***ABSTRACT***

*Secrecy and security are important aspects needed in the process of exchanging information via the internet. Various security techniques have been developed to protect the confidentiality of messages, for example the steganography of the Least Significant Bit (LSB) method. However, most of the research conducted in general still uses lossless images as cover-images. Even though at this time a lot of images that are on the internet and produced by mobile cameras and professional cameras have a lossy format. Therefore, in this study hiding text messages into lossy formatted images using bit substitution. In this study the process of hiding text messages is done in bits one to eight and in all image components alternately. From the research that has been done, the results show that the message can be hidden and extracted from a lossy image format, the percentage value of extraction success is influenced by the position of the bits used to hide the message into the image. Besides the lossy image used also has an influence, where the lossy image has compression which removes redundant data so that it damages the information that has been hidden, and the extraction results in grayscale images are better than the image.*

***Keywords****: Least Significant Bit (LSB), Lossy, Steganography, Bit Substitution*