Abstract

In growing digital world, Cryptography plays an important role to secure confidential information. The objective of the paper is to implement encryption and message digest of information. 3D (6X4X4) - Playfair cipher is multiple letter encryption cipher. In this, tri-graphs of plaintext are treated as single units and converted into corresponding cipher text tri-graphs. 3D (6X4X4) -Playfair cipher supports all 52 alphabets (upper and lower case), 10 digits and 34 special characters. The theme of research is to furnish security to data which contains alphabets numerals and special characters during transmission that’s why message-digest algorithm are introduced and applied on the cipher text of 3D-Playfair cipher with a random key. It makes use of alphabets both lower and uppercase characters, number and special characters for constructing the contents of the matrix.

References

1. 3D - Playfair cipher with additional bitwise operation Amandeep Kaur, Harsh Kumar
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2. 3D (6 X 4 X 4) - Playfair Cipher Nitin, Shubha Jain Department of Computer Science & Engineering, Kanpur Institute of Technology, Kanpur, India Year: 2014


**Index Terms**

Computer Science  
Information Sciences

**Keywords**

3D Playfair Cipher, Encryption, Decryption, Classical Playfair, Plain Text, Ciphertext, Trigraph,
Message-digest algorithm (MD5).