TECHNOLOGY

Multi-Pitch Tracking in Adverse Environments

OVERVIEW

Background
The field of speech processing includes techniques for enhancing speech in conversations and music. Researchers have made recent improvements in separating speakers of interest from their noisy backgrounds. Since many conversations take place in loud environments that include background noise, interfering speakers, etc., relevant parts of speech are often rendered indeterminable. It is desirable to be able to detect speech more effectively, especially in these noisy environments.

Innovative Technology
Researchers at the University of Maryland have created an innovation to more effectively extract the pitch of multiple speakers in the presence of background or other noises. While parts of a speech signal were formerly unintelligible, these parts can now be distinguished and understood through employment of the pitch-tracking algorithm.

Applications
• Cell phones
• Hearing aid cochlear implants
• Military (sniper, subject identification)
• Teleconferencing and videoconferencing

Advantages
• Provides distinguishable speech via detected pitches in multiple voices
• More effective noise filtering in automated speech recognition systems

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Additional Information

INSTITUTION

University of Maryland, College Park

PATENT STATUS

Patent(s) pending

LICENSE STATUS

Available for exclusive or non-exclusive license

CATEGORIES

- Information Technology

EXTERNAL RESOURCES

- US Patent 8,666,734
- US Patent 9,640,200
- US Patent 10,381,025

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