STMicroelectronics and Fraunhofer Heinrich Hertz Institute Demonstrate World's First Standard-Based 3D Adaptive Video-Streaming Software Receiver

Software ensures uninterrupted video delivery and optimum viewing experience on any connected device.

TORINO, Italy, Sept. 28, 2011 /PRNewswire via COMTEX/ -- STMicroelectronics [STM +2.33%], a global semiconductor leader serving customers across the spectrum of electronics applications, and Fraunhofer Heinrich Hertz Institute (HHI), a leading research center for communication systems, digital media and services, today unveiled the industry's first 3D video receiver based on the new MPEG-DASH standard for dynamic and adaptive HTTP streaming. The fully working prototype developed within the EU-funded COAST (Content Aware Searching and Streaming) project is being demonstrated at the Networked and Electronic Media (NEM) Summit in Torino, Italy on 27-29 September 2011.

HTTP streaming enables high-quality video delivery over IP to connected TV sets, set-top boxes and mobile terminals. Recently released by the 3GPP and MPEG groups, Dynamic Adaptive Streaming over HTTP (DASH) aims to simplify the deployment of broadband video streaming services across different network infrastructures and end devices, replacing the multitude of proprietary HTTP streaming protocols with one open, standardized solution. DASH defines formats for content preparation and tools for fast and efficient content adaptation. It supports trick modes, multi-language subtitles and audio tracks, ad insertion and multiple digital rights management technologies aimed at protecting content, and works with standard web-server and cache technologies.

The ST-HHI DASH-based software video receiver uses sophisticated algorithms to guarantee uninterrupted video delivery and optimal viewing experiences through automatic selection of bit-rate, video resolution and format based on the actual network conditions, end-device capabilities and user preferences. Bandwidth fluctuations are compensated for by automatic variation of the video bit-rate while the video format is automatically selected according to the type of terminal, so that consumers are able to watch the same 3D content on standard 2D-display devices.

On show at the 2011 NEM Summit, the ST-HHI 3D adaptive streaming environment comprises a video server, a PC connected to a 3D monitor, and a thin client with 2D display. The 3D video content is generated and delivered over IP from a remote server to both terminals, while the same 3D video flow is automatically adapted to 2D in the thin client. The prototype implements the DASH technology in GStreamer, a popular multimedia framework for PC and embedded platforms that supports a wide range of media formats and streaming protocols.

"DASH enables efficient and easy video delivery - both on-demand and live streaming - over the existing Internet infrastructure to any connected device without any special provisions," said Amedeo Zuccaro, Director, Security & Multimedia System R&D, ST's Advanced Systems Technology Group. "Through our collaboration with HHI, we are the first silicon manufacturer with native support for DASH-based adaptive video streaming integrated in our devices."

"3D video technology left the labs and niches, hit the market and is now available for everyone," said Dr.-Ing. Thomas Schierl, head of Fraunhofer HHI's Multimedia Communications Group. "We are happy to be collaborating with ST to prepare the next generation of devices for the delivery of stereoscopic and multiview video content."

Networked and Electronic Media (NEM) is a European industrial initiative focused on the convergence of media, communications, consumer electronics and IT. 4th NEM Summit, which takes place in Torino, Italy, on 27-29 September 2011, gathers representatives from the networked and electronic media in Europe and worldwide, including corporations, SMEs and start-ups, research centers and institutions, industry associations and groups and standardization bodies.

http://nem-summit.eu
About Fraunhofer Heinrich Hertz Institute
Fraunhofer Institute for Telecommunications - Heinrich-Hertz-Institut is a leading research institute in the fields of Mobile Broadband Communications, Photonic Networks/Components, and Electronic Imaging for Multimedia located in Berlin. The Image Processing Department with 50 researchers in about 20 research projects is working on multimedia applications ranging from very low bit rate video for mobile services up to high quality coding and processing of Digital Cinema, HDTV, 3DTV and Immersive Tele-Presence for delivery in Broadcast, Video-On-Demand, conversational applications as well as mobile and fixed line IPTV. More details on HHI can be found at www.hhi.fraunhofer.de .

About STMicroelectronics
STMicroelectronics is a global leader serving customers across the spectrum of electronics applications with innovative semiconductor solutions. ST aims to be the undisputed leader in multimedia convergence and power applications leveraging its vast array of technologies, design expertise and combination of intellectual property portfolio, strategic partnerships and manufacturing strength. In 2010, the Company's net revenues were $10.35 billion. Further information on ST can be found at www.st.com .

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