IMPLEMENTATION OF STEGANOGRAPHY AT MEDIA IMAGE BASED ON PIXEL VALUE MODIFICATION METHOD USING MODULUS FUNCTION

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Abstract

Currently, growth of human needs for security of secret information via internet is needed. Steganography can be one of solution against this problem. However, it is not easy to produce a steganography file which difficult to detect, so it needs to hard work to find a new steganography method.

Steganography is hiding knowledge of secret data by inserting secret data in multimedia. Although the term steganography known for thousands of years, the practice of steganography in digital media came late and research developed at the end of 2001.

Media used in this Final Project is a color bitmap (BMP) image. Existing steganography methods focus to increase the capacity of secret data that can be inserted. Based on existing methods, implementation methods in this Final Project expect image steganography results were not much different from the original image.

In this final project, writer will implement pixel value modification method (PVM) using the modulus function. Modulus function is used to determine the pixel values are changed. Secret Data will be converted into digit value then inserted into each original image pixel values.
Based on the test results, authors can conclude steganography using PVM method using modulus function can increase the capacity of secret data and the steganography image quality is quite good. The quality of image steganography is affected by the value of the modulus is used and the size of the data inserted in the original image.

Keywords: BMP, modification, modulus, pixel, PVM, steganography, value