

ABSTRACT

OFDM (Orthogonal Frequency Division Multiplexing) has applied in Broadband Wireless Access (BWA) technologies because of its high spectral-efficiency. The principle of orthogonality made it possible for the system to allow overlapping between subcarriers without interference. But OFDM has a weakness, its high PAPR which can stimulate linear distortion in amplifier.

In this final project, simulation and analysis is made to figure out the impact of Partial Transmit Sequence (PTS) in PAPR reduction. In this scheme, each block of subcarriers divided into some sub-blocks, then every sub-block are multiplied by phase combination, the transmitted signal is made to have low PAPR by optimally combining signal sub-blocks. Channel coding used to lessen bit error rate (BER) is Cyclic Code.

Results of simulation shows that addition of partition (V) in PTS will improve reduction of PAPR up to 2,5 dB. Application of cyclic code decrease BER down to 4 dB conventional OFDM.

Keyword :

OFDM, PAPR, PTS, Cyclic code, BER