



SLOVENSKI STANDARD SIST ETS 300 166 E1:2003

01-december-2003

Prenos in multipleksiranje (TM) – Fizične in električne karakteristike hierarhičnih digitalnih vmesnikov za opremo, ki uporablja plezihrone ali sinhrono digitalne hierarhije na osnovi hitrosti 2 048 kbit/s

Transmission and Multiplexing (TM); Physical and electrical characteristics of hierarchical digital interfaces for equipment using the 2 048 kbit/s - based plesiochronous or synchronous digital hierarchies

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ICS:

33.040.20	Prenosni sistem	Transmission systems
35.200	Vmesniška in povezovalna oprema	Interface and interconnection equipment

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**Transmission and Multiplexing (TM);
Physical and electrical characteristics of hierarchical digital
interfaces for equipment using the 2 048 kbit/s -
based plesiochronous or synchronous digital hierarchies**

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Foreword

This European Telecommunication Standard (ETS) has been produced by the Transmission and Multiplexing (TM) Technical Committee of the European Telecommunications Standards Institute (ETSI).

This ETS specifies the physical and electrical characteristics of hierarchical interfaces based on CCITT Recommendation G.703 [2] but it does not intend to preclude the use of interfaces covered in other standards.

The aim of this ETS is to provide inter-vendor and inter-operator compatibility.

The conformance testing requirements corresponding to the specifications contained in this ETS are to be specified in a different ETS.

Physical parameters for optical interfaces for the Synchronous Digital Hierarchy (SDH) are to be specified in a different standard which is under development.

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1 Scope

This ETS describes the requirements for the physical and electrical parameters of interfaces based on CCITT Recommendations G.702 [1], G.703 [2] and G.707 [3] for interconnection of digital network elements:

- in-station (i.e. for distances below a few hundred metres);
- using metallic (symmetrical or coaxial) pairs;
- at 64, 2 048, 8 448, 34 368 and 139 264 kbit/s hierarchical levels of the Plesiochronous Digital Hierarchy (PDH) and at the first level of the Synchronous Digital Hierarchy (SDH) (STM-1 at 155 520 kbit/s).

This ETS also describes the requirements for the physical and electrical parameters of the 2 048 kHz synchronisation interface.

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 G.702 (1990): "Digital hierarchy bit rates".
- [2] CCITT Recommendation G.703 (1991): "Physical/electrical characteristics of hierarchical digital interfaces".
- [3] CCITT Recommendation G.707 (1991): "Synchronous digital hierarchy bit rates". [SIST ETS 300 166 E1:2003](https://standards.iteh.ai/catalog/standards/sist/fd89f5b4-29f4-4753-bdc6-766597c297d4/sist-ets-300-166-e1-2003)
- [4] CCITT Recommendation I.431 (1988): "Primary rate user/network interface - Layer 1 specification". <https://standards.iteh.ai/catalog/standards/sist/fd89f5b4-29f4-4753-bdc6-766597c297d4/sist-ets-300-166-e1-2003>
- [5] CCITT Recommendation O.9 (1988): "Measuring arrangements to assess the degree of unbalance about earth".
- [6] CCITT Recommendation G.704 (1991): "Synchronous frame structures used at primary and secondary hierarchical levels".

3 Definitions

For the purposes of this ETS, there are no terms needing a specific definition.

4 Symbols and abbreviations

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

PDH	Plesiochronous Digital Hierarchy
PRBS	Pseudo-Random Binary Sequence
SDH	Synchronous Digital Hierarchy