



SLOVENSKI STANDARD SIST ETS 300 099 E1:2003

01-december-2003

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Integrated Services Digital Network (ISDN); Specification of the Packet Handler access point Interface (PHI)

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Ta slovenski standard je istoveten z: **ETS 300 099 Edition 1**
SIST ETS 300 099 E1:2003
<https://standards.iteh.ai/catalog/standards/sist/b1d5cc50-7daa-4878-978b-5dbcf1fce687/sist-ets-300-099-e1-2003>

ICS:

33.080	Digitalno omrežje z integriranimi storitvami (ISDN)	Integrated Services Digital Network (ISDN)
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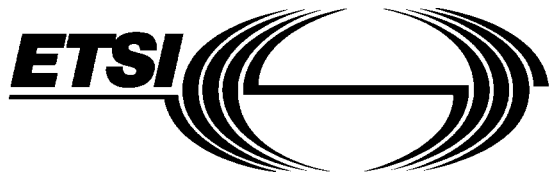
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EUROPEAN
TELECOMMUNICATION
STANDARD

ETS 300 099

August 1992

Source: ETSI TC-NA

Reference: T/NA2(89)10

ICS: 33.080

Key words: ISDN, access, interface

iTeh STANDARD PREVIEW
Integrated Services Digital Network (ISDN);
Specification of the
Packet Handler access point Interface (PHI)

ETSI

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Foreword

This European Telecommunication Standard (ETS) has been prepared by the Network Aspects (NA) Technical Committee of the European Telecommunications Standards Institute (ETSI).

In accordance with CCITT Recommendation I.130 [1], the following three level structure is used to describe the telecommunications services by European public telecommunications operators under the pan-European Integrated Services Digital Network (ISDN):

- Stage 1: is an overall service description, from the user's standpoint;
- Stage 2: identifies the functional capabilities and information flows needed to support the service described in stage 1; and
- Stage 3: defines the signalling system protocols and switching functions needed to implement the service described in stage 1.

This ETS defines a network-internal interface for the provision of ISDN packet mode services as defined in ETS 300 048 [7] (derived from CCITT Recommendation I.232 [16]), ETS 300 049 [8] (derived from CCITT Recommendation I.232 [16]) (stage 1) and ETS 300 007 [20] (derived from CCITT Recommendation X.31) (stage 3).

NOTE 1: The term ISDN packet mode services is used in a way as to include both case B (ISDN packet mode bearer services, PMBS) and case A (PSPDN services), see ETS 300 007 [20].

NOTE 2: No stage 2 service description existed at the time this standard was prepared.

NOTE 3: The PLL service described in ETS 300 049 [8] and supported by this standard is not explicitly mentioned in ETS 300 007 [20].

NOTE 4: For case A services described in ETS 300 007 [20] and supported by this standard, no stage 1 service description exists.

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1 Scope

1.1 Implementation alternatives for ISDN packet mode services and applicability of this specification

This specification defines a network-internal interface for the provision of ISDN packet-mode services.

The term ISDN packet mode services is defined in such a way as to include both case B (ISDN Packet Mode Bearer Services (PMBS)), and case A (PSPDN services), see ETS 300 007 [20].

This specification shall be used if a specific implementation alternative for the provision of these services is used in an ISDN. The implementation alternatives and the exact location of the interface are described in the following paragraphs.

In CCITT Recommendation I.324 [6], local Connection-Related Function (CRF) and Packet-Handling Function (PHF) are defined as being involved in the provision of packet mode bearer services (PMBS). The local CRF includes the Exchange Termination (ET). Two basic implementation alternatives are mentioned in subclause 3.1.2 of CCITT Recommendation I.324 and in ETS 300 007 [20]:

- 1) the PHF is integrated in the local CRF; and
- 2) the PHF is not part of the local CRF. Local CRF and PHFs are implemented with different physical equipment and in a multi-vendor environment. In addition, the PH, although logically belonging to the ISDN, may be physically part of the PSPDN.

In the first case, the interface between ET and PHFs can be kept internal and proprietary. In the second case, a standardised interface between local CRF and PHFs is required. This specification defines a manufacturer-independent interface between the local CRF and PHFs. The interface is called the Packet Handler access point Interface (PHI).

If the second implementation alternative is chosen for the provision of packet mode services in an ISDN, this specification shall be used for the implementation of the PHI. The existence of this specification does, however, not preclude the choice of the first implementation alternative in an ISDN.

Considerations for the use of the PHI in private networks and interworking between private and public networks are outside the scope of this standard. The PHI is a network-internal interface to be used in public networks.

1.2 ISDN packet mode services supported

The full scope of services defined in ETS 300 048 [7] and ETS 300 049 [8] (Case B) and in ETS 300 007 [20] (Cases A and B) is supported by the PHI specification, see Clause 5 for details. Subclause 5.4 contains a table giving an overview of the services, references to the relevant sections of the PHI specification and a conformance statement.

The PHI specification uses the term Packet Handler (PH) in both Case A and Case B services. For Case A services, the PH assumes the role of the Access Unit (AU), see ETS 300 007 [20].

No other services are supported by the PHI specification.

1.3 Local and remote access to the PHI

The PHI denotes the interface between the PH and the CRF it is directly connected to (called CRF-P, see subclause 4.3). At least in the initial phase of service offerings it can be expected that the number of local exchanges in an ISDN exceeds the number of packet handlers. The PHI will thus also have to support subscribers accessing it remotely, i.e. subscriber and PH are connected to different CRFs.