

## **ABSTRACT**

*Confidentiality of data in a data exchange process between devices becomes a very important factor to be considered along with the amount of data being stolen by others. To avoid this, we need a data security techniques, one of which is steganography. Steganography is a technique of hiding secret data in a storage data, where the existence of secret data is expected not to make suspicion and not visible to the human senses. However, the use of steganography is needed modifications to improve the security of the confidential data. One modification is double steganography.*

*In this final project has been performed twice hiding messages process of steganography technique or double steganography. Secret data is hidden in the form of black and white pictures with the format \*.bmp (bitmap) that is inserted into a grayscale image format \*.bmp using the Dual Tree Complex Wavelet Transform (DT-CWT). Then, the second insertion is done by inserting a picture that has been inserted the secret message (stegoimage) into the storage of a video format \*.avi (audio video interleave) using Discrete Wavelet Transform (DWT).*

*Based on the test results, the design system has good performance seen from the video stego range of Signal to Noise (SNR) value between 45.9dB - 62.46 dB. The system also has a high resistance against AWGN attack seen from the extraction of messages that generate maximum BER value is 0 when attacked by AWGN 50dB.*

***Keywords: Double Steganography, Dual Tree Complex Wavelet Transform, Discrete Wavelet Transform, Signal to Noise Ratio, Additive White Gaussian Noise, Bit Error Rate***