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Foreword

This third edition of ETS 300 076 was produced by the Terminal Equipment (TE) Technical Committee of the European Telecommunications Standards Institute (ETSI).

This third edition is intended to supersede the 1992 version of this ETS which was adopted in Autumn 1992. It takes into account the introduction of both the photographic and the audio syntax described in ETS 300 177 [6] and ETS 300 149 [7] respectively, as well as the Videotex enhanced Man Machine Interface (VEMMI) defined in ETS 300 382 [30].

This ETS describes the Terminal Facility Identifier (TFI) which may be used to ascertain the capabilities of either a physical Videotex terminal or another Videotex service. This ETS is one of an integrated package of seven ETSs covering various aspects of Videotex which comprises:

ETS 300 072	Terminal Equipment (TE); Videotex presentation layer protocol Videotex presentation layer data syntax
ETS 300 073	Videotex presentation layer data syntax; Geometric display (CEPT Recommendation T/TE 06-02, Edinburgh 1988)
ETS 300 074	Videotex presentation layer data syntax transparent data; (CEPT Recommendation T/TE 06-03, Edinburgh 1988)
ETS 300 075	Terminal Equipment (TE); Videotex processable data
ETS 300 177	Terminal Equipment (TE); Videotex Photographic Syntax
ETS 300 149	Terminal Equipment (TE); Videotex Audio syntax
ETS 300 382	Terminal Equipment (TE); Videotex Enhanced Man Machine Interface service (VEMMI).

Proposed transposition dates	
Date of latest announcement of this ETS (doa):	31st March 1995
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Introduction

The Terminal Facility Identifier (TFI) may be used to ascertain the capabilities of a "terminal" (where a terminal may actually be a physical terminal or another Videotex service). Videotex terminals have not all been designed to support all coding techniques; for example, photographic and audio, or support of different types of local facilities such as telesoftware or various types of modems. In addition, a specific terminal may support one or more of the defined base data syntaxes DS I, DS II or DS III. The TFI may be used to determine:

- each of the national or regional Videotex services;

- the terminal profile and additional terminal capabilities;

- to which parts of the Service Reference Model (SRM) the terminal conforms;

- the current profile and capabilities of the terminal.

1 Scope

This European Telecommunication Standard (ETS) specifies the data syntax to be used by Videotex services for terminal capabilities identification.

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) or the Integrated Services Digital Network (ISDN). Connection of terminals to other networks is for further study.

It also applies to any equipment (e.g. another Videotex service) which acts as a Videotex terminal.

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]	ITU-T Recommendation T.101 (1993): "International interworking for videotex services".
[2]	ETS 300 072 (1990): "Terminal Equipment (TE) - Videotex presentation layer protocol - Videotex presentation layer data syntax".
[3]	ETS 300 073 (1990): "Videotex presentation layer protocol - Geometric Display (CEPT Recommendation T/TE 06-02, Edinburgh 1988)".
[4]	ETS 300 074 (1990): "Videotex presentation layer protocol - Transparent data (CEPT Recommendation T/TE 06-03, Edinburgh 1988)".
[5]	ETS 300 075 (1990): "Terminal Equipment (TE) - Videotex processable data".
[6]	ETS 300 177: "Terminal Equipment (TE) - Videotex - Photographic syntax".
[7]	ETS 300 149: "Terminal Equipment (TE) - Videotex - Audio syntax".
[8]	CCITT Recommendation G.711 (1988): "Pulse Code Modulation of voice frequencies".
[9]	CCITT Recommendation G.721 (1988): "32 kbit/s adaptive differential pulse code modulation (ADPCM)".
[10]	CCITT Recommendation G.722 (1988): "7 kHz audio-coding within 64 kbit/s".
[11]	CCITT Recommendation G.723 (1988): "Extensions of Recommendation G.721 adaptive differential pulse code modulation to 20 and 40 kbit/s for digital circuit multiplication equipment application".
[12]	CCITT Recommendation J.41 (1988): "Characteristics of equipment for the coding of analogue high quality sound programme signals for transmission on 384 kbit/s channels".
[13]	CCITT Recommendation J.42 (1988): "Characteristics of equipment for the coding of analogue medium quality sound programme signals for transmission on 384 kbit/s channels".
[14]	I-ETS 300 036: "European digital cellular telecommunications system (phase 1) - Full-rate speech transcoding (GSM 06.10)".
[15]	CCITT Recommendation V.21 (1988): "300 bits per second duplex modem standardized for use in the general switched telephone network".

[16]   CCITT Recommendation V.22 (1988): "1200 bits per second duplex modem standardized for use in the general switched telephone network and on point-to-point 2-wire leased telephone-type circuits".

[17]   CCITT Recommendation V.22 bis (1988): "2400 bits per second duplex modem using the frequency division technique standardized for use on the general switched telephone network and on point-to-point 2-wire leased telephone-type circuits".

[18]   CCITT Recommendation V.23 (1988): "600/1200 bits per second modem standardized for use in the general switched telephone network".

[19]   CCITT Recommendation V.26 bis (1988): "2400/1200 bits per second modem standardized for use in the general switched telephone network".

[20]   CCITT Recommendation V.26 ter (1988): "2400 bits per second duplex modem using the echo cancellation technique standardized for use on the general switched telephone network and on point-to-point 2-wire leased telephone-type circuits".

[21]   CCITT Recommendation V.27 ter (1988): "4800/2400 bits per second modem standardized for use in the general switched telephone network".

[22]   CCITT Recommendation V.29 (1988): "9600 bits per second modem standardized for use on point-to-point 4-wire leased telephone-type circuits".

[23]   CCITT Recommendation V.32 (1988): "A family of 2-wire, duplex modems operating at data signalling rates of up to 9600 bit/s for use on the general switched telephone network and on leased telephone-type circuits".

[24]   CCITT Recommendation V.32 bis (1991): "A duplex modem operating at data signalling rates of up to 14 400 bit/s for use on the general switched telephone network and on leased point to point 2-wire telephone type circuits".

[25]   CCITT Recommendation V.17 (1990): "Recommendation for a 2-wire modem for facsimile applications with rates up to 14 400 bit/s".

[26]   CCITT Recommendation H.221 (1988): "Frame structure of a 64 kbit/s channel in audio-visual teleservices".

[27]   CCITT Recommendation V.42 (1988): "Error correcting procedures for DCEs using asynchronous to synchronous conversion".

[28]   CCITT Recommendation V.42 bis (1990): "Data compression procedures for data circuit-terminating equipment (DCE) using error correcting procedures".

[29]   ISO/IEC 11172-3 (1993): "Information technology - Coding of moving pictures and associated audio for digital storage media at up to about 1,5 Mbit/s - Audio part".

[30]   ETS 300 382 (1994): "Terminal Equipment (TE) - Videotex Enhanced Man Machine Interface service (VEMMI)".

[31]   CCITT Recommendation T.4 (1992): "Standardization of group 3 facsimile apparatus for document transmission".

[32]   CCITT Recommendation T.6 (1988): "Facsimile coding schemes and coding control functions for group 4 facsimile apparatus".

[33]   ITU-T Recommendation V.34 (1994): "A modem operating at data signalling rates of up to 28 800 bits for use on the general switched telephone network and on leased point-to-point 2-wire telephone-type circuits".

3 Definitions

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

capability: Coding method described by the Videotex data syntax and supported by a given Videotex terminal.

data syntax: Videotex coding technique as described in ITU-T Recommendation T.101 [1].

facility: See "capability".

profile: Consistent subset of the Service Reference Model (SRM).

service reference model: List of functionalities a terminal should comply with.

videotex host computer: The computer (or network of computers provided by a single party) on which one or more applications are implemented and/or one or more of the Videotex service facilities are provided (CCITT Recommendation F.300).

4 Abbreviations

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

DRCS	Dynamically Redefinable Character Set
DS I	Data Syntax according to ITU-T Recommendation T.101 [1], annex B
DS II	Data Syntax according to ITU-T Recommendation T.101 [1], annex C
DS III	Data Syntax according to ITU-T Recommendation T.101 [1], annex D
ISDN	Integrated Services Digital Network
PSTN	Public Switched Telephone Network
PDE	Presentation Data Element
SRM	Service Reference Model
TFI	Terminal Facility Identifier
US	Unit Separator
VPCE	Videotex Presentation Control Element
VPDE	Videotex Presentation Data Element
VEMMI	Videotex Enhanced Man Machine Interface

5 Overview

The Videotex data syntax allows for the use of a variety of different coding techniques (text, mosaics, graphics, audio, photographic pictures, etc...).

The Videotex terminals have not all been designed to support all the possible coding techniques; some of them are unable to display graphic or photographic images, to output audio information. Some others partly support such facilities. Some facilities are grouped together in order to establish a so called "Videotex profile" which represents a coherent and consistent set of functionalities and, therefore, is intended to be supported by a large population of terminals.

In addition, terminals may be connected to different networks, use different modems, etc...

To maximize the chance of successful communication, the Videotex host computer may ask the terminal about the capabilities it supports.

The terminal may answer indicating:

- either the data syntax and the profile(s);

- or the precise list of facilities it supports.

The coding is described in clause 6 below and the formal description of the terminal response is given in clause 8.

6   Coding

To request the terminal profile, the code US 2/0 4/0 is transmitted to the terminal.

The terminal shall reply with US 2/0 followed by a series of bytes from columns 4 to 7 of the code table and terminating with the code 4/0 except in some cases when the Escape code (7/15) is used (see subclause 6.3).

```
        Host                                                      Terminal

     .... Identification Command:    US 2/0 4/0    - - - - - - - - - >

     <- - - -                       US 2/0 x/y...x/y Z;            TFI response......
```

Intermediate codes x/y shall be transmitted by the terminal between US 2/0 and the final code Z. The value of the final code Z is described in subclause 6.3. Intermediate codes identify the capabilities of the terminal and shall be selected from the following list:

4/1 - 4/15	=	reserved for internal use of each data syntaxes DS I, DS II and DS III (DS II is defined by this ETS)
5/0, 5/1	=	audio mode (as defined in subclause 6.4)
5/2	=	modem capability (as defined in subclause 6.5)
5/3	=	reserved
5/4	=	data syntax and profile (rank/facility) identification:

3/1	=	DS I
3/2	=	DS II
3/3	=	DS III
3/4 to 3/13	=	reserved
3/14	=	private
3/15	=	CCITT terminator code

5/5	=	photographic mode (as defined in subclause 6.6)
5/6	=	support of ISO 9281 switching
5/7	=	support of VEMMI data
5/8 - 5/15	=	reserved
6/0 - 7/15	=	reserved for internal use of each data syntax DS I, DS II and DS III.

The values in the range 4/1 - 4/15 and 6/0 - 7/15 terminated by the code 3/15 are used for the profile identification. The codes following a particular data syntax identification pertain to that particular data syntax.

6.1   Compatibility provision for ITU-T Recommendation T.101

Terminal Facility Identifier (TFI) implementations of terminals which are intended to be used in systems where more than one data syntax is in use, should be based on ITU-T Recommendation T.101 [1]. In that case, the profile identification of data syntax II (4/1 - 4/15 and 6/0 - 7/15) are included between the codes 5/4, 3/2 and 3/15. The code 5/6 indicates the support of ISO/IEC 9281 switching. The code 5/7 indicates the support of VEMMI. The end of the TFI response is indicated by the value 4/0 only and not by the last capability byte (see subclause 6.3). The detailed description is contained in ITU-T Recommendation T.101 [1], § 9.2.

6.2 Conformance to the SRM

NOTE: This subclause is present within this ETS only to maintain compatibility with existing systems.

The following codes have been assigned for identifying parts of the SRM.

4/0	=	Terminator	
4/1	=	Alphamosaic	(ETS 300 072 [2])
4/2	=	Geometric	(ETS 300 073 [3])
4/3	=	Photographic	(ETS 300 072 [2] - and for ETS 300 177 [6])
4/4	=	Define DRCS	(ETS 300 072 [2])
4/5	=	Define colour	(ETS 300 072 [2])
4/6	=	Define format	(ETS 300 072 [2])
4/7	=	Transparent data	(ETS 300 074 [4])
4/8	=	Reset	(ETS 300 072 [2])
4/9	=	Processable data	(ETS 300 075 [5])
4/11	=	Timing control	(ETS 300 072 [2])

EXAMPLE 1: A terminal conforming to the following parts of the SRM: Alphamosaic, Define DRCS, Define colour, Define format, Reset shall transmit:

US 2/0 4/1 4/4 4/5 4/6 4/8 4/0.

If different levels of conformance are defined in the future (as for the Geometric display or Processable data) then the level of conformance may be indicated by one or more bytes from column 3 of the code table following the relevant byte from column 4.

For the Geometric mode (primary byte 4/2) the following sub-levels shall be defined:

3/0 - 3/7 = reserved

3/8 - 3/15 = the sub-levels to be defined are for further study.

EXAMPLE 2: A terminal which conforms to the following parts of the SRM: Alphamosaic, Geometric (sub-level coded 3/9), Define Dynamically Redefinable Character Set (DRCS), Define colour, Define format and Reset shall transmit:

US 2/0 4/1 4/2 3/9 4/4 4/5 4/6 4/8 4/0.

The sub-levels of processable data are for further study.

6.3 Profiles and non-Latin language capabilities

The following codes for terminal profiles have been assigned:

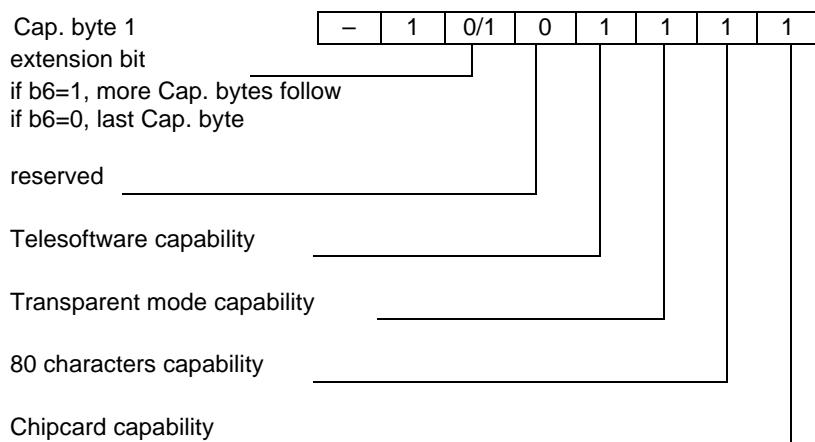|		
6/0	=	Alphamosaic profile 1 of ETS 300 072 [2]
6/1	=	Alphamosaic profile 2 of ETS 300 072 [2]
6/2	=	Alphamosaic profile 3 of ETS 300 072 [2]
6/3	=	Alphamosaic profile 4 of ETS 300 072 [2]
6/4	=	Alphamosaic chinese profile 5 of ETS 300 072 [2]
6/5	=	Reserved for Alphamosaic profiles
6/6	=	Non-final capability byte indicator
6/7	=	Terminal configuration delimiter

6/8	=	Geometric profile x 1 (ETS 300 073) [3]
6/9	=	Geometric profile x 2 (ETS 300 073) [3]
6/10 - 6/15	=	Reserved for future Geometric profiles
7/0	=	Any photographic profile
7/1	=	Reserved for CEPT-DPCM image coding profile (ETS 300 072 [2], part 3, appendix A)
7/2	=	Reserved for CEPT-ADCT image coding profile (ETS 300 072 [2], part 3, appendix B)
7/3	=	Greek capability
7/4	=	Arabic capability
7/5	=	Chinese capability
7/6	=	Hebrew capability
7/7	=	Cyrillic capability
7/8 - 7/13	=	Reserved for future use
7/14	=	ASCII profile introducer

The following byte from columns 4 - 7 specifies the ASCII capabilities and the following ASCII capabilities have been reserved:

4/1	=	reserved for VT52
4/2	=	reserved for VT100 series
4/3	=	reserved for VT200 series
4/4	=	reserved for Teletype
4/5	=	reserved for VT300 series
4/6 - 7/13	=	reserved
7/14	=	allocated for private use

7/15 = Escape code. The following bytes (Cap. bytes) from columns 4 - 7 specify additional terminal capabilities by using a bitwise identification (Cap.bits) in the following way:

Cap. byte 1	–	1	0/1	0	1	1	1	1

extension bit
if b6=1, more Cap. bytes follow
if b6=0, last Cap. byte

reserved

Telesoftware capability

Transparent mode capability

80 characters capability

Chipcard capability

The Telesoftware capability bit and the Transparent mode capability bit shall be used to identify the use of these data types associated with the profiles. Subclause 6.2 gives codes that are used to identify SRM conformance to ETS 300 074 [4] (Transparent data) and ETS 300 075 [5] (Processable data).

Cap. byte 2

—	1	0/1	0	1	1	1	1	1

extension bit
if b6=1, more Cap. bytes follow
if b6=0, last Cap. byte

reserved

to be defined
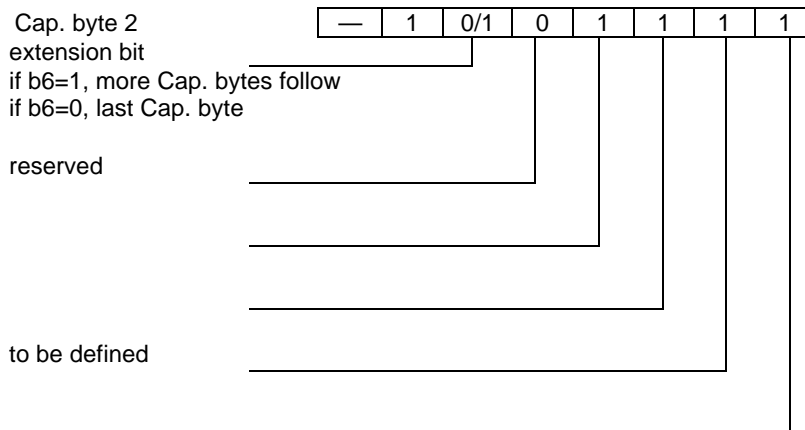
The end of the TFI sequence shall be determined:

- either by the code 4/0;

- or by the last Capability byte (extension bit set to 0).

    "When a capability byte is used in a Terminal Facility response and when this capability byte is not the last byte of the TFI response, the non-final capability byte indicator shall be used to indicate that other x/y codes, as defined by clause 6 of this ETS, may follow any last byte capability byte".

The non-final capability byte indicator has the value 6/6 and shall be the very first byte of the ETSI data syntax terminal identification response.

For a terminal supporting only the ETSI data syntax, the non-final capability byte shall immediately follow the US 2/0 sequence. When the non-final capability byte indicator is used, the end of the TFI sequence shall then be 4/0.

EXAMPLE: A terminal supporting three configurations:

- configuration 1: alphamosaic profile 1 with chip card;

- configuration 2: alphamosaic Greek profile 2 with telesoftware;

- configuration 3: alphamosaic profile 4;

shall transmit:

US 2/0 6/6 6/0 7/15 4/1 6/7 6/1 7/3 7/15 4/8 6/7 6/3 4/0.

If a terminal supports more than one alphamosaic, ASCII, geometric, photographic or special profile, it may send the codes assigned to each profile it supports. If a terminal sends more than one code for the same display mode it shall be capable of handling the switching sequences defined in annex C, clause 5 of ETS 300 072 [2].

The first alphamosaic profile shall identify the preferred profile.

EXAMPLE:

a)   US 2/0 6/1 4/0: alphamosaic profile 2
b)   US 2/0 6/0 6/9 7/15 4/6 =

–	1	0	0	0	1	1	0
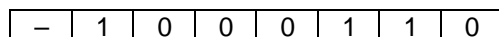
Alphamosaic profile 1 with geometric profile x2, transparent mode and 80 character capability.

NOTE: In the above examples throughout this subclause, the most significant bit is represented by the symbol "-". It corresponds to the parity bit in a 7 bit environment and is not defined in an 8 bit environment.

6.4 Audio capabilities

When receiving a profile request US 2/0 4/0, the terminal supporting an audio capability shall issue, together with the other codes used for identifying profiles or parts of the SRM, one or more audio conformance code(s) followed by one or more couple(s) of octets indicating respectively the algorithm supported and the audio bitrate.

The audio conformance codes have been assigned as follows:

5/0 = Audio capability, block mode (as described in ETS 300 149 [7])
5/1 = Audio capability with framing (as described in CCITT Recommendation H.221 [26]).

Algorithm identification:

3/0   =   PCM A-law described in CCITT Recommendation G.711 [8]
3/1   =   PCM µ-law described in CCITT Recommendation G.711 [8]
3/2   =   ADPCM described in CCITT Recommendations G.721 [9]/G.723 [11]
3/3   =   sub-band ADPCM described in CCITT Recommendation G.722 [10]
3/4   =   RPE-LTP coding method (I-ETS 300 036 [14])
3/5   =   Near instantaneous (CCITT Recommendation J.41 [12])
3/6   =   Sub-band ADPCM (CCITT Recommendation J.42 [13])
3/7   =   MPEG Audio (ISO 11172-3 [29])
3/8-3/14 =   reserved for future use
3/15   =   forbidden (CCITT terminator code for alphamosaic facility)

Bitrate audio coding:

3/0   =   8 kbits/s
3/1   =   16 kbits/s
3/2   =   24 kbits/s
3/3   =   32 kbits/s
3/4   =   40 kbits/s
3/5   =   48 kbits/s
3/6   =   56 kbits/s
3/7   =   64 kbits/s
3/8   =   13 kbit/s (I-ETS 300 036 [14])
3/9   =   2,4 kbit/s (provisional)
3/10   =   4,8 kbit/s (provisional)
3/11   =   128 kbit/s (provisional)
3/12   =   192 kbit/s (provisional)
3/13   =   384 kbit/s (provisional)
3/14   =   256 kbit/s (provisional)
3/15   =   forbidden (CCITT terminator code for alphamosaic facility)

EXAMPLE: When receiving a profile request, a terminal which conforms to the alphamosaic, geometric and photographic parts of the SRM and which supports the audio capability in block mode using PCM A-law 64 kbit/s or ADPCM 32 kbit/s shall transmit:

US 2/0 4/1 4/2 4/3 5/0 3/0 3/7 3/2 3/3 4/0.

6.5 Modem capability

When receiving a profile request US 2/0 4/0, the terminal supporting the modem capability shall issue together with the other codes used for identifying profiles or parts of the SRM, or an audio capability, the modem conformance code followed by one or more byte(s) in order to indicate the type of modems supported by the terminal.

The modem conformance code has been assigned as follows:

5/2 = modem capability

Each byte following the modem conformance code shall take one of the following values:

3/0 = not applicable or unknown capability (default)
3/1 = no modem used
3/2 = modem running in asynchronous mode, according to the following specification:

    4/0 = reserved code (ETSI terminator code)
    4/1 = unknown modem (default)
    4/2 = modem according to CCITT Recommendation V.21 [15]
    4/3 = modem according to CCITT Recommendation V.22 [16]
    4/4 = modem according to CCITT Recommendation V.22 bis [17]
    4/5 = modem according to CCITT Recommendation V.23 [18]
    4/6 = modem according to CCITT Recommendation V.32 [23]
    4/7 = modem according to CCITT Recommendation V.32 bis [24]
    4/8 = modem according to CCITT Recommendation V.26 ter [20]
    4/9 = provisionally reserved code for modem according to ITU-T Recommendation V.34 [33]

    4/10 - 4/13 =reserved codes

    4/14 =reserved code for non-CCITT modem
    4/15 =reserved code

3/3 = modem running in synchronous mode, according to the following specification:

    4/0 = reserved (ETSI terminator code)
    4/1 = unknown modem (default)
    4/2 = modem according to CCITT Recommendation V.26 bis [19]
    4/3 = modem according to CCITT Recommendation V.26 ter [20]
    4/4 = modem according to CCITT Recommendation V.27 ter [21]
    4/5 = modem using the modulation technique described in CCITT Recommendation   V.29 [22]
    4/6 = modem according to CCITT Recommendation V.32 [23]
    4/7 = modem according to   CCITT Recommendation V.32 bis [24]
    4/8 = modem according to CCITT Recommendation V.17 [25]
    4/9 = modem according to CCITT Recommendation V.22 [16]
    4/10 =modem according to CCITT Recommendation V.22 bis [17]
    4/11 =provisionally reserved code for modem according to ITU-T Recommendation V.34 [33]
    4/12 - 4/13 =reserved codes
    4/14 =reserved code for non-CCITT modem
    4/15 =reserved code

3/4 = modem using an embedded error correction or compression mechanism, whose type is (are) identified by the following byte(s):

    4/0 = reserved (ETSI terminator code)
    4/1 = unknown mechanism
    4/2 = correction mechanism as described by CCITT Recommendation V.42 [27]
    4/3 = compression mechanism as described by CCITT Recommendation V.42 bis [28]

    4/4 - 4/15 = reserved codes.

The compression or correction mechanism only applies to the immediate preceding defined modem type. In this case, the asynchronous or synchronous type of any additional modem shall be repeated.

EXAMPLE: When receiving a profile request, a terminal which conforms to alphamosaic profile 3 and may use either a V.23 modem, or a V.32/V.42 modem, or a V.27ter modem shall transmit:

US 2/0 6/2 5/2 3/2 4/5 3/3 4/6 3/4 4/2 3/3 4/4 4/0.

3/5 - 3/14 = reserved

3/15 = forbidden (CCITT terminator code for alphamosaic capability).

6.6 Photographic capabilities

When receiving a profile request US 2/0 4/0, the terminal supporting a photographic capability shall issue, together with the other codes, the photographic conformance code.

The photographic conformance code has been assigned as follows:

5/5 = photographic conformance code.

This conformance code may be followed by one or more codes identifying the profile(s) in use:

3/0 = reserved
3/1 = compatible photographic profile P1 (ETS 300 177 [6]) (CIF, sequential)
3/2 = compatible photographic profile P2 (ETS 300 177 [6]) (P1 + 2-1-1 sequential)
3/3 = compatible photographic profile P3 (ETS 300 177 [6]) (P2 + 4-2-2 sequential)
3/4 = compatible photographic profile P4 (ETS 300 177 [6]) (P3 + spectral selection mode)
3/5 = compatible photographic profile P5 (ETS 300 177 [6]) (P4 + successive approximation progressive mode)

3/6-3/13 = reserved

3/14 = private choice of photographic profile P_{PRIV} (ETS 300 177 [6])
3/15 = forbidden (CCITT terminator code for alphamosaic capability)

For a given profile, it is possible to indicate if the terminal has a specific display capability whose type is identified by the following byte:

4/0 = reserved (ETSI terminator code)
4/1 = monochrome capability
4/2 = time dependent display combination rule
4/3 = full layer combination rule
4/4 = CCITT Recommendation T.4 [31] decoding facility
4/5 = CCITT Recommendation T.6 [32] decoding facility
4/6-4/15 = reserved.

It is assumed that, in absence of any additional information, the terminal has a colour display capability. In addition, a monochrome terminal shall always be able to process received colour information and to have it displayed in monochrome.

EXAMPLE: When receiving a profile request, a terminal which conforms to alphamosaic profile 4 together with photographic P1 (colour and CCITT Recommendation T.4 [31] decoding facility) and photographic P2 (monochrome, full layer combination rule and CCITT Recommendation T.6 [32] decoding facility) shall transmit:

US 2/0 6/3 5/5 3/1 4/4 3/2 4/1 4/3 4/5 4/0.

6.7 Terminal configuration delimiter

A given Videotex terminal may consist of several Videotex logical terminals.

Each logical terminal may have several characteristics: profiles, modem, etc...

The terminal configuration delimiter is used to delimit logical terminals within one single physical terminal.

When receiving a profile request US 2/0 4/0, the terminal may transmit a list of supported logical terminals. In this list, the logical terminals shall be delimited with the character 6/7.

EXAMPLE: (In this example, the character " / " is used to represent the terminal configurations delimiter):

- alphamosaic profile 4: 6/3;
- alphageometric profile 1, x2 / alphageometric profile 2, x1: 6/0 6/9 6/7 6/1 6/8;
- alphamosaic profile 4 / VT100, photo profile P1: 6/3 6/7 7/14 4/2 5/5 3/2.

NOTE: The Videotex service may switch the terminal into a specific configuration by issuing the mechanism from ETS 300 072 [2], annex C, clause C.5.

6.8   Non-Latin language capability

Several codes in the range 7/3 - 7/7 are reserved to express the non-Latin language capability.

In order to indicate that a given alphamosaic profile is to be used with a non-Latin language, the alphamosaic profile code shall be immediately followed by one single non-Latin language capability code.

EXAMPLE 1:   A terminal supporting alphamosaic profile 1, alphamosaic profile 3 for both Greek and Chinese and a chip card capability shall transmit:

US 2/0 6/0 6/2 7/3 6/2 7/5 7/15 4/1.

EXAMPLE 2:   A terminal supporting two configurations: a first one consisting of alphamosaic profile 4 and Greek profile 2; a second configuration consisting of a Chinese profile 2 with a chip card capability shall transmit:

US 2/0 6/3 6/1 7/3 6/7 6/1 7/5 7/15 4/1.

EXAMPLE 3:   A terminal supporting three configurations:

- configuration 1: alphamosaic profile 1 with chip card;

- configuration 2: alphamosaic Greek profile 2 with telesoftware;

- configuration 3: alphamosaic profile 4;

shall transmit:

US 2/0 6/6 6/0 7/15 4/1 6/7 6/1 7/3 7/15 4/8 6/7 6/3 4/0.

6.9   Determination of the terminal current profile and capabilities

In the context of a multiprofile Videotex service, it could be useful to determine the terminal profile and capabilities currently in use.

To request the terminal current profile and capabilities, the sequence US 2/0 4/15 4/0 shall be transmitted to the terminal.

```
Host                                        Terminal
 .... Current profile Command:  US 2/0 4/15 4/0    - - - - - - - - - >
<- - - -                        US 2/0 x/y...x/y Z;     TFI response......
```

The terminal shall reply with the sequence US 2/0 followed by a series of bytes (x/y) from the columns 4 to 7 of the code table and terminated by Z which is the code 4/0, except in some cases when the escape code (7/15) is used (see subclause 6.3). Intermediate codes identify the terminal current profile and capabilities. In this case the terminal configuration delimiter (6/7) shall never be used.

EXAMPLE: A terminal which supports the three following configurations:

- Configuration 1: Alphamosaic profile 1 with chip card capability;

- Configuration 2: Alphamosaic profile 4 and alphamosaic profile 2 with Greek capability;

- Configuration 3: Alphamosaic profile 3;

shall respond

for configuration 1 in use: US 2/0 6/0 7/15 4/1;

for configuration 2 and profile 4 in use: US 2/0 6/3 4/0;

for configuration 2 and profile 2 with Greek capability in use: US 2/0 6/1 7/3 4/0;

for configuration 3 in use: US 2/0 6/2 4/0.

7 Defaults

If no response is received from a terminal within a specified time (depending upon the transmission network being used), then the basic terminal used within that network is assumed.

8 Formal description of the terminal response

8.1 Introduction

This formal grammar is a description of the TFI response.

8.2 Notation used

<symbol>	nonterminal
<a/b>	- terminal : a, b = 0..15
<symbol>*	0 or more occurrences
<symbol>+	1 or more occurrences
<symbol>O	optional (0 or 1 occurrences)
<symbol-1> ::= <symbol-2>	- symbol-1 has the syntax of symbol-2
<symbol-1> | <symbol-2>	symbol-1 or alternative symbol-2
[comment]	explanation

8.3 Formal description of the terminal response

TFI-global-request	::=	1/15 2/0 4/0
TFI-current-prof-request	::=	1/15 2/0 4/15 4/0
TFI-response	::=	1/15 2/0 <response>
response	::=	<response-et> | <response-ci>
response-et	::=	<response-66> | <old-response>

response-66	::=	6/6 <response-n> 4/0

response-n	::=	<config-1> <config-n>*

[In case of a response to a TFI-current-prof-request, "response-n" shall be restricted to :

response-n	::=	<config-1>]

config-1	::=	<response-1> <cap-bytes>O

response-1	::=	<ds-II-prof> <com-prof>O

config-n	::=	6/7 <config-1>

old-response	::=	<response-1> <config-p>*,<caps-bits-or-end>

[In case of a response to a TFI-current-prof-request, "old-response" shall be restricted to:

old-response	::=	<response-1><caps-bits-or-end>]

config-p	::=	6/7 <response-1>

response-ci	::=	5/4 <ds-list> <com-prof>O <end of resp>

ds-II-prof	::=	<srm>*<etsi-prof>O

etsi-prof	::=	<alpham-prof>+<geom-prof>*<cept-photo-prof>

alpha-ascii-prof	::=	<alpham-prof>|<ascii-prof>

[In case of a response to a TFI current-prof-request, only one occurrence of <alpham-prof> shall appear and only one occurrence of <geom-prof> and/or only one occurrence of <cept-photo-prof> may appear]

com-prof	::=	<audio-prof>O <photo-prof>O <9281-switch>O <modem-prof>O

audio-prof	::=	<audio-intro> <audio-alg-and-rate>+

audio-intro	::=	5/0|5/1

audio-alg-and-rate	::=	3/x 3/y [x=0..7, y=0..14]

photo-prof	::=	5/5 <photo-id>+

photo-id	::=	3/x <monochrome>O [x=1..5] <time-dpdency-rule>O <full-layer-rule>O <T.4decoding>O <T.6decoding>O

monochrome	::=	4/1

time-dpdency-rule	::=	4/2

full-layer-rule	::=	4/3

T.4decoding	::=	4/4

T.6decoding	::=	4/5

9281-switch	::=	5/6

VEMMI	::=	5/7

cap-bits-or-end	::=	<cap-bytes>	<end of resp>

ds-list	::=	<ds-I-list>O <ds-ll-list> <ds-lll-list>O

ds-I-list	::=	3/1 <ds-I-prof> 3/15 [for the description of <ds-I-prof> refer to ITU-T Recommendation T.101 [1], annex B]
ds-II-list	::=	3/2<response-n> 3/15
ds-III-list	::=	3/3 <ds-III-prof> 3/15 [for the description of <ds-III-prof>refer to ITU-T Recommendation T.101 [1], annex D]
srm	::=	4/x [x=1...11]
end-of-resp	::=	4/0
alpham-prof	::=	6/x <Non-Latin-language>O [x=0..4]
Non-Latin-language	::=	7/x [x=3...7]
geom-prof	::=	6/8 | 6/9
cept-photo-prof	::=	7/0 | 7/1 | 7/2
ascii-prof	::=	7/14 <ascii-prof-id>+

[In case of a response to a TFI-current-prof-request, only one occurrence of <ascii-prof-id> shall appear]

ascii-prof-id	::=	4/x [x=1..5,14]
cap-bytes	::=	7/15 <cap-byte-1> <cap-byte-2>O
<cap-byte-1>	::=	[defined by bit positions in subclause 6.3]
<cap-byte-2>	::=	[defined by bit positions in subclause 6.3]
modem-prof	::=	5/2 <modem-type>+

[In case of a response to a TFI-current-prof-request, only one occurrence of <modem-type> shall appear]

modem-type	::=	<default> |<nil>| <modem-list>
default	::=	3/0
nil	::=	3/1
modem-list	::=	<asyn>|<syn>
asyn	::=	3/2 4/x <cc>O [x = 1...9]
syn	::=	3/3 4/x <cc>O [x = 1...11]
cc	::=	3/4 4/x [x = 1...3]

Annex A (informative): Bibliography

The following texts have been referred to informatively in this ETS.

1)   ISO/IEC 9281 (1990): "Information technology - Picture coding methods Part 1:
            Identification, Part 2: Procedure for registration".

2)   CCITT Recommendation F.300 (1988): "Videotex service".

History

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