Comparison Analysis of Multi-Channel Echo Cancellation Using Adaptive Filters

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Abstract : Acoustic echo cancellation in multichannel is a system identification application. In real time environment, signal changes very rapidly which required adaptive algorithms such as Least Mean Square (LMS), Leaky Least Mean Square (LLMS), Normalized Least Mean square (NLMS) and average (AFA) having high convergence rate and stable. LMS and NLMS are widely used adaptive algorithm due to less computational complexity and AFA used of its high convergence rate. This research is based on comparison of acoustic echo (generated in a room) cancellation thorough LMS, LLMS, NLMS, AFA and newly proposed average normalized leaky least mean square (ANLLMS) adaptive filters.