Abstract

In the world of modern communication, securing information is a very important task. Hence Cryptographic systems are integral parts of communication systems in majority applications. Security requirements demand that these systems need to be operated with large secret keys. Since it is very difficult to remember large private keys, these keys are replaced by biometric features and this is called biometric security. The biometric identification system is one of the royal technologies used in the recognition system. Iris recognition system is the most reliable system for an individual identification. Of all biometrics-based techniques, the iris pupils and the outer areas provide very high accuracies in verifying an individual’s identity. The iris is unique across peoples. Only the iris bit code template specific to an individual need to be stored for future identity verification. In this paper customer information is embedded in the iris. The Low Distortive Transformation (LDT) method is used to retrieve the information from the stego image in the server system. The iris authentication process is performed after the preprocessing on iris image with the reference of the iris database. Authentication process is implemented using Temporal Informative Restorable Image (TIRI) method. And this paper proposes a method to authenticate a person based on iris. The system will allow the process if the authentication process is success, otherwise it will send non authentication information to the client. The data embedding by LDT ensures the minimization of the mean square error.
This paper combines the embedding, reversible data retrieval and iris feature based authentication. It is experimentally verified that the proposed system outperforms existing biometric security systems.

References

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Index Terms

Computer Science  Image Processing
Keywords

Biometric  Multimodel iris feature map  low-distortion transform  lookup table
Temporal Informative Representative Images