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## **DVB COMPLETES CURRENT GENERATION OF SPECIFICATIONS FOR UHDTV SERVICES**

### **Important Revisions and Updates for DVB UHD Services Over IP-Based Networks and Bitmapped Subtitling for UHDTV**

**Geneva – 20 November, 2017** – At the 87th meeting of the DVB Steering Board (SB) important revisions and updates for three DVB specifications were approved. This development marks the completion of the current generation of specifications for Ultra High Definition Television – DVB UHD-1.

DVB UHD-1 covers elements for the improvement of video and audio quality for broadcast TV services. In addition to UHD (4k) resolution and a wider color space, these elements include High Dynamic Range (HDR) for increased contrast ratios, Higher Frame Rates (HFR) for sharper images of moving objects, and Next Generation Audio (NGA) for the support of object- or scene-based audio schemes. The revisions and updates pertain to DVB-DASH, audiovisual coding and bitmapped subtitles.

The revision of ETSI TS 103 285, the DVB MPEG-DASH Profile for Transport of DVB Services over IP Based Networks, was approved. It adds the following new features: the provision of live text messages and slideshows for use with Hybrid Digital Radio; support for linking interactive applications to broadcast services delivered by DVB-DASH; HDR; HFR; NGA.

Also approved were amendments to TS 101 154, the DVB video and audio coding specification. The amended specification contains H.264/AVC and HEVC video conformance points for use with MPEG DASH. These are aligned with the broadcast codec conformance points, supporting a similar feature set, but take into account the specific requirements of adaptive bitrate delivery over IP-based networks.

Lastly, amendments to DVB Subtitling Systems (ETSI EN 300 743) were approved. These add explicit support of subtitling for UHDTV services, as defined in ETSI TS 101 154 and ETSI EN 300 468. The latest revision introduces technical extensions specifically for progressive-scan subtitle object coding and the capability to provide the subtitle CLUT (Color Look-Up Table) for color systems other than ITU-R BT.601. The new progressive-scan

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subtitle object coding allows subtitles to be converted from suitably coded PNG files. The bitmap-based subtitle specification is complemented by TTML-based subtitle specification, draft EN 303 560, which was approved by the SB in July 2017.

Commenting on completing the milestone DVB UHD specifications, Peter MacAvock, DVB Chairman said: "UHD is a key part of many broadcasters' portfolios. DVB has worked tirelessly to finalize a comprehensive set of specifications for UHD. While work continues, DVB is certain that broadcasters can confidently implement UHD on the basis of its specifications".

### **About DVB**

DVB 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.

DVB dominates the digital broadcasting environment with thousands of broadcast services around the world using DVB specifications. There are hundreds of manufacturers offering DVB compliant equipment. To date there are over a billion DVB receivers shipped worldwide.

Further information about DVB can be found at: [www.dvb.org](http://www.dvb.org), [www.dvbservices.com](http://www.dvbservices.com) and [www.dvbworld.org](http://www.dvbworld.org).

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