Abstract

Finger vein recognition is a method of biometric authentication which is a promising biometric recognition technology used to recognize the individuals, to verify their identity and is one of many famous kinds of biometrics. With the increasing demand for fast and accurate biometric identification and matching solutions, researchers have been busy trying to develop new ways and algorithms to digitize and match biometric features of human body. This paper will extend one of the current methods by combining it with conventional method used in fingerprint for minutiae extraction to extract the minutiae points of finger vein Based on: 1- Finger region localization 2- Miura et al. vein extraction method 3- Fingerprint Minutiae Extraction The minutiae points are going to be used for the authentication system that requires only points to be stored on its own database. Experimentation has been conducted to monitor each step till the minutiae points were extracted . By matching these points for each individual, authentication system will be faster and accurate.
Investigation of Efficiency of using Minutiae Detection Method for Finger Vein Recognition and Matching

- A. Rosdi, C. W. Shing, and S. A. Suandi, Finger vein recognition using local line binary pattern, Sensors (Basel, Switzerland), Volume 11, No. 12, January 2011, page 11357-71
- Beining Huang, Yanggang Dai, Rongfeng Li, Darun Tang, Wenxin Li, Finger-vein authentication based on wide line detector and pattern normalization, In 20th International Conference on Pattern Recognition (ICPR), IEEE, 2010, pages 1269–1272
- Erdal Sivri, Shape descriptors based on intersection consistency and global binary patterns, Master’s thesis, Middle East Technical University, Ankara, Turkey, 2012.

Index Terms

Computer Science
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Keywords

Biometric  Finger vein  Minutiae  Extraction.