Accommodating Secret Sharing Technique for Personal Remembrance via Steganography

Adnan Gutub and Maimoona Al-Ghamdi

Computer Engineering Department, Umm Al-Qura University, Makkah, Saudi Arabia

Abstract—The secret sharing scheme is a data security tool that provide the reliability and robustness for multi-user authentication systems. This work focus on improving counting-based secret sharing technique for better shares security as well as simple and fast computation. The research considers resolving some originally published defects in the shares reconstruction phase proposing new distribution model authenticated to be optimized practical and efficient. The shares reconstruction model also reflected increasing the security of the system by authenticity of the shares via steganography. We have employed image-based steganography methods to store the shares presenting a comparison proofed remark. The improved system has been analyzed according to distortion security and capacity parameters showing attractive contributions.

Keywords—Counting-Based Secret Sharing, Image Steganography, Shares Distribution, Secret Reconstruction, Key Management, Key Distribution, Information Security.