Abstract

MIMO-OFDM is one of the emerging communication schemes which provide efficient communication with multi-carrier modulation. MIMO technology uses spatial diversity technique by using multiple antennas at the transmitter and the receiver side. In MIMO systems, the data streams arriving from different path with different time are combined at the receiver side. OFDM is a modulation scheme that allows digital data to be efficiently and reliably transmitted over a radio channel even in multipath environments. The main idea of OFDM system is to modulate the input data symbol onto a group of subcarriers with predefined coefficients such that the generated ICI within the group will cancel each other. The major disadvantage of this approach is higher bit error rates. The channel estimation also plays an important role in MIMO-OFDM systems. There are number of channel estimation methods which have already been proposed for MIMO-OFDM systems. In the past years many techniques had been proposed to reduce bit error rate in MIMO-OFDM systems. In this paper, we are proposing the new technique to reduce bit error rate in MIMO-OFDM technology. The proposed technique is filtering technique under this technique we use KALMAN filter for reducing bit error rate. Using kalman filter, channel estimation is also done properly as compared with the true value.
Channel Estimation based on Kalman Filtering with BER Reduction in MIMO-OFDM Systems

References

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Index Terms

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