

ABSTRACT

The CW radar is one of the radars commonly used to change the Doppler effect of a moving target. This radar diverts objects and places its position in open space by transmitting electromagnetic energy and moving the echoes needed. The results obtained from the simulation are expected to be used as a reference in developing the human interface system to the engine.

In this Final Project is to discuss a system that can translate motion signals that have been determined based on Doppler responses. In this Final Project, CW radar operated at 10 GHz is studied and provided to support human hand movements. Experimental investigations were carried out with computer simulations and CW HB100 radar modules.

This experimental result shows that CW radar can distinguish several hand movements. Hand gesture approved with radar. Then the signal can be distinguished by using a cross-correlation process in MATLAB.

Keywords: Radar, Continuous Wave Radar, Doppler Effect, Cross-Correlation.