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Digitalno omrežje z integriranimi storitvami (ISDN) – Paketne nosilne storitve (PMBS) – Nosilne storitve prek B-kanala uporabniškega dostopa, osnovne in primarne

Integrated Services Digital Network (ISDN); ISDN Packet Mode Bearer Services (PMBS) bearer services provided by the B-channel of the user access -basic and primary rate

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Digitalno omrežje z
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(ISDN)

Integrated Services Digital
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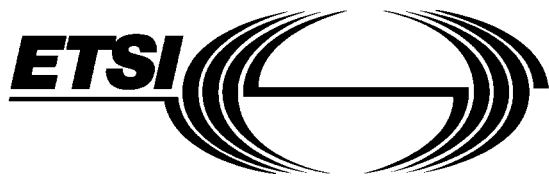
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bearer services provided by the B-channel of the user access -
basic and primary rate**

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Contents

Foreword	5
1 Scope	7
2 Normative references	7
3 Definitions	8
4 Description	9
5 Procedures	9
5.1 Provision and withdrawal	9
5.2 Normal procedures	9
5.2.1 Activation, deactivation and registration	9
5.2.2 Invocation and operation	9
5.2.2.1 Virtual call procedures	9
5.2.2.1.1 Layer 1 Activation and channel establishment	9
5.2.2.1.2 Layer 2 activation (B-channel)	10
5.2.2.1.2.1 Method 1 - Semi-permanent layer 2	10
5.2.2.1.2.2 Method 2 - On demand layer 2	10
5.2.2.1.3 Terminal selection and identification	10
5.2.2.1.4 Call establishment	10
5.2.2.1.5 Data transfer	10
5.2.2.1.6 Terminating the call	10
5.2.2.1.7 Layer 2 deactivation	10
5.2.2.1.8 Layer 1 deactivation and channel release	11
5.2.2.2 Permanent virtual circuit procedures	11
5.2.2.2.1 Layer 1 activation and channel establishment	11
5.2.2.2.2 Layer 2 activation	11
5.2.2.2.3 Terminal selection and identification	11
5.2.2.2.4 Call establishment	11
5.2.2.2.5 Data transfer	11
5.2.2.2.6 Terminating the call	11
5.2.2.2.7 Layer 2 deactivation	11
5.2.2.2.8 Layer 1 deactivation and channel release	11
5.2.3 Interrogation and Editing	11
5.3 Exceptional procedures	12
5.3.1 Activation, deactivation and registration	12
5.3.2 Invocation and operation	12
5.3.2.1 Virtual call	12
5.3.2.2 Permanent virtual circuit	12
5.3.3 Interrogation and editing	12
6 Network capabilities for charging	12
7 Interworking	13
7.1 Interworking between Public Networks	13
7.2 Interworking between Private and Public ISDNs	13
8 Interaction with supplementary services	13

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9	Attributes and values of attributes (including the provision of individual bearer services)	13
9.1	Attributes and values	13
9.2	Provision of individual bearer services	15
Annex A (normative):	Standard service profile	16
Annex B (normative):	User facilities	17
Annex C (informative):	Bibliography	18
History		19

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SIST ETS 300 048 E1:2003

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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 B-channel of the user access. Services using the D-channel are covered in ETS 300 049.

The requirements described in this ETS are applicable only to those services within Europe and are based upon CCITT Recommendation I.232 [8].

The service description corresponds to case B (B-channel) of ETS 300 007 [7] (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 [7].

Annexes A and B are normative. Annex C is informative.

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1 Scope

This European Telecommunication Standard (ETS) defines the stage one of the Packet Mode Bearer Service (PMBS) provided by the B-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 [1]), but does not deal with the details of the human interface itself.

This ETS makes use of ETS 300 007 [7], which is a stage 3 ETS, in order to provide a description of the procedures. This mechanism would not normally be used in a stage 1 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 category provide 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.

ISDN VC and PVC bearer service category is described in CCITT Recommendation I.232 [8].

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 [1]. Where the text indicates the status of a requirement, (i.e. as strict command or prohibition, as authorisation leaving freedom, 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] CCITT Recommendation I.130 (1988): "Method for the characterisation of telecommunication services supported by an ISDN and network capabilities of an ISDN".
- [2] CCITT Recommendation I.112 (1988): "Vocabulary of terms for ISDNs".
- [3] CCITT Recommendation I.210 (1988): "Principles of telecommunication services supported by an ISDN and the means to describe them".

- [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] ETS 300 125 (1991): "Integrated Services Digital Network (ISDN); User-network interface data link layer specification. Application of CCITT Recommendations Q.920/I.440 and Q.921/I.441".
- [6] CCITT Recommendation X.1 (1988): "International user classes of service in public data networks and Integrated Service Digital Networks (ISDNs)".
- [7] ETS 300 007 (1991): "Integrated Services Digital Network (ISDN); Support of packet-mode terminal equipment by an ISDN".
- [8] CCITT Recommendation I.232 (1988): "Packet mode bearer services categories".
- [9] CCITT Recommendation E.164 (1988): "Numbering plan for the ISDN era".

3 Definitions

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

Integrated Services Digital Network (ISDN): See CCITT Recommendation I.112 [2], § 2.3, definition 308.

service; telecommunication service: See CCITT Recommendation I.112 [2], § 2.2, definition 201.

supplementary service: See CCITT Recommendation I.210 [3], § 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 [7].

semipermanent: See ETS 300 007 [7], Clause 7.

party number: As ISDN number, a number conforming to the numbering plan and structure specified in CCITT Recommendation E.164 [9]

party subaddress: See CCITT Recommendation E.164 [9], § 11.2.

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4 Description

This service is described for both the point-to-multipoint and point-to-point configurations. This covers the passive bus and 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 B-channel in both directions continuously and simultaneously, for the duration of a call as described in ETS 300 007 [7]. This shall be performed by means of procedures over a B-channel in both directions continuously and simultaneously, for the duration of a call as described in ETS 300 125 [5] (CCITT Recommendations I.462/X.31). User class 30 as described in CCITT Recommendation X.1 [6] is supported.

NOTE: In case of access via TA, the following user classes are supported at the R-reference point: 8-13 (see CCITT Recommendation X.1 [6])

5 Procedures

5.1 Provision and withdrawal

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

The user can have subscription to a specific CCITT Recommendation X.25 [4] profile (essential for PVC operation); or standard profile as described in Annex A.

5.2 Normal procedures

5.2.1 Activation, deactivation and registration

Not applicable.

5.2.2 Invocation and operation

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

5.2.2.1 Virtual call procedures

If a B-channel has already been established between the terminal and the Packet Handler (PH) then CCITT Recommendation X.25 [4] packet layer calls may be made over an active Link Access Procedure-Balanced (LAPB) data link. If no such B-channel connection exists then channel establishment procedures are needed to provide a communication path between the terminal and the PH.

5.2.2.1.1 Layer 1 Activation and channel establishment

Layer 1 shall be permanently active or activated on demand by the Data Terminal Equipment (DTE) or the PH. The procedures for layer 1 activation depend on methods for layer 2 activation; see following sections. For Primary Rate Access (PRA), layer 1 is permanently active.

A B-channel connection to the Packet Handler (PH) is either permanent or shall be established on demand. In the latter case detailed procedures for channel establishment by the terminal or by the network are to be found in ETS 300 007 [7] using ETS 300 102-1 signalling procedures.