

Press Release

Erlangen/Berlin,
August 30, 2010

Fraunhofer Presents HD Video Conferencing to Deliver Natural Communication Experiences to the Home

Visit us at IFA 2010, Berlin
Sept. 3 – 8, 2010
TechWatch booth 5/7, hall 8.1

Fraunhofer's telepresence@home HD video conferencing technology, developed within the EU project "Together Anywhere Together Anytime" delivers a "same-room" experience despite the distance between users.

Fraunhofer IIS, the world's authoritative source of audio and multimedia technologies, is presenting technologies for telepresence@home and HD video conferencing systems, featuring low delay, high quality audio and video for the first time at IFA 2010 in Berlin. Fraunhofer's technology allows users to experience completely natural conversation just as if the participants were sitting in the same room.

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The telepresence@home system demo is part of the European Union's "Together Anywhere Together Anytime" (TA2) project, which aims to enable new media experiences to nurture relationships between families and friends. Through its work as a research partner within TA2, Fraunhofer contributed its Audio Communication Engine to provide the highest quality audio, and now delivers a matching low delay video solution. This new video technology reduces delay to a level that allows for natural communication experiences. In contrast to conventional video conferencing systems, the Audio Communication Engine and low delay video technology deliver a complete telepresence@home system that provides the highest audio and video quality along with imperceptible latency.

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“Current low delay video technologies require either a much higher bit-rate or rely on very expensive dedicated hardware,” said Dr. Nikolaus Faerber, low delay video project manager at Fraunhofer IIS. “However, Fraunhofer’s solution is based on PC hardware, which is widely available at a very competitive price. The result is an HD video conferencing system for the home that delivers the best possible communication experience at a low cost.”

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Fraunhofer’s low delay video technology consists of low delay, high-quality video encoding and decoding based on H.264 in conjunction with a custom designed low delay frame grabber card. This combination enables high quality HD video at DSL compatible bit-rates well below 100 ms delay end-to-end.

For audio, Fraunhofer’s Audio Communication Engine combines several components that vastly improve the sound quality and clarity of video conferences compared to present systems. First, the MPEG audio communications codec “AAC Enhanced Low Delay” ensures CD quality audio at very low coding delays and bit rates. Second, 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.

“The combination of Fraunhofer’s low delay video technology and Audio Communication Engine will enable truly

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outstanding video conferencing experiences in the home,” said Ian Kegel, Research Group Leader at BT Innovate & Design and Technical Delivery Manager in the TA2 project. “Because the communication is so natural, users feel as if they are in the same room whether they are playing a game, interactively sharing videos or just having a conversation. This same-room feeling means that distance between people no longer impacts the quality of their communication and relationships.”

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Fraunhofer will demonstrate its technology for PC-based video conferencing at its booth 5/7 at IFA TecWatch (hall 8.1).

For more information, visit www.ta2-project.eu and www.iis.fraunhofer.de/amm.

About Fraunhofer IIS

The Fraunhofer IIS Audio and Multimedia division, based in Erlangen, Germany, has been working in compressed audio technology for more than 20 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 AAC (Advanced Audio Coding) as well as technologies for the media world of tomorrow, including MPEG Surround, MPEG Spatial Audio Object Coding and the Fraunhofer Audio Communication Engine.

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 1 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 17,000 employees worldwide, Fraunhofer-Gesellschaft is composed of 59 Institutes conducting research in a broad range of research areas. For more information, contact Matthias Rose, matthias.rose@iis.fraunhofer.de, or visit www.iis.fraunhofer.de/amm.

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