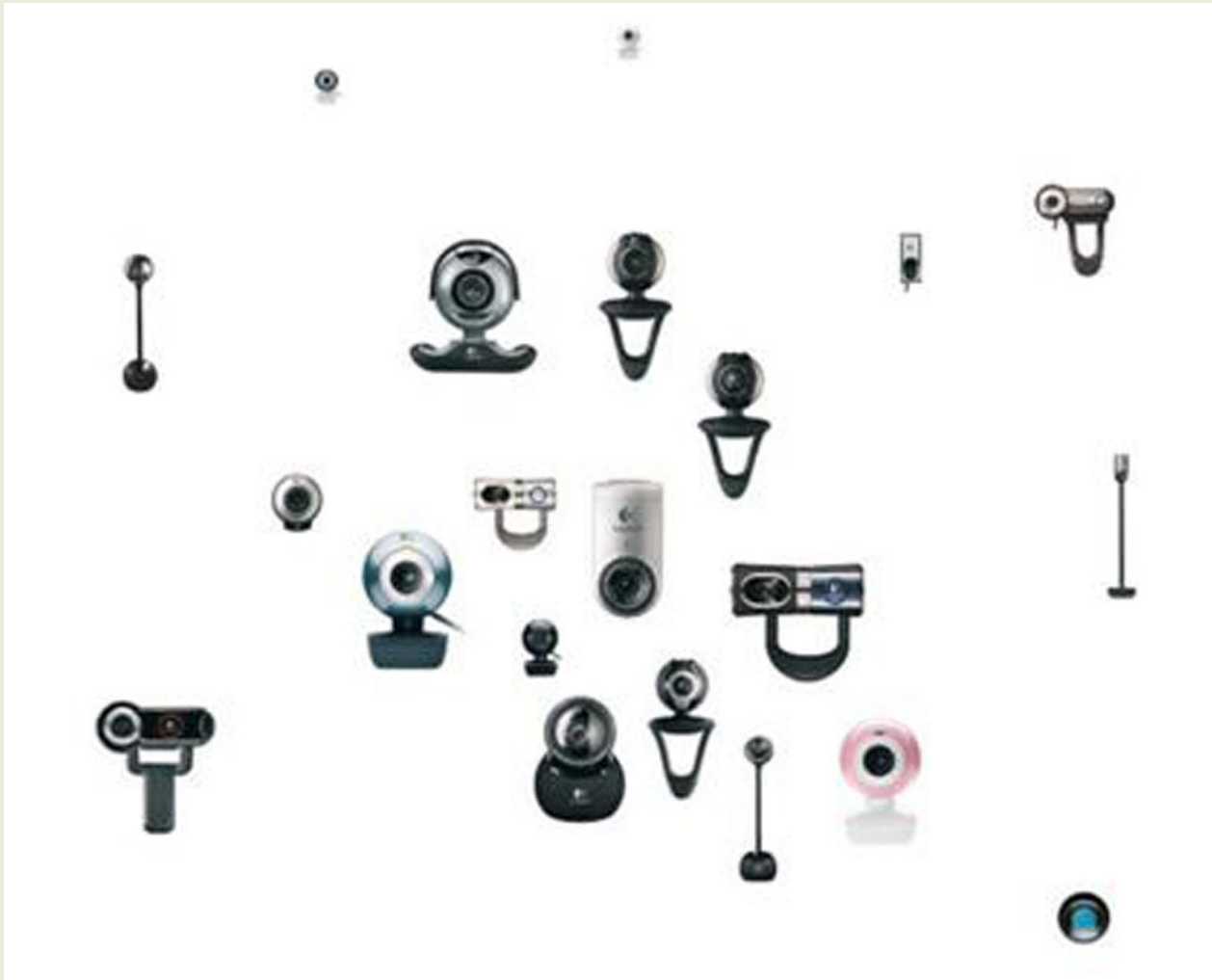


EPFL PSYCHO ACOUSTIC
ECHO CANCELER (PAEC)



EPFL Psycho Acoustic Echo Canceler (PAEC) is running in millions of Logitech webcams and communication products. PAEC is an audio processing software developed at the Laboratory of Audio-Visual Communications.

Acoustic echo suppression and noise suppression is an important part of any "hands-free" telecommunication system such as telephony or audio or video conferencing systems to eliminate undesired echo signals that result from acoustic coupling between a loudspeaker and a microphone.

The PAEC algorithm was developed by Dr. Christof Faller using similar techniques used in audio compression formats like the well known MP3.

The main originality and benefit of this particular Echo Canceler is its low complexity in terms of computing requirements, which is one of the key factor that has triggered the interest for Logitech to effectively embed this technology into the drivers of all its webcams. Indeed, Logitech has the obligation to be able to support a wide range of computer systems and CPUs, including old generations with modest computing capabilities.

This License has been a success for both Logitech, EPFL, the lab and the Inventors for several reasons including the fact it has generated a substantial amount of royalties upon each webcam sold.