

Study on the influence of transmission channels on the physical layer at the radio interface in WCDMA networks

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Abstract: In this study, we focus on analyzing and evaluating the influence of transmission channel characteristics at the physical layer on the radio interface in WCDMA networks. The practical context highlights the importance of this issue for mobile service quality. The objective of the research is to identify key channel factors affecting system performance and to develop a mathematical model for predicting physical layer behavior under various channel conditions. The research methodology includes both theoretical and experimental analysis, aiming to provide useful solutions for optimizing WCDMA networks. The expected results of this study will help improve mobile service quality and enhance the competitiveness of mobile systems.

Keywords: transmission channel, physical layer, WCDMA network, radio interface, optimization