

Mission



Global Advocacy for Next-Gen A/V

Bring together market leaders from every part of the industry;
broadcasters, service providers, consumer electronics, and technology vendors
to collaborate on solving real-world hurdles, and
accelerate Ultra HD deployment

Guidelines WG



- Released v2.2 in Jan '20, V2.3 in April '20, V2.4 in Oct '20
- Annexes on: ST2110, ATSC 3.0, South America Road Map to UHD (TV2.5), ACES Workflows, DVB-T2, and real world Ultra HD deployments
- Best practice for conversion of HDR to SDR
 - Guidance for rendering Graphics, Closed Captioning and Subtitles (HDR vs SDR)
 - Improved accuracy of color space conversions (ITU-R BT.2124, ΔE_{ITP} metric)
 - Configuration of reference monitors
- Live Ultra HD content production and distribution via the Internet (OTT)
- NGA: harmonized terminology / production workflows
 - Immersive. High spatial resolution that increases the sense of sound envelopment.
 - Personalized. Tailor the audio experience for the viewer along with Dialog Enhancement, language selection, interactivity and personal tastes.

Guidelines WG



Soon to be released: V2.5 in Oct '21

- Updated definition of HDR including new explanatory illustration
- New Annex on NBCU Dual SDR/HDR workflow
- Updated device support for 4k and HDR
- Updates to OTT Packagers using CTA 5005
- AVS 2 and 3 Codec updates
- Expanded annex on Video over IP (ST 2110)
- Updates on ATSC 3.0 deployments in the US
- NGA Trials in 2019/2020

Guidelines WG

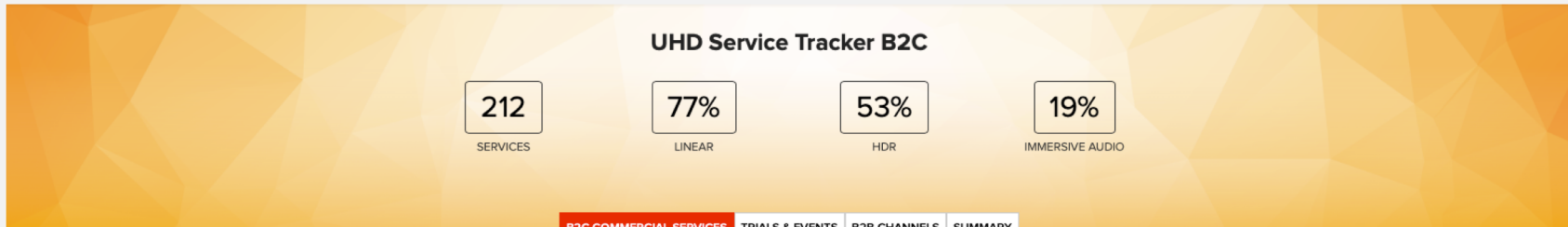


- **Key Initiative – Broadcast Sub-Group**
- Maintain experience while viewing in different ambient lighting environments
 - How and when viewers watch live content
 - Inability to view darker scenes
- Address perceived differences between SDR and HDR content brightness.
 - Mastering process change
 - TV Settings in a viewing mode
 - Signaling of content benefitting from viewing mode
- Liaison with UHD Alliance – on FilmMaker Mode implementation / extension
- Production process in use for live sports
 - Compensation LUT to achieve SDR peak/HDR diffuse white matching in SDR grading
- Significant contributions from BBC, LG and NBC Universal

Communications WG

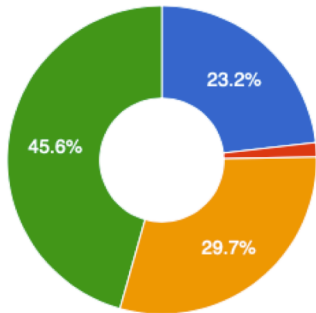


<https://ultrahdforum.org/uhd-service-tracker/>



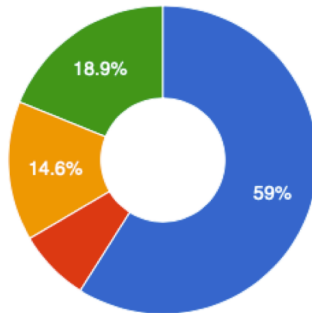
These charts represent all tracked services including OTT VoD-only ones.

B2C - NGA Subscriber-Reach



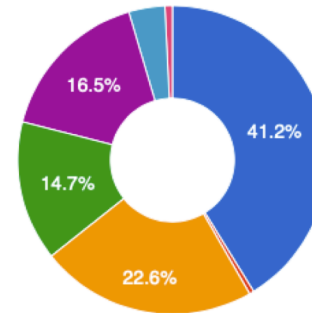
Surround ◀ 3/4 ▶

B2C - NGA Operators



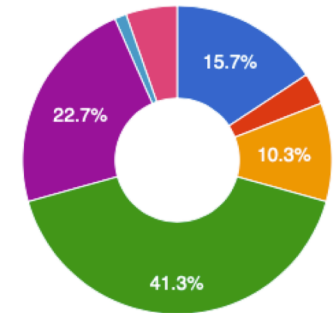
Immersive ◀ 4/4 ▶

B2C - HDR Subscriber-Reach



No HDR HLG ◀ 3/5 ▶

B2C - HDR Operators



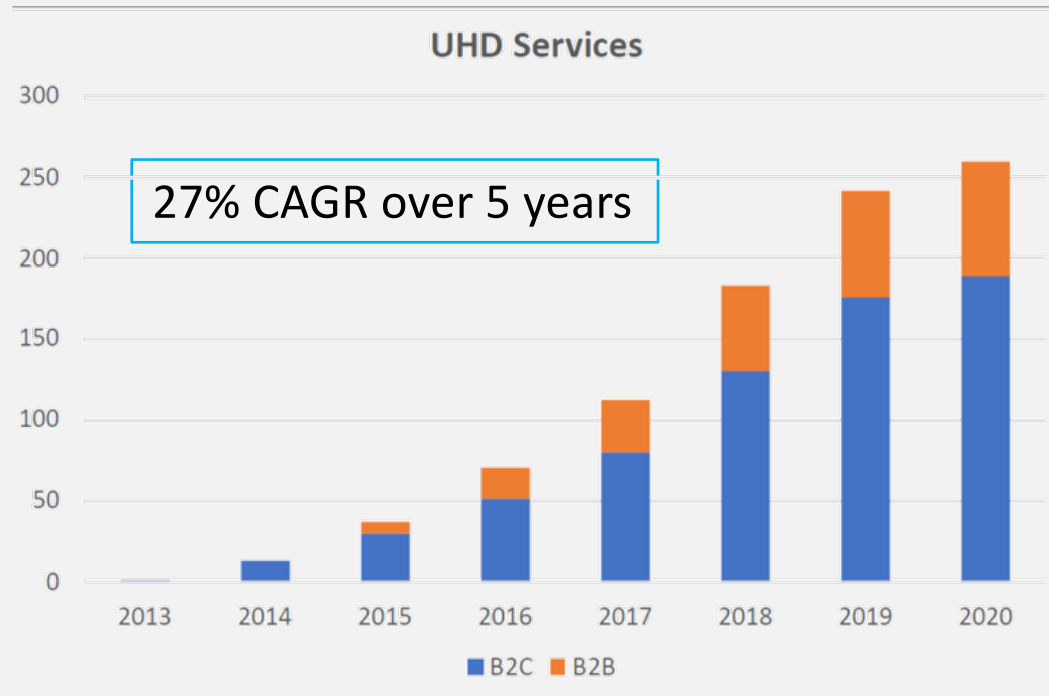
Dolby Vision ◀ 2/5 ▶

Communications WG



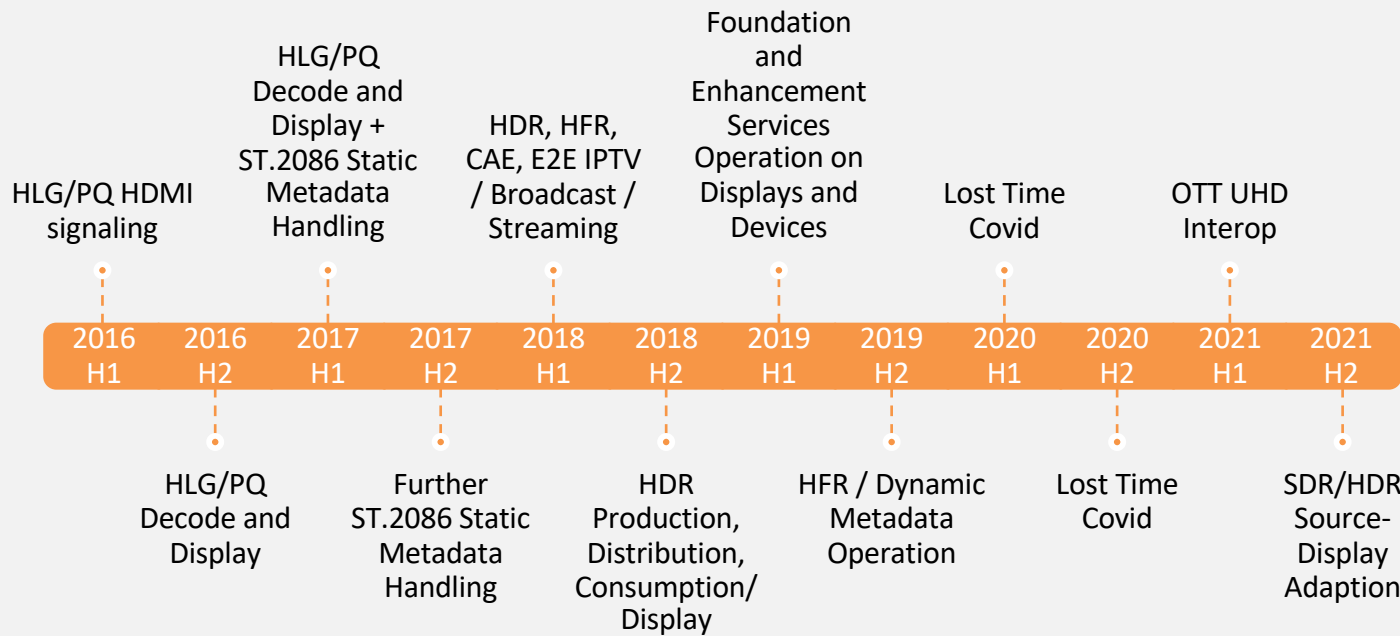
Ultra HD at EOY 2020

- 190 B2C services
- 70 B2B services
- 450 M potential subscribers
- 50 M+ active UHD viewers



Newsletters

Interop WG



Interop tests & plug-fests

- Standards
- Usability
- Viewing Experience

Current Initiatives:

> OTT Interop

> IP Production Users Group

Interop WG



OTT Interop

Content	
HDR10	
HLG10	AAC
DV P5	AC3-JOC
DV P8.1	AC4
DV P8.4	



IP Production Users Group

- Demonstrate and document IP-based workflows for the creation & exchange of **Ultra HD content**
- High-level test vectors that are more feature-complete and responsive to customer needs.
- Workflows can include cloud-based elements (whether on-premise or remote).
- Documentation can include tutorials, best practices, and suggested technology selections.
- When gaps are identified relative to test vectors, analyze and document them, sharing with other concerned groups

Security WG

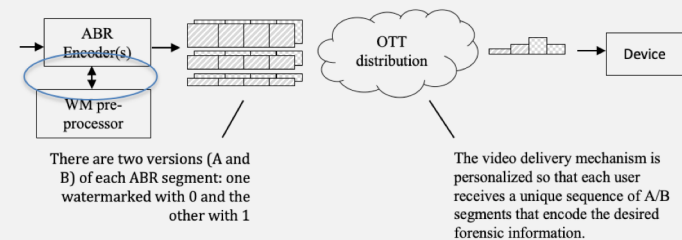


Watermarking API for Encoder Integration v1.0.1, March 2021

- What we solve
 - Integration in the headend
 - Many transcoder providers
 - Many watermarking technology providers
 - many x many type of problem
 - Simplify integration, accelerate deployment, avoid lock-in

- Addresses:

- Baseband and compressed domain
- Live and VOD
- ABR OTT content
- Focus on transcoder – preprocessor interface
- Creation of the A/B versions



- Why now: Watermarking is a key security element for UHD and sport content
- Several UHDF member companies are implementing the API

Conclusion



- Active, growing group of members
- Addressing important and current interop topics
- Welcome collaborations via liaisons and new members

<p>Charter (11)</p>	
<p>Contributor (10)</p>	
<p>Associate (11)</p>	