

ABSTRACT

Development of information technology and communication is growing very rapidly in this modern era, so that makes everyone may exchange some of information in anywhere and anytime by just using the internet in realtime. Behind all of the advantages and convenience provided by internet there are the weakness which cannot be avoided, the most weakness is from security and privacy. Therefore a technique is needed to be able to secure the information, one of them is using steganography. Steganography is a technique for hiding data and information on a media without arousing suspicion from other parties.

Research on digital image steganography processing has been carried out before by several people, one of which was carried out by K. Thangadurai and G. Sudha Devi on his journal entitled "An Analysis of LSB based image steganography techniques", published in IEEE in 2014. In this research the writer will apply steganography on digital image by using Quantization Index Modulation (QIM) method with combination technique Stationary Wavelet Transform (SWT) and Discrete Sine Transform (DST), where previously the data to be inserted is first streamlined using the Compressive Sensing (CS) technique.

By using Matlab Software as a means of designing digital image steganography systems, the results of this study obtained stego image results that have a low Bit Error Rate (BER) parameter or $BER = 0$, high or infinite on Structural Peak Signal to Noise Ratio (PSNR), High Similarity Index Matrix (SSIM) or $SSIM = 1$. When the stego image is tested for its durability by using JPEG compression attacks, Additive White Gaussian Noise, and salt and pepper noise the BER results are high or $> 30\%$ and the SSIM results are low or < 1 . This results in stego image is not resistant to attacks.

Keywords: *Steganography, Stationary Wavelet Transform, Discrete Sine Transform, Stego Image, Compressive Sampling*