RECORDING HIGH-QUALITY AUDIO IN CHALLENGING CONDITIONS AND PROVIDING VIEWERS WITH A FLAWLESS BROADCAST

At sports games or in outdoor broadcast conditions, it can be hard to record sound to a high standard of quality. And yet sound is crucially important in sports coverage as it helps bring viewers into the heat of the action. The challenge is to record the sound of a live sports event with the highest possible audio quality alongside the video feed, with only limited equipment.

Illusonic, a startup spun out of EPFL’s Audiovisual Communications Laboratory (LCAV), has produced a processor that can deliver high-quality sound live in challenging conditions and an excellent audio feed. Christof Faller, Illusonic’s founder, drew on LCAV’s expertise in processing acoustic signals to design this processor, which is used in Schoeps’ SuperCMIT microphone among others. The processor employs beamforming technology and has two built-in microphones – one at the front and another at the rear. They provide an optimum recording of all frequencies, including low frequencies. The recording process is highly directional, and when placed directly on cameras, the microphone can be used to record very high-quality audio together with the images. We can thus hear the sound made when a ball is kicked at the same time as we see the player kicking it.

The microphone and its processor were used for the first time at a major sports event in South Africa. The microphone is now widely used for TV coverage – in sports such as soccer and tennis – as well as by the film industry.

BEAMFORMING AUDIO PROCESSOR FOR MICROPHONES

The two SuperCMIT microphones.

Schoeps’ SuperCMIT microphone in its packaging.

SuperCMIT printed circuit boards, including the DSP (digital signal processor), are programmed by Illusonic.