

STN	Digitálne televízne vysielanie (DVB) Špecifikácia informácií o službách (SI) v systémoch DVB	STN EN 300 468 V1.16.1 87 0468
------------	---	--

Digital Video Broadcasting (DVB); Specification for Service Information (SI) in DVB systems

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 02/20

Obsahuje: EN 300 468 V1.16.1:2019

129975

ETSI EN 300 468 V1.16.1 (2019-08)



Digital Video Broadcasting (DVB); Specification for Service Information (SI) in DVB systems

EBU DVB[®]

Reference

REN/JTC-DVB-376

Keywordsbroadcasting, digital, DVB, MPEG, service, TV,
video**ETSI**650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

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

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Important notice

The present document can be downloaded from:

<http://www.etsi.org/standards-search>

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the prevailing version of an ETSI deliverable is the one made publicly available in PDF format at www.etsi.org/deliver.

Users of the present document should be aware that the document may be subject to revision or change of status.

Information on the current status of this and other ETSI documents is available at

<https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx>

If you find errors in the present document, please send your comment to one of the following services:

<https://portal.etsi.org/People/CommiteeSupportStaff.aspx>

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2019.

© European Broadcasting Union 2019.

All rights reserved.

DECT™, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members.

3GPP™ and **LTE™** are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

oneM2M™ logo is a trademark of ETSI registered for the benefit of its Members and of the oneM2M Partners.

GSM® and the GSM logo are trademarks registered and owned by the GSM Association.

Contents

Intellectual Property Rights	8
Foreword.....	8
Modal verbs terminology.....	9
1 Scope	10
2 References	10
2.1 Normative references	10
2.2 Informative references.....	13
3 Definition of terms, symbols and abbreviations.....	13
3.1 Terms.....	13
3.2 Symbols.....	17
3.3 Abbreviations	17
4 Service Information (SI) description.....	21
5 Service Information (SI) tables	23
5.1 SI table mechanism	23
5.1.1 Use of table sections	23
5.1.2 Mapping of sections into Transport Stream (TS) packets.....	24
5.1.3 Coding of PID and table_id fields	25
5.1.4 Repetition rates and random access	26
5.1.5 Scrambling	26
5.1.6 Bit order and transmission order.....	26
5.2 Table definitions.....	28
5.2.0 Introduction.....	28
5.2.1 Network Information Table (NIT).....	29
5.2.2 Bouquet Association Table (BAT)	30
5.2.3 Service Description Table (SDT).....	32
5.2.4 Event Information Table (EIT).....	33
5.2.5 Time and Date Table (TDT)	36
5.2.6 Time Offset Table (TOT)	36
5.2.7 Running Status Table (RST).....	37
5.2.8 Stuffing Table (ST).....	38
5.2.9 Discontinuity Information Table (DIT)	38
5.2.10 Selection Information Table (SIT).....	38
6 Descriptors	38
6.0 Introduction	38
6.1 Descriptor identification and location	38
6.2 Descriptor coding	40
6.2.0 General principles.....	40
6.2.1 Adaptation field data descriptor.....	40
6.2.2 Ancillary data descriptor.....	41
6.2.3 Announcement support descriptor.....	42
6.2.4 Bouquet name descriptor	44
6.2.5 CA identifier descriptor	44
6.2.6 Cell frequency link descriptor.....	44
6.2.7 Cell list descriptor.....	45
6.2.8 Component descriptor.....	46
6.2.9 Content descriptor.....	53
6.2.10 Country availability descriptor	56
6.2.11 Data broadcast descriptor.....	56
6.2.12 Data broadcast id descriptor.....	57
6.2.13 Delivery system descriptors.....	58
6.2.13.1 Cable delivery system descriptor	58
6.2.13.2 Satellite delivery system descriptor.....	59
6.2.13.3 S2 satellite delivery system descriptor	60

6.2.13.4	Terrestrial delivery system descriptor	61
6.2.14	DSNG descriptor	64
6.2.15	Extended event descriptor.....	64
6.2.16	Extension descriptor	65
6.2.17	Frequency list descriptor.....	65
6.2.18	FTA content management descriptor	66
6.2.18.0	Semantics and syntax of the FTA content management descriptor.....	66
6.2.18.1	Scope of the FTA content management descriptor	68
6.2.19	Linkage descriptor	69
6.2.19.0	Semantics and syntax of the linkage descriptor	69
6.2.19.1	Mobile hand-over linkage	70
6.2.19.2	Event linkage.....	71
6.2.19.3	Extended event linkage	72
6.2.20	Local time offset descriptor	75
6.2.21	Mosaic descriptor.....	76
6.2.22	Multilingual bouquet name descriptor	78
6.2.23	Multilingual component descriptor.....	79
6.2.24	Multilingual network name descriptor.....	80
6.2.25	Multilingual service name descriptor.....	80
6.2.26	Near Video On Demand (NVOD) reference descriptor.....	81
6.2.27	Network name descriptor	82
6.2.28	Parental rating descriptor	82
6.2.29	Partial Transport Stream (TS) descriptor	82
6.2.30	PDC descriptor.....	83
6.2.31	Private data specifier descriptor.....	83
6.2.32	Scrambling descriptor	83
6.2.33	Service descriptor	84
6.2.34	Service availability descriptor.....	86
6.2.35	Service list descriptor.....	86
6.2.36	Service move descriptor.....	87
6.2.37	Short event descriptor	87
6.2.38	Short smoothing buffer descriptor	88
6.2.39	Stream identifier descriptor.....	89
6.2.40	Stuffing descriptor	90
6.2.41	Subtitling descriptor.....	90
6.2.42	Telephone descriptor.....	91
6.2.43	Teletext descriptor	92
6.2.44	Time shifted event descriptor.....	93
6.2.45	Time shifted service descriptor.....	93
6.2.46	Transport stream descriptor	94
6.2.47	VBI data descriptor	94
6.2.48	VBI teletext descriptor.....	95
6.3	Extended descriptor identification and location	96
6.4	Extended descriptor coding	97
6.4.0	Introduction.....	97
6.4.1	Audio preselection descriptor	97
6.4.2	CI ancillary data descriptor.....	99
6.4.3	CP descriptor	100
6.4.4	CP identifier descriptor	100
6.4.5	CPCM delivery signalling descriptor.....	101
6.4.6	Delivery system descriptors	101
6.4.6.1	C2 delivery system descriptor	101
6.4.6.2	SH delivery system descriptor.....	103
6.4.6.3	T2 delivery system descriptor	107
6.4.6.4	C2 bundle delivery system descriptor	109
6.4.6.5	S2X satellite delivery system descriptor	110
6.4.7	Image icon descriptor.....	113
6.4.8	Message descriptor	115
6.4.9	Network change notify descriptor.....	115
6.4.10	Service relocated descriptor	117
6.4.11	Supplementary audio descriptor	118
6.4.12	Target region descriptor.....	120

6.4.13	Target region name descriptor	121
6.4.14	T2-MI descriptor.....	123
6.4.15	URI linkage descriptor.....	123
6.4.16	Video depth range descriptor	124
6.4.16.0	Semantics and syntax of the video depth range descriptor.....	124
6.4.16.1	Production disparity hint	125
6.5	Scoping rules for scoping descriptors.....	126
7	Storage Media Interoperability (SMI) measures	126
7.0	Introduction	126
7.1	SMI tables	126
7.1.0	General principles.....	126
7.1.1	Discontinuity Information Table (DIT)	127
7.1.2	Selection Information Table (SIT).....	127
7.2	SMI descriptors	129
7.2.0	Introduction.....	129
7.2.1	Partial Transport Stream (TS) descriptor	129
Annex A (normative): Coding of text characters		130
A.0	General principles	130
A.1	Control codes.....	130
A.2	Selection of character table	130
Annex B: Void		144
Annex C (informative): Conversion between time and date conventions		145
Annex D (normative): Service information implementation of AC-3, Enhanced AC-3, and AC-4 audio in DVB systems		147
D.0	Introduction	147
D.1	AC-3 and Enhanced AC-3 component types.....	147
D.2	AC-3 descriptor	148
D.3	AC-3 descriptor syntax and semantics	148
D.4	Enhanced_AC-3 descriptor	150
D.5	Enhanced_AC-3 descriptor syntax and semantics	150
D.6	AC-4 descriptor	152
D.7	AC-4 descriptor syntax and semantics	152
D.8	Use of the supplementary audio descriptor with AC-4	154
Annex E (normative): Usage of the Scrambling_descriptor		155
Annex F (informative): ISO 639 Language Descriptor for "original audio" Soundtrack		156
Annex G (normative): Service information implementation of DTS coded audio in DVB systems		157
G.0	Introduction	157
G.1	DTS and DTS-HD descriptors	157
G.2	DTS Descriptor	157
G.2.0	Use of the DTS descriptor.....	157
G.2.1	Syntax and semantics for the DTS descriptor	157
G.3	DTS-HD descriptor	160
G.3.1	DTS-HD descriptor syntax	160
G.3.2	Substream information	162

G.3.3	Asset information	163
G.3.4	Component type	165
G.4	Use of DTS-HD in Receiver Mixed Applications for Single PID and Multiple PID Implementations	166
Annex H (normative):	Service information implementation of AAC coded audio in DVB systems	167
H.0	Introduction	167
H.1	AAC Audio descriptor.....	167
H.2	AAC descriptor	167
H.2.0	Use of the AAC descriptor	167
H.2.1	Syntax and semantics for the AAC descriptor.....	167
Annex I (normative):	Assignment and interpretation of the service_type field.....	169
I.1	Background	169
I.2	Assignment of service_type	169
I.2.0	General principles.....	169
I.2.1	service_type "digital television service" (0x01).....	169
I.2.2	service_type "H.264/AVC" (various).....	170
I.2.3	service_type "H.264/AVC frame compatible stereoscopic HD" (various).....	170
I.2.4	service_type "advanced codec digital radio sound service" (0x0A).....	171
I.2.5	service_type "HEVC digital television service" (0x1F).....	171
I.2.5.0	General principles.....	171
I.2.5.1	Signalling for service frame compatible plano-stereoscopic 3DTV for HEVC coded services.....	172
I.2.5.2	Signalling for HDR and/or frame rate of 100 Hz, 120 000/1 001 Hz, or 120 Hz, but with a HEVC half frame rate temporal video sub-bitstream frame rate lower than or equal to 60 Hz.....	174
I.2.5.3	Spatial, temporal and dynamic range characteristics	174
I.2.5.4	Summary of signalling for different bitstream profiles using service_type 0x1F.....	175
I.2.6	service_type "HEVC digital television service with HDR and/or a frame rate of 100 Hz, 120 000/1 001 Hz, or 120 Hz" (0x20).....	176
I.2.6.1	General principles.....	176
I.2.6.2	Summary of signalling for different bitstream profiles using service_type 0x20	178
I.2.7	Summary of signalling for HEVC bitstream profiles using service_type 0x1F or 0x20 (informative).....	179
Annex J (normative):	Signalling of Supplementary Audio	180
J.1	Overview	180
J.2	Receiver-mix supplementary audio.....	180
J.2.1	Introduction	180
J.2.2	PSI PMT signalling	181
J.2.3	EIT signalling.....	181
J.2.3.0	General principles	181
J.2.3.1	Visually impaired audio description	181
J.3	Broadcast-mix supplementary audio	182
J.3.1	Introduction	182
J.3.2	PSI PMT signalling	182
J.3.3	EIT signalling.....	182
J.3.3.0	General principles	182
J.3.3.1	Visually impaired audio description	182
J.4	PSI signalling of audio purpose.....	182
J.5	SAOC-DE parametric data streams.....	183
J.5.1	Introduction	183
J.5.2	PSI PMT signalling	183
J.5.3	EIT signalling.....	184
Annex K (normative):	Extended event linkage descriptor usage.....	185

Annex L (normative):	Service information implementation of DTS Neural Surround™ coded audio in DVB systems	187
L.0	Introduction	187
L.1	DTS Neural Descriptor.....	187
Annex M (normative):	Signalling of next-generation audio.....	189
M.1	Overview	189
M.2	PSI PMT Signalling	189
M.3	Mapping of codec specific values to the audio preselection descriptor (informative).....	189
Annex N (informative):	Bibliography.....	191
Annex O (informative):	Change History	192
History		194

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<https://ipr.etsi.org/>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

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.

European Broadcasting Union
CH-1218 GRAND SACONNEX (Geneva)
Switzerland
Tel: +41 22 717 21 11
Fax: +41 22 717 24 81

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 standardization, interoperability and future proof specifications.

National transposition dates

Date of adoption of this EN:	19 August 2019
Date of latest announcement of this EN (doa):	30 November 2019
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 May 2020
Date of withdrawal of any conflicting National Standard (dow):	31 May 2020

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 Service Information (SI) data which forms a part of DVB bitstreams, in order that the user can be provided with information to assist in selection of services and/or events within the bitstream, and so that the Integrated Receiver Decoder (IRD) can automatically configure itself for the selected service. SI data for automatic configuration is mostly specified within ISO/IEC 13818-1 [15] as Program Specific Information (PSI).

The present document specifies additional data which complements the PSI by providing data to aid automatic tuning of IRDs, and additional information intended for display to the user. The manner of presentation of the information is not specified in the present document, and IRD manufacturers have freedom to choose appropriate presentation methods.

It is expected that Electronic Programme Guides (EPGs) will be a feature of Digital TV transmissions.

The definition of an EPG is outside the scope of the present document (i.e. the SI specification), but the data contained within the SI specified in the present document may be used as the basis for an EPG.

Rules of operation for the implementation of the present document are specified in ETSI TS 101 211 [i.1].

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] ETSI EN 300 231: "Television systems; Specification of the domestic video Programme Delivery Control system (PDC)".
- [2] ETSI EN 300 401: "Radio Broadcasting Systems; Digital Audio Broadcasting (DAB) to mobile, portable and fixed receivers".
- [3] ETSI EN 300 706: "Enhanced Teletext specification".
- [4] ETSI EN 301 192: "Digital Video Broadcasting (DVB); DVB specification for data broadcasting".
- [5] ETSI EN 301 210: "Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation for Digital Satellite News Gathering (DSNG) and other contribution applications by satellite".
- [6] ETSI EN 301 775: "Digital Video Broadcasting (DVB); Specification for the carriage of Vertical Blanking Information (VBI) data in DVB bitstreams".
- [7] ETSI EN 301 790: "Digital Video Broadcasting (DVB); Interaction channel for satellite distribution systems".
- [8] ETSI EN 302 307-1: "Digital Video Broadcasting (DVB); Second generation framing structure, channel coding and modulation systems for Broadcasting, Interactive Services, News Gathering and other broadband satellite applications; Part 1: DVB-S2".
- [9] ETSI TS 101 154: "Digital Video Broadcasting (DVB); Specification for the use of Video and Audio Coding in Broadcast and Broadband Applications".

- [10] ETSI TS 102 005: "Digital Video Broadcasting (DVB); Specification for the use of Video and Audio Coding in DVB services delivered directly over IP protocols".
- [11] ETSI TS 102 006: "Digital Video Broadcasting (DVB); Specification for System Software Update in DVB Systems".
- [12] ETSI TS 102 323: "Digital Video Broadcasting (DVB); Carriage and signalling of TV-Anytime information in DVB transport streams".
- [13] ETSI TS 102 812: "Digital Video Broadcasting (DVB); Multimedia Home Platform (MHP) Specification 1.1.3".
- [14] ISO/IEC 10646: "Information technology - Universal Coded Character Set (UCS)".
- [15] ISO/IEC 13818-1: "Information technology - Generic coding of moving pictures and associated audio information - Part 1: Systems".
- [16] ISO/IEC 6937: "Information technology - Coded graphic character set for text communication - Latin alphabet".
- [17] ISO/IEC 8859-1: "Information technology - 8-bit single-byte coded graphic character sets - Part 1: Latin alphabet No. 1".
- [18] ISO/IEC 8859-2: "Information technology - 8-bit single-byte coded graphic character sets - Part 2: Latin alphabet No. 2".
- [19] ISO/IEC 8859-3: "Information technology - 8-bit single-byte coded graphic character sets - Part 3: Latin alphabet No. 3".
- [20] ISO/IEC 8859-4: "Information technology - 8-bit single-byte coded graphic character sets - Part 4: Latin alphabet No. 4".
- [21] ISO/IEC 8859-5: "Information technology - 8-bit single-byte coded graphic character sets - Part 5: Latin/Cyrillic alphabet".
- [22] ISO/IEC 8859-6: "Information technology - 8-bit single-byte coded graphic character sets - Part 6: Latin/Arabic alphabet".
- [23] ISO/IEC 8859-7: "Information technology - 8-bit single-byte coded graphic character sets - Part 7: Latin/Greek alphabet".
- [24] ISO/IEC 8859-8: "Information technology - 8-bit single-byte coded graphic character sets - Part 8: Latin/Hebrew alphabet".
- [25] ISO/IEC 8859-9: "Information technology - 8-bit single-byte coded graphic character sets - Part 9: Latin alphabet No. 5".
- [26] ISO/IEC 8859-10: "Information technology - 8-bit single-byte coded graphic character sets - Part 10: Latin alphabet No. 6".
- [27] ISO/IEC 8859-11: "Information technology - 8-bit single-byte coded graphic character sets - Part 11: Latin/Thai alphabet".
- [28] ISO/IEC 8859-13: "Information technology - 8-bit single-byte coded graphic character sets - Part 13: Latin alphabet No. 7".
- [29] ISO/IEC 8859-14: "Information technology - 8-bit single-byte coded graphic character sets - Part 14: Latin alphabet No. 8 (Celtic)".
- [30] ISO/IEC 8859-15: "Information technology - 8-bit single-byte coded graphic character sets - Part 15: Latin alphabet No. 9".
- [31] CENELEC EN 50221: "Common interface specification for conditional access and other digital video broadcasting decoder applications".
- [32] IEC 61883 (parts 1 and 4): "Consumer audio/video equipment - Digital interface".

- [33] IEEE 1394.1TM: "IEEE Standard for High Performance Serial Bus Bridges".
- [34] ISO 8601: "Data elements and interchange formats - Information interchange - Representation of dates and times".
- [35] ISO 3166 (all parts): "Codes for the representation of names of countries and their subdivisions".
- [36] ISO 639-2: "Codes for the representation of names of languages - Part 2: Alpha-3 code".
- [37] KS X 1001: "Code for Information Interchange (Hangeul and Hanja)", Korean Agency for Technology and Standards, 2014.
- NOTE: Available at <https://kssn.net/en/search/stddetail.do?itemNo=K001010102764>. Also see <https://standard.go.kr/KSCI/standardIntro/getStandardSearchView.do?ksNo=KSX1001>. This document has been published in Korean only.
- [38] ETSI ES 201 812: "Digital Video Broadcasting (DVB); Multimedia Home Platform (MHP) Specification 1.0.3".
- [39] ETSI TS 102 825 (parts 1 to 5, 7, 9 and 10): "Digital Video Broadcasting (DVB); Content Protection and Copy Management (DVB-CPCM)".
- [40] ETSI EN 302 755: "Digital Video Broadcasting (DVB); Frame structure channel coding and modulation for a second generation digital terrestrial television broadcasting system (DVB-T2)".
- [41] ETSI TS 102 770: "Digital Video Broadcasting (DVB); System Renewability Messages (SRM) in DVB Systems".
- [42] ETSI EN 302 583: "Digital Video Broadcasting (DVB); Framing Structure, channel coding and modulation for Satellite Services to Handheld devices (SH) below 3 GHz".
- [43] ETSI TS 102 772: "Digital Video Broadcasting (DVB); Specification of Multi-Protocol Encapsulation - inter-burst Forward Error Correction (MPE-iFEC)".
- [44] IETF RFC 2045: "Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies".
- [45] ETSI EN 302 769: "Digital Video Broadcasting (DVB); Frame structure channel coding and modulation for a second generation digital transmission system for cable systems (DVB-C2)".
- [46] ETSI TS 101 547-2: "Digital Video Broadcasting (DVB); Plano-stereoscopic 3DTV; Part 2: Frame Compatible Plano-stereoscopic 3DTV".
- [47] ETSI TS 101 547-3: "Digital Video Broadcasting (DVB); Plano-stereoscopic 3DTV; Part 3: HDTV Service Compatible Plano-stereoscopic 3DTV".
- [48] ETSI TS 102 809: "Digital Video Broadcasting (DVB); Signalling and carriage of interactive applications and services in Hybrid Broadcast/Broadband environments".
- [49] ETSI TS 102 773: "Digital Video Broadcasting (DVB); Modulator Interface (T2-MI) for a second generation digital terrestrial television broadcasting system (DVB-T2)".
- [50] GB-2312-1980: "Code of Chinese graphic character set for information interchange, primary set".
- [51] IETF RFC 3986: "Uniform Resource Identifiers (URI): Generic Syntax".
- [52] ETSI TS 101 547-4: "Digital Video Broadcasting (DVB); Plano-stereoscopic 3DTV; Part 4: Service frame compatible Plano-stereoscopic 3DTV for HEVC coded services".
- [53] ETSI EN 302 307-2: "Digital Video Broadcasting (DVB); Second generation framing structure, channel coding and modulation systems for Broadcasting, Interactive Services, News Gathering and other broadband satellite applications; Part 2: DVB-S2 Extensions (DVB-S2X)".
- [54] ETSI EN 300 743: "Digital Video Broadcasting (DVB); Subtitling systems".

NOTE: This is also available as DVB BlueBook A156.

- [55] ETSI EN 303 560: "Digital Video Broadcasting (DVB); TTML subtitling systems".
- [56] ETSI TS 101 162: "Digital Video Broadcasting (DVB); Allocation of identifiers and codes for Digital Video Broadcasting (DVB) systems".

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.

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

- [i.1] ETSI TS 101 211: "Digital Video Broadcasting (DVB); Guidelines on implementation and usage of Service Information (SI)".
- [i.2] ETSI TS 102 727: "Digital Video Broadcasting (DVB); Multimedia Home Platform (MHP) Specification 1.2.2".
- [i.3] ETSI TR 102 825 (parts 6, 8, 11 to 13): "Digital Video Broadcasting (DVB); Content Protection and Copy Management (DVB-CPCM)".
- [i.4] ETSI TS 102 201: "Digital Video Broadcasting (DVB); Interfaces for DVB Integrated Receiver Decoder (DVB-IRD)".
- [i.5] ETSI EN 300 429: "Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation for cable systems".
- [i.6] ETSI EN 300 421: "Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation for 11/12 GHz satellite services".
- [i.7] ETSI EN 300 744: "Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation for digital terrestrial television".
- [i.8] ETSI TS 103 205: "Digital Video Broadcasting (DVB); Extensions to the CI Plus™ Specification".
- [i.9] ATIS 0800006: "IIF Default Scrambling Algorithm (IDSA) IPTV Interoperability Specification".

NOTE: Available at https://www.techstreet.com/atis/standards/atis-0800006-v002?product_id=1752006.

koniec náhľadu – text ďalej pokračuje v platenej verzii STN