Abstract

A study of space-time block coding in analytical form-multiple input and multiple output (STBC-MIMO) system was done in various cases. Initially, a basic Alamouti scheme for encoding was illustrated. Then, the performance of proposed STBC-MIMO was studied under varying a number of transmitting antennas, varying number of receiving antennas, varying channels, various modulations and also at varying rates. The simulation results were obtained for all cases. At each and every stage, a new encoding matrix was derived.

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Index Terms

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Space-Time Block Coding, OSTBC, Rayleigh fading channel, AWGN, MIMO, BER.