

ABSTRACT

Synchronization is one of the important things in telecommunication system. Lost of synchronization between transmitter and receiver could happen because the characteristic of the channel variation. To handle it, we choose feedforward method that is also suitable for burst data type.

In this final task the performance of feedforward method for wavelet OFDM is the attention, where the signal is the output of wavelet filter in the form of baseband signal BPSK (binary phase shift keying) that already added AWGN (additive white gaussian noise). The signal is resampled by higher factor, such that the spectral component at $1/T$ can still be represented, then it processed through TDFT (time discrete fourier transform), then it processed by the argument to produce delay estimation. Simulation use Matlab 7.0 software in m-file.

From the the result of simulation, the length of delay estimation observation (L) effect the deviation of the estimated delay, where more longer L the smaller the deviation of the estimated delay. Beside that, more lower the SNR, synchronizer can no longer detect the estimated delay correctly. This condition called the limit of non-data aided synchronizer.