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ENHANCED SECURITY AND CAPACITY OF DATA TRANSMISSION USING LSB IMAGE STEGANOGRAPHY METHOD

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ABSTRACT

Distributing digital information electronically is vulnerable to a variety of attacks and attempts in breaking and revealing the secret information. Security has become one of the most significant problems for distributing digital information safely. It is essential to protect digital information while communicating over insecure channels. Thus, a need exists for developing technologies that will help protecting digital information and to provide an acceptable amount of secrecy and privacy for any one connecting to and communicating over insecure channels. A prototype is proposed which is able to perform steganography. The prototype's priority is to embed large amount and different formats of information such as TEXT, PDF, IMAGE, etc using cover images like PNG, BMP. Pixel indicator high embedding capacity algorithm for RGB images is adopted and implemented in this project. Moreover, the adopted pixel indicator algorithm is enhanced in such a way to offer high embedding steganography algorithm based on RGB images. Tests are conducted to analyze the capacity and quality performance of high embedding steganography algorithm for RGB images. Some images are rejected to embed due to the low capacity using RGB images. For overall PSNR performance, embedding using RGB images with 2 bits has achieved better PSNR performance and better quality than using RGB images with 3 bits.