

FRAUNHOFER HEINRICH HERTZ INSTITUTE

PRESS RELEASE

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Fraunhofer HHI at IBC 2015, September 10-15, Amsterdam, Netherlands

At this year's IBC, the Fraunhofer Heinrich Hertz Institute presents its latest solutions. Meet us at our booth 8.B80, hall 8.

You find the following highlights at our booth 8.B80, hall 8:

Compressed Domain Video Compositing - HEVC in Future Cloud IPTV

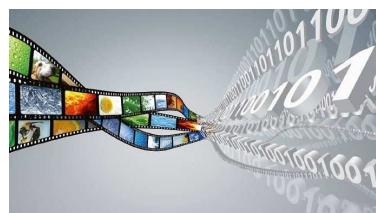
Video compositing is used in many applications, e.g. IPTV services such as Deutsche Telekom Entertain, in which user interface elements are displayed as a video overlay. Fraunhofer HHI has developed a light-weight technique for compositing of HEVC coded video in the compressed domain. The technique consists of merging several input video bitstreams into a single output video bitstream and inserting pre-encoded pictures that form the desired alpha-blended composition through standard prediction tools.



Such a lightweight approach is computationally much less demanding than transcoding-based compositing and requires only a single standard-conformant HEVC video decoder which keeps end devices as simple as possible. The exhibit demonstrates a joint prototype with Telekom Innovation Laboratories, the central Innovation Unit of Deutsche Telekom, targeted at a future IPTV platform technology.

HEVC Real-time Encoding of UHD Video with High Dynamic Range and Wide Color Gamut

Fraunhofer HHI's leading H.265 / MPEG-HEVC real-time software encoder now integrates HDR processing, to enable HEVC live encoding of 10-bit UHD video with High Dynamic Range (HDR) and Wide Color Gamut (WCG). For that,



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the HEVC encoder conveys video metadata according to international standards, e.g. ITU-R Rec. BT.2020 WCG, SMPTE ST 2084 HDR transfer characteristics and SMPTE ST 2086 mastering display color volume metadata, supporting high luminance and WCG images.

The thereby accomplished broader range of color and brightness, and an exceptional contrast ratio can be delivered to any preferred end device – creating a realistic, truly immersive experience for its viewers.

OmniCam-360 provides panoramic content for VR glasses

Fraunhofer HHI's OmniCam-360 is a worldwide unique system for recording high-resolution video panoramas. For instance sport or musical events can be experienced in an Ultra High Definition panorama up to 360 degrees. The latest development makes it possible to provide this UHD panoramic content for so-called Virtual Reality (VR) glasses. Thanks to the real-time solution of Fraunhofer HHI, the ten single camera segments are smoothly composed to an UHD video that can be transmitted to VR glasses so that the spectator is able to enjoy a truly immersive experience.



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The **Fraunhofer Heinrich Hertz Institute** is a world leader in the development of mobile and fixed broadband communication networks and multimedia systems. From photonic components and systems through fiber optic sensor systems to video coding and transmission, the Fraunhofer HHI works together with its international partners from research and industry. www.hhi.fraunhofer.de

The Fraunhofer-Gesellschaft is the leading organization for applied research in Europe. Its research activities are conducted by 66 institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of nearly 24,000, who work with an annual research budget totaling more than 2 billion euros. Of this sum, around 1.7 billion euros is generated through contract research. More than 70 percent of the Fraunhofer-Gesellschaft's contract research revenue is derived from contracts with industry and from publicly financed research projects. International collaborations with excellent research partners and innovative companies around the world ensure direct access to regions of the greatest importance to present and future scientific progress and economic development.