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Digitalno omrežje z integriranimi storitvami (ISDN) – Paketne nosilne storitve (PMBS) – Nosilne storitve navideznega klica (VC) in stalnega navideznega voda (PVC) v sistemu ISDN prek D-kanala uporabniškega dostopa, osnovne in primarne

Integrated Services Digital Network (ISDN); ISDN Packet Mode Bearer Services (PMBS); ISDN Virtual Call (VC) and Permanent Virtual Call (PVC) bearer services provided by the D-channel of the user access - basic and primary rate

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New presentation - see History box

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Foreword

This European Telecommunication Standard (ETS) has been produced by the Network Aspects (NA) Technical Committee of the European Telecommunications Standards Institute (ETSI). It describes the stage one requirements of the ISDN Packet Mode Bearer Service (PMBS) provided on the D-channel of the user access. Services using the B-channel are covered in ETS 300 048.

The requirements described in this ETS are applicable only to those services within Europe, and are based on CCITT Recommendation I.232 [12]. This service description corresponds to case B (D-channel) of draft ETS 300 007 [1] (the European equivalent to CCITT Recommendation I.462/X.31 case B).

The requirements for stage three of this service are contained in ETS 300 007 [1].

Annexes A and B are normative, Annexes C and D are informative.

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1 Scope

This European Telecommunication Standard (ETS) defines stage one of the ISDN Packet Mode Bearer Service (PMBS) provided on the D-channel of the user access for the pan-European Integrated Services Digital Network (ISDN) as provided by European public telecommunications operators. Stage one is an overall service description from the user's point of view (see CCITT Recommendation I.130 [13]), but does not deal with the details of the human interface itself.

This ETS makes use of ETS 300 007 [1], which is a stage three standard, in order to provide a description of the procedures. This mechanism would not normally be used in a stage one standard.

This ETS does not define details of the interworking requirements of private ISDNs with the public ISDN.

In addition, this ETS specifies the base functionality where the service is provided to the user via a private ISDN.

This ETS does not specify the additional requirements where the service is provided to the user via a telecommunications network that is not an ISDN but does include interworking requirements of other networks with the public ISDN.

Charging principles are outside the scope of this ETS.

The ISDN Virtual Call (VC) and Permanent Virtual Circuit (PVC) bearer service categories provides the unrestricted transfer (without alteration) of user information in a packetised manner over a virtual circuit between reference points via the basic and primary rate access. Each of the reference points can be either an S or coincident S and T reference point.

NOTE: Network operators can also provide information transfer with the same attributes where the reference point is T.

The ISDN VC and PVC bearer service category is described in CCITT Recommendation I.232 [12].

This ETS is applicable to the stage three standards for the ISDN PMBS. The term "stage three" is also defined in CCITT Recommendation I.130 [13]. Where the text indicates the status of a requirement (i.e. as strict command or prohibition, as authorisation leaving freedom, or as a capability or possibility), this shall be reflected in the text of the relevant stage three standards.

Furthermore, conformance to this ETS is met by conforming to the stage three standards with the field of application appropriate to the equipment being implemented. Therefore no method of testing is provided for this ETS.

2 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] ETS 300 007 (1991): "Integrated Services Digital Network (ISDN); Support of packet-mode terminal equipment by an ISDN".

[2] 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".

[3] ETS 300 102-1 (1990): "Integrated Services Digital Network (ISDN); User-network interface layer 3; Specifications for basic call control".

[4] 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".

[5] CEPT Recommendation T/CD 08-03: "General interworking and service aspects of packet switched public data networks".

[6] ETS 300 012: "Integrated Services Digital Network (ISDN); Basic user-network interface; Layer 1 specification and test principles".

[7] ETS 300 011: "Integrated Services Digital Network (ISDN); Primary rate user-network interface; Layer 1 specification and test principles".

[8] CCITT Recommendation I.112 (1988): "Vocabulary of terms for ISDNs".

[9] CCITT Recommendation I.210 (1988): "Principles of telecommunication services supported by an ISDN and the means to describe them".

[10] CCITT Recommendation E.164 (1988): "Numbering plan for the ISDN era".

[11] CCITT Recommendation X.1 (1988): "International user classes of service in public data networks and Integrated Service Digital Networks (ISDNs)".

[12] CCITT Recommendation I.232: "Packet-mode bearer services categories".

[13] CCITT Recommendation I.130 (1988): "Method for the characterisation of telecommunication services supported by an ISDN and network capabilities of an ISDN".

3 Definitions

For the purposes of this ETS, the following definitions apply:

Integrated Services Digital Network (ISDN): see CCITT Recommendation I.112 [8], § 2.3, definition 308.

service; telecommunications service: see CCITT Recommendation I.112 [8], § 2.2, definition 201.

supplementary service: see CCITT Recommendation I.210 [9], § 2.4.

virtual call: see CCITT Recommendation X.25 [4], § 3.

permanent virtual circuit: see CCITT Recommendation X.25 [4], §3.

service profile: see CCITT Recommendation X.25 [4].

packet handler: see ETS 300 007 [1].

semipermanent: see ETS 300 007 [1].

party number: as ISDN number, a number conforming to the numbering plan and structure specified in CCITT Recommendation E.164 [10].

party subaddress: see CCITT Recommendation E.164 [10], § 11.2.

4 Description

This service is described in respect of both the point-to-multipoint and the point-to-point access configurations. This covers the passive bus and Network Terminating 2 (NT2) access arrangements.

These packet mode bearer services allow users (e.g. terminals) in a point-to-point communication configuration to communicate via the ISDN using CCITT Recommendation X.25 [4] encoding, by means of procedures over a D-channel in both directions continuously and simultaneously, for the duration of a call as described in ETS 300 007 [1] (CCITT Recommendation I.462/X.31).

No distinct user class is defined for the D-channel at 16 kbit/s. The use of class 30 may be available if the primary rate access (D-channel at 64 kbit/s) is offered.

NOTE: In case of access via a Terminal Adaptor (TA), the following user classes are supported at the R reference points: 8-10, and in addition 11 and 13 on a D64-channel (see CCITT Recommendation X.1 [11]).

5 Procedures

5.1 Provision and withdrawal

This service shall either be provided by prior arrangement with the service provider, or be available on a general basis.

The user may subscribe to:

- a specific CCITT Recommendation X.25 [4] profile (essential for PVC operation); or
- a standard service profile, as described in Annex A.

NOTE: ETS 300 007 [1] requires terminals to be identified by means of CCITT Recommendation E.164 [10] numbers. However, for an interim period, addressing according to Annex C is possible. In this case the terminal address is determined at subscription time.

5.2 Normal procedures

5.2.1 Activation, deactivation and registration

Not applicable.

5.2.2 Invocation and operation

VC and PVC virtual circuit procedures can be invoked and operated by a given terminal concurrently.

5.2.2.1 Virtual call procedures

5.2.2.1.1 Layer 1 activation

Layer 1 shall be permanently active or activated on demand by the Data Terminating Equipment (DTE) or the Packet Handler (PH). For Primary Rate Access (PRA), layer 1 is permanently active.