

STN	Digitálne televízne vysielanie (DVB). Špecifikácia informácií o službe (SI) v systémoch DVB.	STN EN 300 468 V1.14.1 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. 11/14

Obsahuje: EN 300 468 V1.14.1:2014

119830

Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, odbor SÚTN, 2014
Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy rozmnožovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

ETSI EN 300 468 V1.14.1 (2014-05)



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

EBU
OPERATING EUROVISION

DVB[®]
Digital Video
Broadcasting

Reference

REN/JTC-DVB-329

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>

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 only prevailing document is the print of the Portable Document Format (PDF) version kept on a specific network drive within ETSI Secretariat.

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

<http://portal.etsi.org/tb/status/status.asp>

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

http://portal.etsi.org/chaicor/ETSI_support.asp

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.

© European Telecommunications Standards Institute 2014.

© European Broadcasting Union 2014.

All rights reserved.

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

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

GSM® and the GSM logo are Trade Marks registered and owned by the GSM Association.

Contents

Intellectual Property Rights	7
Foreword.....	7
1 Scope	8
2 References	8
2.1 Normative references	8
2.2 Informative references.....	11
3 Definitions and abbreviations.....	11
3.1 Definitions.....	11
3.2 Abbreviations	14
4 Service Information (SI) description.....	17
5 Service Information (SI) tables	19
5.1 SI table mechanism	19
5.1.1 Explanation	20
5.1.2 Mapping of sections into Transport Stream (TS) packets.....	20
5.1.3 Coding of PID and table_id fields	21
5.1.4 Repetition rates and random access	22
5.1.5 Scrambling	22
5.2 Table definitions.....	22
5.2.1 Network Information Table (NIT)	22
5.2.2 Bouquet Association Table (BAT)	24
5.2.3 Service Description Table (SDT).....	25
5.2.4 Event Information Table (EIT)	27
5.2.5 Time and Date Table (TDT)	29
5.2.6 Time Offset Table (TOT)	30
5.2.7 Running Status Table (RST).....	31
5.2.8 Stuffing Table (ST).....	31
5.2.9 Discontinuity Information Table (DIT)	32
5.2.10 Selection Information Table (SIT).....	32
6 Descriptors	32
6.1 Descriptor identification and location	32
6.2 Descriptor coding	34
6.2.1 Adaptation field data descriptor.....	34
6.2.2 Ancillary data descriptor.....	35
6.2.3 Announcement support descriptor	35
6.2.4 Bouquet name descriptor	37
6.2.5 CA identifier descriptor	37
6.2.6 Cell frequency link descriptor.....	38
6.2.7 Cell list descriptor.....	38
6.2.8 Component descriptor.....	40
6.2.9 Content descriptor.....	43
6.2.10 Country availability descriptor	45
6.2.11 Data broadcast descriptor.....	46
6.2.12 Data broadcast id descriptor.....	47
6.2.13 Delivery system descriptors.....	47
6.2.13.1 Cable delivery system descriptor	47
6.2.13.2 Satellite delivery system descriptor.....	49
6.2.13.3 S2 satellite delivery system descriptor	50
6.2.13.4 Terrestrial delivery system descriptor	51
6.2.14 DSNG descriptor	53
6.2.15 Extended event descriptor.....	53
6.2.16 Extension descriptor	55
6.2.17 Frequency list descriptor.....	55
6.2.18 FTA content management descriptor.....	56

6.2.18.1	Scope of FTA content management descriptor	58
6.2.19	Linkage descriptor	58
6.2.19.1	Mobile hand-over linkage	60
6.2.19.2	Event linkage.....	61
6.2.19.3	Extended event linkage	61
6.2.20	Local time offset descriptor	64
6.2.21	Mosaic descriptor.....	65
6.2.22	Multilingual bouquet name descriptor.....	67
6.2.23	Multilingual component descriptor.....	68
6.2.24	Multilingual network name descriptor.....	69
6.2.25	Multilingual service name descriptor.....	69
6.2.26	Near Video On Demand (NVOD) reference descriptor.....	70
6.2.27	Network name descriptor.....	71
6.2.28	Parental rating descriptor	71
6.2.29	Partial Transport Stream (TS) descriptor.....	71
6.2.30	PDC descriptor.....	72
6.2.31	Private data specifier descriptor.....	72
6.2.32	Scrambling descriptor	72
6.2.33	Service descriptor	73
6.2.34	Service availability descriptor.....	74
6.2.35	Service list descriptor.....	75
6.2.36	Service move descriptor.....	75
6.2.37	Short event descriptor	76
6.2.38	Short smoothing buffer descriptor	76
6.2.39	Stream identifier descriptor.....	78
6.2.40	Stuffing descriptor	78
6.2.41	Subtitling descriptor.....	79
6.2.42	Telephone descriptor.....	80
6.2.43	Teletext descriptor	81
6.2.44	Time shifted event descriptor.....	82
6.2.45	Time shifted service descriptor.....	82
6.2.46	Transport stream descriptor	82
6.2.47	VBI data descriptor.....	83
6.2.48	VBI teletext descriptor.....	84
6.3	Extended descriptor identification and location	84
6.4	Extended descriptor coding	85
6.4.1	BCI ancillary data descriptor	85
6.4.2	CP descriptor	86
6.4.3	CP identifier descriptor.....	86
6.4.4	CPCM delivery signalling descriptor.....	86
6.4.5	Delivery system descriptors	87
6.4.5.1	C2 delivery system descriptor.....	87
6.4.5.2	SH delivery system descriptor.....	89
6.4.5.3	T2 delivery system descriptor	93
6.4.6	Image icon descriptor.....	95
6.4.7	Message descriptor	98
6.4.8	Network change notify descriptor.....	98
6.4.9	Service relocated descriptor	100
6.4.10	Supplementary audio descriptor	101
6.4.11	Target region descriptor.....	102
6.4.12	Target region name descriptor	104
6.4.13	T2-MI descriptor.....	106
6.4.14	URI linkage descriptor.....	106
6.4.15	Video depth range descriptor	107
6.4.15.1	Production disparity hint	108
6.5	Scoping rules for scoping descriptors.....	109
7	Storage Media Interoperability (SMI) measures	109
7.1	SMI tables	109
7.1.1	Discontinuity Information Table (DIT)	110
7.1.2	Selection Information Table (SIT).....	110
7.2	SMI descriptors	112

7.2.1	Partial Transport Stream (TS) descriptor	112
Annex A (normative):	Coding of text characters	113
A.1	Control codes.....	113
A.2	Selection of character table	113
Annex B (normative):	CRC decoder model.....	127
Annex C (informative):	Conversion between time and date conventions	128
Annex D (informative):	Service information implementation of AC-3 and Enhanced AC-3 audio in DVB systems	130
D.1	AC-3 and Enhanced AC-3 component types.....	130
D.2	AC-3 Descriptor	131
D.3	AC-3 Descriptor Syntax	131
D.3.1	Semantics for the AC-3 descriptor	132
D.4	Enhanced_AC-3 Descriptor	133
D.5	Enhanced_AC-3 Descriptor Syntax	133
D.5.1	Semantics for the Enhanced AC-3 descriptor.....	134
Annex E (normative):	Usage of the Scrambling_descriptor	136
Annex F (informative):	ISO 639 Language Descriptor for "original audio" Soundtrack	137
Annex G (informative):	Service information implementation of DTS[®] coded audio in DVB systems	138
G.1	DTS [®] and DTS-HD [®] Audio descriptors.....	138
G.2	DTS [®] Descriptor Syntax.....	138
G.2.1	Semantics for the DTS [®] descriptor.....	138
G.3	DTS-HD [®] descriptor	141
G.3.1	DTS-HD [®] descriptor syntax	141
G.3.2	Substream information	142
G.3.3	Asset information	143
G.3.4	Component type	144
G.4	Use of DTS-HD [®] in Receiver Mixed Applications for Single PID and Multiple PID Implementations	145
Annex H (informative):	Service information implementation of AAC coded audio in DVB systems	146
H.1	AAC Audio descriptor.....	146
H.2	AAC_Descriptor Syntax.....	146
H.2.1	Semantics for the AAC descriptor.....	146
Annex I (normative):	Assignment and interpretation of the service_type field.....	148
I.1	Background	148
I.2	Assignment of service_type	148
I.2.1	service_type "digital television service" (0x01).....	148
I.2.2	service_type "advanced codec" (various).....	149
I.2.3	service_type "advanced codec frame compatible stereoscopic HD" (various).....	149
Annex J (normative):	Signalling of Receiver-Mix and Broadcast-Mix Supplementary Audio..	150
J.1	Overview	150

J.2	Receiver-mix supplementary audio	150
J.2.1	Introduction	150
J.2.2	PSI PMT signalling	151
J.2.3	EIT signalling.....	151
J.2.3.1	Visually impaired audio description	151
J.3	Broadcast-mix supplementary audio	151
J.3.1	Introduction	151
J.3.2	PSI PMT signalling	152
J.3.3	EIT signalling.....	152
J.3.3.1	Visually impaired audio description	152
J.4	PSI signalling of audio purpose.....	152
Annex K (normative):	Extended event linkage descriptor usage.....	153
Annex L (informative):	Service information implementation of DTS Neural Audio™ coded audio in DVB systems.....	155
L.1	DTS® Neural Descriptor.....	155
Annex M (informative):	Bibliography	157
History		158

Intellectual Property Rights

IPRs essential or potentially essential to the present document 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 (<http://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.

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:	13 May 2014
Date of latest announcement of this EN (doa):	31 August 2014
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	28 February 2015
Date of withdrawal of any conflicting National Standard (dow):	28 February 2015

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 [18] 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 TS 101 211 [i.2].

2 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 reference document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://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.

2.1 Normative references

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: "Digital Video Broadcasting (DVB); Second generation framing structure, channel coding and modulation systems for Broadcasting, Interactive Services, News Gathering and other broadband satellite applications (DVB-S2)".
- [9] ETSI TS 101 154: "Digital Video Broadcasting (DVB); Specification for the use of Video and Audio Coding in Broadcasting Applications based on the MPEG-2 Transport Stream".

- [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 102 114: "DTS Coherent Acoustics; Core and Extensions with Additional Profiles".
- [13] ETSI TS 102 323: "Digital Video Broadcasting (DVB); Carriage and signalling of TV-Anytime information in DVB transport streams".
- [14] ETSI TS 102 366: "Digital Audio Compression (AC-3, Enhanced AC-3) Standard".
- [15] ETSI TS 102 812: "Digital Video Broadcasting (DVB); Multimedia Home Platform (MHP) Specification 1.1.3".
- [16] ISO/IEC 10646: "Information technology - Universal Coded Character Set (UCS)".
- [17] ISO/IEC 11172-3: "Information technology - Coding of moving pictures and associated audio for digital storage media at up to about 1,5 Mbit/s - Part 3: Audio".
- [18] ISO/IEC 13818-1: "Information technology - Generic coding of moving pictures and associated audio information: Systems".
- [19] ISO/IEC 13818-2: "Information technology - Generic coding of moving pictures and associated audio information: Video".
- [20] ISO/IEC 13818-3: "Information technology - Generic coding of moving pictures and associated audio information - Part 3: Audio".
- [21] ISO/IEC 14496-3: "Information technology - Coding of audio-visual objects - Part 3: Audio".
- [22] ISO/IEC 6937: "Information technology - Coded graphic character set for text communication - Latin alphabet".
- [23] ISO/IEC 8859-1: "Information technology - 8-bit single-byte coded graphic character sets - Part 1: Latin alphabet No. 1".
- [24] ISO/IEC 8859-2: "Information technology - 8-bit single-byte coded graphic character sets - Part 2: Latin alphabet No. 2".
- [25] ISO/IEC 8859-3: "Information technology - 8-bit single-byte coded graphic character sets - Part 3: Latin alphabet No. 3".
- [26] ISO/IEC 8859-4: "Information technology - 8-bit single-byte coded graphic character sets - Part 4: Latin alphabet No. 4".
- [27] ISO/IEC 8859-5: "Information technology - 8-bit single-byte coded graphic character sets - Part 5: Latin/Cyrillic alphabet".
- [28] ISO/IEC 8859-6: "Information technology - 8-bit single-byte coded graphic character sets - Part 6: Latin/Arabic alphabet".
- [29] ISO/IEC 8859-7: "Information technology - 8-bit single-byte coded graphic character sets - Part 7: Latin/Greek alphabet".
- [30] ISO/IEC 8859-8: "Information technology - 8-bit single-byte coded graphic character sets - Part 8: Latin/Hebrew alphabet".
- [31] ISO/IEC 8859-9: "Information technology - 8-bit single-byte coded graphic character sets - Part 9: Latin alphabet No. 5".
- [32] ISO/IEC 8859-10: "Information technology - 8-bit single-byte coded graphic character sets - Part 10: Latin alphabet No. 6".
- [33] ISO/IEC 8859-11: "Information technology - 8-bit single-byte coded graphic character sets - Part 11: Latin/Thai alphabet".

- [34] ISO/IEC 8859-13: "Information technology - 8-bit single-byte coded graphic character sets - Part 13: Latin alphabet No. 7".
- [35] ISO/IEC 8859-14: "Information technology - 8-bit single-byte coded graphic character sets - Part 14: Latin alphabet No. 8 (Celtic)".
- [36] ISO/IEC 8859-15: "Information technology - 8-bit single-byte coded graphic character sets - Part 15: Latin alphabet No. 9".
- [37] CENELEC EN 50221: "Common interface specification for conditional access and other digital video broadcasting decoder applications".
- [38] IEC 61883 (parts 1 and 4): "Consumer audio/video equipment - Digital interface".
- [39] IEEE 1394.1: "IEEE Standard for High Performance Serial Bus Bridges".
- [40] ISO 8601: "Data elements and interchange formats - Information interchange - Representation of dates and times".
- [41] ISO 3166 (all parts): "Codes for the representation of names of countries and their subdivisions".
- [42] ISO 639-2: "Codes for the representation of names of languages - Part 2: Alpha-3 code".
- [43] Recommendation ITU-R BS.1196-2 (appendix 3): "Audio coding for digital broadcasting".

NOTE: Appendix 3 contains additional information on the AC-3 audio encoding algorithm and decoding requirements, relevant to the present document.

- [44] KSX1001: "Code for Information Interchange (Hangeul and Hanja)", Korean Agency for Technology and Standards, Ref. No. KSX 1001-2004.

NOTE: Available at <http://unicode.org/Public/MAPPINGS/OBSOLETE/EASTASIA/KSC/KSX1001.TXT>.

- [45] ETSI ES 201 812: "Digital Video Broadcasting (DVB); Multimedia Home Platform (MHP) Specification 1.0.3".
- [46] ETSI TS 102 825 (parts 1 to 5, 7, 9 and 10): "Digital Video Broadcasting (DVB); Content Protection and Copy Management (DVB-CPCM)".
- [47] 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)".
- [48] Void.
- [49] ETSI TS 102 770: "Digital Video Broadcasting (DVB); System Renewability Messages (SRM) in DVB Systems".
- [50] ETSI EN 302 583: "Digital Video Broadcasting (DVB); Framing Structure, channel coding and modulation for Satellite Services to Handheld devices (SH) below 3 GHz".
- [51] ETSI TS 102 772: "Digital Video Broadcasting (DVB); Specification of Multi-Protocol Encapsulation - inter-burst Forward Error Correction (MPE-iFEC)".
- [52] IETF RFC 2045: "Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies".
- [53] 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)".
- [54] ETSI TS 101 547-2: "Digital Video Broadcasting (DVB); Plano-stereoscopic 3DTV; Part 2: Frame Compatible Plano-stereoscopic 3DTV".
- [55] ETSI TS 101 547-3: "Digital Video Broadcasting (DVB); Plano-stereoscopic 3DTV; Part 3: HDTV Service Compatible Plano-stereoscopic 3DTV".
- [56] ETSI TS 102 809: "Digital Video Broadcasting (DVB); Signalling and carriage of interactive applications and services in Hybrid Broadcast/Broadband environments".

- [57] ETSI TS 102 773: "Digital Video Broadcasting (DVB); Modulator Interface (T2-MI) for a second generation digital terrestrial television broadcasting system (DVB-T2)".
- [58] GB-2312-1980: "Code of Chinese graphic character set for information interchange, primary set".
- [59] IETF RFC 3986: "Uniform Resource Identifiers (URI): Generic Syntax".
- [60] ETSI TS 102 034: "Digital Video Broadcasting (DVB); Transport of MPEG-2 TS Based DVB Services over IP Based Networks".

2.2 Informative references

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 101 162: "Digital Video Broadcasting (DVB); Allocation of identifiers and codes for Digital Video Broadcasting (DVB) systems".
- [i.2] ETSI TS 101 211: "Digital Video Broadcasting (DVB); Guidelines on implementation and usage of Service Information (SI)".
- [i.3] ETSI TS 102 727: "Digital Video Broadcasting (DVB); Multimedia Home Platform (MHP) Specification 1.2.2".
- [i.4] ETSI TR 102 825 (parts 6, 8, 11 to 13): "Digital Video Broadcasting (DVB); Content Protection and Copy Management (DVB-CPCM)".
- [i.5] ETSI TS 102 201: "Digital Video Broadcasting (DVB); Interfaces for DVB Integrated Receiver Decoder (DVB-IRD)".
- [i.6] ETSI EN 300 429: "Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation for cable systems".
- [i.7] ETSI EN 300 421: "Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation for 11/12 GHz satellite services".
- [i.8] ETSI EN 300 744: "Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation for digital terrestrial television".
- [i.9] DVB BlueBook A165: "Digital Video Broadcasting (DVB); Extensions to the CI Plus Specification".
- [i.10] ISO/IEC 14496-10: "Information technology -- Coding of audio-visual objects -- Part 10: Advanced Video Coding".

koniec náhľadu – text ďalej pokračuje v platenej verzii STN