

ABSTRACT

Radar or Radio Detection and Ranging has the capability to detect the movement of an object. Radar has many implementation in daily life in various fields such as military, health and much more. With the development of technology began to develop Human to Machine Interface (HMI) which has the ability to translate the user's cues by machine. Radar has also developed so that it could be combined with HMI so they could combine their respective functions.

One type of Radar is the Continuous Wave (CW) Radar. CW Radar generally used to detect objects based on the Doppler effect. CW Radar with certain configurations combine with HMI is expected could be one solution to support these expectations. This Final Project uses two configurations, namely horizontal and vertical configurations combined with HMI using MyDAQ and LabVIEW for know the power level and will be processed further with MATLAB to determine measurement accuracy.

The results obtained from this Final Project are by using multisensor configuration can detect hand movement. Horizontal configuration and Vertical could detect with an accuracy rate of 87.5% from 8 times of testing in each configuration in terms of power and measurement accuracy. So, it can be concluded by using a multisensor configuration in the form of horizontal and vertical can detect hand movement.

Keyword: *Continous Wave Radar, Doppler Radar, Impelementation of HMI, MyDaQ, LabVIEW.*