PRESS RELEASE

Redefining the Communication Experience: Fraunhofer IIS Makes Full-HD Voice Available for VoIP Apps

Full-HD Voice VoIP using the AAC-ELD codec delivers CD-like quality for highly improved communication experiences.

Erlangen, Germany – Nov 12, 2012 – Fraunhofer IIS, the world's renowned source for audio and multimedia technologies, will showcase how its Full-HD Voice codec, Enhanced Low Delay AAC (AAC-ELD), supercharges the communication quality of any VoIP app, be it for smartphones, tablets or televisions at CES 2013.

Natively supported in iOS and Android, the AAC-ELD codec is now readily available to app developers and service providers to offer superior VoIP applications that run at the Full-HD Voice quality level. This delivers a completely new same-room communication experience to the end-user.

"From mobile phones to TVs, consumers expect the highest audio quality from their entertainment experiences. There is no reason the expectations for VoIP communication should be any different," said Harald Popp, head of the Multimedia Realtime Systems department at Fraunhofer IIS. "By providing developers direct, native access to the best codecs to deliver Full-HD Voice VoIP apps, consumers can expect the best quality possible."

Fraunhofer's Full-HD Voice technology is already widely used to provide CD-like audio quality for professional video conferencing systems, as well as consumer video telephony applications, such as Apple FaceTime. With AAC-ELD now available in iOS and Android, this same level of professional communication quality can be readily deployed in consumer VoIP apps.

App developers can access the natively-integrated AAC-ELD codec through the Fraunhofer FDK Codec Library in Android since version 4.1 and in iOS since version 4.0 as well as in OSX, allowing cross-platform deployment of Full-HD Voice.

Background Information on Audio Quality in Communication Systems

Historically, the audio quality of VoIP services has been similar to legacy telephony, with a maximum audio bandwidth of 3.4 kHz. Recently, some services have offered a higher audio bandwidth of 7 kHz, which is still quite limited compared to 20 kHz which is the maximum bandwidth humans are able to hear. Another reason for the limited audio

quality of phone calls is usage of speech codecs. As their algorithms emulate a single human vocal tract, they are only optimized for a single speaker in a quiet environment. Speech codecs do not deliver other signals clearly, such as ambience sounds, music and background noise. The result is compromised audio quality in conversations and highly distorted background sounds or music.

With the state-of-the-art MPEG-4 communication codec AAC-ELD, app developers can easily offer a level of performance that removes the limitations of speech codecs and offers the full audio bandwidth of up to 20 kHz, giving voice, music, and ambience sounds equal treatment.

To experience a comparison between legacy telephony and Full-HD Voice visit *www.full-hd-voice.com*. For more information about AAC-ELD visit *www.iis.fraunhofer.de/amm*. For information about The Fraunhofer FDK Codec Library for Android visit *www.iis.fraunhofer.de/fdk*. To download the developer's guide for the AAC-ELD implementation in iOS visit *www.iis.fraunhofer.de/ammwhitepapers*.

VoIP applications that run at the Full-HD Voice quality level deliver a completely new same-room communication experience to the end-user. © Fraunhofer IIS / Kurt Fuchs | *www.iis.fraunhofer.de/pr*.

About Fraunhofer
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 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 5 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 20,000 employees worldwide, Fraunhofer-Gesellschaft is composed of 60 Institutes conducting research in a broad range of research areas.

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