

ABSTRACT

Telecommunication is one of the most important things in human life. It has been in a very fast development and has various kinds of innovation. Wireless technology is one of the results of the development that has many variations whether in means of transmission, mode of modulation and access methods that are being used. Modulation is one of the most important things in telecommunication system that offers many effects in it. There are many kinds of modulation that can be used. One of them is combining two kinds of modulation. To get to know about how the result is, a simulation is needed to be done.

The simulation of OFDM and BPSK demodulation is done by using C++ Builder language program, based on IEEE 802.11g standard. The desired result is the visualization of the different shapes of the signal in each block. This simulation software is validated by a comparison between the demodulation simulation of OFDM and BPSK in C++ builder and Matlab. The second way of validation is by calculating error probability (P_e), so it can be seen whether the error probability in this simulation is in the right value.

The result of this simulation depends on the hardware specification. Using the C++ builder program needs a high capacity and a well-done hardware.

Keywords: BPSK, OFDM, Modulation