

ABSTRACT

Digital Image is a kind of digital media that can be used for insertion and sending secret message to a receiver without causing the outsider suspicious with the message, one of the ways for this is by steganography. In this final project, process of the steganography is using an adaptive method, which is correlate color feature that avoiding extreme changes of the color.

There are two steps in this final project, those are insertion process and retaking the message that has been inserted. Insertion process begin with generate random numbers with Pseudo Random Algorithm, these random numbers will use for determine pixel that will be modified, after that pixel that has been chosen will be modified agree with the message bit. Second process is retaken back the message that has been inserted, that is regenerate random pseudo numbers, determine pixel position, and taking message that has been inserted.

After doing planning and implementation, there is a trial for testing the endurance of stego image from attacking. Kind of attacks that are used in the trial are rotate (rotate scale $30^\circ : 45^\circ : 60^\circ : 90^\circ$), rescale (rescale scale $0.5 : 0.75 : 1.25 : 1.5$), and noise salt and pepper (noise scale $0.05 : 0.1 : 0.25 : 0.5$). From this result measurement done with subjective and objective point of view, steganography adaptive for digital image that has quality of stego image, average MSE system is 0.1 and average PSNR above is 50dB. After done the attack of Rescaling, Rotate, and given Noise Salt and Pepper. In Rescale and Rotate, result of logo extraction still looking good, as in Noise Salt and Pepper result of logo extraction was worse than both of other attacking. From image histogram, there is not really an extreme difference that can be conclude that the system is can performed really well in both kind of those histogram.

Key words: *Steganography, Adaptive, Pseudo Random, Digital Image*