Abstract

The principle objective of this work is to enhance the knowledge about channel estimation and to compare the existing channel estimation techniques under different channel conditions. Normally the received signal is corrupted by the channel (Multipath, ISI). The estimation of a time-varying multipath fading channel is a difficult task for the receiver. Its performance can be
improved if an appropriate channel estimation filter is used according to the prior knowledge of
the fading channel. In this work the two popular estimation algorithms, viz., LMS and RLS are
studied with respect to AWGN, Rician and Rayleigh channels. The simulation is performed in
MATLAB platform.

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Index Terms

Computer Science
Signal Processing

Key words
LMS (Least Mean Square) RLS (Recursive Least-Squares)
AWGN (Additive white Gaussian noise) Rayleigh Fading
Channel & Rician Fading Channel