

A Comparative Study of Acoustic Echo Cancellation Based on Least Mean Square Method

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Abstract

This system is implemented to improve the clarity of audio echo speech signal. Acoustic echo cancellation (AEC) greatly enhances the audio quality of loudspeaker enclosure microphone (LEM) system. The presented implementation is based on LMS and NLMS algorithm. This work shows that the use of the NLMS algorithm will eliminate much of the trade-off between residual error with the fixed step-size least mean-square (LMS) algorithm and therefore resulting in an improved performance. This study is also outlines the comparative efficiency of NLMS over LMS through and Spectrogram. Each of the acoustic echo cancellation algorithms is implemented by Matlab programming.