

## ABSTRACT

Radar is a technology that is very beneficial for humans, where radar can determine something at a certain distance, and the working principle on radar is like the working principle of a dolphin brain. Radar is very often used to determine the weather every day. And humanity really needs radar to carry out activities, as early monitoring of disasters that will occur so that damage can be minimized.

This final project aims to discuss how to process weather radar signals that will use the DCT (Discrete Cosine Transform) method. The processing results will be calculated how the performance with the predetermined calculations, the data contained on the web which will be sampled as a comparison with the results that have used the DCT method, where the date, time and type have been determined. The comparison that will be made is to compare how the optimization of signal processing using DCT starts from the process until the data is received, and also the accuracy or the results received whether it changes or not.

The use of block size greatly affects the value of performance. From the data tested, the block size 4x4 has the best performance out of the 7 block sizes tested with the values of SNR 308,934, PSNR 283,194, and the time needed to compress 48.4186 seconds.

**Keywords :** IDRA, DCT (*Discrete Cosine Transform*), 4TU.Center for Reasearch Data