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Implementation and Performance Analysis of Data Encryption Standard and RSA Algorithm with Image Steganography and Audio Steganography

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Abstract : In today's era data security is an important concern and most demanding issues because it is essential for people using online banking, e-shopping, reservations etc. The two major techniques that are used for secure communication are Cryptography and Steganography. Cryptographic algorithms scramble the data so that intruder will not able to retrieve it; however steganography covers that data in some cover file so that presence of communication is hidden. This paper presents the implementation of Ron Rivest, Adi Shamir, and Leonard Adleman (RSA) Algorithm with Image and Audio Steganography and Data Encryption Standard (DES) Algorithm with Image and Audio Steganography. The coding for both the algorithms have been done using MATLAB and its observed that these techniques performed better than individual techniques. The risk of unauthorized access is alleviated up to a certain extent by using these techniques. These techniques could be used in Banks, RAW agencies etc, where highly confidential data is transferred. Finally, the comparisons of such two techniques are also given in tabular forms.

Keywords : audio steganography, data security, DES, image steganography, intruder, RSA, steganography
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