

Request Information

Permalink

Over-the-Counter (OTC) Hearing Aid Advancements

Tech ID: 33741 / UC Case 2024-971-0

BRIEF DESCRIPTION

This technology introduces innovative methods to significantly improve the performance and accessibility of OTC hearing aids for individuals with mild-to-moderate hearing loss.

FULL DESCRIPTION

The technology encompasses the application of advanced hearing aid front-end processing, such as directional microphones and multi-channel noise reduction algorithms, to enhance OTC hearing aids. It also includes a novel fitting method that simplifies the adjustment process for users, ensuring that sounds are audible and comfortable. Furthermore, the integration of smartphones and True-Wireless-Stereo (TWS) devices, alongside artificial intelligence (AI), offers opportunities to further revolutionize hearing aid functionality and user experience.

SUGGESTED USES

- » Hearing aids for adults with perceived mild-to-moderate hearing loss.
- » Smartphone and True-Wireless-Stereo (TWS) earbud applications designed to function as personal hearing amplification devices.
- » Artificial intelligence (AI)-powered devices and applications to enhance speech recognition and noise cancellation in hearing aids.
- » Healthcare solutions aimed at preventing or delaying cognitive decline and dementia through early hearing loss intervention.

ADVANTAGES

- » Improved speech intelligibility and sound quality for users with mild-to-moderate hearing loss.
- » Simplified fitting process which allows users to adjust hearing aids without professional audiograms.
- » Utilization of existing consumer electronics to enhance accessibility and affordability of hearing aids.
- » Incorporation of AI to solve complex auditory challenges.

PATENT STATUS

Patent Pending

RELATED MATERIALS

CONTACT

Richard Y. Tun
tunr@uci.edu
tel: 949-824-3586.



OTHER INFORMATION

CATEGORIZED AS

- » Medical
- » Devices

RELATED CASES

2024-971-0

» Chung, K., Zeng, F.-G. (2024). Over-the-counter hearing aids: implementations and opportunities. Frontiers in Audiology and Otology, 2.

UCI Beall
Applied Innovation

5270 California Avenue / Irvine, CA
92697-7700 / Tel: 949.824.2683



© 2024, The Regents of the University of California
[Terms of use](#)
[Privacy Notice](#)