An Adaptive Noise Canceller for DS-CDMA Systems

M A Himayath Shamshi 1, 2T Anil Kumar and 3K Kumar Naik

1 Research Scholar, 2 Professor,
1, 2, 3 Department of Electronics & Communication Engineering,
1, 3 KL University, Vaddeswaram, India.
2 SR Engineering College, Warangal, India.
1 himayathshamshi@gmail.com, 2 tvakumar2000@yahoo.co.in, 3 kumarnaik@kluniversity.in

ABSTRACT

This paper presents an adaptive noise cancelling scheme (a speech-specific filtering technique to suppress additive interference) and its VLSI implementation strategy. Adaptive noise cancelling scheme is a sensible choice for speech-orientated devices in situations where the designer has no knowledge of the properties of interference that could potentially corrupt the input speech to a point beyond intelligibility. Issues of power consumption and silicon area become prominent when implementing a noise-cancelling algorithm on such a portable device. Further, some of the benefits of implementation and its potential area for improvement are also addressed in this paper. Finally, the approach is corroborated with simulation results.

Keywords: Adaptive noise cancelling, VLSI design, speech enhancement