

{tag}

{/tag}

International Journal of Computer Applications
© 2015 by IJCA Journal

Volume 113 - Number 4

Year of Publication: 2015

Authors:

Anoop Kumar Tiwari

Ajay Rajpoot

K. K. Shukla

S. Karthikeyan

10.5120/19817-1637

{bibtex}pxc3901637.bib{/bibtex}

Abstract

The Internet provides very economical real-time communications between computers and delivers services/products almost instantly to the users. The sensitive data transmitted through the internet must be secured as it is growingly susceptible to security related problems such as eavesdropping, malicious interventions etc. The steganography is an alternative to cryptographic techniques for secured transmission of data over the internet, where the secret message is hidden in some other innocuous communication so that only the rightful recipient can able to detect the presence of the secret message and extract it. Recently, many data embedding schemes have been proposed for achieving the robustness of this technique. However, most of the schemes lack to strike a tradeoff between the embedding capacity and the visual quality. In this paper, we have proposed a new method for hiding messages in a

color image in the spatial domain based on chaos theory, which uses chaotic maps to embed data. This method is robust as well as has the higher payload capacity and compression resistant.

Refer

ences

- Herodotus , John M. Marincola and Aubrey De Selincourt, "Herodotus:T he Histories",. Penguin Classics, London, 1996
- Shawn D. Dickman "An Overview of Steganography"; James Madison University InfosecTechreport, JMU-INFOSEC-TR-2007-002, July 2007.
- Ingemar J. Cox, Matthew L. Miller, JeffreyA. Bloom, JessicaFridrich, TonKalker, "Digital Watermarking and steganography"; Morgan Kaufmann, 2007.
- Pan ,H. K. , Y. Y. , Chen, and Y. C. , Tseng, "A Secure Data Hiding Scheme for Two-Color Images"; Proc. Fifth IEEE Symp. Computers and Comm. , IEEE Press, Piscataway, N. J. , 2000.
- Westfeld, A. , "F5-A Steganographic Algorithm: High Capacity Despite Better Steganalysis";, 4th International Workshop on Information Hiding, 2001.
- Bhavana. S, K. L. Sudha, "Text Steganography Using LSB Insertion Method Along With Chaos Theory";, International Journal of Computer Science, Engineering and Applications (IJCSEA) Vol. 2, No. 2, April 2012.
- Tayel, M. ; Shawky, H. ; Hafez, A. E. S. , "A new chaos steganography algorithm for hiding multimedia data,"; Advanced Communication Technology (ICACT), 2012 14th International Conference on , vol. , no. , pp. 208,212, 19-22 Feb.
- Bo Wang; Jiuchao Feng, "A chaos-based steganography algorithm for H. 264 standard video sequences,"; Communications, Circuits and Systems, 2008. ICCAS 2008. International Conference on , vol. , no. , pp. 750,753, 25-27 May 2008
- Nidhi Sethi and Deepika Sharma, (2012) "A novel method of image encryption using logistic mapping";, in Proc. of International Journal of Computer Science Engineering (IJCSE), Vol. 1, No. 2, pp. 115-119.

Index Terms

Computer Science

Security

Keywords

Steganography chaotic map chaotic pixel selection Bifurcation diagram Histogram

Logistic map