Abstract

Conventionally the testing of hearing aid algorithm is accomplished by conducting listening test on hearing impaired, but these tests are not only time consuming but also causes exhaustion, especially in aged patients. Simulation based testing proves to be better option for preliminary evaluation of developed algorithm. A novel methodology based on wavelet transform is designed for dichotic presentation. Among different wavelet families, daubechies & symlet are chosen due to their pre-eminence among others. The performance of developed algorithm has been tested on four normal hearing subjects under noisy environment with SNR of 3db, 0db, -3db & -6db in prerecorded phonetically balanced words. Comparative result analysis of performance measures like perception rate and perception time shows the outperformance of processed over unprocessed signals.

References

Wavelet based Scheme to Improve Performance of Hearing under Noisy Environment

1997, pp. 89-140


Index Terms
Keywords

Dichotic presentation, Sensorineural, Binaural, Spectral masking, Speech Processing.