Abstract

Modern advancement in communication technologies has resulted in the widely and increase in use of smartphones such as android, blackberry, iPhones and much more. The proliferation of smartphones raises much security issues. This is so because the security features of such devices are limited. The most novel approach to arrest the security challenges in the smartphone is cryptography and steganography. Cryptography concerns itself with the masking of the content of a secret message whereas steganography deals with the concealment or hiding of a secreted message from the unauthorized person. The system proposed in this study uses a cover object, image specifically to hide the message to be sent. Before a message is embedded in the image, the message is first encrypted using RSA encryption algorithm. After the message has been encrypted, the process of embedding or hiding the message in the image is carried on. Least Significant Bit (LSB) technique is used to embed the message into the video. The performance Analysis was carried out using Peak-Signal-to –Noise-Ratio (PSNR). The results show that high security and robustness is achieved in smartphones when cryptography is combined with steganography.
Design of Image Steganography based on RSA Algorithm and LSB Insertion for Android Smartphones

References


Index Terms

Computer Science

Image Processing

Keywords

Image Steganography, Smartphones, Android, Cryptography, LSB, RSA, PSNR.