ABSTRACT

The development of digital images at this time has an important role in many fields. As for several ways in digital image processing such as identification, segmentation, and classification. Identifying an object in this final project can be done after going through the segmentation process. Where the segmentation method used in this final project is the Markov random field method.

Markov random fields model objects in the image using a probabilistic model. Then segmentation is done by classifying image pixels according to the probabilistic parameters of each object. After passing through the segmentation process, the color produced will be counted to find the lowest percentage of color pixels that are assumed to be the dominant object in the image. The color pixels will then be embedded in the original RGB image to determine the dominant object in the image. There are 30 images used as data for identifying dominant objects.

In this final project an objective and subjective test is conducted. Objective testing is obtained by calculating the precision error value of the masking program with the results of ground truth, the results obtained from the average value of the precision error of 30 processes of comparison of the precision value of the program masking results and the results of ground truth, which is 38,339%. Subjective testing was obtained by making questionnaires given to 30 correspondents, as many as 2.11% of the 30 correspondents rated dominant objects not identified in the test results, 19.55% gave sufficiently identified assessments, 46.77% gave assessments identified but still existed. noise and 31.55% give a perfectly identified rating.

Keyword: Markov Random Field, Counting, Masking.