

Bachelor/Master Thesis

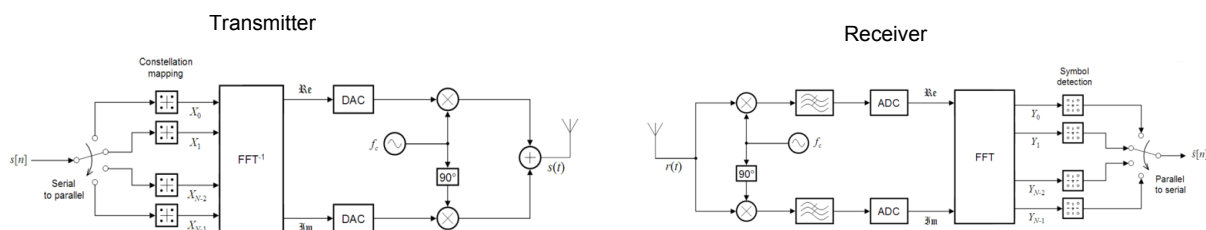
Comparison and evaluation between OFDM with FBMC systems

Research field:

Multicarrier communication systems, digital communications, signal processing

Keywords: FBMC, OFDM, BER

Discription: Orthogonal frequency division multiplexing (OFDM) has been used for broadband and wireless communications for the past two decades. Nowadays, it is the dominant technology for multicarrier communications. However, it has some disadvantages for certain applications, for example, in cognitive radio systems, OFDM has severe out-of-band signal power leakage. Therefore, in order to come up with desirable solutions, filter bank multicarrier (FBMC) systems are now considered as a promising approach.



Goal: The goal of this thesis is to compare and evaluate the performance between these two systems under different channels. Moreover, a closed-form bit error rate (BER) expression for the FBMC system should be achieved.

Prerequisites:

- Strong interests in theoretical research
- Knowledge of the digital communication systems
- Skills in Matlab/Simulink

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