
- [14] CCITT Recommendation X.25 (1988): "Interface between Data Terminal Equipment (DTE) and Data Circuit-terminating Equipment (DCE) for terminals operating in the packet mode and connected to public data networks by dedicated circuit".
- [15] CCITT Recommendation X.31 (1988): "Support of packet mode terminal equipment by an ISDN".

- [16] CCITT Recommendation X.32 (1988): "Interface between Data Terminal Equipment (DTE) and Data Circuit-terminating Equipment (DCE) for terminals operating in the packet mode and accessing a packet switched public data network through a public switched telephone network or an integrated services digital network or a circuit switched public data network".
- [17] CCITT Recommendation X.121 (1988): "International numbering plan for public data networks".
- [18] CCITT Recommendation X.213 (1988): "Networks service definition for open systems interconnection for CCITT applications".
- [19] CCITT Recommendation X.300 (1988): "General principles for interworking between public networks, and between public networks and other networks for the provision of data transmission services".
- [20] CCITT Recommendation X.320 (1988): "General arrangements for interworking between Integrated Services Digital Networks (ISDNs) for the provision of data transmission services".
- [21] CCITT Recommendation X.325 (1988): "General arrangements for interworking between Packet Switched Public Data Networks (PSPDNs) and Integrated Services Digital Networks (ISDNs) for the provision of data transmission services".
- [22] ETS 300 011: "Integrated Services Digital Network (ISDN); Primary rate user-network interface Layer 1 specification and test principles".
- [23] ETS 300 012: "Integrated Services Digital Network (ISDN); Basic user-network interface Layer 1 specification and test principles".
- [24] ETS 300 058 (1991): "Integrated Services Digital Network (ISDN); Call Waiting (CW) supplementary service Digital Subscriber Signalling System No. one (DSS1) protocol".
- [25] ETS 300 099: "Integrated Services Digital Network (ISDN); Specification of the Packet Handler Access Point Interface (PHI)".
- [26] ETS 300 102-1 (1990): "Integrated Services Digital Network (ISDN); User-network interface layer 3 Specifications for basic call control".
- [27] ETS 300 103 (1990): "Integrated Services Digital Network (ISDN); Support of X.21, X.21 *bis* and X.20 *bis* based Data Terminal Equipments (DTEs) by an ISDN Synchronous and asynchronous terminal adaption functions".
- [28] ETS 300 125 (1991): "Integrated Services Digital Network (ISDN); User-network interface data link layer specifications Application of CCITT Recommendations Q.920/I.440 and Q.921/I.441".

1 Scope

This stage three standard defines user-network signalling requirements to support:

- a) the application of the ISDN circuit mode 8 kHz structured 64 kbit/s unrestricted bearer service category for access to a Packet Switched Public Data Network (PSPDN);
- b) the ISDN packet mode bearer services (both B and D channels);

for the pan-European Integrated Services Digital Network (ISDN) as provided by European public telecommunications operators at the T reference point or coincident S and T reference point (as defined in CCITT Recommendation I.411 [6], by means of the Digital Subscriber Signalling System number one (DSS1). Stage three identifies the protocols and switching functions required to support telecommunication services (see CCITT Recommendation I.130 [4]).

In order to aid the understanding and the interpretation of the signalling and protocol requirements and specifications, this standard also includes:

- reference configurations aiming at providing guidance on the allocation of functionality in an ISDN supporting the above services;
- a summary of the service aspects that may be expected from an ISDN conforming to this standard.

This standard also specifies the mapping from the coincident S and T reference point to the R reference point, using a terminal adaptor to support existing X.25 DTE's.

This standard has been written to support cases a) and b) at the coincident S and T reference point. In addition the access protocol provides the capability to support cases a) and b) also at the T reference point where the services are offered to the user via a private ISDN.

The mapping to an S reference point or R reference point via a private ISDN (e.g. combining NT2 and TA functional groupings) is not specified, although such a configuration is not precluded.

The ISDN packet-mode bearer services (PMBS) provide the unrestricted transfer (without alteration) of user information in a packetised manner over a virtual circuit within the B and D channels at coincident S and T reference point.

The ISDN circuit-mode 64 kbit/s unrestricted 8 kHz structured bearer services provide unrestricted information transfer between coincident S and T reference points (see CCITT Recommendation I.411 [6]).

This standard is applicable to user and network equipment supporting case a or case b, to be attached at either side of a T reference point or coincident S and T reference points.

2 General service aspects

Two main services for packet switched data transmission are defined for packet-mode terminals connected to the ISDN, namely:

- Case A: access to a PSPDN (PSPDN services);
- Case B: use of an ISDN virtual circuit service.

In Case A an ISDN transparent circuit connection, either permanent (i.e., non-switched) or demand (i.e., switched), is used. The corresponding ISDN bearer service is a 64 kbit/s service. The service available to the user is that of the PSPDN described in CCITT Recommendation X.25 [14] (permanent access) and CCITT Recommendation X.32 [16] (demand access), as well as in other CCITT X-Series Recommendations (e.g., X.2, X.121).

In Case B an ISDN virtual circuit service is used.

In Case A only B-channel can be used to access the packet switched service at the user-network interface, while in Case B both B-and D-channels can be used. The detailed service aspects for both cases are described in Clause 3.

This ETS covers the following procedures at the coincident S and T reference point:

- B- and D- channel access on both basic and primary rate interfaces;
- CCITT Recommendation X.25 [14] LAPB procedures on the B-channel and ETS 300 125 [28] LAPD procedures on the D-channel.
CCITT Recommendation X.25 [14] LAP procedures are not considered here;
- CCITT Recommendation X.25 [14] packet layer procedures on both B- and D-channels.

In addition, this ETS defines the use of ETS 300 125 [28] and ETS 300 102-1 [26] procedures, when appropriate for the establishment and release of a physical path through the ISDN.

3 Reference configurations

The configurations given below are the basis on which the support of CCITT Recommendation X.25 [14] DTEs and TE1s by the ISDN should be standardised. Interworking considerations are defined in Clause 6.

These configurations are also the basis on which the support of packet mode TE1s by an ISDN has been standardised, since an X.25 DTE and its Terminal Adaptor (TA) is always equivalent to a packet mode TE1 at the S/T interface. Therefore, every reference in this ETS to the combination of an X.25 DTE and its TA should always be considered as being applicable to a packet mode TE1. However, some TE1s may have more capability than that available from an X.25 DTE and its TA.

Multiple X.25 DTE + TAs or TE1s, or a combination thereof, may be supported at the customer premises. Multiple X.25 DTEs may be multiplexed at layer 3 by an NT2 onto a single B-channel. Multiple TAs or TE1s are able to use the B-channel, one at a time, on a per-call basis.

This ETS only applies to packet mode operation carried out independently on a single ISDN network connection type (i.e. involving either a B- or a D-channel).

In addition, Annex D shows the reference configurations and an example of incoming call offering where an NT2 acting as a Frame Handler is present at the user access.

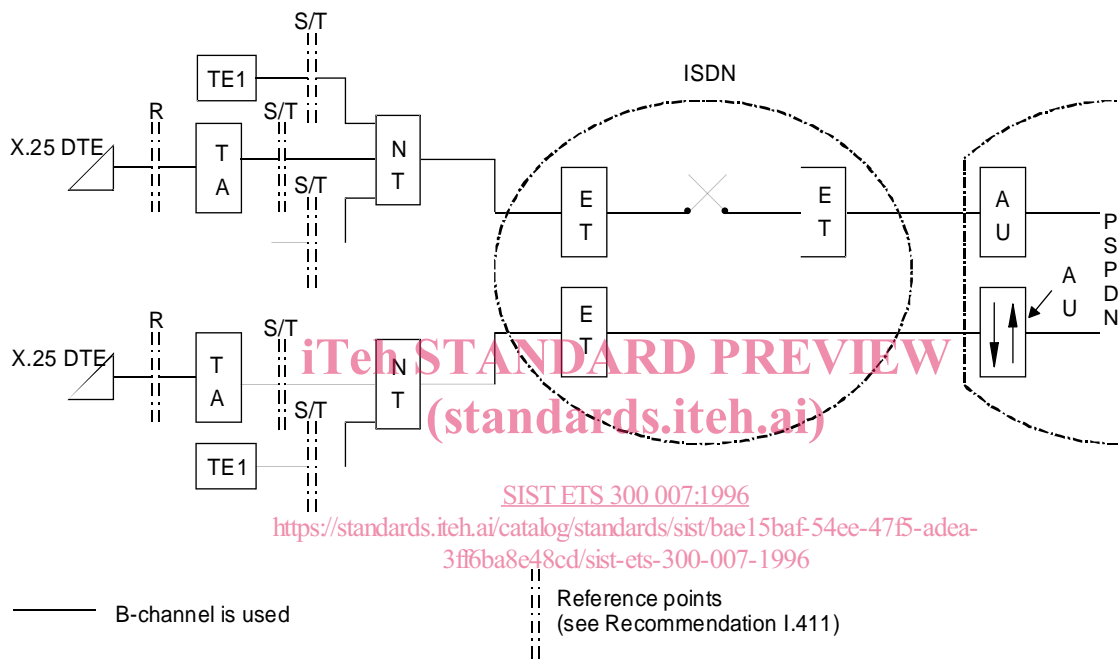
3.1 Configuration when accessing PSPDN services (Case A)

This configuration (see figure 1) refers to the service of Case A, thus implying a transparent handling of packet calls through an ISDN. Only access via the B-channels is possible. In this context, the only support that an ISDN gives to packet calls is a physical 64 kbit/s circuit-mode semi-permanent or demand transparent network connection type between the appropriate PSPDN port and the X.25 DTE+TA or TE1 at the customer premises.

In the case of semi-permanent access, the X.25 DTE+TA or TE1 is connected to the corresponding ISDN port at the PSPDN (AU). The TA, when present, performs only the necessary physical channel rate adaption between the user at the R reference point and the 64 kbit/s B-channel rate. ETS 300 102-1 [26] messages are not used in this case.

In the case of demand access to PSPDNs, which is illustrated in the upper portion of figure 1, the X.25 DTE+TA or TE1 is connected to an ISDN port at the PSPDN (AU). The AU is also able to set up 64 kbit/s physical channels through the ISDN.

In this type of connection, originating calls will be set up over the B-channel towards the PSPDN port using the ISDN signalling procedure prior to starting CCITT Recommendation X.25 [14] layer 2 and layer 3 functions. This can be done by exploiting either hot-line (e.g., direct call) or complete selection methods. Moreover, the TA, when present, performs user rate adaption to 64 kbit/s. Depending on the data rate adaption technique employed, a complementary function may be needed at the AU of the PSPDN (see clause 8 on TA rate adaption).



Keys:

- S/T = Coincident S and T reference point
- AU = ISDN access unit ports
- TA = Terminal adaptor
- NT = Network termination
- ET = Exchange termination
- TE1 = Terminal equipment 1

NOTE 1: This figure is only an example of many possible configurations and is included as an aid to the text describing the various interface functions

NOTE 2: See CCITT Recommendation X.325 [21] for interworking guidelines

Figure 1: Configuration when accessing PSPDN services

In the complete selection case, two separate numbers are used for outgoing access to the PSPDN:

- the ISDN number of the access port of the PSPDN, indicated in the ETS 300 102-1 [26] SETUP message;
- the address of the called DTE indicated in the CCITT Recommendation X.25 [14] call request packet.

The corresponding service requested in ETS 300 102-1 [26] SETUP message is ISDN circuit-mode bearer service.

For calls originated by the PSPDN, the same considerations as above apply. In fact, with reference to figure 1, the ISDN port of the PSPDN includes both rate adaption (if required) and path setting-up functions.

When needed, DTE identification may be provided to the PSPDN by using the call establishment signalling protocols in ETS 300 102-1 [26]. Furthermore, DCE identification may be provided to the DTE, when needed, by using the same protocols.

For the demand access case, layer 2 and layer 3 operation in the B-channel as well as service definitions are given in CCITT Recommendation X.32 [16].

Some PSPDNs may operate the additional DTE identification procedures defined in CCITT Recommendation X.32 [16] to supplement the ISDN provided information in Case A.

3.2 Configuration for the ISDN virtual circuit service (Case B)

This configuration refers to the case where a packet handling (PH) function is provided within the ISDN. The configuration in figure 2 relates to the case of CCITT Recommendation X.25 [14] link and packet layer procedures conveyed through the B-channel. In this case, the packet call is routed, within an ISDN, to some PH function where the complete processing of the CCITT Recommendation X.25 [14] call can be carried out.

<https://standards.iteh.ai/catalog/standards/sist/bae15baf-54ee-47f5-adea-3ff6ba8e48cd/sist-ets-300-007-1996>