

Multimedia Steganography Using RSA and Huffman Algorithms with LSB Insertion

TREO Talk Paper

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Abstract

In recent years, security and privacy concerns have led to an emergence of programs and mobile applications that offers mechanisms to facilitate covert communication. Steganography is a robust technique used to obscure the presence of private data in a cover object when communicating between sender and receiver.

The aim of this study is to develop an android application to transmit secret messages embedded on multimedia files (images, audio, and video). In our research, we propose to develop a two-fold method for sending secret messages embedded on multimedia files. The first step is to encrypt the message to be sent using RSA encryption method. The second step is to compress the encrypted secret message using Huffman compression algorithm and embedding the encrypted secret message on multimedia content ready for transmission. LSB algorithm will then be used to embed the secret message (already encrypted and compressed) into the multimedia file. Java programming language will be used to develop an android application to implement the proposed method.

We hope the research will create a novel method to transmit secure and compressed hidden messages. We are primarily looking for comments, feedback, and suggestions from the audience on our research idea, proposed methods, and other ways to improve the work.