Abstract

Face recognition is one of biometric that non-intrsusive[11] because it doesn't need user cooperation. However, human face is dynamically varies because of variation in expression, pose, accessories (e.g. glasses), illumination, etc.

In the individual identification system based on face images, there are train data and test data. Orthogonal Laplacianfaces generates a subspace from the train data. Both data are then mapped in to this subspace to get the features. This feature is actually the extraction from face image by taking the discriminative characteristic of face image. The face images are classified by comparing the features of train face images and the test ones.

The testing is carried out with several scenarios to find out the accuration of the system based on the number of individual, number of train data, and the dimension reduction of face image vector. Performance of the system in discriminate individual face images is tested by clustering the data. The system feasibility in identifying individual is tested by implementing threshold value. The result of this test using ORL database (7 train images and 3 test images from each individual) shows the optimum accuration 99.6% with FAR 0.125% and FRR 0.2708%.

Keywords : face recognition, OLPP, PCA