

Triple-A: Secure RGB Image Steganography Based on Randomization

Adnan Gutub, Ayed Al-Qahtani, Abdulaziz Tabakh

*Computer Engineering Department, KFUPM, Dhahran 31261, SAUDI ARABIA
{gutub@kfupm.edu.sa, ayedsaad@gmail.com, atabakh@kfupm.edu.sa }*

Abstract—A new image-based steganography technique – called triple-A algorithm - is proposed in this paper. It uses the same principle of LSB, where the secret is hidden in the least significant bits of the pixels, with more randomization in selection of the number of bits used and the color channels that are used. This randomization is expected to increase the security of the system and also increase the capacity. This technique can be applied to RGB images where each pixel is represented by three bytes to indicate the intensity of red, green, and blue in that pixel.

Key-Words: Steganography, randomization, RGB Bitmap images, Triple-A Algorithm, Computer Security.