

ABSTRACT

Various types of ways to communicate can be done, one of which is by hiding the message into another object, it can be called steganography. Steganography is an art or science that studies the natural process of hiding information or secret messages into the data cover, the cover of the data can be video, audio or image. Steganography can be grouped into 2 types, namely: blind steganography and non-blind steganography, abuse of steganography often occurs, one of which is used to insert a certain message on the basis of a crime. Therefore, steganalysis is needed to control the existence of misuse of steganography.

This study designed architecture from a method called DCT (Discrete Cosine Transform) and block division as a steganalysis extraction method, using PCA (Principal Component Analysis) as a digital image reduction, K-NN (K-Nearest Neighbor) for classification processes, and methods windowing to determine the location and volume of image steganography. There have been many studies that have developed these methods, but the parameters of accuracy and time are the most noticed parameters. Based on these conditions, in this study DCT, PCA, K-NN architecture, block division, and windowing are designed which not only can detect hidden messages or not, but also can detect the position and volume of the secret message with the best accuracy.

By using more complete parameters in the form of Mean, Covariance, Standard Deviation, Cosine, Euclidean Distance, Correlation, City Block, and Eigen, this study produces an accuracy rate of 75% in the steganalysis system and an accuracy of 72% in image position and volume detection image steganography.

Keywords: *Steganografi, Steganalisis, DCT, PCA, K-NN, Windowing.*