The Ultra HD Forum DVB Webinar
Codec, standards and UHD formats
Where is the industry headed?
March 2020

Benjamin Schwarz
UHDF Communications WG Chair
CTOiC
[bs@ctoic.net]
## UHD Key Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
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<tr>
<td>Resolution*</td>
<td>4K provides clearer, crisper &amp; more detail-rich picture than HD</td>
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<tr>
<td>WCG Wide Color Gamut</td>
<td>More realistic and vibrant colors</td>
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<td>HDR* High Dynamic Range</td>
<td>Greater range contrast including dynamic HDR</td>
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<td>HFR High Frame Rate</td>
<td>Motion rendering from 100 fps closest to real</td>
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<td>NGA Next Generation Audio</td>
<td>Immersive, personalized sound perceived as coming from infinite points</td>
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<td>Other enabling technologies</td>
<td>Content Aware Encoding (CAE) puts the bits in the best position in ABR</td>
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Global Advocacy for Next-Gen A/V Delivery

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<tr>
<th>Charter</th>
<th>Contributor</th>
<th>Associate</th>
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<td>BROADCOM</td>
<td>comcast, DOLBY, Fraunhofer, NAB, MediaKind, INAB, AT&amp;T, PBS, LG, INTERDIGITAL</td>
<td>ARRIS, Coate me, BBC, brightcove, FOX, kpn, SONY, verimatrix, V-SILICON, TCL, Irdeto</td>
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<td>bcom, BBright, BEAMR, DIG Consulting, CONTENT ARMOR, EBU, Fairmile West, Image, Eurofins, Digital Testing, EBU, TULIX Systems, ULTRAHD FORUM ITALIA, travelxp, Digital Testing, movie labs, KOBETA</td>
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40+ Direct members inc. many organisations
Some key contributions to the industry

• Guidelines (2.2 coming out in April)
• Plugfests
• Evangelisation, over 2K demos given on 4 continents
• A true Forum
  – weekly teleconferences,
  – 2 to 3 F2F meetings per year at events
• Service tracker
Spring 2020 update

• ~150 commercial consumer-facing services WW in our new service tracker
  – From 3B tracked subscribers in total, 300M+ have access to UHD services
  – ~75% of services are predominantly linear with over 125M UHD subs
  – ~25% of services are VoD-based and have over 180M UHD subs
  – ~50% have HDR, ~25% have NGA

• 5 years after our launch, non-linear OTT and live/linear Broadcast UHD is well documented in our guidelines including for HDR deployments

• New in our April 2020 guidelines:
  – Professional Video over IP (ST2110)
  – OTA broadcast (ATSC)
  – Nascent UHD markets – China, South America

• Other new deployment frontiers for 2020 and beyond
  – More on HDR: Seamless Interop, Live OTT, Mobile, Dynamic HDR
  – Stabilize NGA
  – Launch HFR