

# PRESS RELEASE

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## Fraunhofer HHI at Mobile World Congress 2016, February 22-25 in Barcelona

**At the GSMA Mobile World Congress 2016 Fraunhofer HHI's wireless and video experts present their latest developments. Visit us at Fraunhofer Booth 7 G31.**

You find the following highlights at our booth 7 G31:

### HEVC high quality encoding with HDR support

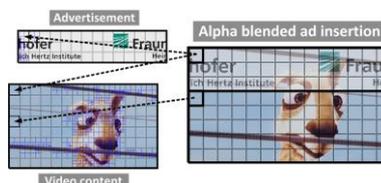
Fraunhofer HHI presents the latest generation of its world-wide leading H.265/MPEG-HEVC software encoding technology, now enabling HEVC live encoding of 10-bit UHD video with High Dynamic Range (HDR) and Wide Color Gamut (WCG).



To satisfy the growing need for high resolution video in applications such as video on demand, mobile web streaming and high-quality TV broadcasting, the encoder scales from high efficient live encoding to very high quality fast offline encoding.

### Advertisement Overlay Insertion for HEVC based services

Insertion of transparent advertisement overlays into coded video typically requires transcoding. Fraunhofer HHI has developed a lightweight technique for advertisement insertion into 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 video output through standard prediction tools. Such a lightweight approach is computationally much less demanding than transcoding-based solutions and requires only a single standard-conformant HEVC video decoder which keeps end devices as simple as possible. The exhibit demon-



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strates live insertion of advertisement overlays into coded content video bit-streams and playout thereof.

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### Software Defined Radio

The Software Defined Radio – SDR – enables flexible wireless prototypes and products with support for multiple radio standards in a compact and energy efficient form factor. The SDR system replaces special and expensive custom hardware boards by FPGAs, DSPs and general purpose processors (GPPs) in MicroTCA form factor. The SDR platform allows prototyping for 4G and 5G systems to benchmark new waveforms, realize Multi-MIMO and Massive MIMO systems, as well as test novel wireless communication concepts.



### Millimeter-Wave Radio Platform – For 5G Research and Experiments

Millimeter-wave transmission is seen as one of the disruptive technologies that will impact the next mobile radio network standard. The high performance digital radio testbed (Hirate) is a flexible hardware platform, which enables and supports applied research and prototyping in the envisioned millimeter-wave frequency bands.



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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](http://www.hhi.fraunhofer.de)

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The Fraunhofer-Gesellschaft is the leading organization for applied research in Europe. Its research activities are conducted by 67 institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of 24,000, who work with an annual research budget totaling more than 2.1 billion euros. Of this sum, more than 1.8 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.

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