Abstract

Visual Secret Sharing (VSS) encrypts secret images into n shares and decryption is done through the human vision. But, traditional visual cryptography scheme is restricted to the number of secret images or the performance of recovered image is not good. The proposed scheme shares multiple images using gray level mixing with real size image recovery and has improved contrast of recovered images with use of inspection function. We propose a scheme that can share m binary secret images into n rectangular gray level share images. The low computation bit plane encoding scheme uses concept of Extended Visual Cryptography scheme (EVCS) to have meaningful shares that can easily managed and reduce attention of hackers.
Multiple Secret Sharing Scheme with Gray-Level Mixing using EVCS

over communication channel. In first phase, m images are broken into shares using conventional EVCS. Each image is broken into n individual binary shares. In the second phase, the respective shares of every image are combined with stacking the shares, since each share works as a bit plane in gray image.

References

- D. S. G. Ateniese, C. Blundo and D. R. Stinson, "Constructions and bounds for visual cryptography," in 23rd International Colloquium on Automata, Languages and
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Index Terms

Computer Science  
Security

Keywords

Visual Secret Sharing(vss)  
Extended Visual Cryptography Scheme (evcs)  
Bit Plane Encoding
Contrast