ABSTRACT

FURQON HENSAN MUTTAQIEN. Signature Recognition with Single Training Image Using VFI5 Algorithm Based on Histogram. Supervised by AZIZ KUSTIYO.

Biometrics is the science of establishing the identity of an individual based on the physical, chemical or behavioral attributes of the person. Signature is one of the most common object used in biometric system. In this research, we will use VFI5 algorithm to classify offline signature images. The classification method in this research is only using a single image as a training image. The feature used as the input for VFI5 algorithm is the gray level intensity of the image which represented as a histogram. Then, the histogram is divided into six types of interval. But before dividing the histogram, the images are partitioned into a few parts with fifteen different sizes. The result of this research indicates that images partitioned horizontally have better accuracy than images partitioned vertically. The highest accuracy in this research is 95.56% which is obtained using 15 x 10 pixels image partition. The result of this research also shows that the accuracy of the recognition is influenced by the size and the number of partition.

Keywords: signature recognition, histogram, VFI5 algorithm, single training image, image partition.