

TITLE

Method and system for consonant-vowel ratio modification for improving speech perception

ABSTRACT

Increasing the level of the consonant segments relative to the nearby vowel segments, known as consonant-vowel ratio (CVR) modification, is reported to be effective in improving speech intelligibility by listeners in noisy backgrounds and by hearing-impaired listeners. A method along with a system for real-time CVR modification using the rate of change of spectral centroid for detection of spectral transitions is disclosed. A preferred embodiment of the invention using a 16-bit fixed point processor with on-chip FFT hardware is also presented for real-time signal processing. It can be integrated with other FFT-based signal processing in communication devices, hearing aids, and other systems for improving speech perception under adverse listening conditions.

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