SLOVENSKI STANDARD
SIST I-ETS 300 245-1 E1:2003

01-december-2003

Digitalno omreģje z integriranimi storitvami (ISDN) ï Tehniļne karakteristike telefonskih terminalov 1. del: Sploģno

Integrated Services Digital Network (ISDN); Technical characteristics of telephony terminals; Part 1: General

Ta slovenski standard je istoveten z: I-ETS 300 245-1 Edition 1

ICS:

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

SIST I-ETS 300 245-1 E1:2003 **en**

INTERIM EUROPEAN TELECOMMUNICATION STANDARD

I-ETS 300 245-1

May 1994

Source: ETSI TC-TE

Reference: T/TE 10-07 (A)

ICS: 33.080

Key words: ISDN, telephony terminals

Integrated Services Digital Network (ISDN); Technical characteristics of telephony terminals

Part 1: General

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Foreword

This Interim European Telecommunication Standard (I-ETS) was prepared by the Terminal Equipment (TE) Technical Committee of the European Telecommunications Standards Institute (ETSI).

An ETSI standard may be given I-ETS status as it is regarded either as a provisional solution ahead of a more advanced standard, or because it is immature and requires a "trial period". The life of an I-ETS is limited, at first, to three years after which it can be converted into an European Telecommunication Standard (ETS), have its life extended for a further two years, be replaced by a new version of the I-ETS or, finally, be withdrawn.

This is the first part of an I-ETS which is currently intended to comprise eight parts.

This I-ETS specifies technical characteristics for Integrated Services Digital Network (ISDN) telephony terminals as described in the scope of this I-ETS. The characteristics are additional to type approval requirements to which the terminal equipment is subject. The additional characteristics are meant to give improved performance.

In the present version of the I-ETS the following parts are included:

Part 1: General.

Part 2: PCM A-law, handset telephony.

Part 3: PCM A-law, loudspeaking and handsfree telephony.

Part 4: Interface for additional equipment.

Part 5: Wideband (7 kHz) handset telephony.

Part 6: Wideband (7 kHz) handsfree telephony.

Part 7: Locally generated information tones.

Part 8: Terminal application of 16 kbit/s speech coding algorithms.

NOTE: Part 8 is still under study within ETSI.

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1 Scope

This Interim European Telecommunication Standard (I-ETS) specifies the technical characteristics (electrical, logical and acoustic) for telephony terminals to be used at the basic access of the coincident S and T reference point of the Integrated Services Digital Network (ISDN). The characteristics of this I-ETS are additional to those of the ISDN basic access attachment requirements (ETS 300 085 [1], ETS 300 104 [2] and ETS 300 153 [3]) and of any other Standard or attachment requirements to which the terminal equipment is subject. The additional characteristics of this I-ETS are meant to give improved performance relative to the attachment ETSs. However, this I-ETS is not intended to be used for type approval purposes or other mandatory requirements.

This I-ETS is applicable to telephony terminals as well as to telephony functions of multimedia or multiservice terminals.

This I-ETS is applicable to Terminal Equipment (TE) of the functional group defined as Terminal Equipment Type 1 (TE1) in CCITT Recommendation I.411 [4].

The characteristics specified in this I-ETS cover a number of functions or facilities which can be combined to form a particular terminal. The characteristics relevant for each speech coding algorithm, function or facility can be found in separate parts of the I-ETS. This Part (Part 1) covers the introduction to the I-ETS and the characteristics which are common to telephony terminals to be connected to a coincident S and T reference point to a public telecommunication network presented as an ISDN basic access point.

For multimedia or multiservice terminals, other requirements or standards may apply instead of, or in addition to, this I-ETS.

TE specially designed for the disabled (e.g. with amplification of received speech as an aid for the hard-of-hearing), may have characteristics which may be specified in separate parts of this I-ETS.

TE using a radio link (e.g. cordless telephones) will, due to the characteristics of the radio channel, be specified separately.

NOTE: In some countries, an interim ISDN service corresponding to, but not wholly compatible with, the ISDN basic access standards may be provided. This I-ETS does not apply for connection to such a service.

2 Normative references

This I-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 I-ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referenced to applies.

[1] ETS 300 085 (1990): "Integrated Services Digital Network (ISDN); 3,1 kHz telephony teleservice, Attachment requirements for handset terminals".

[2] ETS 300 104 (1991): "Integrated Services Digital Network (ISDN); Attachment requirements for terminal equipment to connect to an ISDN using ISDN basic access, Layer 3 aspects (Candidate NET 3, Part 2)".

[3] ETS 300 153 (1992): "Integrated Services Digital Network (ISDN); Attachment requirements for terminal equipment to connect to an ISDN using ISDN basic access (Candidate NET 3, Part 1)".

[4] CCITT Recommendation I.411 (1988): "Integrated Services Digital Network (ISDN) user-network interfaces - Reference configurations".

[5] CCITT Recommendation P.10 (1988): "Vocabulary of terms on telephone transmission quality and telephone sets".

[6] CCITT Recommendation G.701 (1988): "Vocabulary of digital transmission and multiplexing, and pulse code modulation (PCM) terms".

[7] ETS 300 111 (1992): "Integrated Services Digital Network (ISDN); Telephony 3,1 kHz teleservice, Service description".

[8] ETS 300 263 (1992): "Integrated Services Digital Network (ISDN); Telephony 7 kHz teleservice, Service description".

[9] CCITT Recommendation I.430 (1988): "Integrated Services Digital Network (ISDN) user-network interfaces: layer 1 recommendations".

[10] ETS 300 102-1 (1990) (including Amendment 1 (1993)): "Integrated Services Digital Network (ISDN); User-network interface layer 3, Specification for basic call control".

[11] ETS 300 082 (1992): "Integrated Services Digital Network (ISDN); 3,1 kHz telephony teleservice, End-to-end compatibility".

[12] I-ETS 300 281: "Integrated Services Digital Network (ISDN); Telephony 7 kHz teleservice, Terminal requirements necessary for end-to-end compatibility".

[13] ETS 300 267 (1993): "Integrated Services Digital Network (ISDN); Telephony 7 kHz and videotelephony teleservices; Digital Subscriber Signalling System No. one DSS1) protocol".

[14] prI-ETS 300 322: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1), Abstract test Suite (ATS) for user of signalling-network-layer protocol for circuit-mode basic call control".

[15] CCITT Recommendation G.711 (1988): "Pulse code modulation (PCM) of voice frequencies".

[16] CCITT Recommendation G.722 (1988): "7 kHz audio-coding within 64 kbit/s".

[17] CCITT Recommendation E.164 (1991): "Numbering plan for the ISDN era".

[18] CCITT Recommendation G.101 (1988): "The transmission plan".

[19] ETS 300 012 (1992): "Integrated Services Digital Network (ISDN); Basic user-network interface, Layer 1 specification and test principles".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of this I-ETS, the relevant definitions given in CCITT Recommendations P.10 [5] and G.701 [6] apply along with the following.

Telephony 3,1 kHz teleservice: A description of the telephony 3,1 kHz teleservice is to be found in ETS 300 111 [7].

Telephony 7 kHz teleservice: A description of the telephony 7 kHz teleservice is to be found in ETS 300 263 [8].

Restricted power condition: As defined in CCITT Recommendation I.430 [9]. The condition is indicated by the reversed polarity of the phantom voltage at the coincident S and T reference point.

NOTE: For some networks restricted power condition will be the normal operating mode.

Designated terminal: Refers to the terminal which is permitted to draw power from Power source 1 under Restricted power conditions as specified in CCITT Recommendation I.430 [9].

Telephony terminal: A terminal which supports the telephony 3,1 kHz teleservice and/or the telephony 7 kHz teleservice.

3,1 kHz terminal: A terminal which supports the telephony 3,1 kHz teleservice.

7 kHz terminal: A terminal which supports the telephony 7 kHz teleservice.

Loudspeaking telephony terminal: A handset telephony terminal using a loudspeaker assosiated with an amplifier as a telephone receiver (see CCITT Recommendation P.10 [5]).

Handsfree telephony terminal: A telephony terminal using a loudspeaker associated with an amplifier as a telephone receiver and which can be used without a handset (see CCITT Recommendation P.10 [5]).

Multiservice terminal: A terminal which supports more than one service (bearer service or teleservice).

Multimedia terminal: A terminal which simultaneously supports two or more media (e.g. audio, video, text, data).

Digital interface: Refers to the B-channels available at the coincident S and T reference point at an ISDN basic access.

3.2 Abbreviations

For the purposes of this I-ETS, the following abbreviations, plus the relevant abbreviations in CCITT Recommendations P.10 [5] and G.701 [6], apply.

BC	Bearer Capability (see ETS 300 102-1 [10])
DTMF	Dual Tone Multi Frequency (the same as MFPB - Multi Frequency Push Button)
ETS	European Telecommunication Standard
ETSI	European Telecommunications Standards Institute
HLC	High Layer Compatibility (see ETS 300 102-1 [10])
I-ETS	Interim European Telecommunication Standard
ISDN	Integrated Services Digital Network
LLC	Low Layer Compatibility (see ETS 300 102-1 [10])
UDI	Unrestricted Digital Information (see ETS 300 102-1 [10])
UDI-TA	Unrestricted Digital Information with Tones and Announcements (previously called 7 kHz audio in ETS 300 102-1 [10])