IMPLEMENTATION AND ANALYSIS OF VARIOUS SYMMETRIC ENCRYPTION TECHNIQUES

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Abstract

This paper implements some of the widely used, Symmetric encryption techniques i.e. DES, 3DES, AES, BLOWFISH & RC4 in MATLAB software. After the implementation, we compare these techniques on various points. These points are avalanche effect due to one bit variation in plaintext keeping the key constant, avalanche effect due to one bit variation in key keeping the plaintext constant, key length, memory required for implementation, input block size, output buffer size, simulation time required for different length of messages and number of rounds required for complete processing. After getting the results of comparisons, this paper suggests some specific area of application of the compared Symmetric and Asymmetric encryption techniques.

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Keywords: encryption algorithm, decryption algorithm, ciphertext, deciphertext.