SLOVENSKI STANDARD
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Terminalska oprema (TE) ï Izboljġana storitev vmesnika ļ lovek-stroj pri sistemu Videotex in multimedijske/ hipermedijske poiskavne storitve

Terminal Equipment (TE); Enhanced Man Machine Interface service for Videotex and Multimedia/Hypermedia retrieval services

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35.180	Terminalska in druga periferna oprema IT	IT Terminal and other peripheral equipment

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Terminal Equipment (TE); Enhanced Man Machine Interface service for Videotex and Multimedia/Hypermedia retrieval services

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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).

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1 Scope

This European Telecommunication Standard (ETS) specifies the data syntax to be used by Videotex and Multimedia/Hypermedia Information retrieval services for implementation of the Videotex Enhanced Man Machine Interface (VEMMI).

In the Videotex case this ETS is applicable to both the Videotex service and the attached Videotex terminals. Those terminals may be connected to the Videotex service via the Public Switched Telephone Network (PSTN), Integrated Services Digital Network (ISDN) or Packet Switched Public Data Network (PSPDN). Typically, the terminals should support ISDN Syntax-Based Videotex (SBV).

The ETS can also be used for any kind of retrieval service (not related to Videotex) by using the relevant underlying platform and content data types.

2 Normative references

This 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 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 T.50 (1992): "International Reference Alphabet (IRA) (Formerly International Alphabet No. 5 or IA5) - Information technology - 7-bit coded character set for information interchange".

[2] CCITT Recommendation T.51 (1992): "Latin based coded character sets for telematic services".

[3] CCITT Recommendation T.52 (1993): "Non-Latin coded character sets for telematic services".

[4] ITU-T Recommendation T.101 (1994): "International interworking for videotex services".

[5] ITU-T Recommendation T.102 (1993): "Syntax-based videotex end-to-end protocols for circuit mode ISDN".

[6] ITU-T Recommendation T.105 (1994): "Syntax-based videotex application layer protocol".

[7] ITU-T Recommendation H.261 (1994): "Video codec for audiovisual services at p x 64 kbit/s".

[8] ITU-TS Recommendation H.320 (1994): "Narrow-band visual telephone systems and terminal equipment".

[9] ITU-T Recommendation F.300 (1994): "Videotex service".

[10] ISO 2022 (1986): "Information technology - ISO 7-bit and 8-bit coded character sets - Code extension techniques".

[11] ISO 2375 (1985): "Data processing - Procedure for registration of escape sequences".

[12] ISO/IEC 8632 (1992): "Information technology - Computer graphics - Metafile for storage and transfer of picture description information".

[13] ISO 8859 (1987): "Information Processing - 8-bit single byte coded graphic character set".

[14] ISO/IEC 9281 (1990): "Information technology - Picture coding methods".

[15] ISO/IEC 10646-1 (1993): "Information technology - Universal Multiple-Octet Coded Character Set (UCS); Part 1: Architecture and Basic Multilingual Plane".

[16] ISO/IEC 10918-1 (1994): "Information technology - Digital compression and coding of continuous-tone still images: Requirements and guidelines".

[17] ISO/IEC 11172-1 (1993): "Information technology - Coding of moving pictures and associated audio for digital storage media at up to about 1.5 Mbit/s - Part 1: Systems".

[18] ISO/IEC 11172-2 (1993): "Information technology - Coding of moving pictures and associated audio for digital storage media at up to about 1.5 Mbit/s - Part 2: Video".

[19] ISO 639 (1988): "Codes for the representation of names of languages".

[20] ETS 300 072 (1990): "Terminal Equipment (TE); Videotex presentation layer protocol, Videotex presentation layer data syntax".

[21] ETS 300 073: "Videotex presentation layer data syntax; Geometric Display (CEPT Recommendation T/TE 06-02, Edinburgh 1988)".

[22] ETS 300 076 (1994): "Terminal Equipment (TE); Videotex, Terminal Facility Identifier (TFI)".

[23] ETS 300 079 (1991): "Integrated Services Digital Network (ISDN); Syntax-based Videotex, End-to-end protocols, circuit mode DTE-DTE".

[24] ETS 300 149 (1992): "Terminal Equipment (TE); Videotex, Audio syntax".

[25] ETS 300 177 (1995): "Terminal Equipment (TE); Videotex, Photographic syntax".

[26] ETS 300 223 (1993): "Terminal Equipment (TE); Syntax-based Videotex, Common end-to-end protocols".

[27] ISO/IEC DIS 13818-1: "Information technology - Generic coding of moving pictures and associated audio information; Part 1: Systems".

[28] ISO/IEC DIS 13818-2: Information technology - Generic coding of moving pictures and associated audio information; Part 2: Video".

3 Definitions and abbreviations

3.1 Definitions

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

controls: Visual user-interface elements that allow a user to interact with data.

dedicated terminal: Designed to support VEMMI but using a different platform than a multipurpose personal computer. Such terminals may have processing, storage and presentation limitations.

Defined Display Area (DDA): See ITU-T Recommendation F.300 [9].

emphasis: Highlighting, colour change or other visible indication of the condition of an element or choice and the effect of that condition on a user's ability to interact with that element. Emphasis can also give additional information about the state of an object. The method used to emphasize an element is terminal dependent.

label: Text data associated with a VEMMI component to inform the user of the purpose of a particular component or item.

local manager: See VEMMI local manager.

mnemonic: A single, easy-to-remember alphanumeric character that activates a VEMMI Menu Choice component and validates it. A Mnemonic character can also be used to validate an active Push Button.

modal mode: When a VEMMI object is "modal" it is not possible for the user to leave this VEMMI object to the benefit of another VEMMI object of the same application with different possible access tools. Each attempt to access another object by the user is refused and possibly indicated by a sound signal.

resource file transfer: Mechanism to transfer files referenced by VEMMI resource objects from a VEMMI application to a VEMMI terminal.

stretched presentation: Reduced or enlarged display of a bitmap in order to meet given space requirements.

tiled presentation: Repeated display of a given bitmap in a horizontal and/or vertical direction in order to meet given space requirements.

videotex application: Videotex application using encoded data, protocols and profiles, as defined in the Videotex ETSs referenced in clause 2. A Videotex application does not use a VEMMI service, data and protocols (see ITU-T Recommendation F.300 [9]).

videotex data: Data interchanged between a Videotex application and a Videotex terminal.

VEMMI application: Application offering an enhanced man/machine interface as described in this ETS.

VEMMI data: VEMMI objects description and contents and VEMMI commands exchanged between the VEMMI application and the VEMMI terminal.

VEMMI local manager: Software running in the VEMMI terminal to handle and to present the VEMMI objects that are sent to the user by the VEMMI application.

VEMMI terminal: A terminal which is able to run a VEMMI local manager.

Videotex host computer: See ITU-T Recommendation F.300 [9].

Videotex terminal: See ITU-T Recommendation F.300 [9].

3.2 Abbreviations

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

BIN	Bitmap Identification Number
BMP	Microsoft Windows Device-Independent Bitmap
CD-ROM	Compact Disk-Read Only Memory
CGM	Computer Graphics Metafile
CIN	Component Identification Number
CMI	Coding Method Identifier
CR	Carriage Return
DDA	Defined Display Area
DE	Data Entity
DIB	Device-Independent Bitmap
DLL	Dynamic Link Libraries
DRCS	Dynamically Redefinable Character Set
DS I	Data Syntax according to ITU-T Recommendation T.101 [4], annex B
DS II	Data Syntax according to ITU-T Recommendation T.101 [4], annex C
DS III	Data Syntax according to ITU-T Recommendation T.101 [4], annex D
ESC	Escape
FIN	Font Identification Number
G0	Primary character set of CCITT Recommendation T.51 [2]
G2	Supplementary character set of CCITT Recommendation T.51 [2]
GIF	Graphics Interchange Format

GMT	Greenwich Mean Time
GUI	Graphical User Interface
HTML	HyperText Markup Language
HTTP	HyperText Transfer Protocol
IP	Internet Protocol
IRV	International Reference Version
ISDN	Integrated Services Digital Network
JIS	Japanese Institute for Standardization
JPEG	Joint Photographic Experts Groups
LF	Line Feed
LI	Length Indicator
MDI	More Data Indicator
MIDI	Musical Instrument Digital Interface
MIN	Multimedia Identification Number
MPEG	Moving Picture Experts Group
NDC	Normalized Device Co-ordinate
OIN	Object Identification Number
PCD	Picture Code Delimiter
PCE	Picture Control Entity
PDA	Personal Digital Assistant
PDE	Picture Data Entity
PE	Picture Element
PI	Picture Identifier
PM	Picture Mode
PSPDN	Packet Switched Public Data Network
PSTN	Public Switched Telephone Network
RGB	Red Green Blue
SBV	Syntax-Based Videotex
TCP	Transmission Control Protocol
TE	Terminal Equipment
TFI	Terminal Facility Identifier
TIN	Text Identification Number
TLV	Type Length Value
TV	Television
UI	User Interface
VEMMI	Videotex Enhanced Man Machine Interface
VIF	VEMMI Interchange Format
VIN	Videotex Identification Number
VPDE	Videotex Presentation Data Element
VTX	Videotex

4 General model

4.1 Introduction

Between a host and a VEMMI terminal a VEMMI service handles:

- general VEMMI objects as described in this ETS;
- data contents as defined in this ETS;
- data contents as referenced in this ETS.

A VEMMI terminal may also handle a Videotex application using encoded data and protocols as described in the Videotex ETSs referenced in clause 2.

4.2 Definition of the VEMMI elements

The logical units which form the structure of the VEMMI shall be named and defined as follows:

- VEMMI objects;
- VEMMI components or components;
- VEMMI component items or items.

VEMMI element is a generic name used in this ETS to designate an object, a component or an item.

An example is given in figure 1.

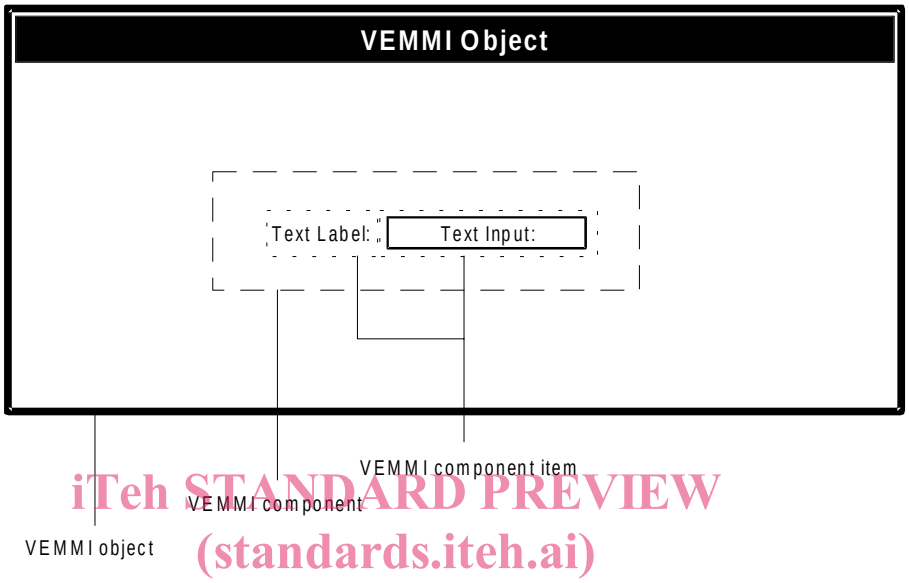

Figure 1: Example showing objects/components/items

4.2.1 VEMMI object definition and identification

The following four different types of VEMMI objects are defined in this ETS:

- display objects;
- operative objects;
- resource objects;
- metacode objects.

If not stated otherwise the term object used alone always refers to a display object.

VEMMI objects are the logical units which are used by a VEMMI application to interact with the user.

VEMMI objects can be composed of different components.

The objects are only defined regarding their functionality, their size and position relative to the Defined Display Area (DDA). The representation of the objects is terminal dependent.

Every object shall be identified by an Object Identification Number (OIN) which shall be unique within a VEMMI application at any one time.

4.2.2 VEMMI component definition

VEMMI components always belong to a VEMMI object and are only valid within this object. The object, to which a component belongs, is named the parent object.

In order to transport information, components may carry a data content (see subclause 4.5).