ABSTRACT

Advances and developments in technology are used by the community to support various sectors, one of which is the payment sectors. Nowadays, people can easily make mobile payment transactions via QR Codes, such as QRIS, Go-Pay, Dana, OVO, etc. increasing the demand for information and data protection. This convenience poses many security risks in its use. Attackers can look for a crack for committing crimes on payment transactions and making a lot of businesses suffer economic losses. There are many ways that hackers can obtain information or data, so information and data need to be protected. Therefore, the development of a robust mobile payment authentication system is imperative. In this research, Visual Cryptography is proposed to secure the transaction using QR Codes using Extended Visual Cryptography Scheme (EVCS) for making the shared image into meaningful image to make it easier for the public to uses the transaction. This paper uses Bit-level Visual Cryptography Scheme (VCS) and the Steganography method for the extended Visual Cryptography Scheme (EVCS) by embedding the pixel data from shared image into carrier image. The performance result from this research shows that the EVCS has the 29 Db on PSNR score and 53 % on the SSIM score while the MSE score is 84.36, also the image can be reconstructed without any problem and can be recognizable for the human vision and QR Code reader device.

Keyword: *Visual Cryptography, Bit-level, EVCS, Steganography, QR Code, Authentication System*