ClearOne Awarded a New Patent for Echo Cancellation with Beamforming Microphone Arrays by the U.S. Patent and Trademark Office

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SALT LAKE CITY, March 15, 2016 /PRNewswire/ -- ClearOne (NASDAQ: CLRO), a global provider of audio and visual communication solutions, announced today that it has been awarded a new patent on combining beamforming microphone arrays and echo cancellation.

On February 16, 2016, the U.S. Patent and Trademark Office ("USPTO") issued United States Patent number 9,264,553 entitled "Methods and Apparatuses for Echo Cancellation with Beamforming Microphone Arrays." The '553 patent covers the method of first generating a number of fixed beams through beamforming, followed by performing acoustic echo cancellation on each beam. The '553 patent also covers conferencing apparatuses that are configured to practice this method.

Previously, combining beamforming microphone arrays and acoustic echo cancellation involved performing acoustic echo cancellation first, followed by beamforming. This created a problem because the echo cancellation operation had to be performed separately on each individual microphone signal. When beam steering was performed first, the echo canceller constantly attempted to adapt to acoustic differences with every change in the beams, resulting in poor echo cancellation performance. Moreover, in order to achieve high directionality from a microphone array, a large number of microphones was required, requiring a large number of echo cancellers. Such a system would be more complex, cost more, have worse performance, or exhibit some combination of these drawbacks.

To solve these problems, engineers at ClearOne have invented a method to generate a number of fixed beams, in which the number of beams is less than the number of microphones, for input into an echo canceller. The echo cancellation is then performed on the combined signals corresponding to a fixed beam rather than on each microphone signal. This enables superior directionality with excellent echo cancellation at a lower cost.

The technology of the '553 patent is incorporated in ClearOne's Beamforming Microphone Array product and is currently available.

The '553 patent is part of ClearOne's growing patent portfolio that currently includes over 70 patents and 27 pending patent applications, covering multiple new technologies in the fields of audio and video processing, audio and video streaming, and communication technologies. This ongoing development of new patents continues ClearOne's market leadership position, strong history of product innovation, and development of cutting-edge technologies.

About ClearOne

ClearOne is a global company that designs, develops and sells conferencing, collaboration, streaming and digital signage solutions for voice and visual communications. The performance and simplicity of its advanced, comprehensive solutions offer unprecedented levels of functionality, reliability, and scalability.

Printable releases are available in our Investor Relations area at http://investors.clearone.com.

Contact:
ClearOne Marketing
801-975-7200
marketing@clearone.com

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