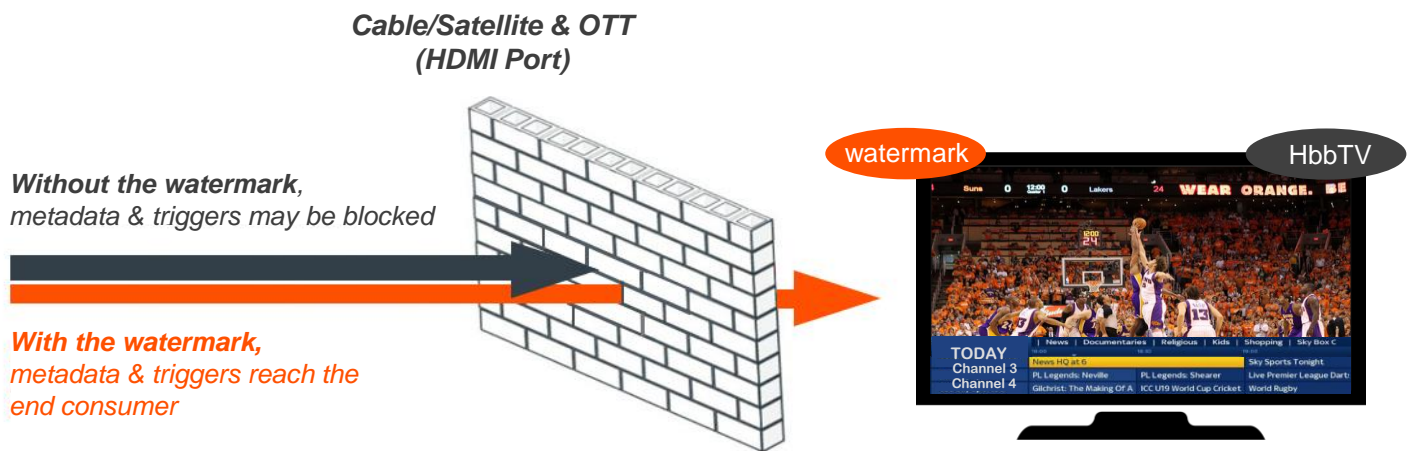


HBBTV EXTENDING SPECIFICATIONS TO SUPPORT MORE DISTRIBUTION PATHS

APPLICATION DISCOVERY USING WATERMARKING

- ▶ HbbTV will publish a specification in 2019 for **launching applications using audio and video watermarking** for distribution paths that do not carry AIT or TEMI.
- ▶ This includes HDMI, re-multiplexing, metadata removal and analog broadcast.



A GLOBAL STANDARD FOR WATERMARKING

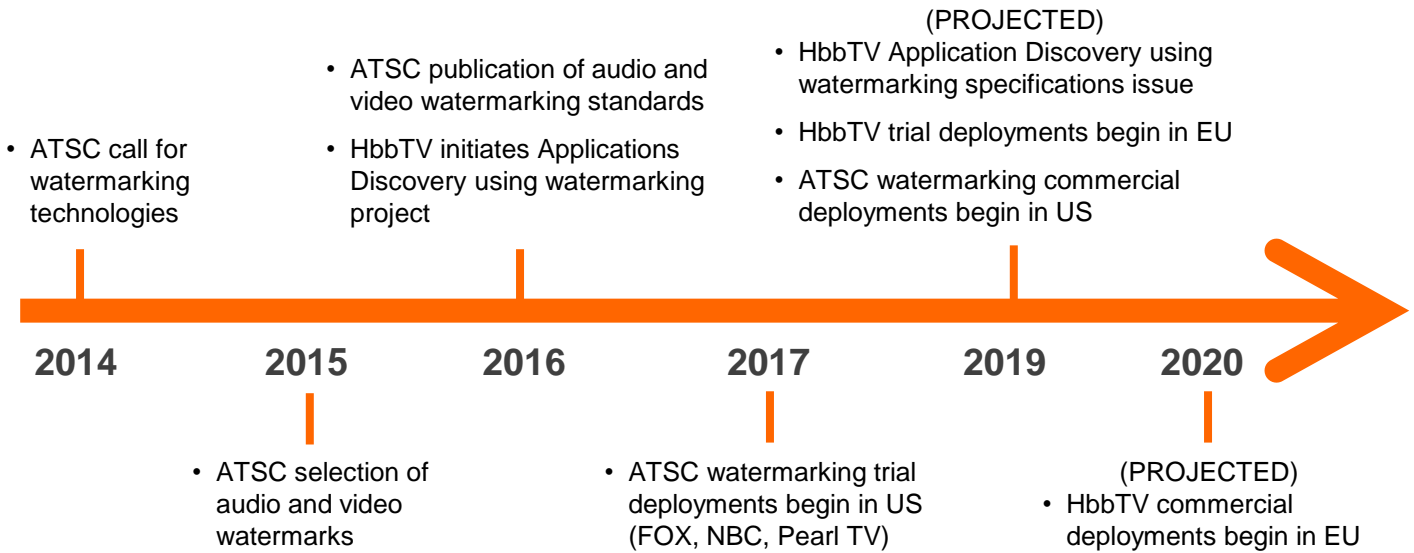
- ▶ HbbTV has aligned with audio and video watermark standards published by the ATSC.
- ▶ Watermarking enables HbbTV terminals to:
 - discover the AIT
 - identify the service and the selected audio and video components
 - retrieve and launch HbbTV applications
 - maintain frame-accurate timeline synchronization
- ▶ Watermarks deliver HbbTV services through **all delivery paths & TV interfaces.**

- Cable	- HDMI
- Satellite	- SCART
- Terrestrial	- IP
- OTT	- Tuner

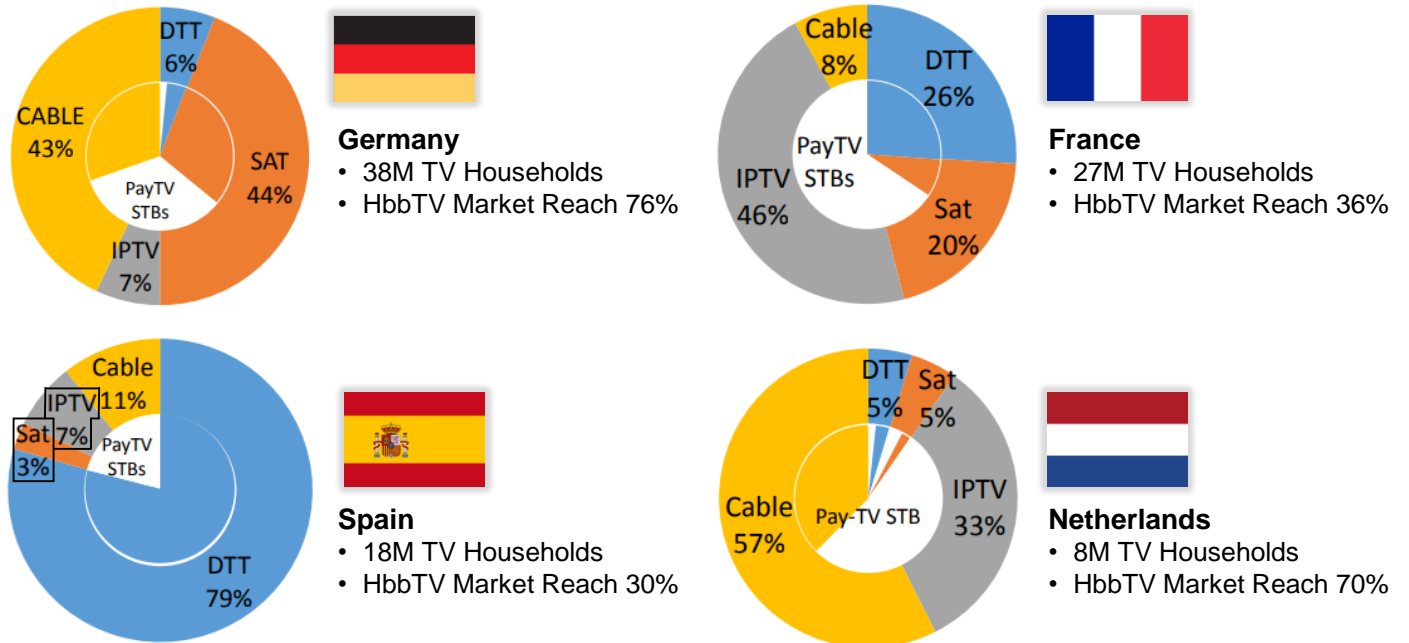


HBBTV EXTENDING SPECIFICATIONS TO SUPPORT MORE DISTRIBUTION PATHS

TIMELINE FOR HBBTV APPLICATION DISCOVERY USING WATERMARKING



KEY MARKETS FOR HBBTV APPLICATION DISCOVERY USING WATERMARKING



<https://www.hbbtv.org/deployments/>