Abstract

Biometric is science that studies the recognition of personal identification. The recognition can be done through the medium of sound, images, and text. There are many technology that requires authentic information about someone's identity. But many people use a fake identity to be able to access these technologies. Therefore it is needed a system identification by using something unique. Texture of the palm is the unique thing that people have. Everyone has a different texture palms. It is needed a computerized system to identify a person through the palm. The system is expected to assist in identifying the owner of the palm.

This final task will build the palm recognition system using hand detection. The detection is done by color segmentation that will generate the region of palm and the region of background. Contourlet transformation and Principal Component Analysis (PCA) are used as a feature extraction. Whereas the classification process using euclidean distance technique.

The result of testing system, palm recognition can be implemented contourlet transform and Principal Component Analysis (PCA). Contourlet transform which is followed by PCA will generate smaller dimension and faster computation time with provide the same performance as using only the contourlet transform. The accuracy obtained is 89%.

Keywords : *palm, color segmentation, transformasi contourlet, Principal Component Analysis*