Symmetric Arabic Language Encryption Technique Based on Modified Playfair Algorithm

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Abstract : Due to the large number of exchanges in the networks, the security of communications is essential. Most ways of keeping communication secure rely on encryption. In this work, a symmetric encryption technique is offered to encrypt and decrypt simple Arabic scripts based on a multi-level security. A proposed technique uses an idea of Playfair encryption with a larger table size and an additional layer of encryption to ensure more security. The idea of the proposed algorithm aims to generate a dynamic table that depends on a secret key. The same secret key is also used to create other secret keys to over-encrypt the plaintext in three steps. The obtained results show that the proposed algorithm is faster in terms of encryption/decryption speed and can resist to many types of attacks.