Several transmission modes are defined in IEEE 802.11 a/b/g WLAN standards. A very few transmission modes are considering for IEEE 802.11 a/b/g in physical layer parameters and wireless channel characteristics. In this paper, we evaluated the performance of available transmission modes in IEEE 802.11b [1]. However, the performance analysis can be done.
straightforward using the evaluation of IEEE 802.11b. The performance of transmission modes are evaluated by calculating the probability of Bit Error Rate (BER) versus the Signal Noise Ratio (SNR) under the frequently used three wireless channel models (AWGN, Rayleigh and Rician) [2]. We consider the data modulation and data rate to analyze the performance that is BER vs. SNR. We also consider multipath received signals. The simulation results had shown the performance of transmission modes under different channel models and the number of antennas. Based on simulation results, we observed that some transmission modes are not efficient in IEEE 802.11b. The evaluation of performance confirms the increase in the coverage area of the physical layer in the 802.11b WLAN devices.

Reference

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Index Terms

Computer Science
Communications
### Key words

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<th>AWGN</th>
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