



**Digital Video Broadcasting (DVB);
Implementation guidelines for the second generation system
for Broadcasting, Interactive Services, News Gathering and
other broadband satellite applications;
Part 2: S2 Extensions (DVB-S2X)**

EBU
OPERATING EUROVISION

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Foreword

This Technical Report (TR) 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).

The work of the JTC was based on the studies carried out by the European DVB Project under the auspices of the Ad Hoc Group on DVB-S2 of the DVB Technical Module. This joint group of industry, operators and broadcasters provided the necessary information on all relevant technical matters (see clause 2).

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.

The present document is part 2 of a multi-part deliverable covering the implementation guidelines for the second generation system for Broadcasting, Interactive Services, News Gathering and other broadband satellite applications, as identified below:

Part 1: "DVB-S2";

Part 2: "S2 Extensions (DVB-S2X)".

Modal verbs terminology

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1 Scope

The present document gives an overview of the technical and operational issues relevant to the system specified in ETSI EN 302 307-2 [i.2], and is intended to provide guidance to broadcasters and operators considering the adoption of DVB-S2X. It is assumed a reasonable familiarity with the original DVB-S2 standard ETSI EN 302 307-1 [i.1], whose technical and operational issues are described in details in ETSI TR 102 376-1 [i.3]. It can also be considered as a useful guideline for implementation of DVB-S2, when enhanced DVB-S2 receivers and channel models are applicable.

2 References

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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] 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".
- [i.2] 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)".
- [i.3] ETSI TR 102 376-1: "Digital Video Broadcasting (DVB) Implementation guidelines for the second generation system for Broadcasting, Interactive Services, News Gathering and other broadband satellite applications; Part 1: DVB-S2".
- [i.4] Ken Mc Cann: "Review of DTT HD Capacity Issues, An Independent Report from ZetaCast Ltd Commissioned by Ofcom".
- [i.5] ETSI TS 102 991: "Digital Video Broadcasting (DVB); Implementation Guidelines for a second generation digital cable transmission system (DVB-C2)".
- [i.6] J. Grotz, B. Ottersten, J. Krause: "Applicability of Interference Processing to DTH Reception", 9th International Workshop on Signal Processing for Space Communications, September 2006.
- [i.7] ETSI TR 102 768: "Digital Video Broadcasting (DVB); Interaction channel for Satellite Distribution Systems; Guidelines for the use of EN 301 790 in mobile scenarios".