Abstract

As fingerprints are unique and life-long characteristics of human, they are the most popular way of identification, commercially as well as for security purposes. With security concerns and extent of automation increasing, database is increasing enormously. With the requirement of reduced processing time, there is a continual demand and extended scope for research in this area. In this paper, fingerprint identification has been done using a method in the transform
domain. The one-step Walsh transform i.e. either the row or the column transform of the fingerprint first calculated and then it is subjected to sectorization to generate the feature vector. Sectorization is done in the complex plane after the sequency components have been separated. The final matching scores are generated by fusing together the row and column transform techniques’ score using MAX and OR rules. The algorithm has been tested on a database of 168 images of 21 individuals. The results with accuracy of more than 96% show that the method can be satisfactorily used in fingerprint identification.

Reference

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