ABSTRACT

CRYPTOSAIC : Cryptography for Mosaicing

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Recently, there are many data especialy image data which is necessary to be secured such as military and medical data. One method which is frequently used is mosaic. One of the disadvantages from mosaicing is that it is difficult to be reversed into the original image. For overcoming the problem then it is proposed to use encryption algorithm instead of mosaicing. Encryption algorithm which has been proposed to encrypt the part of image which have been cropped (a part which is considered confidental) in rectangle shape. However, the inefficiency occured while encrypting the unimportant part of the cropped image. In this study, a method which is using edge detection for segmenting the cropping area (such that the cropping area is similar to the image shape) and maintaining the security level. The cropping process is conducted by applying Sobel edge detection and Soft Encryption as well as AES for strengthening the security level. As for securing the image, it is done by altering the two dimensional pixel value into set of one dimensional pixel value, and further the pixel value set is encrypted using encryption algorithm such as in text [1][4][5]. By implementing this proposed method, lower computation while maintaining the strength is achieved.

Keywords: Mosaic, selective bitplane, experiment