

Performance Analysis of Transmit Beamforming under Employment of Generalized Receiver in Wireless Communication Systems

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Abstract— The bit error rate (BER) performance analysis of transmit beamforming technique employing the generalized receiver (GR) under the binary phase shift keying (BPSK) modulation over Rayleigh fading channel is investigated. The scheme uses two transmit antennas and one receive antenna. Simulation result demonstrates a high performance gain under employment of GR with transmit beamforming technique in comparison with Neyman Pearson (NP) receiver under the same conditions.

Keyword— *Generalized Receiver (GR), Rayleigh fading channel, bit error rate (BER), transmit beamforming, and transmit diversity.*



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