

Research on OFDM technology applied in LTE

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Abstract: This topic aims to examine the necessity of Orthogonal Frequency Division Multiplexing (OFDM) technology in Long Term Evolution (LTE) telecommunications systems. The main objective is to analyze and evaluate the data transmission performance of OFDM applied to LTE mobile networks, thereby building an optimized system based on theoretical and experimental methods. The research methodology includes synthesizing existing literature on OFDM in LTE and conducting practical experiments to identify improvements in transmission performance. The expected results from this topic will provide important information to optimize mobile network performance, contributing to the development of sustainable telecommunications technology.

Keywords: OFDM, LTE, Data transmission optimization, Mobile telecommunications, Telecommunications technology