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HYfa]bUg_UcdfYa Ufh9LÈFYZfYb b]df]_`4 Y_`nUj]XYcHfYZc bYÈdcXUh_cj bY
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Terminal Equipment (TE); Videotelephone reference terminal - data communication using in-band signalling principles

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ICS:

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|-----------|---|
| 33.160.60 | X^] ^å•æ) æQ ~ ä ^åæ\ æMultimedia systems and teleconferencing equipment |
| 35.180 | Terminalska in druga periferna oprema IT IT Terminal and other peripheral equipment |

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STANDARD**

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Foreword

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

An ETSI standard may be given I-ETS status either because it is regarded 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 to three years after which it can be converted into an ETS, have its life extended for a further two years, be replaced by a new version, or be withdrawn.

Proposed announcement date	
Date of adoption:	20 June 1997
Date of latest announcement of this I-ETS (doa):	31 October 1997

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1 Scope

This Interim European Telecommunication Standard (I-ETS) specifies the necessary signalling procedures and interfaces of a data port of ITU-T Recommendation V.24 [2] type on an audiovisual terminal using framed communication as described in ETS 300 144 [1], to which a Personal Computer (PC) or similar Data Terminal Equipment (DTE) may be attached.

The data communication facility is intended to provide an independent data channel which may be used for general data communication between two terminals. The data channel may support transmission in either or both directions.

This I-ETS describes two optional schemes:

- a fully standardized data-transmission and applications-sharing scheme capable of multipoint operation; this requires conformant software to be present on both DTEs, and the link can be controlled from the DTEs themselves. The scheme could be extended to higher bit-rates, as may be required in the future;
- a simplified scheme which does not require standardized software but which gives point-to-point communication between PCs having a common application; in this case the link must be controlled by the user from the videophones.

Terminals supporting teleservices using in-band signalling (e.g. telephony 7 kHz or videotelephony) may offer data communication facilities as described in this specification as an option, but the facility is not a part of the defined teleservice.

This interim standard is applicable to terminals which are intended for connection to the pan-European Integrated Services Digital Network (ISDN) as provided by European public telecommunication operators at the T reference point or coincident S and T reference point, and which support in-band signalling and frame communication as described in ETS 300 144 [1].

2 Normative references

This I-ETS incorporates by dated and 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 referred to applies.

- | | |
|-----|--|
| [1] | ETS 300 144 (1996): "Integrated Services Digital Network (ISDN): Audiovisual services; Frame structure for a 64 kbit/s to 1 920 kbit/s channel and associated syntax for inband signalling". |
| [2] | ITU-T Recommendation V.24 (1994): "List of definitions for interchange circuits between Data Terminal Equipment (DTE) and Data Circuit-terminating Equipment (DCE)". |
| [3] | ITU-T Recommendation V.28 (1994): "Electrical characteristics for unbalanced doubled-current interchange circuits". |
| [4] | ISO 2110 (1989): "Information technology- Data communication - 25-pole DTE/DCE interface connector and contact number assignments". |
| [5] | ITU-T Recommendation T.122 (1995): "Multipoint communication service for audiographic and audiovisual conferencing service definition". |
| [6] | ITU-T Recommendation T.123 (1995): "Protocol stacks for audiographic and audiovisual teleconference applications". |
| [7] | ITU-T Recommendation T.124 (1995): "Generic Conference Control". |

- [8] ITU-T Recommendation T.125 (1994): "Multipoint communication service protocol specification".
- [9] CCITT Recommendation Q.922 (1992): "ISDN data link layer specification for frame mode bearer services".
- [10] ETS 300 145 (1996): "Integrated Services Digital Network (ISDN); Audiovisual services; Videotelephone systems and terminal equipment operating on one or two 64 kbit/s channels".
- [11] ITU-T Recommendation H.320 (1994): "Narrow-band visual telephone systems and terminal equipment".
- [12] ETS 300 143 (1994): "Integrated Services Digital Network (ISDN); Audiovisual services Inband signalling procedures for audiovisual terminals using digital channels up to 2 048 kbit/s".
- [13] ISO/IEC 3309 (1993): "Information technology - Telecommunications and information exchange between systems - High-layer Data Link Control (HDLC) procedures - Frame structure".
- [14] ITU-T Recommendation V.14 (1994): "Transmission of start-stop characters over synchronous bearer channels".

3 Definitions and abbreviations

3.1 Definitions

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

H.221 framing: Framing as specified in ETS 300 144 [1].

terminal: Audiovisual terminal and attached personal computer or similar.

T.120 protocol: Protocols conforming to the specifications given in ITU-T Recommendations T.122 [5], T.123 [6], T.124 [7] and T.125 [8].

MLP: A logical data channel defined in ETS 300 144 [1].

asynchronous: Transmission where start-stop characters are used to control the data flow.

synchronous: Transmission where no start-stop characters are used to control the data flow.

3.2 Abbreviations

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

API	Application Program Interface
DCE	Data Communication Equipment
DSR	Data Set Ready
DTE	Data Terminal Equipment
DTR	Data Terminal Ready
FCS	Frame Check Sequence, see ITU-T Recommendation Q.922 [9]
HDLC	High-layer Data Link Control
ISDN	Integrated Services Digital Network
MLP	See subclause 3.1
MCU	Multipoint Control Unit
PC	Personal Computer

4 General

4.1 Overview

start-stop

ITU-T Recommendations V.14/V.24

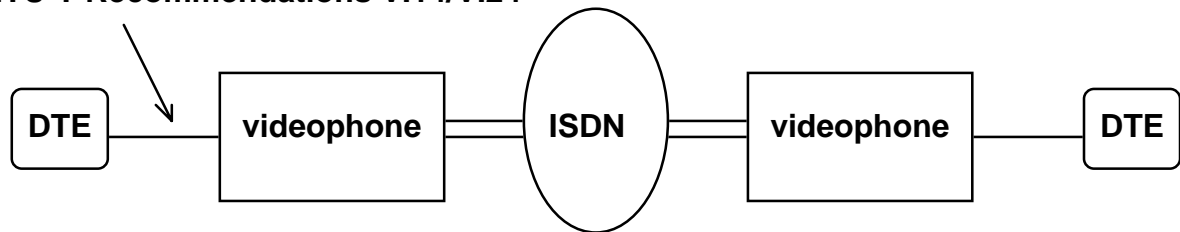


Figure 1: System configuration

Figure 1 shows the general arrangement to which the provisions of this I-ETS apply: two terminals using in-band signalling as specified in ETS 300 144 [1] are in communication via the ISDN. To each terminal a DTE (such as a PC) is attached, the DTEs are able to communicate across the telecommunication link between the videophones.

This I-ETS describes two schemes:

- a fully standardized data-transmission and applications-sharing scheme (see clause 5), capable of multipoint operation; this requires conformant software to be present on both DTEs, and the link can be controlled from the DTEs themselves. The scheme could be extended to higher bitrates, as may be required in the future (see figure 2);

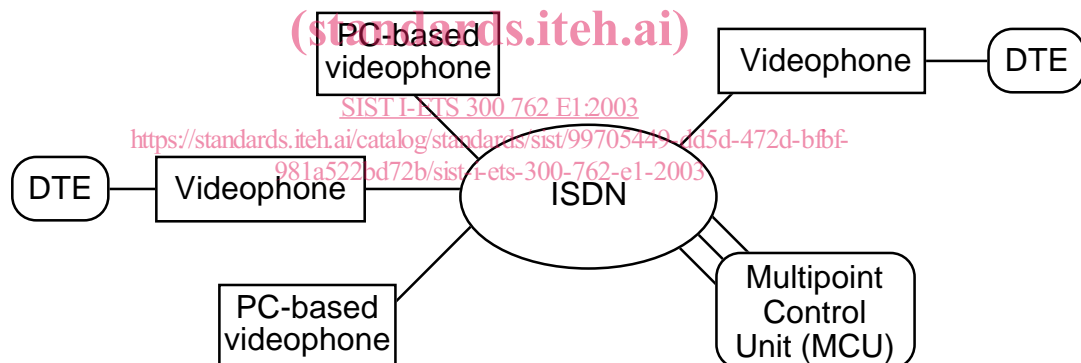


Figure 2: Multipoint communication using T.120 protocol

- a simplified scheme (see clause 6) which does not require standardized software but which gives point-to-point communication between PCs having a common application; the link must be controlled by the user from the videophones.

NOTE: If the videophone is programmed to carry out the procedures of clause 5 then a PC may be attached and **either** of these schemes activated.

4.2 Physical link between videotelephone and computer

The signalling link between the videotelephone and the computer shall meet the requirements of ITU-T Recommendation V.24 [2]. The electrical interface shall meet the requirements of ITU-T Recommendation V.28 [3]. The physical connector used on the videophone shall conform to the requirements set out in ISO 2110 [4] (see note).

NOTE: This interface is often referred to as RS-232.