# ETSI EN 300 468 V1.18.1 (2023-12)

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

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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).

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The DVB Project is an industry-led consortium of broadcasters, manufacturers, network operators, software developers, regulators and others from around the world committed to designing open, interoperable technical specifications for the global delivery of digital media and broadcast services. DVB specifications 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.

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# 1 Scope

The present document specifies the Service Information (SI) data which forms a part of Digital Video Broadcasting (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 [1] 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 Guide (EPG) will be a feature of Digital TeleVision (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] ISO/IEC 13818-1: "Information technology - Generic coding of moving pictures and associated audio information - Part 1: Systems".

[2] ETSI EN 300 743: "Digital Video Broadcasting (DVB); Subtitling systems".

[3] ETSI EN 301 192: "Digital Video Broadcasting (DVB); DVB specification for data broadcasting".

[4] 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".

[5] ETSI EN 301 775: "Digital Video Broadcasting (DVB); Specification for the carriage of Vertical Blanking Information (VBI) data in DVB bitstreams".

[6] ETSI EN 301 790: "Digital Video Broadcasting (DVB); Interaction channel for satellite distribution systems".

[7] 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".

[8] 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)".

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[9] 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)".

[10] ETSI EN 302 583: "Digital Video Broadcasting (DVB); Framing Structure, channel coding and modulation for Satellite Services to Handheld devices (SH) below 3 GHz".

[11] 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)".

[12] ETSI EN 303 560: "Digital Video Broadcasting (DVB); TTML subtitling systems".

[13] ETSI ES 201 812: "Digital Video Broadcasting (DVB); Multimedia Home Platform (MHP) Specification 1.0.3".

[14] ETSI TS 101 154: "Digital Video Broadcasting (DVB); Specification for the use of Video and Audio Coding in Broadcast and Broadband Applications".

[15] ETSI TS 101 162: "Digital Video Broadcasting (DVB); Allocation of identifiers and codes for Digital Video Broadcasting (DVB) systems".

[16] ETSI TS 101 547-2: "Digital Video Broadcasting (DVB); Plano-stereoscopic 3DTV; Part 2: Frame Compatible Plano-stereoscopic 3DTV".

[17] ETSI TS 101 547-3: "Digital Video Broadcasting (DVB); Plano-stereoscopic 3DTV; Part 3: HDTV Service Compatible Plano-stereoscopic 3DTV".

[18] ETSI TS 101 547-4: "Digital Video Broadcasting (DVB); Plano-stereoscopic 3DTV; Part 4: Service frame compatible Plano-stereoscopic 3DTV for HEVC coded services".

[19] 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".

[20] ETSI TS 102 006: "Digital Video Broadcasting (DVB); Specification for System Software Update in DVB Systems".

[21] ETSI TS 102 323: "Digital Video Broadcasting (DVB); Carriage and signalling of TV-Anytime information in DVB transport streams".

[22] ETSI TS 102 770: "Digital Video Broadcasting (DVB); System Renewability Messages (SRM) in DVB Systems".

[23] ETSI TS 102 772: "Digital Video Broadcasting (DVB); Specification of Multi-Protocol Encapsulation - inter-burst Forward Error Correction (MPE-iFEC)".

[24] ETSI TS 102 773: "Digital Video Broadcasting (DVB); Modulator Interface (T2-MI) for a second generation digital terrestrial television broadcasting system (DVB-T2)".

[25] ETSI TS 102 809: "Digital Video Broadcasting (DVB); Signalling and carriage of interactive applications and services in Hybrid Broadcast/Broadband environments".

[26] ETSI TS 102 812: "Digital Video Broadcasting (DVB); Multimedia Home Platform (MHP) Specification 1.1.3".

[27] ETSI TS 102 825 (parts 1 to 5, 7, 9 and 10): "Digital Video Broadcasting (DVB); Content Protection and Copy Management (DVB-CPCM)".

[28] ETSI EN 300 231: "Television systems; Specification of the domestic video Programme Delivery Control system (PDC)".

[29] ETSI EN 300 401: "Radio Broadcasting Systems; Digital Audio Broadcasting (DAB) to mobile, portable and fixed receivers".

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

[31] EN 50221: "Common interface specification for conditional access and other digital video broadcasting decoder applications", (produced by CENELEC).

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[39] ISO/IEC 8859-2: "Information technology - 8-bit single-byte coded graphic character sets - Part 2: Latin alphabet No. 2".

[40] ISO/IEC 8859-3: "Information technology - 8-bit single-byte coded graphic character sets - Part 3: Latin alphabet No. 3".

[41] ISO/IEC 8859-4: "Information technology - 8-bit single-byte coded graphic character sets - Part 4: Latin alphabet No. 4".

[42] ISO/IEC 8859-5: "Information technology - 8-bit single-byte coded graphic character sets - Part 5: Latin/Cyrillic alphabet".

[43] ISO/IEC 8859-6: "Information technology - 8-bit single-byte coded graphic character sets - Part 6: Latin/Arabic alphabet".

[44] ISO/IEC 8859-7: "Information technology - 8-bit single-byte coded graphic character sets - Part 7: Latin/Greek alphabet".

[45] ISO/IEC 8859-8: "Information technology - 8-bit single-byte coded graphic character sets - Part 8: Latin/Hebrew alphabet".

[46] ISO/IEC 8859-9: "Information technology - 8-bit single-byte coded graphic character sets - Part 9: Latin alphabet No. 5".

[47] ISO/IEC 8859-10: "Information technology - 8-bit single-byte coded graphic character sets - Part 10: Latin alphabet No. 6".

[48] ISO/IEC 8859-11: "Information technology - 8-bit single-byte coded graphic character sets - Part 11: Latin/Thai alphabet".

[49] ISO/IEC 8859-13: "Information technology - 8-bit single-byte coded graphic character sets - Part 13: Latin alphabet No. 7".

[50] ISO/IEC 8859-14: "Information technology - 8-bit single-byte coded graphic character sets - Part 14: Latin alphabet No. 8 (Celtic)".

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[53] GB-2312-1980: "Code of Chinese graphic character set for information interchange, primary set".

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[55] IEEE 754: "Standard for Floating-Point, 2019.

[56] ETSI EN 301 545-2: "Digital Video Broadcasting (DVB); Second Generation DVB Interactive Satellite System (DVB-RCS2); Part 2: Lower Layers for Satellite standard".

[57] DVB BlueBook A180: "Native IP Broadcasting".

## 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 1: 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); 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 TS 103 205: "Digital Video Broadcasting (DVB); Extensions to the CI PlusTM Specification".

[i.4] ETSI TS 103 286-2: "Digital Video Broadcasting (DVB); Companion Screens and Streams; Part 2: Content Identification and Media Synchronization".

[i.5] ETSI TR 102 825 (parts 6, 8, 11 to 13): "Digital Video Broadcasting (DVB); Content Protection and Copy Management (DVB-CPCM)".

[i.6] ATIS 0800006: "IIF Default Scrambling Algorithm (IDSA) IPTV Interoperability Specification".

[i.7] IEC 61883 (parts 1 and 4): "Consumer audio/video equipment - Digital interface".

[i.8] IEEETM 1394.1: "IEEE Standard for High Performance Serial Bus Bridges".

[i.9] American Institute of Aeronautics and Astronautics, AIAA 2006-6753-Rev1 "Revisiting Space track Report #3: Rev 1".

[i.10] NGA.STND.0036-1.0.0-WGS84 Department of Defense World Geodetic System 1984: "Its Definition and Relationships with Local Geodetic Systems"; Version 1.0.0, 8 July 2014.

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# 3 Definition of terms, symbols and abbreviations

## 3.1 Terms

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

**AC-3:** coding of audio using the Dolby AC-3 audio compression method as defined in ETSI TS 101 154 [14], clause 6.2

NOTE: The service information requirements for AC-3 streams carried in DVB systems are described in annex D. The carriage of AC-3 elementary streams as private data within MPEG systems is described in ETSI TS 101 154 [14], clause 6.2.

**AC-4:** coding of audio using the Dolby AC-4 audio compression method as defined in clause 6.6 and clause 6.7 of ETSI TS 101 154 [14]

NOTE: The Service Information requirements for AC-4 streams carried in DVB systems are described in annex D. The carriage of AC-4 elementary streams as private data within MPEG systems is described in clause 6.6 and clause 6.7 of ETSI TS 101 154 [14].

**audio preselection:** set of audio programme components representing a version of the audio programme that may be selected by a user for simultaneous decoding

NOTE: An audio preselection is a sub-selection from all available audio programme components of one audio programme. An audio preselection can be considered the NGA equivalent of audio services in predecessor systems, which each utilized complete mixes.

**audio programme:** complete collection of all audio programme components and a set of accompanying audio preselections

NOTE: Not all audio programme components of an audio programme are necessarily meant to be presented at the same time. An audio programme may contain audio programme components that are always presented, and it may include optional audio programme components.

**audio programme component:** the smallest addressable unit of an audio programme

**auxiliary NGA stream:** NGA stream delivered using NGA multi-stream delivery, and containing additional audio programme components not contained in the main NGA stream

**bouquet:** collection of services marketed as a single entity

**broadcaster:** organization which assembles a sequence of events or data streams to be delivered to the viewer; the delivery can be based upon a schedule

**cell:** geographical area that is covered with DVB signals delivering one or more particular transport or other DVB streams throughout the area by means of one or more transmitters

NOTE: The cell may in addition contain repeaters. Two neighbouring cells may be intersecting, or fully overlapping. The *cell_id* that is used to uniquely identify a cell is unique within each *original_network_id*. For hand-over purposes it is more convenient if the transport streams associated with the cell cover exactly the same area, or only one transport stream per cell is used.

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**component:** one or more entities which together make up an event

EXAMPLE: Video, audio, teletext.

**conditional access system:** system to control subscriber access to services, data streams and events

EXAMPLE: Videoguard, Eurocrypt.

**delivery system:** physical medium by which one or more DVB transport streams are transmitted

EXAMPLE: Satellite system, wide-band coaxial cable, fibre optics, terrestrial channel of one emitting point.

**dependent stream:** stream or component which relies on another stream or component in order to be rendered as intended

EXAMPLE: A dependent view of a 3D video, or a receiver-mix audio description stream.

**DTS:** coding of audio using the DTS audio compression method as defined in ETSI TS 101 154 [14], clause 6.3

NOTE: The service information requirements for DTS are found in annex G.

**DTS-HD:** coding of audio using the DTS-HD audio compression method as defined in ETSI TS 101 154 [14], clause 6.3

NOTE: The service information requirements for DTS-HD are found in annex G. Note that DTS-HD is a superset of DTS.