

Simulation of OFDM technique in WiMAX

Nguyen Ha Nam

Abstract: This topic focuses on simulating the Orthogonal Frequency Division Multiplexing (OFDM) technique in a Wireless Metropolitan Area Network (WiMAX) system. The research background addresses the necessity of OFDM technology in improving data transmission performance, particularly in wireless Wi-Fi environments. The objective of the project is to build a theoretical and experimental model to evaluate the performance of OFDM in WiMAX through specific tests. The research method combines theoretical analysis with application deployment to identify the advantages and limitations of OFDM in the WiMAX context. The expected result is to provide a foundation for optimizing OFDM-based data transmission systems, contributing to the rapid development of modern wireless technology.

Keywords: OFDM, WiMAX, Simulation, Optimization, Data transmission