

## **A NOVEL APPROACH FOR MULTIMEDIA ENCRYPTION BASED ON CONFUSION AND CHAOTIC LOGISTIC MAP**

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### **ABSTRACT**

The process of exchange of information between two or more entities is known as data communication. It may evolve data in different format, such as text, images, audio and video, etc. Now- a- days, data in the form of images are used in a wide range of applications, like in medicine, in military operations and communication purposes. To safeguard multimedia information from imposters during transmission through communication channels, security measures are required, which can be achieved by the process of encryption. In this paper, we have proposed a multimedia encryption technique centered on confusion and diffusion of data at the pixel level. After encoding discrete cosine transform (DCT) is applied to further diminish the volume of multimedia information. The throughput of various experiments and sensitivity test proofs that proposed method works effectively for real time data encryption and security. An image shuffling method and chaotic logistic map are used for confusion and data encryption/decryption in the proposed method.

**KEYWORDS:** Chaotic System, Confusion and Diffusion, Discrete Cosine Transform (Dct), Logistic Map, Shuffling