

PRESS RELEASE

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Fraunhofer Presents MPEG-DASH Streaming with HEVC and 7.1 HE-AAC at IBC

Fraunhofer's IBC presentations that include multi-screen, dynamic ad insertion and encryption technologies, embrace the MPEG-DASH standard.

ERLANGEN, Germany (September 12, 2013) – A major shift in audio and video streaming techniques has emerged with the introduction of an ISO standard for Dynamic Adaptive Streaming over HTTP (DASH), also known as MPEG-DASH. Fraunhofer is a codeveloper of the MPEG-DASH standard and a leading source of DASH implementations. For IBC, three Fraunhofer institutes – IIS, HHI and FOKUS – collaborated and demonstrate their solutions for DASH-based streaming systems.

DASH delivers high quality streaming multimedia content over the Internet through conventional HTTP servers. It adapts seamlessly to changing network conditions, which eliminates buffering experiences that frustrate viewers.

At IBC, Fraunhofer IIS and Fraunhofer HHI demonstrate the world's first DASH streaming system with 7.1 HE-AAC Multichannel Audio and the new HEVC Video coding standard. The combination of the two state-of-the-art MPEG codecs within a DASH adaptive streaming system allows for the most efficient delivery of high quality content at the lowest possible data rates solely based on international ISO standards.

Fraunhofer IIS is the main developer of HE-AAC v2, the mandatory stereo and optional multichannel codec in the DASH-AVC/264 implementation guidelines developed by DASH-IF. HE-AAC is the ideal choice for DASH due to its encoding efficiency that allows for flawless audio bit rate switching and surround sound streaming, without the need to switch to stereo when bandwidth is constrained.

Fraunhofer HHI, the main developer of HEVC, focuses on combining DASH with HEVC. Fraunhofer HHI's new software toolset for DASH fully supports HEVC content

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encoding. Its authoring tool supports the VoD profile of the ISO Base Media File Format (BMFF) as well as encapsulating HEVC streams into ISO BMFF segments. Fraunhofer HHI's DASH client SDK naturally supports HEVC over DASH based on ISO BMFF. HEVC requires only half the bandwidth for high quality video transmission needed by its predecessor AVC.

Fraunhofer FOKUS introduces at IBC its FAMIUM ecosystem for the consumption and delivery of adaptive bit rate content as well as Digital Rights Management (DRM) protected content. FAMIUM enables platform-independent multiscreen and rich media applications, bundling several DASH and DRM related functionalities for use in web applications. It is based on the W3C working draft Media Source Extensions (MSE) and Encrypted Media Extensions (EME). FAMIUM takes the opportunities of this technology and enhances it with multiscreen, synchronization and DRM capabilities. Use cases such as live TV in the browser without the need for plugins, including dynamic advert insertion or synchronous playback of video with complementary content on multiple screens become possible with the FAMIUM ecosystem solution.

Fraunhofer showcases its MPEG-DASH related technologies in live demonstrations at IBC (Booth B80, Hall 8).

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About Fraunhofer

The Audio and Multimedia division of Fraunhofer Institute for Integrated Circuits IIS, based in Erlangen, Germany, has been working in compressed audio technology for more than 25 years and remains a leading innovator of technologies for cutting-edge multimedia systems. Fraunhofer IIS is universally credited with the development of mp3 and co-development of the AAC (Advanced Audio Coding) as well as technologies for the media world of tomorrow, including Fraunhofer Cingo for virtual surround, Fraunhofer Symphoria for automotive 3D audio, AAC-ELD for telephone calls with CD-like audio quality, and Dialog Enhancement to allow TV viewers to adjust dialog loudness as they desire.

Through the course of more than two decades, Fraunhofer IIS has licensed its audio codec software and application-specific customizations to at least 1,000 companies. Fraunhofer estimates that it has enabled more than 6 billion commercial products worldwide using its mp3, AAC and other media technologies.

The Fraunhofer IIS organization is part of Fraunhofer-Gesellschaft, based in Munich, Germany. Fraunhofer-Gesellschaft is Europe's largest applied research organization and is partly funded by the German government. With 22,000 employees worldwide, Fraunhofer-Gesellschaft is composed of 66 Institutes conducting research in a broad range of research areas.

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