

Palmprint Recognition using Double Density Wavelet Transform and Local Binary Pattern

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Abstract – Palmprint recognition being one of the important aspects of biometric technology is one of the most reliable and successful identification methods. Palmprint is an important complement and reliable biometric that can be used for identity verification because it is stable and unique for every individual. The procedure of implementation is divided into two phases, training phase and testing phase. In training phase there are three sub processes; pre-processing, feature extraction and feature matching. Pre-processing is done with the help of RGB to Gray conversion and Histogram equalization. For feature extraction, we have used double density discrete wavelet transform (D-DWT) and local binary pattern (LBP). The extracted features are then stored in database. In the testing phase the same process is done up to the LBP and then the feature is matched with database. Chi-Square method is used for matching. The MATLAB image processing tool box is used to implement proposed Palmprint recognition system.

Keywords –Biometric Technology, D-DWT, Histogram equalization, LBP, Palmprint, RGB to Gray conversion.