# *ABSTRACT*

*As the technology advances, the risk of threats to information will be even greater, especially in information-information that is confidential. To protect information the first technique that can be used is cryptography. On cryptographic data is transformed into a form that is not formatted, causing the data can not be understood by unauthorized parties. Because data is only encrypted into symbols kunpulan not formatted, it may invite suspicion stretcher. The data is not formatted and can be taken to try to be decrypted. The problem can be solved by adding Steganography after the encryption process. On steganography the data is hidden into other media so that the shape of the data is not visible by the human senses.*

*Process in this program consists of two processes, encoding or insertion process and the decoding or extraction process. In the embedding process takes inputs in the form of a digital image format. PNG, the message, and key. Output of the insertion process is stego image. While the process of decoding or extraction process takes inputs in the form of stego image and key to be able to open the message. The resulting output in the form of a message that has been extracted from the image.*

*At this steganography system testing using three digital images and three texts. Types of modifications are used to test the robustness level image steganography result is transparency and JPEG format conversion. The parameters used to measure changes in the message bits is BER and to measure the magnitude of error in the image are MSE and PSNR, to determine the stego image quality is subjectively by MOS.*

*The test results show that the steganographic system is resistant to modification transparency that can be seen from the average value of the resulting PSNR is > 30dB. MOS values produced very good > 4.5. On the recovery aspect of the test results, the steganographic system can fulfill these aspects indicated by the value of BER 0%. On the test results messaging security can only be extracted with the same key with the key during the insertion process.*



*Keywords: Steganography, encryption, random number, modified image.*