Abstract

Encryption is one of the well known techniques to provide security in transmission of multimedia contents over the internet and wireless networks. The simplest way of encrypting multimedia content is to consider the three-dimensional image or video stream as a one dimensional stream and to encrypt the entire content using standard block ciphers like AES, DES, IDEA etc. But the main flaw of this approach is, it requires too much processing time. So here new method of encrypting the multi-media content is proposed. In the following chaotic map based encryption scheme, we propose the combination of two dimensional chaotic map and discrete cosine transform method for encryption of video data. The proposed encryption scheme is more secure. Since chaos possesses many interesting properties, such as deterministic but random-like complex temporal behavior, high sensitivity to initial conditions and ergodicity etc. These properties have been found to be very useful in cryptographic
designs.

Reference

- Juan Li, Yong Feng, Xuqiang Yang, “Discrete chaotic based 3 D image encryption scheme”, National natural science foundation of china, IEEE2009

Index Terms

Computer Science          Security

Key words

Chaos
Permutation
Confusion
Diffusion

Chaotic map