

## **ABSTRACT**

*Digital image compression is an attempt to transform the data or symbols of the compilation of digital images into data or other symbols, without causing a significant change in the digital image to the human eye that observes it. Compressive sensing (CS) has drawn quite an amount of attention as a joint sampling and compression approach. Its theory shows that when the signal is sparse enough in some domain, it can be decoded from many fewer measurements than suggested by the Nyquist sampling theory. Discrete Cosine Transform (DCT) aims to transform two-dimensional image representations from spatial domains into frequency domains, ie by collecting energy, and existing values are real numbers. In DCT 2-D signal energy at low frequencies is widely distributed in the upper left region of transformation. While the value in the lower right area represents a high frequency that can be ignored because it is not a section that contains important information from an image.*

*The research conducted an analysis of the effect of Compressive Sensing on image watermarking process. Compressive Sensing is also paired with the method of Discrete Cosine Transform (DCT) as its insertion method also for the reconstruction. The results of this study are expected to produce good compression quality determined from 4 main parameters, ie SSIM between 0 - 1, MSE less than equal to 0.1, MOS more than 2.5, and PSNR more 30 for image.*

*Keywords : Compressive Sensing, Discrete Cosine Transform, Wavelet, Reconstruction of Compressive Sensing.*