Update on our Specifications and Related Activities
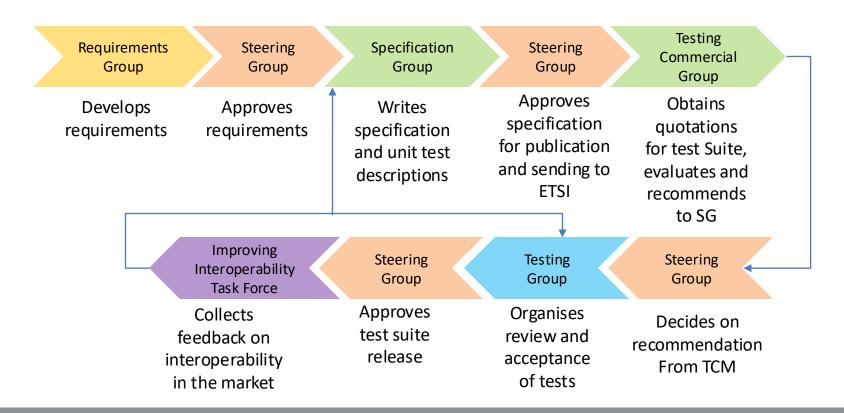
HbbTV Specification Workflow

Requirements Group	Steering Group	Specification Group	Steering Group	Testing Commercial Group
Develops requirements	Approves requirements	Writes specification and unit test descriptions	Approves specification for publication and sending to ETSI	Obtains quotations for test Suite, evaluates and recommends to SG

Improving Interoperability Task Force	Steering Group	Testing Group	Steering Group
Collects feedback on interoperability in the market	Approves test suite release	Organises review and acceptance of tests	Decides on recommendation From TCM

Core Specifications

Informal Name	Formal name in ETSI	When published?
2.0.6	Presumably TS 102 796 V1.9.1	Perhaps 2027?
2.0.5	Candidate TS 102 796 V1.8.1	Early 2026
2.0.4	TS 102 796 V1.7.1	2023-09
2.0.3	TS 102 796 V1.6.1	2021-04
2.0.2	TS 102 796 V1.5.1	2015-09
2.0.1	TS 102 796 V1.4.1	2016-08
2.0.0	TS 102 796 V1.3.1	2015-10
1.5	TS 102 796 V1.2.1	2012-11
1.0	TS 102 796 V1.1.1	2010-06

2.0.5 Highlights (1)

- Specification coming most likely early 2026
- Most significant additions are WebAssembly ("WASM") and DRM
  - Excellent WASM demo from 3CAT using this for software video decoding for signing
    - Will already be in today's TVs unless explicitly disabled or removed
  - Both are documenting today's reality so it's more testable and content providers can rely on it
- Also optional support for 2 features
  - New video codecs AV1 and VVC
    - AV1 probably works 'accidentally' with HbbTV in some of today's TVs
  - HTTP/3 (i.e. including QUIC)
- Also tidying up unused & historical features – more on the next slide
- Many bug fixes, particularly to HbbTV / DVB-I integration from HbbTV 2.0.4
  - Lots of good feedback from early implementers and test developers

2.0.5 Highlights (2) - Tidying Up

- Multi-stream sync (broadcast video + OTT audio) is removed
  - Never really used, very complex to implement & maintain
    - Instead use OTT video + OTT audio
  - This removal only applies to 2.0.5, it has not been removed from 2.0.4
- OTT streaming in MPEG-2 transport stream format now optional
  - Content providers should be moving towards DASH or MSE
  - Content providers that want to keep using this exclusively need to communicate with implementers
- Relaxed requirements for built-in fonts
  - Permit more alternatives to "Tiresias" and "Letter Gothic" as long as the font metrics are no larger
- "Do Not Track" (DNT) removed as it's died in the web and may mislead

2.0.6 Candidates

- HbbTV Requirements Group did a call for proposals
  - Debated at length
- Vote among HbbTV membership just started
- Candidates to add
  - Better support for deep linking into broadcast independent applications
  - Improved usability for HbbTV calls to action (red button etc.)
  - Extend accessibility preferences to better support content discovery
  - Separate concurrent HbbTV apps for DVB-I player and content augmentation
- Candidates for tidying up
  - Remove inter-device media synchronisation
  - Remove analogue broadcast (optional annex)
  - Partially remove extensions to video/broadcast for recording (PVR)
  - Remove Push VOD and File Delivery Protocol
  - Remove the File System Acceleration feature
  - Deprecate the AVControl object (mandatory to 1st January 2030)
  - Bring referenced Open IPTV Forum specification text into HbbTV specifications
  - Remove the Content Access Streaming Descriptor
  - Remove the Debug Print API

DRM Specification

- Historically HbbTV and some national organisations had bad experiences saying anything about DRM
  - HbbTV was silent about DRM for many years
  - Resulted in market fragmentation & apps / services using proprietary solutions
- Market feedback was that people couldn't make HbbTV+DASH+DRM work in the real world
  - Resulted in HbbTV creating the DASH-DRM reference app
  - Also gave HbbTV objective data about actual market support of DRM systems
- Develop a spec on integration of HbbTV and DRM
  - First version includes PlayReady and Widevine + objective critieria for including more later
  - Working its way through ETSI – candidate TS 104 277
- Provides a mixture of material:
  - Background material on DRM,
  - Guidelines for content providers and
  - Requirements for implementations
- HbbTV 2.0.5 will require terminals support "decryption and presentation of DRM-protected video and audio broadband content using at least one of the DRM systems" in the DRM guidelines
- For more information, see webinar at https://youtu.be/MHYJkOgLoIg?si=92SGLISdid60P-9j

- Improvements based on Freely experiences
  - Remove ambiguities
  - Enable more responsive apps
    - e.g. show the channel banner sooner

HbbTV Test Suite

- Summer release ("-2") targets new products for the following year
  - 2025-2 added 1st iteration of tests for DRM (PlayReady)
    - Widevine tests and improved PlayReady coverage to come
  - Improving test suite coverage based on experience from Italy and UK (more in 2026)
  - Also improvements to OpApp and TA tests
- Autumn release ("-3"), each year focuses on maintenance and bug fixes
  - 2025-3 contains 3,421 individual test cases
    - Over 90% are now approved, the highest proportion of approved tests to date.
    - 124 more test cases approved
    - 60 improved - enhance accuracy, reliability and coverage
  - Improvements to tests for the OpApp spec
- Plans for 2026
  - DRM as above
  - Focusing TA tests on ads played with MSE
    - No interest in playing ads via native DASH or regular HTTP
  - 2.0.5

Interoperability Tools

- ## DASH-DRM Reference App
  - Bug fixes
  - Improved tests for live DASH and for subtitles
  - Key rotation in development
- ## DASH Validator
  - Version 2.4.0 released – bug fixes
  - Version 3.0.0 alpha released – moving to PHP8 and new application framework