Adaptive User-Guided Assistive Listening System

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Technology description

Our inventors have addressed this problem through devising an advanced ALS that uses signal processing algorithms for sound classification and enhancement. The system also leverages multiple microphones and delaysum beamforming techniques to reduce the impact of room acoustics and coherent/incoherent noise sources. Included is a novel and sophisticated interface for user-guidance to a target talker that has the potential to greatly enhance ALS performance in multi-talker environments. Additionally, the device should work with many wireless (e.g., Bluetooth) compatible listener devices, including earphones, headsets, hearing aids, and cochlear implants. This invention will benefit individuals who experience communication difficulty in small to medium sized group listening situations with the potential to improve quality of life, social interactions, and effective communication in the workplace.

Researchers at the University of South Florida have developed an adaptive user-guided assistive listening system (ALS) that can enable people with hearing loss to hear and communicate effectively in multi-talker or noisy environments.

Institution

University of South Florida

联系我们

叶先生

电 话：021-65679356

手 机：13414935137

邮 箱：yeyingsheng@zf-ym.com