

First True HD Communication over 4G Networks to Eliminate Distance Barriers in Communication

Fraunhofer IIS is presenting HD communication over an LTE-A (Long Term Evolution Advanced) 4G cellular network, featuring low delay, CD quality audio and HD video at Mobile World Congress 2011. Fraunhofer's technology allows users to experience completely natural mobile phone conversation, just as if the participants were sitting in the same room.

Fraunhofer's solutions for high quality HD communication over LTE include its Audio Communication Engine, which combines several components to vastly improve the sound quality and clarity of phone calls. This audio package includes high-quality, low-delay audio codecs, robust acoustic echo control and a low delay IP streaming system.

Fraunhofer also shows its matching low delay video solution. This combination of technologies delivers the highest audio and video quality along with imperceptible latency, enabling 4G network operators to provide a dramatically improved communications experience compared to current network technologies.

"As next generation networks roll out, Fraunhofer provides a next generation communication experience by combining its Audio Communication Engine with low delay video technology," said Harald Popp at Fraunhofer IIS. "With consumers' increasing demand for HD quality, Fraunhofer is meeting expectations by delivering a new communication experience to mobile subscribers allowing them to forget about distance, as voices sound as clear and natural as if talking to someone in the same room."

Fraunhofer's low delay video technology consists of high-quality video encoding and decoding based on H.264. This enables HD video at 4G compatible bit-rates.

Fraunhofer's Audio Communication Engine includes the MPEG audio communication codec "AAC Enhanced Low Delay" to ensure CD quality audio at very low coding delays and bit rates. In addition, robust, multi-channel echo control software reliably removes echoes, providing hands-free convenience and complete freedom to move around in a room. Finally, a specially matched IP streaming stack and error concealment tools allow for high-quality audio even under adverse network conditions.

Fraunhofer will demonstrate its HD communication technologies for CD-quality phone calls over a LTE-A network at the Fraunhofer IIS booth 2E41 in Hall 2 at Mobile World Congress 2011.

For more information, visit www.iis.fraunhofer.de/amm

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Published on Wireless Design & Development (<http://www.wirelessdesignmag.com>)

Source URL (retrieved on 12/20/2014 - 3:12am):

<http://www.wirelessdesignmag.com/news/2011/02/first-true-hd-communication-over-4g-networks-eliminate-distance-barriers-communication>