Abstract

The high increase in the transmission of digital data over secured and unsecured communications channels poses a lot of security and privacy concerns to both the transmitter and the receiver. Many operations engaged today in urban and warfare, be they for construction, monitory of plants, high voltage lines, military, police, fire service, intelligence etc. engages the use of surveillance systems that transmit sensitive data to and fro the command centre to the remote areas and this data in transmission needs to be secured. In this paper, we
proposed a hybrid cryptographic and digital watermarking technique for securing digital images based on a Generated Symmetric Key. The cryptographic encryption technique made use of both pixel displacement and pixel encryption in securing the images that are to be stored or transmitted across secured and unsecured communications. The digital watermarking technique was used to authenticate the image. The programming and implementation was done using MATLAB.

References

- Fouad, M. ; El Saddik, A. ; Jiying Zhao; Petriu, E. , &quot;Combining cryptography and watermarking to secure revocable iris templates,&quot; Instrumentation and Measurement Technology Conference (I2MTC), 2011 IEEE , vol. , no. , pp. 1,4, 10-12 May 2011 doi: 10. 1109/IMTC. 2011. 5944015
- Minglei Zha; Bin Wang, &quot;On the fast algebraic immunity of even-variable rotation symmetric Boolean functions,&quot; Advanced Communication Technology (ICACT), 2012 14th International Conference on , vol. , no. , pp. 221,224, 19-22 Feb. 2012


A Hybrid Cryptographic and Digital Watermarking Technique for Securing Digital Images based on a Generated Symmetric Key


Index Terms

Computer Science

Image Processing
Keywords
      Cryptography  simulation  watermarking  digital image  RGB pixel shuffling