

NEW IMAGE STEGANOGRAPHY METHOD BY MATCHING SECRET MESSAGE WITH PIXELS OF COVER IMAGE (SMM)

ABDELMGEID AMIN ALI¹ & AL – HUSSEIN SEDDIK SAAD²

¹Associate Professor, Department of Computer Science, Faculty of Science, Al – Minia University, Egypt

²Assistant Lecturer, High Institute for Engineering and Technology (H.I.E.T), Al – Minia, Egypt

ABSTRACT

Steganography has been widely used, including in recent historical times and the present day. It can be defined as the study of invisible communication that usually deals with the ways of hiding the existence of the communicated message. Using steganography, information can be hidden in different embedding mediums, known as carriers. These carriers can be images, audio files, video files, or text files, but digital images are the most popular because of their frequency on the Internet. The larger the cover message is (in data content terms—number of bits) relative to the hidden message, the easier it is to hide the latter. For this reason, digital pictures (which contain large amounts of data) are used to hide messages on the Internet and on other communication media. The use of digital images for steganography makes use of the weaknesses in the human visual system (HVS). In this paper, a novel image steganography method based on Secret Message Matching (SMM) has been proposed.

KEYWORDS: Steganography, Peak Signal-to-Noise Rate (PSNR), Mean Square Error (MSE)