

What DVB will Bring ?

- New Commercial requirements for full broadband DASH based delivery
 - Server side and client side ad insertion included
 - Main content is based on streaming DVB-DASH
 - Reporting of & identification
 - Signaling of ad breaks in this context
- Encoding and packaging: DVB-DASH specification
 - MPEG-DASH is a broad standard for different streaming use cases
 - DVB-DASH is the preferred MPEG-DASH profile for broadcasters and DVB-I
 - Publicly available
- Cross Industry Collaboration
 - Collaborates with MPEG, DASH-IF, SCTE DVS, SVA, IAB etc..

Signaling ad breaks in DVB-DASH

- SCTE-35 is the most popular specification for signaling advertisement slots, also adopted in DVB-TA
- Some open issues on using SCTE-35 in DASH exist
- Liaison with SCTE-35 working on guidelines for SCTE-35 carriage in DASH
 - Clarifications on PTS time in MPEG-2 versus more generic DASH timelines
 - Interpretation and insertion of signals in MPEG-DASH
 - Best practices for interoperability for both server and client side ad insertion
 - Development of best practice for carriage of SCTE-35 in MPEG-DASH
 - Consistent signaling of ad slots between broadband and broadcast
 - Timeline until end of 2021

Encoding & Packaging DVB-DASH

- DVB-DASH is the MPEG-DASH profile for MPEG-DASH preferred by broadcasters
- Supports audio, video, timed text codecs and profiles relevant for broadcast
- Specific guidelines for encoding and packaging of ad content (to be added)
- Specific guidelines on player behavior in such cases (to be added)
- Next version will introduce more detailed guidelines for advertisement content
- Publicly available and published by ETSI: [TS 103 285 V1.3.1](#)
- Master Class at DVB-World 2020 for practical packaging and conditioning:
 - [DVB-I masterclass introductions-packaging-encoding-v2 \(slideshare.net\)](#)

Cross-Industry Collaboration

Collaboration with MPEG :

- Common Media Application (CMAF) MP4 & streaming track format
- [ISO - ISO/IEC 23000-19:2020 - Information technology — Multimedia application format \(MPEG-A\) — Part 19: Common media application format \(CMAF\) for segmented media](#)
- Also used for encoding of ad-content and main content

Collaboration with DASH-IF:

- [DASH-IF Live Media Ingest Protocol \(dashif-documents.azurewebsites.net\)](#)
- Consistent interoperability between Live Encoders and Content Delivery Network or packager
- SCTE-35 support
- Redundancy and failover support

Potential other cross collaboration

- IAB Techlab, SVA streaming video alliance

THANKS!

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DVB designs open technical specifications for the delivery of digital TV and other broadcast & broadband services.

