SLOVENSKI STANDARD
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8][ ]Hˇbcˇca fYÿ^Yˇn`]bhY[ f]fUb]a ]ˇghcf]hj Ua ]ˇf4G8 BˈˈEˇDfchc_cˇ]ˇnˇg_`UXYbˇg_]
g]ghYa ˇJ]XYchYi ˇdf]ˇ]nj YXVˈ_cbYW_cbYWˈEˇJcXcvjb]ˇbU]bˇnˇ8H9!8H9

Integrated Services Digital Network (ISDN); Syntax-based videotex End-to-end
protocols, circuit mode DTE-DTE

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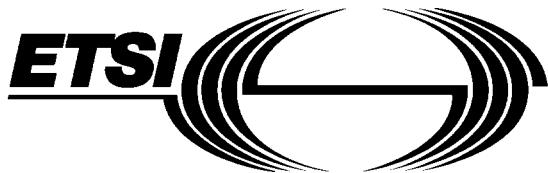
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Foreword

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

This ETS aims to meet the urgent requirements of network operators and equipment manufacturers who are designing equipment to operate on an Integrated Services Digital Network (ISDN).

This ETS also has a close relationship to ETSs 300 072 [10] to 300 076 [14] inclusive and to other proposed ETSs currently under development within the TE Technical Committee (draft prETS 300 177 [19], draft prETS 300 149 [18] and final draft prETS 300 080 [15]). Full details of these documents are given in Clause 2 (Normative references) of this document.

> NOTE: Abstract testing requirements for this ETS are to be developed by ETSI.

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1 Scope

This standard specifies the end-to-end protocols for the ISDN syntax-based Videotex Service.

NOTE 1: This standard does not specify any service aspects of the ISDN syntax-based Videotex Service.

This standard is applicable to devices supporting the ISDN syntax-based Videotex, to be attached at either side of a T reference point or coincident S and T reference points when used as an access to the public ISDN. In this context, a device is either an ISDN Videotex Terminal, an ISDN Videotex Service Centre, an ISDN Videotex Access Point or an ISDN Videotex Host (cf. subclause 3.1).

For the lower layer protocols (layer 1 to layer 3), this standard makes use of final draft prETS 300 080 [15] (based on CCITT Recommendation T.90) for demand circuit-switched calls using the 64 kbit/s unrestricted digital information bearer capability and the DTE/DTE case of the Network Layer peer entities in B-channel connection.

NOTE 2: The end-to-end protocol specified in this ETS is intended to be applicable not only for the DTE/DTE connection over an ISDN.

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 F.300 (1988): "Videotex Service".

[2] CCITT Recommendation T.51 (1988): "Coded character sets for telematic services".

[3] CCITT Recommendation X.3: "Packet assembly/disassembly facility (PAD) in a public data network".

[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] CCITT Recommendation X.29: "Procedures for the exchange of control information and user data between a packet assembly/disassembly (PAD) facility and a packet mode DTE or another PAD".

[6] CCITT Recommendation X.75 (1984): "Packet-switched signalling system between public networks providing data transmission services".

[7] CCITT Recommendation X.121 (1988): "International numbering plan for public data networks".

[8] Draft prETS 300 011: "Integrated Services Digital Network (ISDN); Primary rate user-network interface, Layer 1 specification and test principles (T/L 03-14)".

[9] Draft prETS 300 012: "Integrated Services Digital Network (ISDN); Basic user-network interface, Layer 1 specification and test principles (T/L 03-07)".

[10] ETS 300 072 (1990): "Terminal Equipment (TE); Videotex Presentation Layer protocol, Videotex presentation layer data syntax (T/TE 06-01)".

[11]   ETS 300 073 (1990): "Terminal Equipment (TE); Videotex presentation layer syntax; Geometric Display (CEPT Rec. T/TE 06-02, Edinburgh 1988)".

[12]   ETS 300 074 (1990): "Terminal Equipment (TE); Videotex Transparent Data (CEPT Rec. T/TE 06-03, Edinburgh 1988)".

[13]   ETS 300 075 (1990): "Terminal Equipment (TE); Videotex processable data (T/TE 06-04)".

[14]   ETS 300 076 (1990): "Terminal Equipment (TE); Videotex, Terminal Facility Identifier (TFI) (T/TE 06-05)".

[15]   Final draft prETS 300 080: "Integrated Services Digital Network (ISDN); ISDN lower layer protocols for telematic terminals (T/TE 12-04)".

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

[17]   ETS 300 125 (1991): "Integrated Services Digital Network (ISDN); User-network interface data link layer specifications, Application of CCITT Recommendations Q.920/I.440 and Q.921/I.441".

[18]   Draft prETS 300 149: "Terminal Equipment (TE); Videotex: Audio Syntax".

[19]   Draft prETS 300 177: "Terminal Equipment (TE); Videotex, Photographic Syntax (T/TE 06-06)".

[20]   ISO 7776: "Information processing systems - Data communications - High-level data link control procedures - Description of the X.25 LAPB-compatible DTE data link procedures".

[21]   ISO 8208: "Information processing systems - Data communications - X.25 Packet Level Protocol for Data Terminal equipment".

3 Definitions and abbreviations

3.1 Definitions

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

Access Function: the functional entity which gives access to the Videotex Service. This entity is an integral part of the Videotex Service.

Access Network: the network which provides the link between the Terminal Function and the Access Function.

Audio data: generic term for data which can be made audible (e.g. wave form encoded, phonemically encoded).

Distributed Videotex Application: a Videotex Application which makes use of more than one Videotex Host.

Host Access Network: the network which provides the link between the Access Function and the Host Function(s). It is an integral part of the Videotex Service and may be void.

Host Function: the abstraction of the Videotex Applications available in a particular Videotex Service.

Multi-media communication: term used to indicate that both pictorial and audio data are exchanged.

Pictorial data: generic term for data which can be displayed (e.g. alphamosaic, geometric, photographic).

Telematic Command: In the scope of this ETS, a Telematic Command is a specific service element which is carried in a complete packet sequence of X.25 PLP DATA packets with the Q-bit set to 1. The first octet in the User Data field of the first packet of the complete packet sequence carries a value which is reserved for videotex (cf. draft CCITT Recommendation X.29 (1992), "Telematic service message, videotex").

Terminal Function: the abstraction of a functional entity which acts as a Videotex Terminal.

Videotex Access Point: see CCITT Recommendation F.300 [1].

Videotex Application: see CCITT Recommendation F.300 [1].

Videotex External Host: see CCITT Recommendation F.300 [1].

Videotex Host: this term describes a computer which offers one or more applications and/or facilities. It can be represented through a Videotex Host Computer, an External Videotex Host or a Videotex Service Centre.

Videotex Host Computer: see CCITT Recommendation F.300 [1].

Videotex Service: see CCITT Recommendation F.300 [1].

Videotex Service Centre: see CCITT Recommendation F.300 [1].

> NOTE: According to CCITT Recommendation F.300, a Videotex Service Centre provides host and/or access functions, i.e. it may also act as a Videotex Access Point.

Videotex Terminal: see CCITT Recommendation F.300 [1].

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3.2   Abbreviations

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

AU	**A**ccess **U**nit
CCITT	**I**nternational **T**elegraph and **T**elephone **C**onsultative **C**ommittee
CD	**C**all **D**eflection
CLIP	**C**alling **L**ine **I**dentification **P**resentation
CLIR	**C**alling **L**ine **I**dentification **R**estriction
DCE	**D**ata **C**ircuit-terminating **E**quipment
DDI	**D**irect **D**ialling **I**n
DDU	**D**ialogue **D**ata **U**nit
DFK	**D**efinable **F**unction **Ke**y
DTE	**D**ata **T**erminal **E**quipment
ETS	**E**uropean **T**elecommunication **S**tandard
HAN	**H**ost **A**ccess **N**etwork
IB	**I**n-**B**and
ISDN	**I**ntegrated **S**ervices **D**igital **N**etwork
ISO	**I**nternational **O**rganization for **S**tandardization
ISPBX	**I**ntegrated **S**ervices **P**rivate **B**ranch e**X**change
IVAP	**I**SDN syntax-based **VAP**
IVT	**I**SDN syntax-based **VT**
LSB	**L**east **S**ignificant **B**it
MSB	**M**ost **S**ignificant **B**it
MSN	**M**ultiple **S**ubscriber **N**umber
OB	**O**ut-**B**and
PDN	**P**ublic **D**ata **N**etwork
PDU	**P**rotocol **D**ata **U**nit
PH	**P**acket **H**andler
PLP	**P**acket **L**evel **P**rotocol
PSPDN	**P**acket **S**witched **P**ublic **D**ata **N**etwork
PSTN	**P**ublic **S**witched **T**elephone **N**etwork
Rec	**Rec**ommendation
SBV	**S**yntax-**B**ased **V**ideotex
SUB	**Sub**addressing
TDU	**T**elesoftware **D**ata **U**nit
TFI	**T**erminal **F**acility **I**dentifier
TPD	**T**ransparent **P**rocessable **D**ata
UUI	**U**ser-to-**U**ser **I**nformation
UUS	**U**ser-to-**U**ser **S**ignalling
VAP	**V**ideotex **A**ccess **P**oint
VC	**V**irtual **C**ircuit
VH	**V**ideotex **H**ost
VPDE	**V**ideotex **P**resentation **D**ata **E**lement
VS	**V**ideotex **S**ervice
VT	**V**ideotex **T**erminal

4 Overview

The main feature of an ISDN syntax-based Videotex Terminal (VT) is the capability to access those Videotex Services which are defined for and used in a Public Switched Telephone Network (PSTN) or Packet Switched Public Data Network (PSPDN) environment using an ISDN as an access network.

More advanced services can make use of additional features (specific for an ISDN), which are presented in the following subclauses.

4.1 Direct selection of Videotex applications

The protocol allows the Videotex Terminal to shortcut the dialogue and welcome phase of the Videotex Service and to be connected with a given Videotex Application identified by a network address or a mnemonic.

4.2 Multi-communication

Multi-communication allows a terminal to establish several independent communication channels to one or several independent Videotex Hosts or Videotex Applications.

The protocol supports multi-communication using virtual circuits on one B-channel.

>   NOTE: The handling of several independent communication channels may appear in any configuration (cf. informative Annex A).

>   EXAMPLE: Assume that "ETSI" and "CCITT" are two Videotex Applications offering the possibility to Videotex users to read texts of telecommunication standards. In order to compare the text of a given ETS with an equivalent recommendation, the terminal should establish a virtual circuit (VC) with each of the two applications. The information from the two applications shall be simultaneously displayed on the terminal using some windowing capability.

4.3 Multi-media communication

Multi-media information may contain pictorial data (i.e. alphamosaic, geometric, and photographic display elements) and audio data. The audio data may be transmitted either in parallel or in serial with the pictorial data.

When the audio data is transmitted in serial with the pictorial data, a single virtual circuit may be used to carry both.

When the audio data has to be sent in parallel with the pictorial data, a second virtual circuit dedicated to the transmission of audio data shall be set up.

The protocol supports multi-media communication using virtual circuits on one B-channel, providing for the simultaneous reproduction of both pictorial and audio information, in addition to a serial transmission already covered by the data syntax.

>   NOTE: The handling of several additional communication channels may appear in any configuration (cf. informative Annex A).