Abstract

The design of wireless systems is open for further improvements in respect of spectrum efficiency, coverage area and link reliability. Multiple-Input-Multiple-Output (MIMO) links are capable to overcome the limitations of data rate and range of wireless devices by exploiting bandwidth efficiency of multiple transmit and receive antennas. Improved efficiency can further be possible by incorporating the Space Time Block Code (STBC) with MIMO system. Researches on MIMO systems with STBC have becoming an important area that improves the performance of system without additional bandwidth or transmit power requirements. This paper presents STBC models in Ricean fading environment using various combinations of transmit and receive antenna numbers. The simulations results have been obtained in MATLAB platform. The bit error rate performance has been analyzed for the Ricean factors of k=0,1, and 10 in both the BPSK and 16 QAM modulation schemes.

References

Variable Rate Space-Time- Block-Code Error Analysis for Ricean Faded Channel for PSK and QAM Signals

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Index Terms
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