Performance Evaluation of Face Recognition Technique using Hartley and DCT with Fractional Feature Vector

Abstract

This paper contributes to the performance evaluation of face recognition system that uses Hartley transform. Feature extraction is an important step in face recognition system. In transform based face recognition system, full and partial feature vectors are considered. Hartley transform is applied on resized image of size 128x128. Partial feature vector is selected by cropping the equal sized squares from four corners of transformed image. These cropped feature vectors are concatenated to form the resultant feature vector. Accuracy is calculated by varying the size of cropped feature vector at the corner of transformed image. Accuracy obtained by Hartley transform is compared with accuracy obtained by 2D-DCT. Both transforms give same accuracy and even computational complexity of both is same.

References

**Index Terms**

Computer Science  
Pattern Recognition

**Keywords**
Hartley Transform  Feature Vector