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| Thesis Title | Low information feedback and Makeup constellation method OFDM system over Multipath fading |
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## ABSTRACT

This thesis studied and improved wireless communication systems over multipath channel. At present, there are detector and compensation systems in wireless communication systems. Pre-equalizer is at its most accurate, it sends a large amount of pilot and feedback data to a transmitter. This thesis improves and reduces the complexity by making up constellation. This method is applied for both amplitude and phase of transmitted signal to improve the performance. Pilot information bits are used to trace the channel variation for making up constellation. The receiver sends back the transmitter the low rate information of channel variation. Transmitter will use make up constellation information in modulation process.

The results from the simulation based on 3 scenarios: makeup constellation with equalizer, THP and ZF. The proposed system can effectively reduce bit error rate and closes to the THP's performance.