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Digital Video Broadcasting (DVB);
Guidelines for the implementation of
DVB-IPTV Phase 1 specifications;
Part 1: Core IPTV Functions

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Foreword

This Technical Specification (TS) 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 standardization, interoperability and future proof specifications.

The present document is part 1 of a multi-part deliverable covering the Guidelines for the implementation of DVB-IPTV Phase 1 specifications, as identified below:

Part 1: "Core IPTV Functions";

Part 2: "Broadband Content Guide (BCG) and Content on Demand";

Part 3: "Error Recovery";

Sub-part 1: "Overview of DVB-IPTV Error Recovery";

Sub-part 2: "Application Layer - Forward Error Correction (AL-FEC)";

Sub-part 3: "Retransmission (RET)";

Part 4: "Remote Management and Firmware Update";

Part 5: "Content Download Service (CDS)".

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 is designed as a companion document to help implement the DVB-IPTV Phase 1 version 6: ETSI TS 102 034 [1], which is referred to as the DVB-IPTV handbook.

The present document is the part 1 of the Guidelines and is focusing on the core IPTV functions. Other parts present other aspects of the DVB-IPTV technologies.

The present document is organized in separate sections in the order of the boot-up sequence of the HNED rather than in the same section structure as the DVB-IPTV handbook. Each clause deals with a specific aspect of the DVB-IPTV technology, and offers explanations and examples not found in the DVB-IPTV handbook.

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 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.

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

[1] ETSI TS 102 034 (V2.1.1): "Digital Video Broadcasting (DVB); Transport of MPEG-2 TS Based DVB Services over IP Based Networks".

[2] 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".

NOTE: The support of Scalable Video Codec (SVC) is not defined in the present document.

[3] ETSI TS 102 824 (V1.1.1): "Digital Video Broadcasting (DVB); Remote Management and Firmware Update System for DVB IPTV Services (Phase 2)".

[4] SMPTE Specification 2022-1: "Forward Error Correction for Real-time Video/Audio Transport Over IP Networks".

[5] ETSI TS 102 905: "Digital Video Broadcasting (DVB); Technical Specification for DVB Services in the Home Network Phase 1".

[6] Broadband Forum TR-069 Amendment 4: "CPE WAN Management Protocol", July 2011.

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] IETF RFC 3927: "Dynamic Configuration of IPv4 Link-Local Addresses".

[i.2] IETF RFC 3203: "DHCP reconfigure extension".