# harmonic

## Harmonic Pushes OTT QoE to New Heights at the 2017 NAB Show

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### Advancements Include Reduced Latency and Expanded Bandwidth Optimization Capabilities

SAN JOSE, Calif., April 22, 2017 /PRNewswire/ -- At the 2017 NAB Show, Harmonic (NASDAQ: HLIT), the worldwide leader in video delivery infrastructure, will demonstrate several groundbreaking solutions for OTT delivery, enabling broadcasters and service providers to drive growth in over-the-top video consumption with improved quality of experience (QoE) for their customers. Through innovations in OTT bandwidth optimization, latency and packaging technologies, Harmonic is leading the industry in helping operators deliver pristine SD, HD and Ultra HD video at low bit rates for a variety of services, including live streaming, VOD and time-shift TV.



"Today, one in five U.S. homes pay for three or more OTT services," said Bart Spriester, senior vice president, video products at Harmonic. "Harmonic is committed to helping operators monetize the opportunities available in the OTT environment. At the NAB Show, we will demonstrate how OTT operators can separate themselves from the competition with lower latency, reduced buffering, better video quality and increased bandwidth efficiency by leveraging software appliances or cloud-native applications."

Lower latency when streaming live events is a key goal for OTT operators. Live television broadcasters generally delay live content for approximately seven seconds; delays for live OTT streaming are more in the range of 30-60 seconds. At the NAB Show, Harmonic will showcase a real-time streaming workflow that matches the latency of live broadcast.

"Low latency for OTT is extremely important, especially for the delivery of live sporting events," said *Darryl* Jefferson, VP, Post Production Operations, *NBC* Sports Group. "Any lag time that exists between what's happening in real time and being viewed on screen is truly unacceptable to viewers nowadays. We're excited about the developments that Harmonic is making in the area of reduced latency for OTT video, and expect it to be a game-changer for broadcasters and other content providers as they strive to deliver the best possible quality across all devices."

Harmonic's low-latency streaming workflow is made possible by a unique combination of packaging content in the new Common Media Application Format (CMAF) and HTTP chunked transfer encoding. An emerging media standard for OTT delivery, CMAF reduces the need to package content separately for HLS and MPEG-DASH devices. The use of the new format in Harmonic multiscreen packaging and origin solutions not only improves the OTT viewing experience by reducing latency in live streaming, it also simplifies OTT distribution workflows.

Harmonic will also showcase an innovative new solution for dramatically improved video quality delivered over zero-rated mobile and xDSL networks, based on the company's latest EyeQ<sup>™</sup> technology advancements and new packaging technology expressly designed for constrained networks. Employing this new EyeQ packaging solution, operators can consistently deliver improved HD video quality to set-top boxes connected to low-bandwidth DSL lines, as well as to mobile devices connected to 3G/4G networks without exceeding the 1.5 Mbps bandwidth limitation of zero-rated mobile connections.

The EyeQ technology leverages the Human Visual System to reduce OTT video bit rate requirements by up to 50 percent without impacting video quality. Operators can employ this capability to deliver higher-resolution video streams that can be enjoyed on any device with vastly reduced buffering — even over constrained OTT/ABR networks.

Harmonic will showcase its latest innovations for broadcast and OTT video delivery at the 2017 NAB Show, booth SU1210. Further information about Harmonic and the company's products is available at <u>www.harmonicinc.com</u>.

#### **About Harmonic**

Harmonic (NASDAQ: HLIT) is the worldwide leader in video delivery infrastructure for emerging television and video services. Harmonic enables customers to produce, deliver and monetize amazing video experiences, with unequalled business agility and operational efficiency, by providing market-leading innovation, high-quality service and compelling total-cost-of-ownership. More information is available at <u>www.harmonicinc.com</u>.

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