VERANCE

Targeted Advertising using Watermarking

November 2021

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Verance: Setting The Standard

25 years of delivering industry solutions

ATSC ADVANCED TELEVISION SYSTEMS COMMITTEE

HbbTV

Aspect™ / ADB2

Connected
Broadcast TV

Blu-ray Disc

Cinavia®

Anti-piracy Technology
for Movies

DVD AUDIO™

VCMS/A™

Anti-piracy Technology
for Music

pearl

abc

FOX

NBC

SINCLAIR

ADB2 Makes HbbTV Available to All of Europe/World

ADB2 Standard: Application Discovery Over Broadband Phase 2

Live TV

HTML Browser

Full Hybrid Broadcast Broadband

HTML Browser layered on top of Live TV
new digital experiences, interactivity
and Targeted Advertising (TA)

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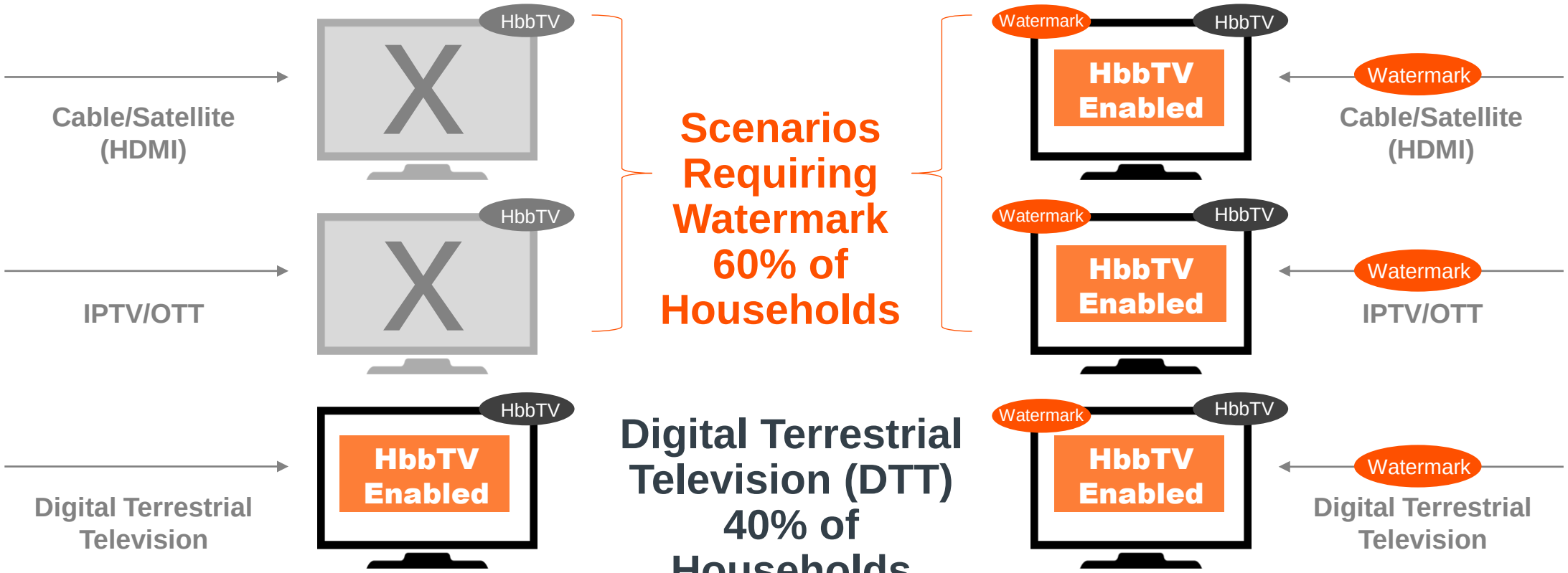
ADB2 Helps Deliver HbbTV Services to 100% of TVs

Enables delivery of HbbTV services across all distribution paths

40% Reach in France
without the watermark

100% Reach in France
with the watermark



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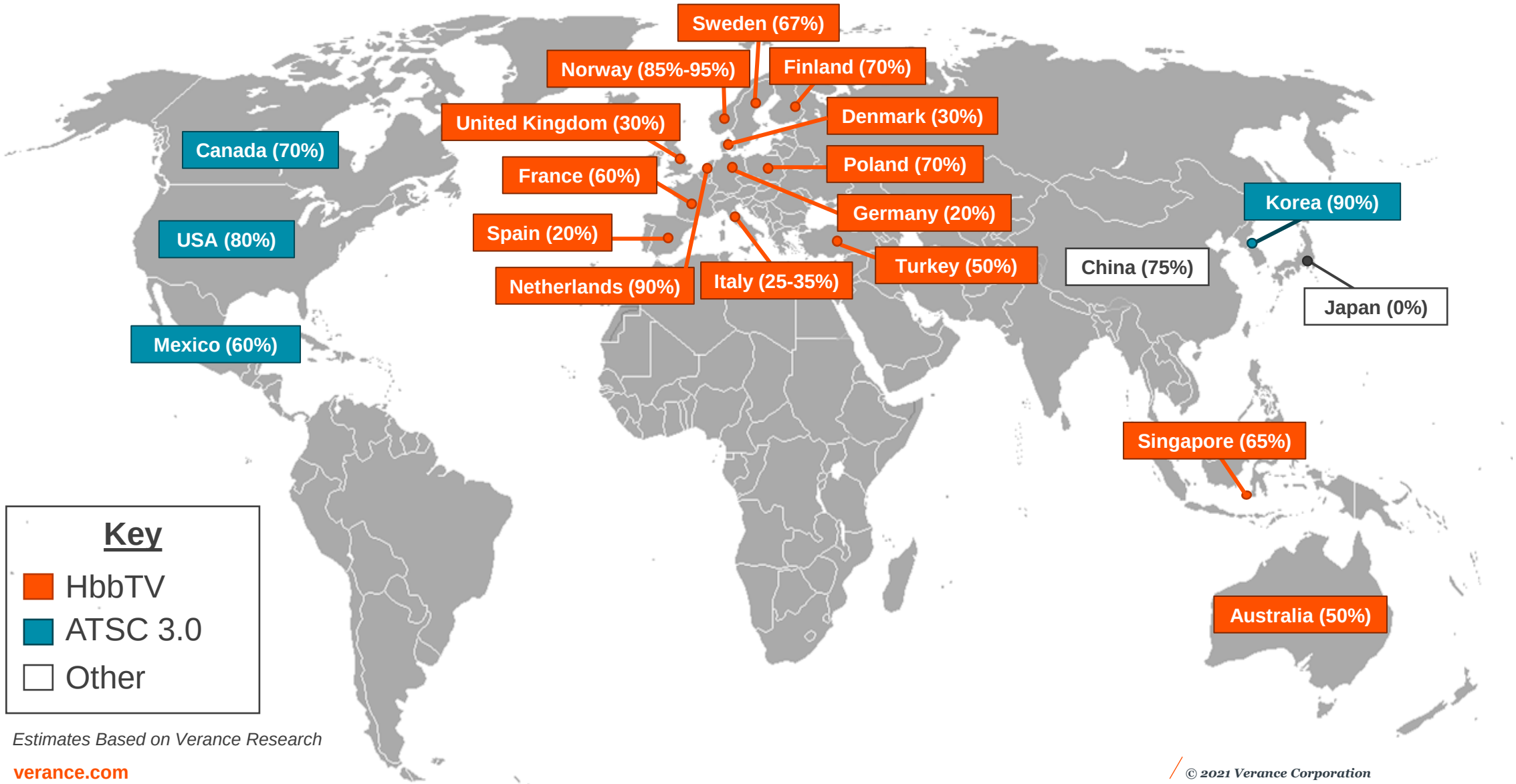
Percent of Households Needing Watermark (HDMI)



Estimates Based on Verance Research

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Specifications / Resources

DVB Blue Book

Dynamic substitution of content in linear broadcast

DVB A178-1 Rev.1

February 2021

HbbTV Application Discovery over Broadband Spec v1.3.1

ADB2+TA **July 2021**

HbbTV Association

ETSI TS 103 736-1 V1.1.1 (2020-06)

TECHNICAL SPECIFICATION

Hybrid Broadcast Broadband TV: Targeted Advertising

EBU

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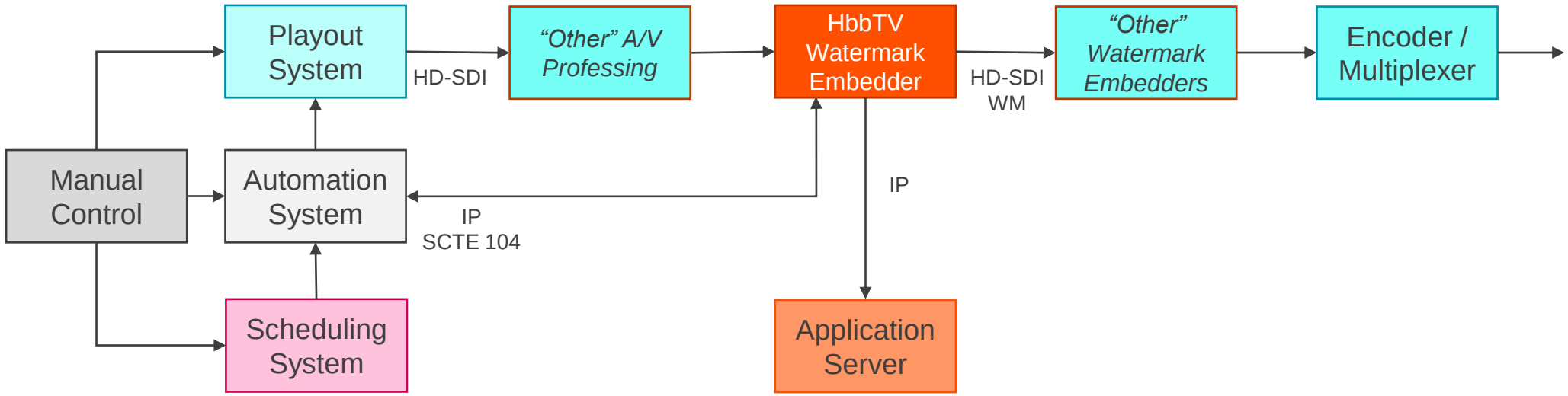
Watermark Embedding



1. Audio watermark must be present throughout the service.
2. Video watermark must be present through the replaceable inventory.
3. Watermark embedders must be time synchronized to the automation master clock.
4. Perform HbbTV watermark insertion after A/V enhancement but before proprietary watermark embedding (e.g. Kantar) and encoding/multiplexing.

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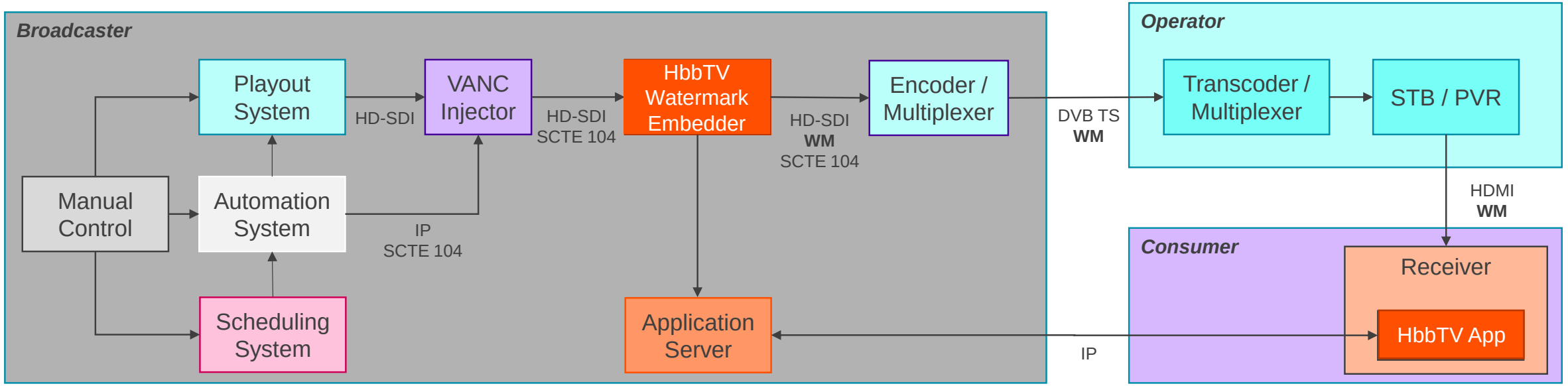
ADB2+TA Signalling



- Signalling formats and delivery methods are specified in DVB Blue Book A178-1r1.
- Three methods are supported:
  1. Video Watermark Delivery
  2. Broadband Delivery with Watermark Push Notification
  3. Broadband Delivery with Broadcaster Application Timeline Synchronization

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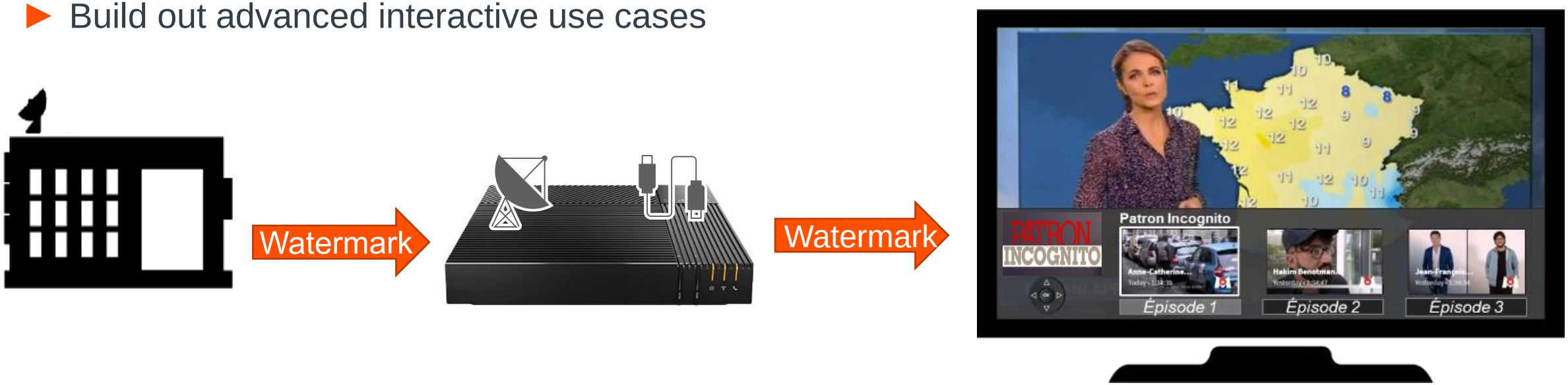
HbbTV / ADB2 Proof of Concept via HDMI

- Verance partnership with Fincons (more information at Fincons booth)
- Embed ADB2 watermark including time code & AIT into broadcast signal
- Using set-top box, route broadcast signal to the HbbTV television receiver via HDMI
- Television receiver detects ADB2 watermark
- Launch HbbTV application on ADB2-enabled TV sets
- Build out advanced interactive use cases



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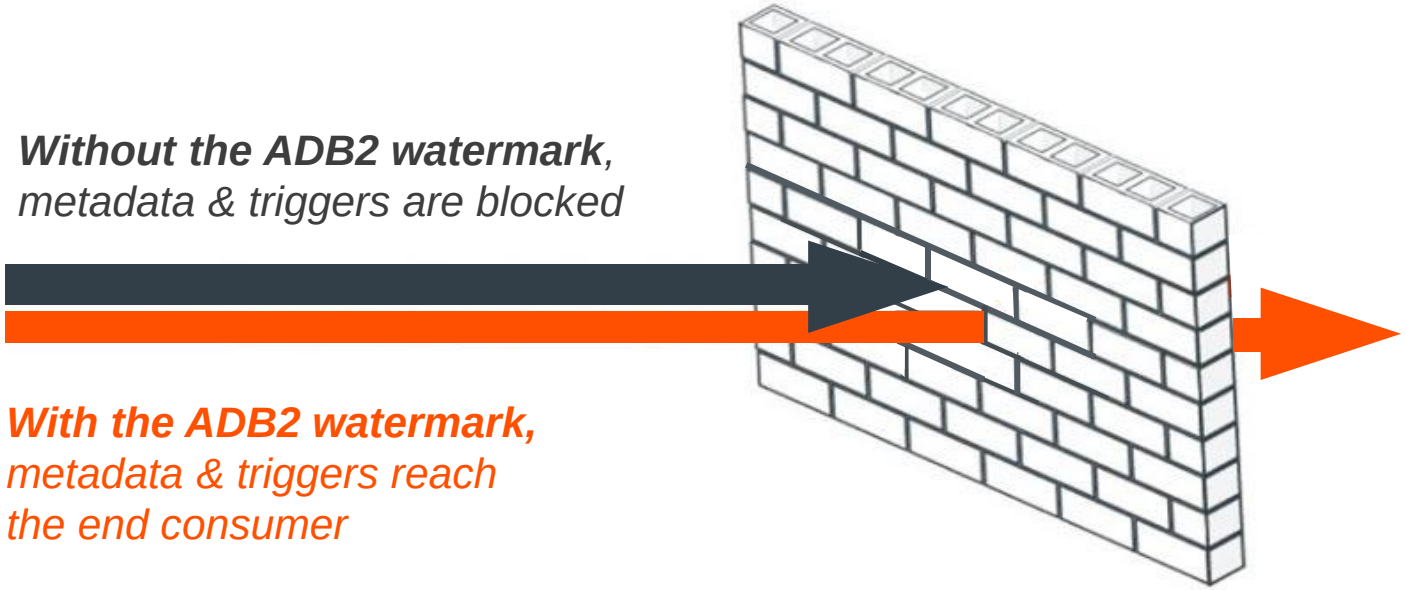
ADB2 Solves HbbTV Delivery Problem

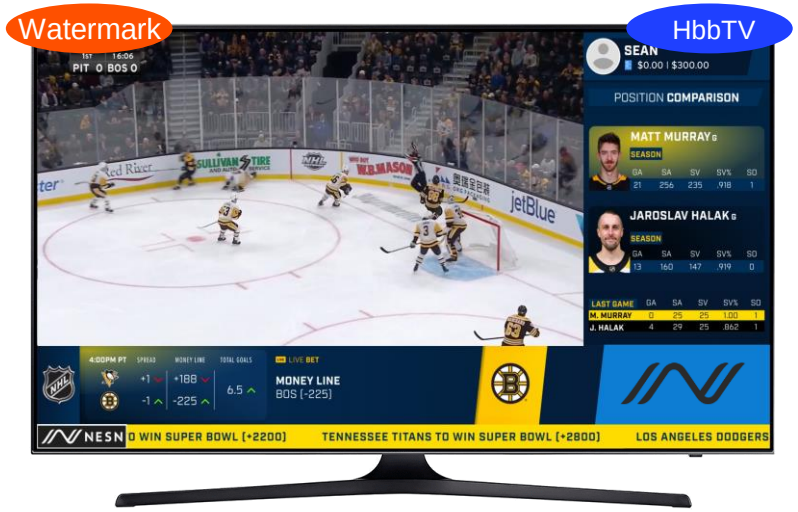
- ADB2 is a **digital audio/video watermark** applied to video assets and detected by TVs.
- Watermark is **inaudible / not viewable** and delivers a **URL + time code** to televisions.
  - Can also carry stream events including SCTE 35 ad insertion messages.

IPTV/satellite/cable/OTT
(HDMI Port)

Without the ADB2 watermark,
metadata & triggers are blocked



With the ADB2 watermark,
metadata & triggers reach
the end consumer



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Thank You

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