ABSTRACT

Data security is very important thing maintaining the confidentiality of information, especially those containing sensitive information that should only be known to its parties who have the right course, especially if its process done through a public network, if the data isn't secure enough, it would be easily intercepted and known by parties that don't have the authority.

In the final project is done encoding content information (plaintext) into the content that isn't understood through encryption (ciphertext), and to recover the original information, along with the decryption process is carried out using the correct key. To built a computerized application, the author uses Visual Studio 2008 as a supporting application.

At the end of this final project work the authors have concluded that the Rjndael Algoritm (AES) has better average value of Avalanche Effect on any differences in the number of bits of 1 bits, 5 bits, 10 bits, 12 bits and 17 bits in a sequence that is 23.250%, 31.932%, 45.945%, 48.945%,and 55.282%, while the algorithm MARS has an average value of Avalanche Effect with the same difference in the number of bits in a sequence is 17.187%, 28.947%, 42.105%, 43.421%, and 55.263%.

Keyword : Encryption, Decryption, MARS, cipher