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SLOVENSKI STANDARD
SIST EN 300 472 V1.4.1:2017

01-junij-2017

Digitalna videoradiodifuzija (DVB) - Specifikacija za prenos teleteksta po standardu ITU-R sistem B v bitnih tokih digitalne videoradiodifuzije

Digital Video Broadcasting (DVB) - Specification for conveying ITU-R System B Teletext in DVB bitstreams

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ETSI EN 300 472 V1.4.1 (2017-04)

EUROPEAN STANDARD

Digital Video Broadcasting (DVB);
Specification for conveying ITU-R System B Teletext
in DVB bitstreams

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Foreword

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

NOTE: The EBU/ETSI JTC Broadcast was established in 1990 to co-ordinate the drafting of standards in the specific field of broadcasting and related fields. Since 1995 the JTC Broadcast 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.

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The Digital Video Broadcasting Project (DVB) is an industry-led consortium of broadcasters, manufacturers, network operators, software developers, regulatory bodies, content owners and others committed to designing global standards for the delivery of digital television and data services. DVB fosters market driven solutions that meet the needs and economic circumstances of broadcast industry stakeholders and consumers. DVB standards cover all aspects of digital television from transmission through interfacing, conditional access and interactivity for digital video, audio and data. The consortium came together in 1993 to provide global standardisation, interoperability and future proof specifications.

National transposition dates	
Date of adoption of this EN:	5 April 2017
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Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 January 2018
Date of withdrawal of any conflicting National Standard (dow):	31 January 2018

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

1 Scope

The present document specifies the method by which ITU-R System B Teletext (Recommendation ITU-R BT.653 [3]), also known as EBU Teletext (see ETSI EN 300 706 [4]), may be carried in DVB bitstreams. This transport mechanism is intended to satisfy the following requirements:

- to support the transcoding of the Teletext data into the Vertical Blanking Interval (VBI) of analogue video. The transcoded signal should be compatible with existing TV receivers with Teletext decoders;

- the maximum data rate for each Teletext service is equivalent to 16 lines per field so that the service is always suitable for transcoding into the VBI;

- the transmission mechanism should be capable of transmitting subtitles with accurate timing with respect to the video (i.e. to within or near frame accuracy).

A more general data transport mechanism for conveying new types of data services is outside the scope of the present document, but the transport syntax specified here can also be adapted for other data.

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at https://docbox.etsi.org/Reference/.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are necessary for the application of the present document.

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

[2] ETSI EN 300 468: "Digital Video Broadcasting (DVB); Specification for Service Information (SI) in DVB systems".

[3] Recommendation ITU-R BT.653: "Teletext systems".

[4] ETSI EN 300 706: "Enhanced Teletext specification".

2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

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The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] ISO/IEC 13818-2: "Information technology -- Generic coding of moving pictures and associated audio information -- Part 2: Video".

[i.2]   ISO/IEC 13818-3: "Information technology -- Generic coding of moving pictures and associated
                     audio information -- Part 3: Audio".

3   Definitions and abbreviations

3.1   Definitions

For the purposes of the present document, the following terms and definitions apply:

MPEG 2: Refers to ISO/IEC 13818 set of standards.

NOTE: Systems coding is defined in part 1 [1], video coding is defined in part 2 [i.1], and audio coding is defined
           in part 3 [i.2] of ISO/IEC 13818.

section: syntactic structure used for mapping all service information defined in ETSI EN 300 468 [2] into
ISO/IEC 13818-1 [1] Transport Stream (TS) packets

service: sequence of programmes under the control of a broadcaster which can be broadcast as part of a schedule

teletext descriptor: descriptor used in the Program Specific Information (PSI) Program Map Table (PMT) to identify
streams which carry EBU teletext data

NOTE: See ETSI EN 300 468 [2].

3.2   Abbreviations

For the purposes of the present document, the following abbreviations apply:

DVB   Digital Video Broadcasting
MPEG   Moving Pictures Expert Group
PES   Packetized Elementary Stream
PID   Packet IDentifier
PMT   Program Map Table
PSI   Program Specific Information
PTS   Presentation Time Stamp
SI   Service Information
TS   Transport Stream
TV   TeleVision
VBI   Vertical Blanking Interval

4   Insertion of Teletext into MPEG-2 transport multiplex

4.0   Packetization and signalling

Teletext data shall be conveyed in Packetized Elementary Stream (PES) packets as defined in clause 4.2, carried by
Transport Stream (TS) packets as defined in ISO/IEC 13818-1 [1] and according to clause 4.1.

The Packet Identifier (PID) of a Teletext stream associated with a service shall be signalled in the Program Map Table
(PMT) of the Program Specific Information (PSI) for that service.

The Teletext data stream shall use stream_type value 0x06 (which indicates a PES stream carrying private data).

The appropriate ES_info field of the program map section describing Teletext data streams shall contain a Teletext
descriptor as defined in ETSI EN 300 468 [2].

A service may include more than one Teletext data stream, provided that each stream has a different value of
data_identifier, and that the streams are distinguishable by their respective Teletext descriptors in the PSI.