SLOVENSKI STANDARD
SIST ETS 300 706 E1:2003

01-december-2003

Specifikacija za izboljšani Teletext

Enhanced Teletext specification

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Ta slovenski standard je istoveten z: ETS 300 706 Edition 1

SIST ETS 300 706 E1:2003
https://standards.iteh.ai/catalog/standards/sist/513dcdef-a82c-4c57-ae6e-a0e8724de6a2/sist-ets-300-706-e1-2003

ICS:

33.050.30	Oprema za teleks, teletekst, telefaks	Equipment for telex, teletext, telefax

SIST ETS 300 706 E1:2003 **en**

2003-01.Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

SIST ETS 300 706 E1:2003

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST ETS 300 706 E1:2003
https://standards.iteh.ai/catalog/standards/sist/513dcdef-a82c-4c57-ae6e-a0e8724de6a2/sist-ets-300-706-e1-2003

SIST ETS 300 706 E1:2003

EUROPEAN TELECOMMUNICATION STANDARD

ETS 300 706

May 1997

Source: EBU/CENELEC/ETSI JTC

Reference: DE/JTC-TTEXT-EACEM

ICS: 33.020

Key words: Broadcasting, data, transmission, Teletext, TV

iTeh STANDARD PREVIEW
(standards.iteh.ai)

European Broadcasting Union — Union Européenne de Radio-Télévision

EBU UER

SIST ETS 300 706 E1:2003
https://standards.iteh.ai/catalog/standards/sist/513dcdef-a82c-4c57-ae6e-a0e8724da6a2/sist-ets-300-706-e1-2003

Enhanced Teletext specification

ETSI

European Telecommunications Standards Institute

ETSI Secretariat

Postal address: F-06921 Sophia Antipolis CEDEX - FRANCE
Office address: 650 Route des Lucioles - Sophia Antipolis - Valbonne - FRANCE
X.400: c=fr, a=atlas, p=etsi, s=secretariat - **Internet:** secretariat@etsi.fr

Tel.: +33 4 92 94 42 00 - Fax: +33 4 93 65 47 16

Copyright Notification: No part may be reproduced except as authorized by written permission. The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 1997.
© European Broadcasting Union 1997.
All rights reserved.

SIST ETS 300 706 E1:2003

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST ETS 300 706 E1:2003
https://standards.iteh.ai/catalog/standards/sist/513dcdef-a82c-4c57-ae6e-a0e8724de6a2/sist-ets-300-706-e1-2003

Whilst every care has been taken in the preparation and publication of this document, errors in content, typographical or otherwise, may occur. If you have comments concerning its accuracy, please write to "ETSI Editing and Committee Support Dept." at the address shown on the title page.

SIST ETS 300 706 E1:2003

Contents

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST ETS 300 706 E1:2003
https://standards.iteh.ai/catalog/standards/sist/513dcdef-a82c-4c57-ae6e-a0e8724de6a2/sist-ets-300-706-e1-2003

SIST ETS 300 706 E1:2003

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST ETS 300 706 E1:2003
https://standards.iteh.ai/catalog/standards/sist/513dcdcf-a82c-4c57-ac6c-abe8724de6d2/sist-ets-300-706-e1-2003

SIST ETS 300 706 E1:2003

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST ETS 300 706 E1:2003
https://standards.iteh.ai/catalog/standards/sist/513dcdcf-a82c-4c57-ac6c-a0c87240c9d2/sist-ets-300-706-e1-2003

SIST ETS 300 706 E1:2003

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST ETS 300 706 E1:2003
https://standards.iteh.ai/catalog/standards/sist/513dcdef-a82c-4c57-ae6e-a0e8724de6a2/sist-ets-300-706-e1-2003

SIST ETS 300 706 E1:2003

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST ETS 300 706 E1:2003
https://standards.iteh.ai/catalog/standards/sist/513dcdef-a82c-4c57-ae6e-a0e8724de6a2/sist-ets-300-706-e1-2003

SIST ETS 300 706 E1:2003

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST ETS 300 706 E1:2003
https://standards.iteh.ai/catalog/standards/sist/513dcdef-a82c-4c57-ae6e-a0e8724de6a2/sist-ets-300-706-e1-2003

SIST ETS 300 706 E1:2003

Foreword

This European Telecommunication Standard (ETS) has been produced by the Joint Technical Committee (JTC) of the European Broadcasting Union (EBU), Comité Européen de Normalisation ELECtrotechnique (CENELEC) and the European Telecommunications Standards Institute (ETSI).

NOTE: The EBU/ETSI JTC was established in 1990 to co-ordinate the drafting of ETSs in the specific field of broadcasting and related fields. Since 1995 the JTC became a tripartite body by including in the Memorandum of Understanding also CENELEC, which is responsible for the standardization of radio and television receivers.

The EBU is a professional association of broadcasting organizations whose work includes the co-ordination of its Members' activities in the technical, legal, programme-making and programme-exchange domains. The EBU has Active Members in about 60 countries in the European Broadcasting Area; its headquarters is in Geneva *.

* European Broadcasting Union
Case Postale 67
CH-1218 GRAND SACONNEX (Geneva)
Switzerland

Tel: +41 22 717 21 11
Fax: +41 22 717 24 81

Transposition dates	
Date of adoption:	7 March 1997
Date of latest announcement of this ETS (doa):	31 August 1997
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	28 February 1998
Date of withdrawal of any conflicting National Standard (dow):	28 February 1998

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST ETS 300 706 E1:2003
https://standards.iteh.ai/catalog/standards/sist/513dcdef-a82c-4c57-ae6e-a0e8724dc6a2/sist-ets-300-706-e1-2003

SIST ETS 300 706 E1:2003

Blank page

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST ETS 300 706 E1:2003
https://standards.iteh.ai/catalog/standards/sist/513dcdef-a82c-4c57-ae6e-a0e8724de6a2/sist-ets-300-706-e1-2003

SIST ETS 300 706 E1:2003

1 Scope

This European Telecommunication Standard (ETS) defines the application of CCIR Teletext System B to CCIR 625 Line 50 field Television Systems B, D, G, H, I, K and L. The System is optimised for broadcast media using cable, terrestrial and satellite transmission and the associated service and product environment. Reliable reception of data is ensured, since there is a good match between the service area defined for vision and sound reception and that provided for Teletext data broadcasting.

The data is organized in a manner optimum for broadcast media by using the rigid timing framework of the television signal. When multiplexed with a video waveform, this permits a fixed relationship to be provided between the data bytes on a television signal data line and locations in the decoder memory. Using this relationship, error identification and correction are available, matched to the statistical occurrence of bit errors. Critical control data and addressing information are protected by Hamming coding. Basic data is protected by using parity checks.

Teletext data packets are normally grouped together to form "pages" of information, although some have a "stand-alone" function. The range of presentation and application features are arranged to be downward compatible. This permits initial services to be defined and existing services to be upgraded, without rendering obsolete equipment already in the field.

Four presentation Levels are defined:

Level 1:
- Alphamosaic characters
- spacing attributes
- fixed colour palette
- 24 rows of 40 columns

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Level 1.5:
- Extends the character repertoire

Level 2.5:
- Extends the language repertoire

SIST ETS 300 706 E1:2003
https://standards.iteh.ai/catalog/standards/sist/513dcdef-a82c-4c57-ae6e-a0e8724de6a2/sist-ets-300-706-e1-2003

- increases the colour palette with re-definable colours
- introduces non-spacing attributes
- allows a number of simple re-definable characters
- provides side panels for additional text or graphics

Level 3.5:
- Extends the number of re-definable characters and their complexity
- introduces different font styles and proportional spacing

Levels 2.5 and 3.5 are intended to replace Levels 2 and 3 respectively as defined in earlier specifications. The new Levels offer more display features and can be transmitted more efficiently. Level 1.5 has evolved in the field due to the language requirements in certain countries and is documented here for the first time.

The facility to invoke the presentation of characters of any writing system or language, or a mixture of such systems is included. This ETS includes the coding for Arabic, Cyrillic, Greek, Hebrew and Latin alphabets. Where appropriate the character repertoires and coding structures of the ISO are used.

In addition to the basic text and graphics display presentation, a wide range of other applications can be supported. Protocols for user-friendly navigation techniques also exist. These topics are covered in the reference documents and the other documents listed in annex Q.

SIST ETS 300 706 E1:2003

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] ETS 300 231: "Television Systems; Specification of the domestic video Programme Delivery Control system (PDC)".

[2] ETS 300 708: "Data transmission within Teletext".

[3] ETS 300 707: "Electronic Programme Guide (EPG); Protocol for a TV-Guide using electronic data transmission".

[4] ISO 6937/2 (1983) + Addendum 1 (1989): "Information processing - Coded character sets for text communication - Part 2: Latin alphabet and non-alphabet graphic characters".

[5] ETR 287: "Code of Practice for Enhanced Teletext".

[6] TR 101 231: "Register of Country and Network Identification codes for Teletext based systems".

[7] prTR 101 233: "Television systems; Code of Practice for allocation of services in the Vertical Blanking Interval (VBI)."

iTeh STANDARD PREVIEW
(standards.iteh.ai)

3 Definitions, symbols and abbreviations

3.1 Definitions

SIST ETS 300 706 E1:2003
https://standards.iteh.ai/catalog/standards/sist/513dcdef-a82c-4c57-ae6e-a0e8724de6a2/sist-ets-300-706-e1-2003

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

Active position: The active position is defined by row and column co-ordinates and is a reference to a screen location within the normal page area. It is used to position enhancement data when overwriting a basic Level 1 Teletext page.

Bit numbering within bytes: The bits of Teletext data bytes are numbered 1 to 8 (LSB to MSB).

Designation code: A data byte used as a packet address extender. It is used to differentiate between instances of the packet X/Y/n. The designation code is the byte after the magazine and packet address and is 8/4 Hamming coded.

Magazine number 8: A packet with a magazine value of 0 is referred to as belonging to magazine 8.

Packet: A sequence of data bits transmitted as a single entity on one TV line. The packet includes elements to establish synchronization within a decoder plus address and information data bits.

Page address: A page address is shown as page number plus sub-code - **M Pt Pu: S4 S3 S2 S1**

Page Format - CA: A method of data broadcasting defined in ETS 300 708 [2] clause 5 where the data is transmitted within Teletext pages. Conditional access and scrambling techniques may be used at the transport layer.

Page Format - Clear: A method of data broadcasting defined in ETS 300 708 [2] clause 4 where the data is transmitted within Teletext pages but without the possibility of applying conditional access and scrambling techniques at the transport layer.

SIST ETS 300 706 E1:2003

Page number: A page number is shown as **M Pt Pu**, where

M = magazine	(range 1 - 8)
Pt = page number tens	(range 0 - F)
Pu = page number units	(range 0 - F)

Prefix: The sequence of clock run-in, framing code and packet address bytes at the start of every Teletext packet.

Sub-code: A page sub-code is shown as **S4 S3 S2 S1**, where

S1 = LSB digit	(range 0 - F)
S2 = LSB+1 digit	(range 0 - 7)
S3 = LSB+2 digit	(range 0 - F)
S4 = MSB digit	(range 0 - 3)

Time filling headers: Page header packets with the page number FF which are inserted into the transmission for the sole reason of maintaining a real-time clock display.

Transmission bit order: The bits of a Teletext data byte are transmitted least significant bit first.

3.2 Symbols

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

Character code r/c	The character in row r, column c of a given character set.
Cn	Control bit n.
Dn	Data bit n.
f_H	Nominal TV line frequency.
Packet M/yy	Magazine related packet, packet number = yy, from any magazine M and with any designation code value.
Packet M/yy/nn	Magazine related packet, packet number = yy, from any magazine M and with a designation code value of nn.
Packet X/yy	Page related packet, packet number = yy, forming part of a Teletext page and thus having the same magazine address value, X, as the page header packet of that page. If applicable, the precise designation code value is not relevant.
Packet X/yy/nn	Page related packet, packet number = yy and designation code value = nn, forming part of a Teletext page and thus having the same magazine address value, X, as the page header packet of that page.
Pn	Protection bit n.
Y = nn	Packet number = nn.
⊕	Logical exclusive-OR function.
○	Feature not available.
⊙	Feature available.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST ETS 300 706 E1:2003
https://standards.iteh.ai/catalog/standards/sist/32ab6c82-4c57-4ce6-b2d2-3a7ed0e8c3ae/sist-ets-300-706-e1-2003

3.3 Abbreviations

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

ACI	Automatic Channel Installation
AIT	Additional Information Table
BCD	Binary Coded Decimal
BTT	Basic TOP Table
CA	Conditional Access
CCIR	International Radio Consultative Committee
CLUT	Colour Look-up Table
CRC	Cyclic Redundancy Check
CVBS	Composite Video and Blanking Signal
DCLUT	Colour Look-up Table for Dynamically Re-definable Character Sets
DRCS	Dynamically Re-definable Character Set
EACEM	European Association of Consumer Electronic Manufacturers
EBU	European Broadcasting Union