Abstract

Mobile communication or wireless phones have become need of everyone in this technological era of global communication. Wireless phones not only provide voice communication, they can also easily be used for other services. But voice quality is always preferable over other services of cellular networks. This demand of superior voice quality, just as like as wired line, over a wireless network has developed and is known as echo cancellation. The main aim of the acoustic echo cancellation is to remove the echoes present in desired signal and to provide echo free speech to the listeners. In this paper, a new approach for acoustic echo cancellation [1] and double talk detection for a teleconference system in non stationary environmental conditions is proposed. In this approach the impulse response of the loud speaker is assumed to be available and is estimated from the digital low pass filter. This approach is more common in the sense that it is applied to all existing algorithms. Performance evaluation of the proposed algorithm is known by calculating echo return loss enhancement (ERLE). This approach shows better performance for non stationary environment and reduces the complexity of both acoustic echo cancellation and double talk detection algorithms and this can be implemented with the help of MATLAB.
Refer

- Constsntain paleologu, Member, IEEE, Silviu ciochina, Member, IEEE, and Jacob Benesty, Senior Member, IEEE,2008, "Variable step size NLMS algorithm for under modeling Acoustic Echo Cancellation", IEEE signal proc., vol. 15.

Index Terms

Computer Science
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Keywords

Acoustic echo cancellation  Adaptive filtering  loud speaker impulse response double talk detection.