

ABSTRACT

Palmprint recognition became one part of study that demand most in the field of biometric. Compare with others biometrics tecknologies, palmprint method give more advantages such as stable structure feature and low cost. In this thesis is offered one of the way for palmprint recognition in human or personal identification with Eigenspace (Eigenpalm) as feature extraction and Support Vector Machine as classifier (SVM).

*The concept of an eigenspace has been widely used in the face recognition that is usually known as Eigenface or Principal Component Analysis. In this case eigenspace will be known as Eigenpalm. The original palmprint images are transformed using Karhunen-Loeve Transform to produce feature vector called “**eigenpalm**” which represents the overall characteristics of the original palmprint images. The result of feature extraction the classified using SVM method, where the data is separated into high dimensional space, to further classified base on palmprint classes.*

Overall the data of palmprint images that are used in this thesis is 1.500 palmprint images obtained by using a digital camera. System testing is done by determining the value of feature length, value of parameter C and degree of kernel function of SVM. From the test result, obtained the best result with highest that is 96.60% for data from client class and 100% for data from unknown class.

Keywords : Biometric, Palmprint Recognition, Eigenface, Eigenpalm, Karhunen-Loeve Transform, Support Vector Machine, Acquisition Digital Camera