ABSTRACT

HARYANTO. The Implementation of Visual Cryptography on Color Images Using Youmaran’s Method. Supervised by SHLEVIE NIDYA NEYMAN.

Visual cryptography was introduced in 1995 by Moni Naor and Adi Shamir. From that moment visual cryptography has grown. Visual cryptography scheme has changed from the most simple technique which can be decrypted by human visual system until advanced techniques that need computer assistance on decryption process. Visual cryptography was firstly used for binary images, but now it can be used in color images. One of the methods that can be used in visual cryptography for the color image is Youmaran’s method. The aim of this research is implementing visual cryptography using Youmaran’s method and then analyzing it. This research uses maximum four cover images to hide plain image. This research uses Mersenne Twister algorithm to generate random numbers for encryption and decryption process. This research also calculates the PSNR value of the decrypted image. The result from this research indicates that using visual cryptography with Youmaran’s method can hide an image in other images. With this method, human eye will not know that in fact there is an image inside the camouflage images.

Keywords: Visual Cryptography, Youmaran, Mersenne Twister, PSNR.