ABSTRACT

Nowadays, some of consumption meats sellers are mixing meats, which are forbidden for Muslim people, such as cow meats with pig meats, goat meats with dog meats. After that phenomenon is watched then on this thesis will do classification kind of consumption meats with image processing for analyzing its texture. Consumption meats are used for classification such as cow, pig, goat, dog, and chicken.

On this thesis system for classification consumption meats will be build on some step. First, do preprocessing of consumption meats by change RGB picture to grayscale picture. On the grayscale picture then feature extraction will be taken by use first and second order feature. Parameters on the first and second order feature are fall in then will be input to classification method with k – Nearest Neighbor so system can do classification for that consumption meats.

On this thesis use two kinds of samples, such as database train samples and input test samples. Amount of database train samples are about 250 pictures with 50 pictures for each consumption meats. Amount of input test samples are about 300 pictures with 250 pictures of consumption meats for classification and 50 pictures for verification. There are three steps experiment on this thesis. First, system with no verification by input 250 test samples picture of consumption meats. Then optimal accuracy level is got when use k – Nearest Neighbor with k = 2 city block distance, about 82,8 %. Second, does verification for system no verification with optimal accuracy level by add input 50 pictures for verification on the 250 test samples picture of consumption meats and add value of threshold. Optimal accuracy level on system with verification is got on threshold value is 50.000 about 82,33%. Last, each picture of test samples are changed to motion blur, then accuracy level on the system with verification by threshold 50.000 sharply decreased to 37,33 %

Keywords: image processing, meats, first order feature, second order feature, k – Nearest Neighbor