









PRESS RELEASE

New UHD HDR Transmission using Hybrid-Log Gamma (HLG) at ABU DBS 2017 HLG standard simplifies HDR for broadcast television

Kuala Lumpur, 07 March 2017 – A pioneering showcase of cutting-edge video broadcast technology will be on display in ABU DBS 2017 (Asia-Pacific Broadcasting Union Digital Broadcasting Symposium) from 6 – 9 March in Kuala Lumpur, Malaysia. Six (6) leading industry players – ATEME, BBright, Binasat Sdn. Bhd. ("Binasat"), Celebrities Management Private Limited ("Celebrities Management"), Cisco and MEASAT Satellite Systems Sdn. Bhd. ("MEASAT") will be collaborating to transmit via satellite UHD/4K HDR (High Dynamic Range) content using the HLG (Hybrid-Log Gamma) standard.

HDR significantly improves picture quality over non-HDR UHD. This is because HDR projects a wider range of richer colours, brighter whites, and deeper, darker blacks, giving the TV picture a more exciting 'dynamic' look. HDR coupled with the increased resolution of UHD represents the future of video.

The HLG standard was developed to make HDR production and transmission easier for broadcasters; it is designed to work similar to regular broadcast television. It simplifies HDR content workflow, is backwards compatible with SDR (Standard Dynamic Range) TVs, and supports live TV to HLG-supported equipment. This makes HLG ideal for broadcasters.

The showcase content is provided by Celebrities Management from their Travelxp 4K channel and conforms to the DVB UHD standard with Rec. 2020 colour space. It will be played-out by a UHD Playout Server, encoded and compressed using the HEVC compression standard by a 4K HEVC Encoder at 50 frames per second with a bit depth of 10 bits. It will then be transmitted via the MEASAT-3 hotbird satellite using the DVB-S2x broadcast standard at 18 Mbps. It will be received by a Receive-Only antenna at ABU DBS 2017, decoded by a UHD HEVC decoder that supports the HLG standard, and displayed for ABU attendees at MEASAT's booth (#50).

"MEASAT, by working with leading technical partners, continues to bring new satellite broadcast technology to the market," said Yau Chyong Lim, Chief Operating Officer, MEASAT. "Broadcasters interested to benefit from the HLG standard are now assured of a proven distribution solution with MEASAT and our partners."

"ATEME is always looking for innovative partners," said Yoann Poizeau, Vice President, Sales Asia Pacific, ATEME. "Using pure software solutions running on Commercial Off-The-Shelf (COTS) hardware — whilst also achieving excellent picture quality — provides the flexibility and cost-effectiveness the broadcasters need. On top of that, TITAN is a future-proof solution, with a

path to 4K-UHD HEVC, HDR and Rec.2020 color space, demonstrating its ability to evolve to suit future UHD formats."

"Binasat is pleased to support this showcase and work with MEASAT to provide the most reliable transmission solution for satellite broadcast," said Jason Na Bon Tiam, Executive Director, Binasat. "With new UHD services coming into the market, we look forward to continue growing and are ready to support broadcasters with transmission solutions that can reliably deliver services to the end customer. This also exhibits our capability to quickly deploy services and adapt to various customer requirements in the broadcast field."

"Once again, MEASAT demonstrates they master end-to-end Ultra HD satellite services, from linear playout to end-user delivery. BBright is proud to support Measat with the UHD-24/7, a flexible and evolution/future-proof playout server. This software-based linear production server accepts several pivot file formats and HDR standards. BBright will continue to innovate in Ultra HD services, from production/contribution to final delivery." said Guillaume Arthuis, Chief Executive Officer, BBright.

"It's not just more pixels. But better pixels. This is what is going to really make a big difference, High Dynamic Range with Wide Color Gamut. It's truly as close to what we see with our human vision. More immersive than ever. We are amongst the first ones globally to adopt HLG HDR which allows the same signal to be seen as SDR in SDR TV sets, and in HDR on HDR enabled TV sets. The demonstration here at ABU along with MEASAT, Cisco, Ateme and BBright is an extension to what distribution partners and viewers can expect from the 100% exclusive and high quality programming of Travelxp 4K, which we have already launched across North America, Europe & MENA region," Prashant Chothani, Chief Executive Officer, Travelxp 4K.

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About ATEME

ATEME (PARIS: ATEME), Transforming Video Delivery. ATEME is a global leader in HEVC, H.264, MPEG-2 video compression solutions for broadcast, cable, DTH, IPTV and OTT. More information is available at www.ateme.com.

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About Binasat Sdn. Bhd.

Binasat Sdn Bhd is a full turnkey solutions provider for the telecommunication sector with services encompassing network and infrastructure planning, design and optimization, network

deployment, network and telecommunications infrastructure operations and maintenance and other telecommunication related services including broadcasting services such as downlinking and uplinking, Digital Satellite News Gathering (DSNG) and support centre. Our business can generally be segmented into three key areas, namely, satellite communication which specialises in Very Small Aperture Terminal (VSAT), mobile telecommunications network and fiber optic network.

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About BBright

BBright brings visionary solutions and products to the professional video industry and focuses on rapid market transitions around 4K – Ultra HD, HEVC. The company develops high-end technologies including software-based appliances such as reference players, playout servers, decoders and transcoders for the UHD video ecosystem. BBright serves customers worldwide such as: broadcast equipment manufacturers, video network operators (satellite, terrestrial), telco operators (IPTV) and TV channels.

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About Celebrities Management Private Limited / Travelxp 4K

Celebrities Management Private Limited is a privately held company in India, with interest in broadcast, advertising, media consulting and other related services. The company operates 7 (seven) satellite channels across the globe across its group companies.

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About MEASAT

MEASAT is a premium supplier of services to leading broadcasters, Direct-To-Home (DTH) platforms and telecom operators. With capacity across six (6) communication satellites, MEASAT provides satellite services to over 150 countries representing 80% of the world's population across Asia, Middle East, Africa, Europe and Australia.

Working with a select group of world-class partners, MEASAT also provides a complete range of broadcast and telecommunications solutions. Services include UHD/HD and SD video playout, video turnaround, co-location, uplinking, broadband and IP termination services. For more information, please visit www.measat.com.

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