



Segment Based Hierarchical Palmprint Matching

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Abstract: Biometric Identification system has high efficiency, high recognition rate and comfortable to user's operating characteristics. Palmprint are the most common authentic biometrics for personal identification, especially for forensic security. Palmprint authentication system is considered to be the most reliable biometric recognition due to its merits such as low-cost, user-friendliness, high speed and accuracy. In this paper, a novel hierarchical minutiae matching algorithm for palmprint identification system is proposed. Real time images are captured using a scanner. Each of these gray-scale images are aligned and then used to extract palmprint features. A hierarchical matching system that is used to reduce the computation cost by segmenting the image and matching it with the database, thereby false palmprints are rejected in the subsequent changes by comparing just a portion of the whole palmprint. The hierarchical strategy can reject many palmprint (in the database of the AFIS) which do not belong to the same hand as the input palmprint quickly, thus it can save much time.

Keywords : Palmprint authentication, Segmentation, Binarization, Hierarchical matching.

