

Research on LTE technology physical layer

Nguyen Tien Dung

Abstract: This topic focuses on studying the Physical Layer of the Long Term Evolution (LTE) mobile communication system. The context for choosing this topic stems from the practical necessity to optimize data transmission performance. The objective is to analyze and evaluate key technical characteristics, as well as to consider potential improvement solutions applicable to the current LTE system. The research methodology includes synthesizing and analyzing theory, combined with practical experiments on simulation equipment. The expected results of this topic not only contribute to scientific knowledge in communication physics but also provide practical guidance for LTE system developers.

Keywords: LTE technology physics, Mobile communication system, Performance optimization, Technical analysis, Practical testing