



HbbTV DRM Specification Explained



- One (the?) main use-case for HbbTV is finding & consuming professional video content
 - As the quality improves from SD to HD to UHD, (US) content owners increasingly require stricter and stricter DRM
 - Access to content protected by DRM is more & more important for HbbTV content providers
 - Giving consumers access to content protected by DRM is more & more important for TV manufacturers
 - TV sets now (all?) include DRM to give access to Netflix, YouTube, etc

- HbbTV historically ignored DRM
 - It was a proprietary technology with many vendors who were fiercely protective of their market position
- DRM tests for HbbTV TVs appeared as country and platform-specific proprietary add-ons outside the HbbTV test suite
 - Initially developed by Farncombe (now Cartesian) for the ancestor of today's FAVN
 - Now licensed by Resillion as part of their Ligada product family
 - Also independently developed for Italy by Kineton
- HbbTV started hearing that lack of working DRM was a reason not to develop HbbTV apps
 - In 2017, HbbTV released a [DASH-DRM reference app](#) and content.
 - HbbTV pays the developer to run this on their receiver zoo & provide HbbTV with anonymised stats
 - Sofia Digital will be presenting on this later in this webinar
- Then along came hardware DRM, specifically PlayReady SL3000
 - At first there was no test content for HbbTV and SL3000
 - In 2022, SL3000 test content added to the DASH-DRM reference app
- HbbTV Steering Group decided to bring DRM into HbbTV on the same basis as other tech

- 2022
 - Started work on HbbTV DRM specification in December 2022
- 2024
 - Reviewed scope of UK and Italian country-specific test suite add-ons
 - Sorted into tests applicable to all HbbTV markets & ones specific to Italy / UK.
 - 51 PlayReady tests independent of country/market
 - 17 Non-DRM tests independent of country/market
 - Only 1 test specific to Italy and 1 specific to UK
 - Issued RfP to bring these into the HbbTV test suite
- 2025
 - Contract for tests awarded to Kineton with DRM license server provided by Nagra
 - First tests delivered April 2025
 - DRM specification [published](#) by HbbTV in June 2025
 - HbbTV test suite [release 2025-2](#) adds 17 PlayReady tests for 2026 products
 - Widevine tests and more PlayReady tests to come in 2026 for 2027 products

- Educational & informative material
 - 5. Overview of DRM and DRM features for people who aren't that familiar with the technology. Introduction to concepts referred to later in the document.
 - 6. Overview of various features included in HbbTV like native DASH players, JavaScript DRM APIs
- Advice to stakeholders
 - 7. Choice of DRM systems
 - 8. Generic advice to stakeholders about inter-op and what they may need to do.
- Requirements on terminals
 - 9. Requirements that are independent of any one DRM system.
- Process
 - 10. Some objective criteria for future inclusion of additional DRM systems.
- Status of the ecosystem
 - A.1 Market data & how its gathered
 - A.2 Known issues
- DRM specific information and requirements
 - B. PlayReady
 - C. Widevine
 - D. Marlin (not relevant in HbbTV anymore).

- oipfDrmAgent
 - Historical API dating back > 10 years
 - Supported in the HbbTV installed base
 - Works with the native DASH player
 - With both HTML5 media element API and older object element API
- W3C EME
 - The standard web API
 - Works with JavaScript DASH players built on W3C MSE
 - Works with native DASH player only with ClearKey
 - May not work with native DASH player with Commercial DRM

- The HbbTV DRM specification does not require a specific DRM system
 - This is a commercial choice for stakeholders
- In the real world only 2 DRM systems are present in the installed base of HbbTV TVs
 - PlayReady and Widevine
 - Please see later for market data on how widely these are supported
- The HbbTV DRM spec is an open & tested definition of how to integrate DRM and HbbTV
 - Referring to something like this will give better inter-operability between services, applications and TV sets

Summary - DRM is supported with HbbTV



- Since 2017, 92% support PlayReady with CENC and the old oipfDrmAgent API
 - 70% support SL3000 hardware DRM
- Since 2022, 97% support PlayReady \geq v3.0
 - 84% with the EME API, 85% with SL3000
- 60%-65% support Widevine

(*) Percentages not weighted by market relevance