

IMAGE STEGANOGRAPHY BY USING DEVELOPMENT OF LEAST SIGNIFICANT BIT

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Relevance. The communication is very important and popular to transform data from one device to another. A message travels from a side to another side and the unauthorized side may listen and discover the content of the message. Therefore, the message must be protected from the unauthorized side. Various techniques have been developed to protect sending the message.

Goal of the work – This paper proposes the least significant bit Steganography method to hide a secret message inside an image cover via using dynamic stego-key. To check the effectiveness of the proposed method, many factors are used for evaluation and compared with another method. The results illustrate more robustness at steganography since stego-key depends on the cover image to hide a secret message.

Result analysis –The development of least significant bit algorithm (DLSB) is similar to (LSB), which converts the message and image pixels into binary form, but the difference is in substituting. The most significant bit (MSB) uses to decide the substituted bit of a message if it is the first bit of (LSB) or the second bit. Our algorithm is a protocol between the sender and the receiver. For example, when MSB is '1', it substitutes the first bit of the (LSB) and when (MSB) is '0', it substitutes the second bit of the LSB. This algorithm is called a development least significant bit (DLSB). The results show a small change between (DLSB) and (LSB). In the LSB method, the color grade of the image pixel changed between ± 1 from the original value. Whereas, in (DLSB), the color grade of the image pixel is changed between ± 2 from the original value. Hence, it is impossible to recognize the difference between cover and stego- image by a human eye because of the small change in color grade.

Conclusion. This paper proposes the least significant bit Steganography method to hide a secret message inside an image cover. the (DLSB) approach has been applied to images for hiding a secret message as well as the (LSB) has been used for the purpose of comparison. The maximum number of bits that can be hidden is equal to the number of pixels in the image. In addition, the key dynamic will now depend on the cover image which rarely can be recognized. Further work can be applied by employing more methods of encrypting on the secret message.