DVB-HbbTV Extension to DASH Conformance Software Tool
What is the DVB-HbbTV Conformance Software Tool?

• DVB-HbbTV Conformance Software Tool is an extension to DASH-IF Conformance Software
• The tool checks if
  – the provided MPEG-DASH MPD manifest
  – media content (segments) pointed to by the provided manifest
  conform to DASH-related media specifications.
• Thus, it provides crucial information for content generators and service providers.
DVB-HbbTV Conformance Software Tool features

- Specifications against which conformance is performed include:
  - MPEG-DASH ISO/IEC 23009-1
  - ISO BMFF ISO/IEC 14496-12
  - DASH-IF IOP 4.1
  - CMAF ISO/IEC 23000-19

- Additionally, DVB-HbbTV Conformance extensions
  - DVB MPEG DASH Profile v1.1.1
  - HbbTV 1.5 Specification

- Checks include:
  - MPEG-DASH MPD validation (XML, DASH schema, and MPEG-DASH MPD rules)
  - Segment Validation (ISO BMFF and MPEG-DASH segment rules)
  - Cross-representation validation (MPEG-DASH cross-representation rules)
  - Live MPD segment access validation
  - Above items for above mentioned specifications

Note: The checks are done till the ISO BMFF level (no checks on track media level)
How to access the DVB-HbbTV Conformance Software Tool?

- Accessible online via DASH-IF
  
  [https://conformance.dashif.org](https://conformance.dashif.org)

Source code and issue reporting


How does the DVB-HbbTV Conformance Software Tool work?

1. INPUT
   1. Provide MPD
   2. Optionally enforce profiles
   3. Click GO

2. PROCESS
   1. Perform checks for conformance
   2. Generate reports

3. RESULTS
   Check result report
How does the DVB-HbbTV Conformance Software Tool work? (cont’d)

• MPD can be provided through the following ways:
  – URL can be provided if the MPD is located on an accessible server in the text box.
  – If MPD is stored locally, file upload or drag & drop features can be used.

• Optionally enforce profiles for enabling conformance checks for enforced specifications (gear icon on top-right).

• Click [GO] and wait for the results.
How does the DVB-HbbTV Conformance Software Tool work? (cont’d)

- Conformance checks are performed for the provided MPD and the media content pointed to by this MPD.
- Reports are generated for users to check and analyze.
How does the DVB-HbbTV Conformance Software Tool work? (cont’d)

- Generated reports are provided to users in a tree format on the web interface. Green tick indicates conformance, warning icon indicates conformance with warnings and cancel bottom indicates nonconformance.

- User can double click on any report indicated by a file icon to see the results. Reports are color-coded for information, warning, and error messages for easier reading.

- User can report any issue regarding the results and/or software tool by clicking Report issue on the bottom of the web interface.
How does the DVB-HbbTV Conformance Software Tool work? (cont’d)

Live Conformance

- When MPD@type = dynamic
  - A link redirecting to live conformance is provided on the web interface.
  - When clicked, Live Conformance opens up on a new tab.
  - Segment availability start times and segment availability end times will be checked.
  - The results will be printed on “Process in detail” panel.

![DASH Validator](image)

Validation (Conformance check) of ISO/IEC 23009-1 MPEG-DASH MPD and Segments

http://livesim.dashif.org/livesim/segmentline_1/testpic_2s/Manifest.mpd

Choose a file or drag it here.

MPD conformance only

![Dynamic Service Conformance](image)