nt. J. Intelligent Engineering Informatics, Vol. 5, No. 4, 2017327Copyright © 2017 Inderscience Enterprises Ltd.

Increasing the hiding capacity in image steganography using Braille code

Mona A.S. Ali\*

Department of Computer Science,

Benha University,

Qalubia, Egypt

Email: [mona.abdelbaset@fci.bu.edu.eg](mailto:mona.abdelbaset@fci.bu.edu.eg)

\*Corresponding author

Essam H. Houssein

Department of Computer Science,

Minia University,

Minia, Egypt

Email: [essam.halim@mu.edu.eg](mailto:essam.halim@mu.edu.eg)

Noha A. Eldemerdash

Department of Computer Science,

Benha University, Qalubia, Egypt

Email: [noha.eldemerdash@fci.bu.edu.eg](mailto:noha.eldemerdash@fci.bu.edu.eg)

Aboul Ella Hassanien

Department of Information Technology,

Cairo University, Giza, Egypt

Email: [aboitcairo@gmail.com](mailto:aboitcairo@gmail.com)

**Abstract**: Least significant bit (LSB) insertion steganography is a one of the most widely used methods for implementing covert data channels in image file exchanges. This popularity comes from its simplicity in implementation and low computational complexity of the algorithm moreover the primary reason being low image distortion. Many researchers try to increase the embedding capacity of LSB algorithm by increasing the layers of the image by keeping the image with minimal distortion effects. This paper introduces a new approach for embedding the data within the images using Braille code and bit-slicing technique. It will be shown that this unique steganography method has minimal visual distortion affects while also hiding the message with a secure and small code. Keywords: steganography; bit-slicing technique; least significant bit; LSB; Braille method.