Stream Cipher Cryptography System Based on Chaotic Function for Information Security

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ABSTRACT

This research aims to apply Logistic Map as one of the chaotic function for improving information transmission security. Chaotic function has a complex behavior, irregular, and random in the deterministic system. Chaotic has a little change will obtain a different number. It is useful for generating the key. Logistic map will be used to generate the key, then it will be combined with sine function to increase the chaos. In determining the key generator we will use the Stickel protocol agreement. Furthermore, the key generator will be in process using chaos function of Logistic Map combined with high oscillation sine function and will get the key which will be used for encryption and decryption. In the encryption process is done with the formula mod 256, while the decryption process is calculated by the formula mod 256, with is Ciphertext, is Plain text, and is the Key. Using the Logistic Map and sine function on the key generator, the chaotic properties are higher for certain parameter values, chaos only on some initial iterations, then an error is related to the value . For other parameter values ??we get a converging key sequence after several iterations.

Kata Kunci: *cryptography,chaotic function, logistic map, sine function,information security*