



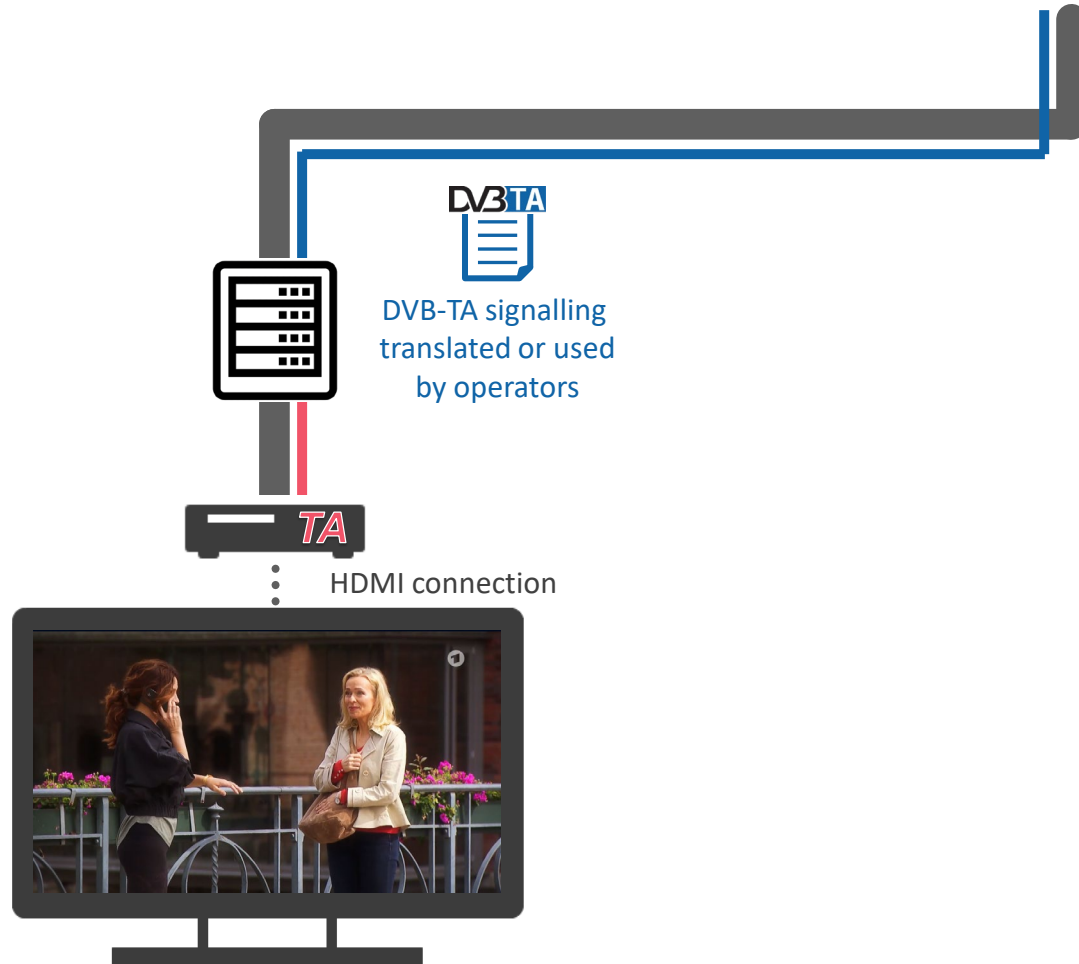
VERANCE

# Looking Forward: DVB-TA using Watermarking

*DVB/HbbTV Webinar:  
Using Targeted Advertising on Broadcast Television, Part 2*

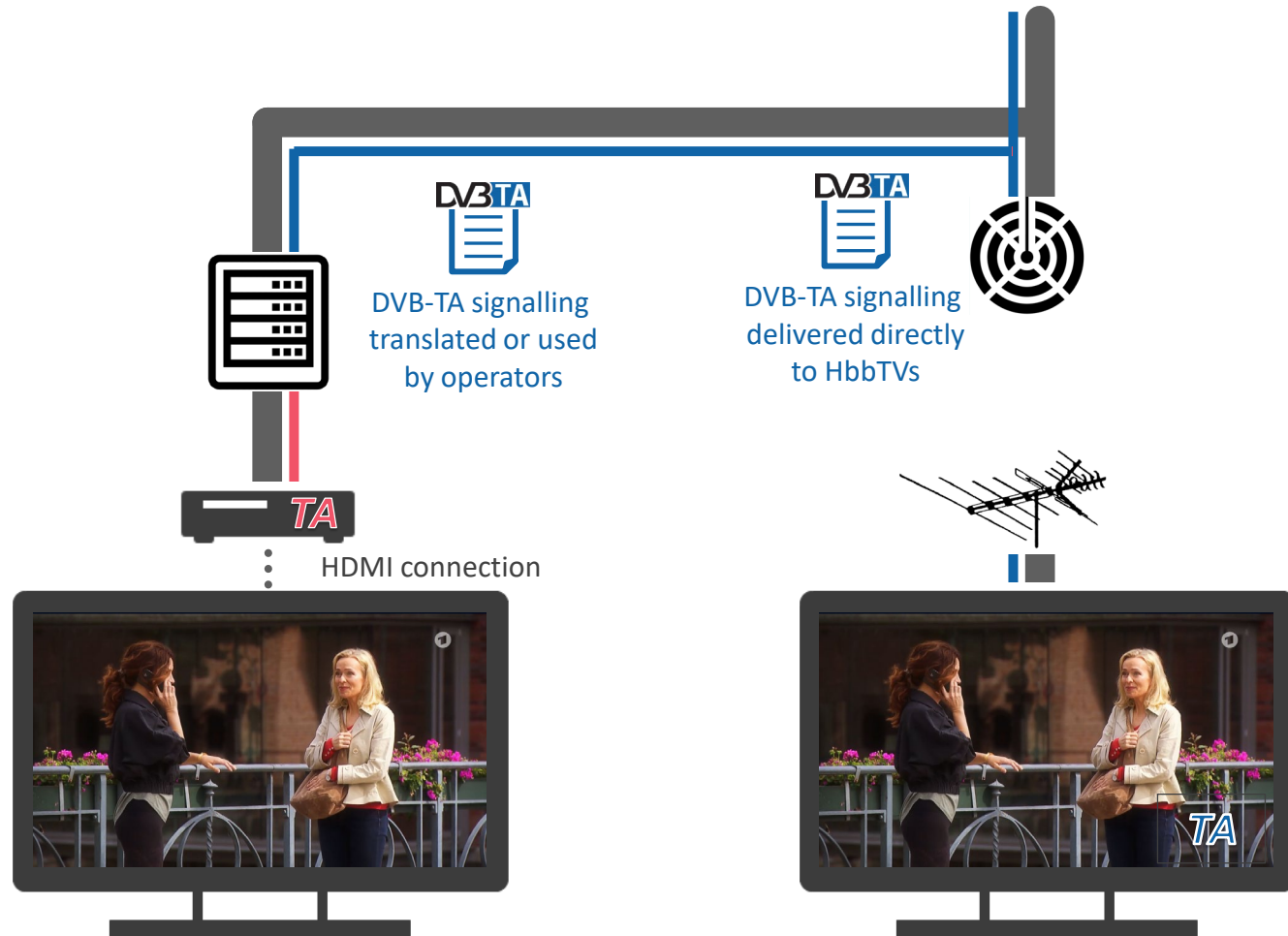
*April 28, 2021*

# DVB-TA using Participating Operator Equipment (“vertical” market)



Participating Operators can use DVB-TA signalling to activate their TA-enabled STBs

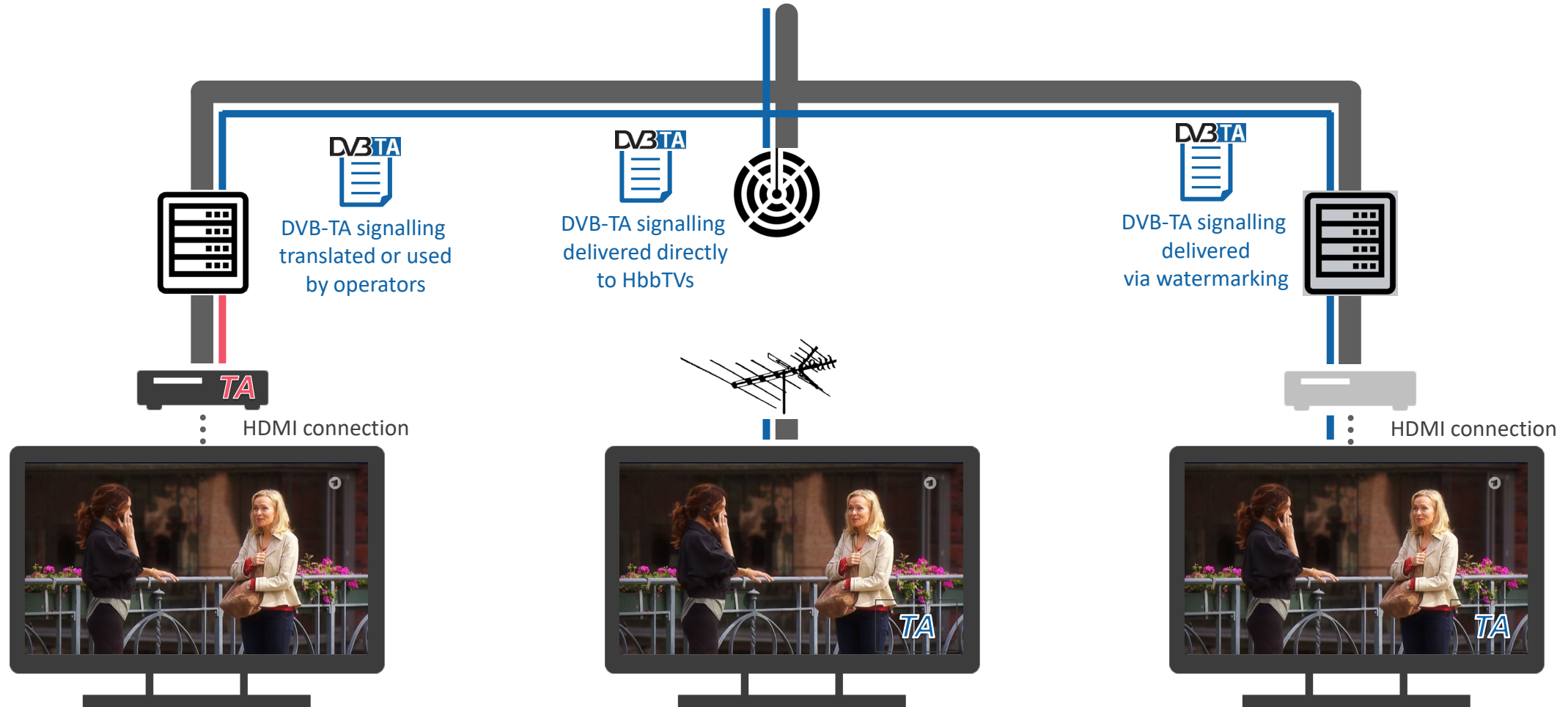
# DVB-TA using Broadcast (“horizontal” market)



Participating Operators can use DVB-TA signalling to activate their TA-enabled STBs

HbbTV TA televisions can use DVB-TA signalling received from broadcast

# DVB-TA using Watermarking

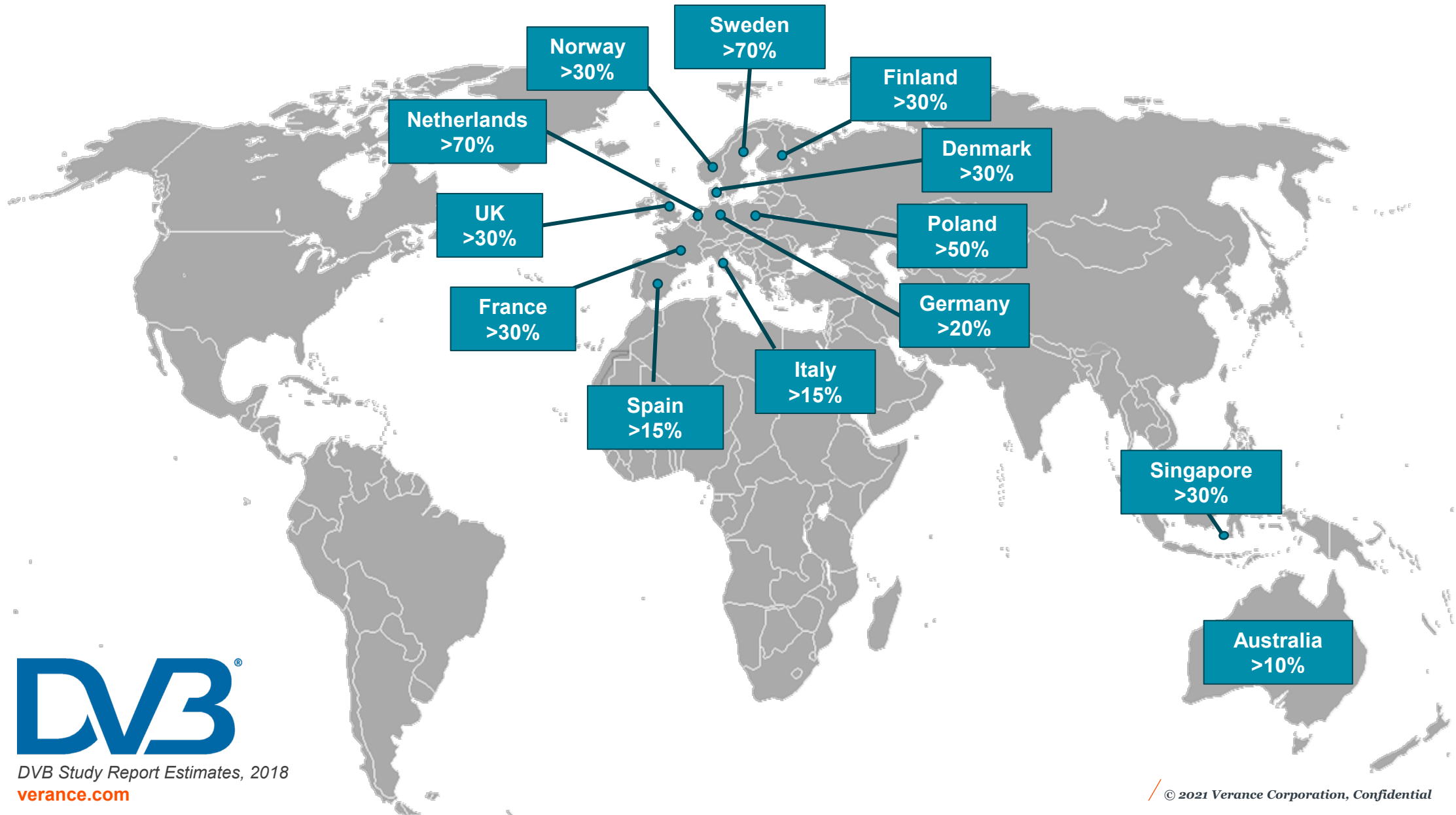


Participating Operators can use DVB-TA signalling to activate their TA-enabled STBs

HbbTV TA televisions can use DVB-TA signalling received from broadcast

HbbTV TA+ADB2 televisions can use DVB-TA signalling received via watermarking through Non-Participating Operator Equipment

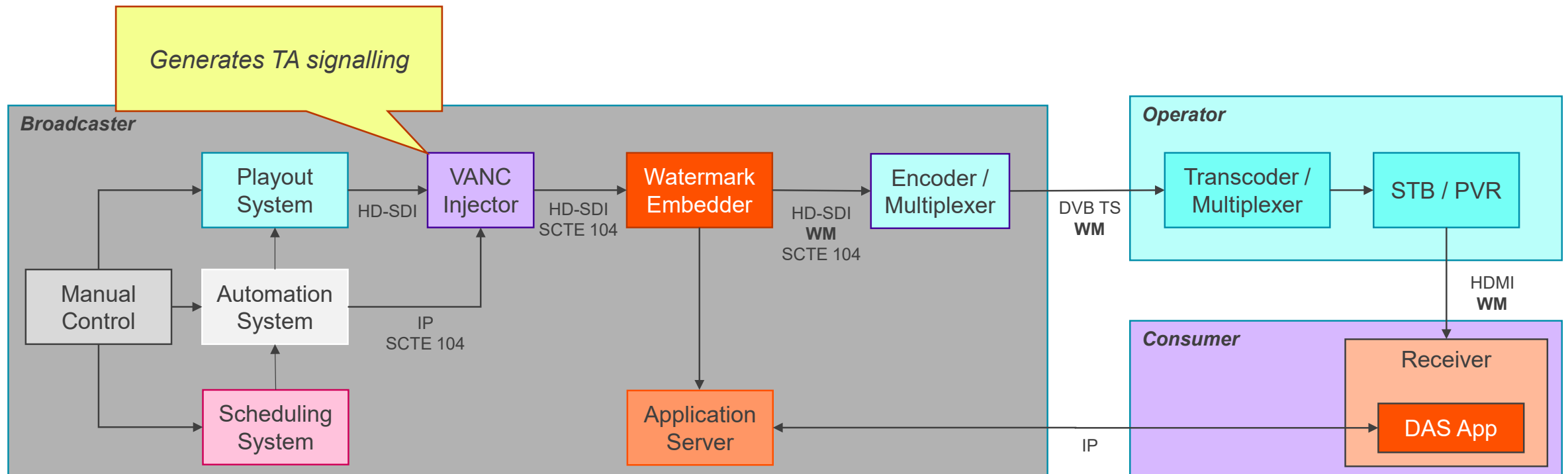
# Many Viewers are Reachable Only with Watermarking



DVB Study Report Estimates, 2018

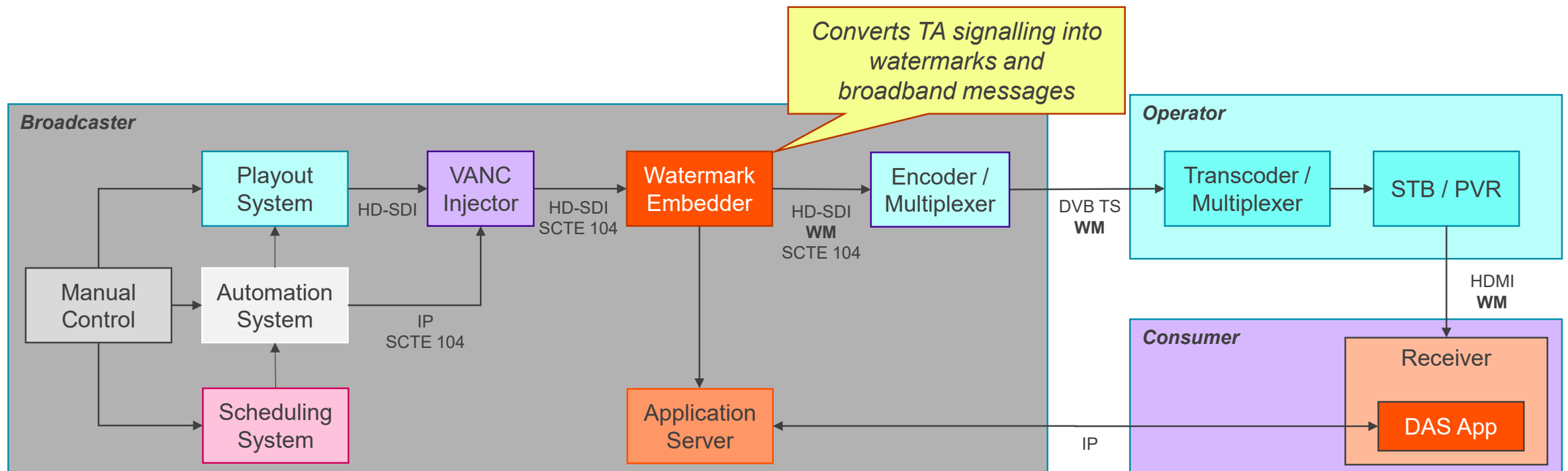
[verance.com](http://verance.com)

# Broadcaster Deployment Model for Watermarking



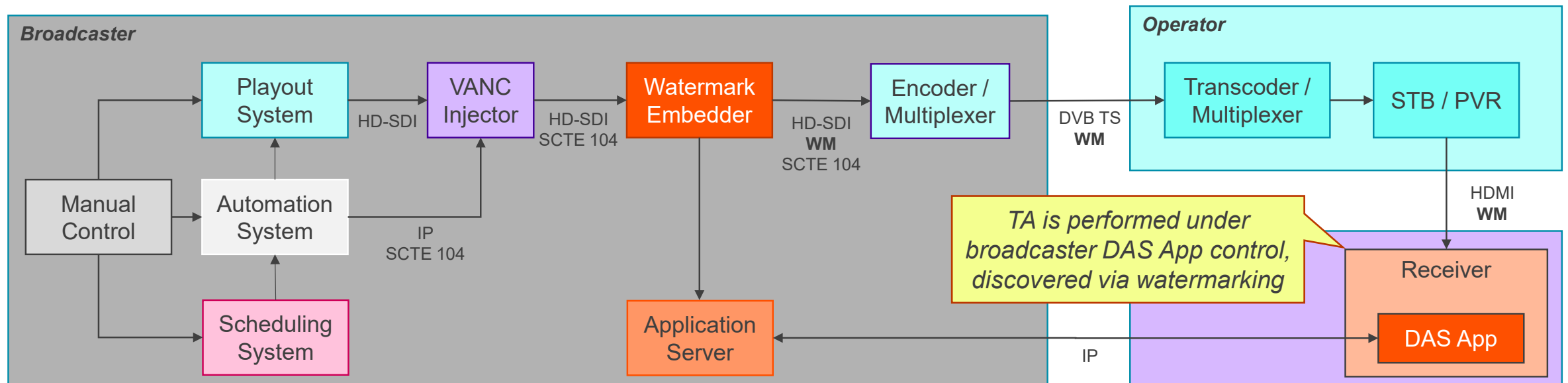
- ▶ Standards-based audio and video watermarking passes through all legacy equipment and interfaces
- ▶ Watermarks enable DAS app discovery, frame-accurate timeline, and stream event delivery
- ▶ Watermark capabilities are supplemented by broadcaster-controlled application servers

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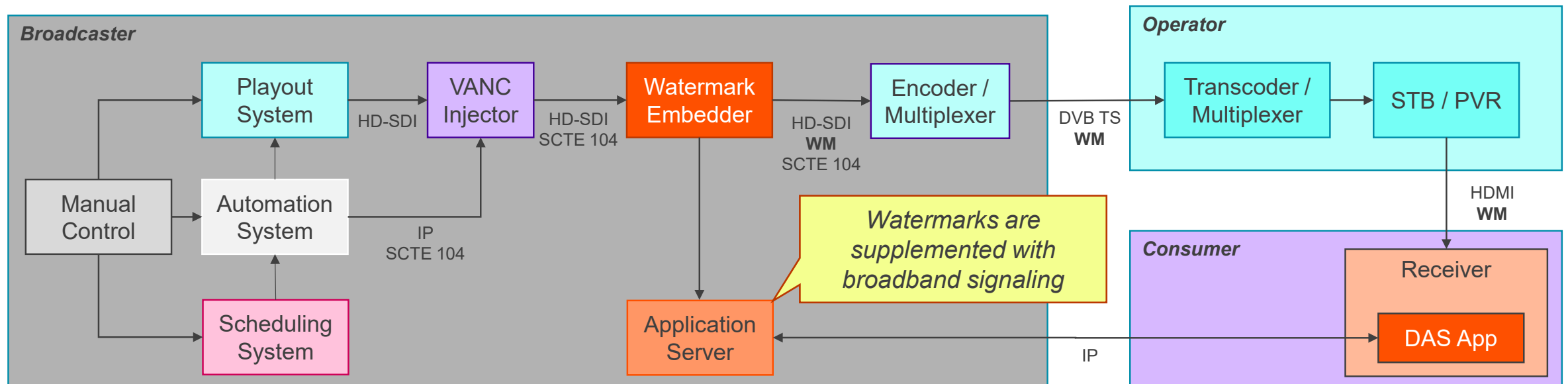
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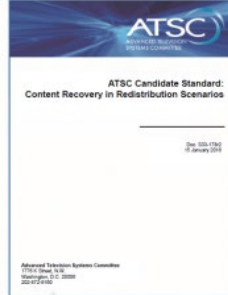
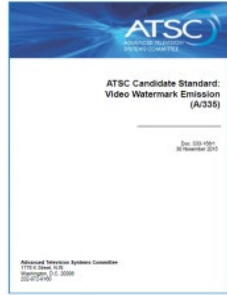
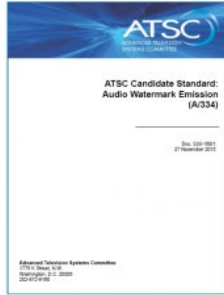


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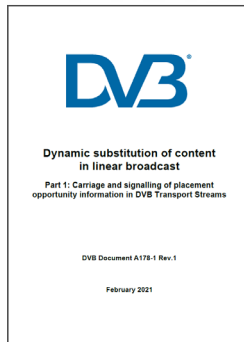


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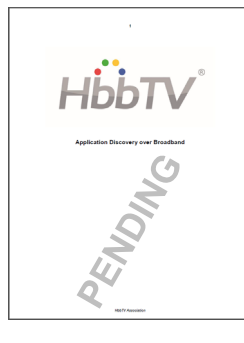
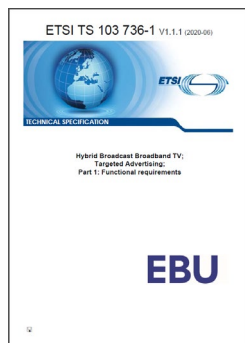
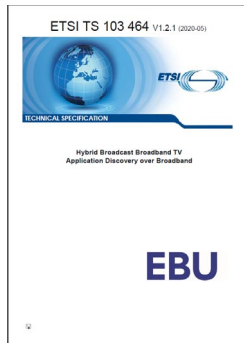
# Standardization status



- ▶ [ATSC A/334 “Audio Watermark Emission Specification”](#)
- ▶ [ATSC A/335 “Video Watermark Emission Specification”](#)
- ▶ [ATSC A/336 “Content Recovery in Redistribution Scenarios”](#)



- ▶ [DVB Blue Book A/178-1 Rev. 1 “Dynamic substitution of content in linear broadcast” \(2/2021\)](#)



- ▶ [ETSI TS 103 464 v1.2.1 \(2020-05\) “Hybrid Broadcast Broadband TV: Application Discovery over Broadband”](#)
- ▶ [ETSI TS 103 736-1 v1.1.1 \(2020-06\) “Hybrid Broadcast Broadband TV: Targeted Advertising; Part 1: Functional requirements”](#)
- ▶ *Revisions to ETSI TS 103 464 to support DVB-TA using watermarking are in preparation for publication by HbbTV in Summer 2021.*