

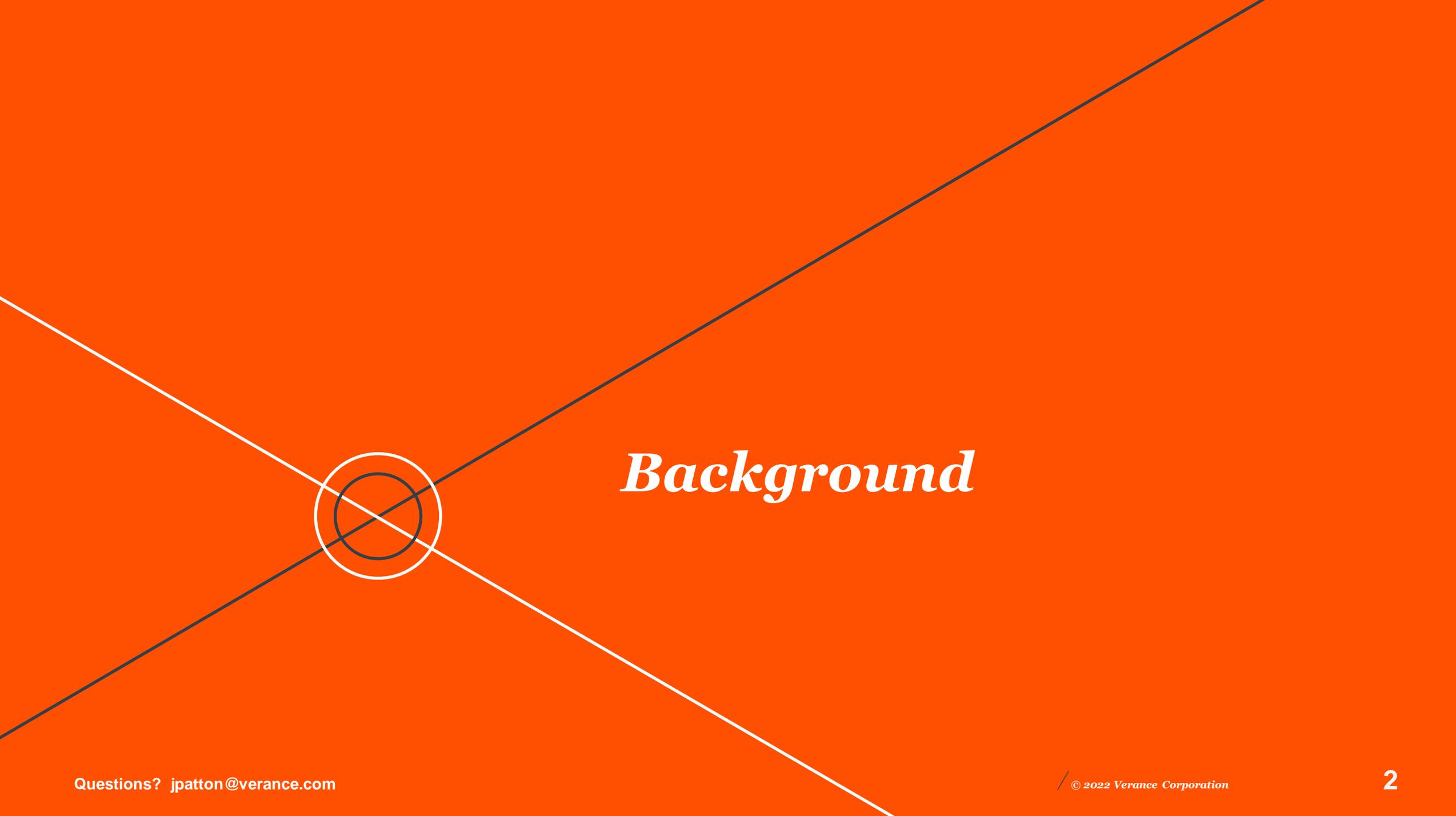


VERANCE



ADB2 & Watermarking Use Cases Coming to Market

November 2022

The background is a solid orange color. Two thin white lines intersect at the center-left of the slide, forming an 'X' shape. At the intersection point, there are two concentric circles: an inner dark blue circle and an outer white circle.

Background

Verance: Setting The Standard

25 years of delivering industry solutions



Aspect™ / ADB2

Connected
Broadcast TV



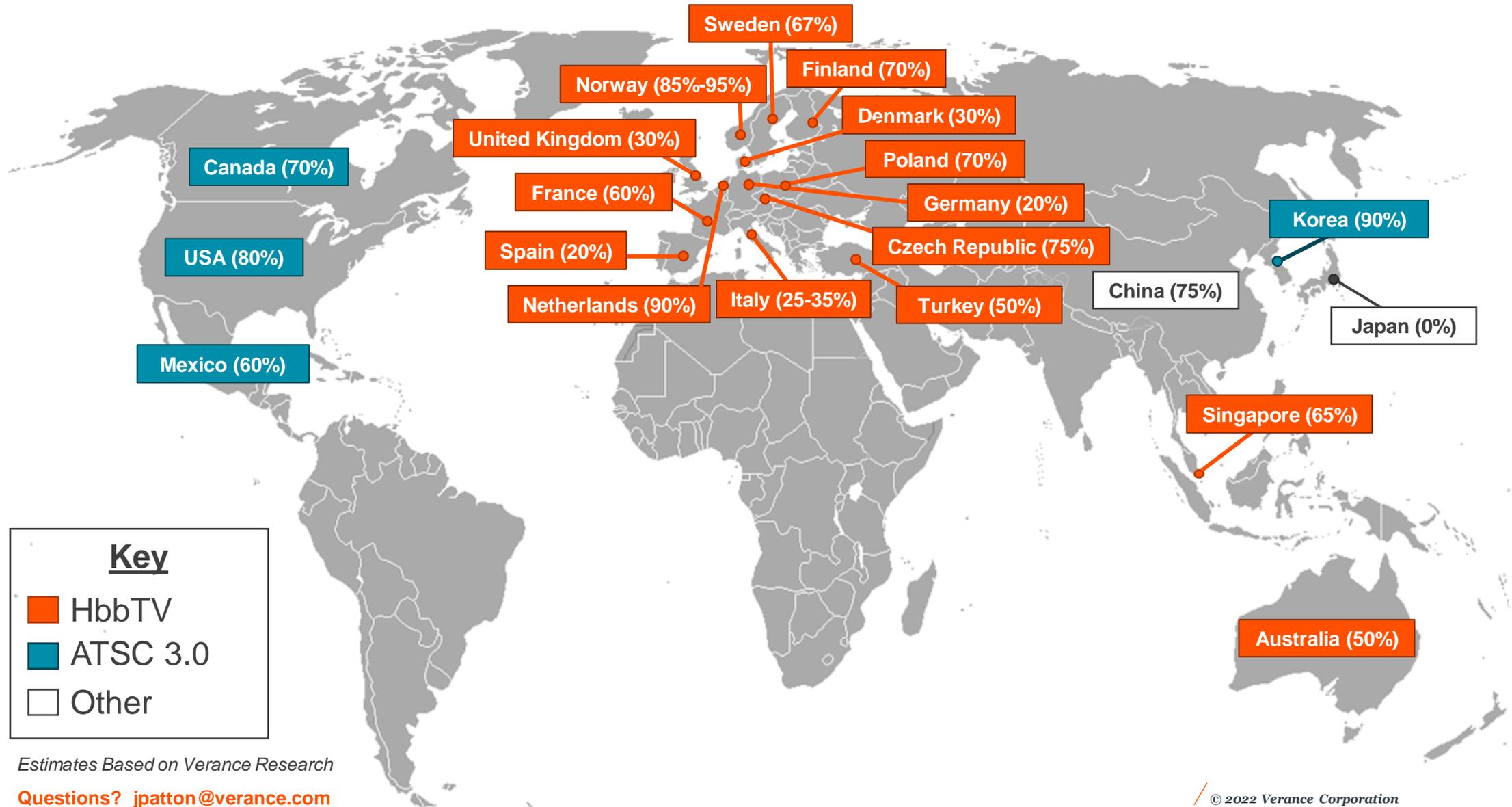
Cinavia®

Anti-piracy Technology
for Movies

VCMS/A™

Anti-piracy Technology
for Music

Percent of Households Needing Watermark (HDMI)



Estimates Based on Verance Research

Questions? jpatton@verance.com

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ADB2 Makes HbbTV Available to All of Europe/World

Live TV



HTML Browser



ADB2 Standard: Application Discovery Over Broadband Phase 2

ADB2 Watermark Enables HbbTV to 100% of TVs

Full Hybrid Broadcast Broadband



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

HbbTV & DVB 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)



Hybrid
Broadcast
Broadband TV:
Targeted Advertising

EBU

A decorative graphic consisting of two intersecting lines, one white and one dark blue, forming an 'X' shape. At the intersection, there are two concentric circles, one white and one dark blue.

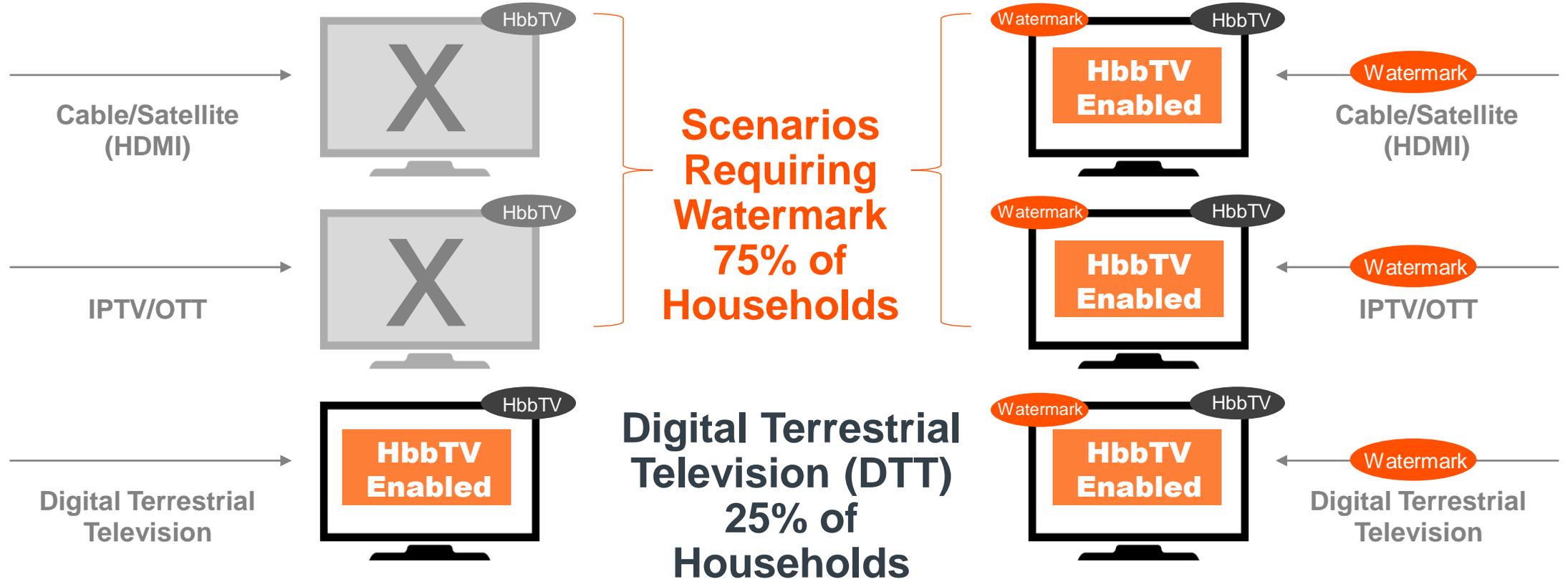
Watermarking Use Cases

ADB2 Helps Deliver HbbTV Services to 100% of TVs

Enables delivery of HbbTV services across all distribution paths

25% Reach in Czech Republic
without the watermark

75% Reach in Czech Republic
with the watermark



ADB2 Solves HbbTV Delivery Problem

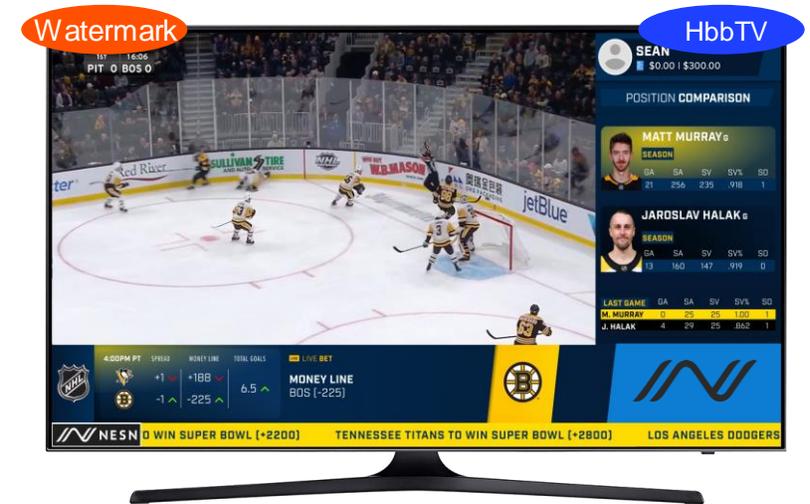
- ▶ ADB2 is a **digital audio/video watermark** applied to video assets and detected by TVs.
- ▶ Watermark is **inaudible / not viewable** and delivers a **URL + time code** to televisions.
 - Can also carry stream events including SCTE 35 ad insertion messages.

*IPTV/satellite/cable/OTT
(HDMI Port)*

*Without the ADB2 watermark,
metadata & triggers are blocked*

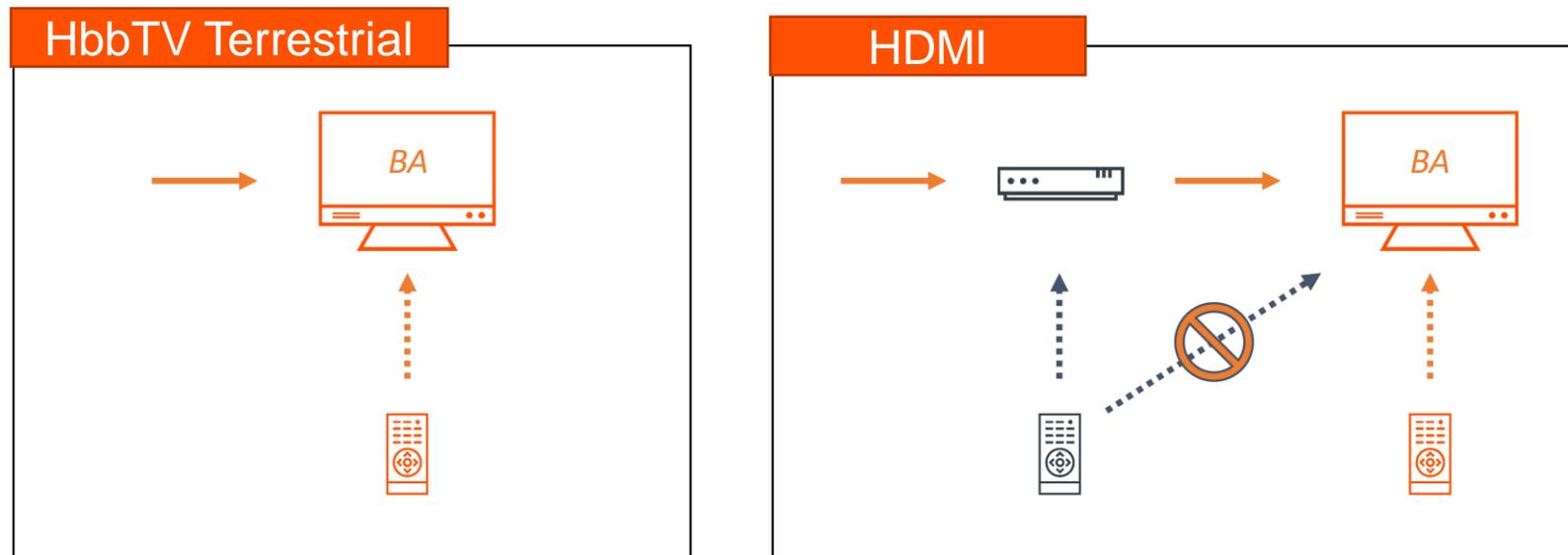


*With the ADB2 watermark,
metadata & triggers reach
the end consumer*

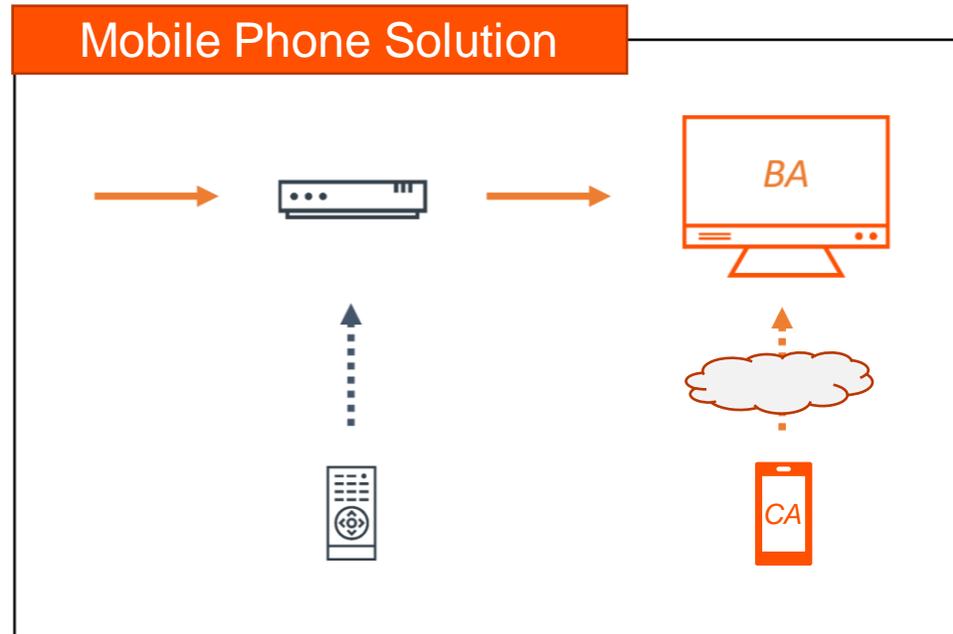


Watermarking Solves the TV Remote Problem

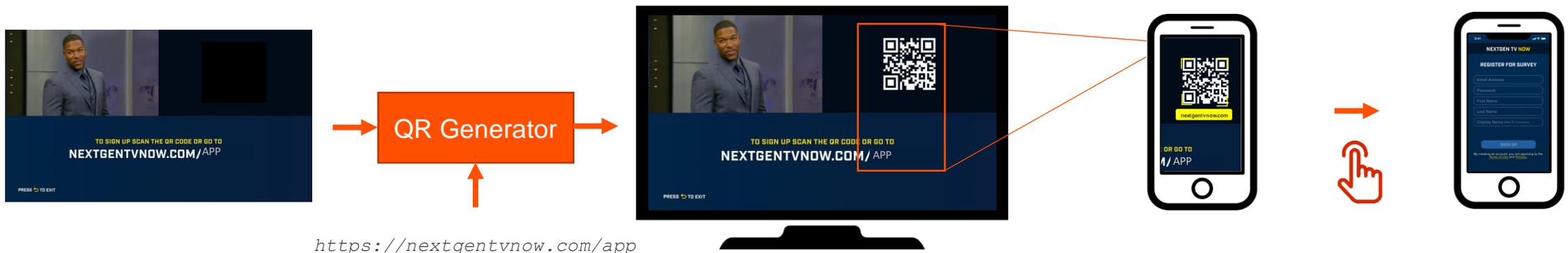
- ▶ Without watermarking, viewers must use a separate remote to control their Set Top Box and the Broadcast Applications
- ▶ Watermarking solves the TV Remote Problem and allows the user to use their Mobile Phone to control both the Set Top Box and Broadcast Applications
 - Mobile Phone as the remote allows for one device to control all applications
 - Mobile Phones make for a more enhanced remote control with more features and a keyboard



Watermarking Solves the TV Remote Problem (cont.)



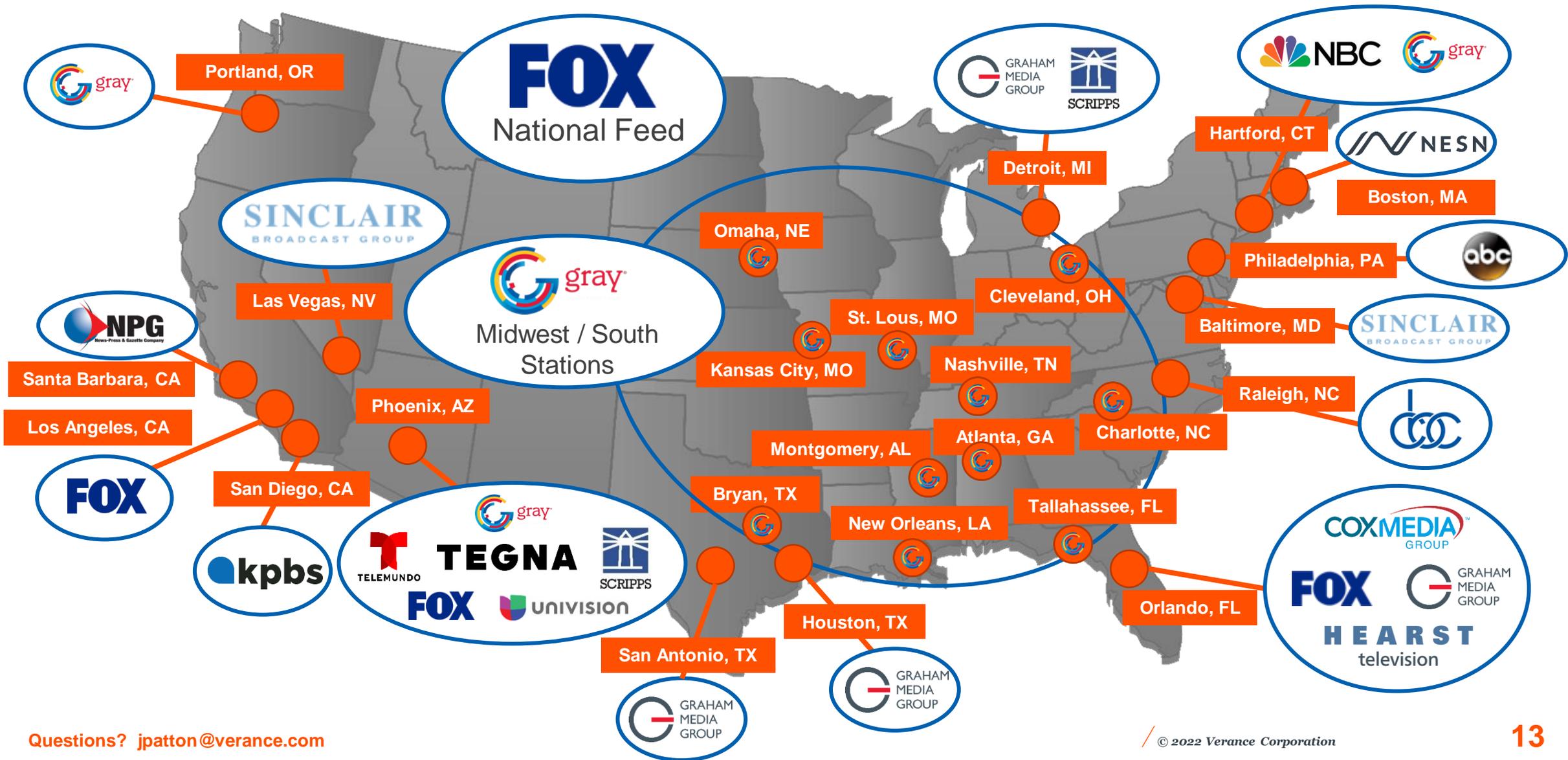
Pairing Process:



The background features a solid orange color. Two thin white lines intersect at the center-left, forming an 'X' shape. At the intersection point, there are two concentric circles: an inner dark blue circle and an outer white circle.

Progress Update

U.S. Audio Watermark Rollouts



Verance and LG Announce Partnership



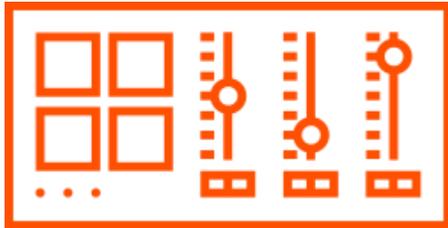
Las Vegas, April 26, 2022 – Verance announced that LG Electronics is the first television manufacturer to implement ATSC 3.0 watermark detection on NEXTGEN TVs – expected to enable reception of new interactive experiences via cable, satellite or antenna reception.

This spring, dozens of 2022 and 2021 LG NEXTGEN TV models will receive a firmware update for the Verance Aspect watermark technology. They include premium 8K and 4K Ultra HD LG OLED models ranging from 55-to 97-inch class sizes (measured diagonally).

- ▶ <https://tvnewscheck.com/tech/article/atsc-3-0-watermark-detection-implemented-first-on-lg-nextgen-tvs-poised-to-expand-interactive-services/>

Next Steps for ADB2

TV BROADCASTERS



TV MANUFACTURERS



THANK YOU

JASON PATTON

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