**A Simple Steganography Algorithm Based on Lossless Compression Technique in WSN**

**ABSTRACT**

Image security has wide applications in data transferring from source to destination system. However, cryptography is a data secrecy technique between sender and receiver, the steganography increases the level of security and acts a protective layer to the hidden information within the source image. In this paper, a compression scheme based image security algorithm for wireless sensor network is proposed to hide a secret color image within the source color image. The main contribution of this paper is to propose a compression scheme which is based on level matrix and integer matrix, and increases the compression level significantly. The performance of the proposed system is evaluated in terms of peak signal to noise ratio (PSNR), mean square error (MSE), number of pixels change rate (NPCR) and unified average changing intensity (UACI). The proposed method achieves 42.65% PSNR, 27.16% MSE, 99.9% NPCR and 30.99% UACI.

***Keywords*** Image Security, Steganography, Compression, Secret Image, Cryptography