Abstract
Digital video is one of the most popular multimedia data exchanged over the internet. Previous cryptography studies have focused on text data. The encryption algorithms developed for text data may not be suitable to multimedia applications because of large sizes of video. An algorithm is proposed in which a video file is encrypted by considering each frame a colour image. Each video is broken down into its constituent frames. Chaotic mapping algorithms are applied on all the frames and in the temporal domain of the video as well. The algorithm was run on different videos, and results were obtained show improved performance time and good security. Initial comparison against existing methods also shows that encryption time required is less, while recovered plaintext also has fewer distortions.

References

- Peterson, G. 1997. Arnold's Cat Map

Index Terms

Computer Science

Image Processing
Keywords
Chaotic Maps  Encryption  Multimedia  Rectangular Map  Spatial Domain  Video