Pichaporn Chutivisut 2012: Implementation of an OFDM Data Transmission over Personal Computer Soundcard. Master of Engineering (Electrical Engineering), Major Field: Electrical Engineering, Department of Electrical Engineering. Thesis Advisor: Assistant Professor Wachira Chongburee, Ph.D. 59 pages.

This research is to improve the previous similar research which designs a communication link over an audio channel. The audio band is a part of the existing infrastructure, so this is to maximize its usage.

In the previous work, the data is sent over an existing FM broadcasting system. The OFDM transmit waveform is generated by a personal computer soundcard to fit 15 kHz bandwidth of the audio channel. It is shown that images can be sent over the FM broadcasting.

The goal in this research is to increase the transmission rate by replacing BPSK used in the previous by QPSK modulation for faster transmit rate. It is developed to work on Windows without using MATLAB platform. This research covers transmission by using audio signal cable without the FM broadcasting.

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