

Research on RoF system using OFDM technique

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Abstract: This topic focuses on researching and implementing a Radio-over-Fiber (RoF) transmission system combined with Orthogonal Frequency Division Multiplexing (OFDM) technology. The context of the topic arises from the high demand for bandwidth in mobile telecommunications networks. The objective is to build and verify the performance of an OFDM-based RoF system through theoretical analysis and practical experiments. The methodology combines literature research, mathematical model design, and application deployment on modern telecommunications platforms. The expected result is to provide an efficient transmission solution for future mobile networks, contributing to the development of telecommunications technology.

Keywords: RoF, OFDM, Mobile Telecommunications Network