Abstract

A biometric system is basically a pattern recognition system. Biometrics based user authentication system serve as a reliable means for meeting the challenges in today's world of information and network security. It has gained enormous interest by scientists and researchers. Unimodal biometric systems that employ only a single biometric trait fails to achieve the desired security levels. Even the best unimodal biometric system suffers from various problems. To overcome these issues, we propose a multi-modal biometric system which employs iris and hand-geometry biometric traits. The iris patterns of human eye are very complex and random. It is almost impossible for an imposter to imitate them. Hand-geometry measurements are not so distinctive and hence are used only for verification purpose. By combining them with other biometric trait like iris, a more secure multi-biometric security system can be obtained for verification as well as identification purpose. In this paper we will present a brief introduction about unimodal biometric systems, need for biometrics integration, various integration levels, types of multi-biometric systems and some previous research work. In the last section (7th), we have presented our proposed multi-biometric system.
Towards an Integrated Biometric Technique

References

- Ryszard S. Chora’s, "Hybrid Iris and Retina Recognition For Biometrics", IEEE 2010.

Index Terms

Computer Science  Security
Keywords
Multi-biometric System  Iris  Hand-geometry  Biometrics Integration  Multi-sensor
Multi-algorithm
Multi-sample
Multi-instance
Multi-modal
Hybrid Systems