

ABSTRACT

Some edge detection methods have been improved to increase the result of one dimension shape detection in an image. Those methods have different approaches in edge detection process. Most of them uses convolution mask to predict the first derivation of brightness function of the image, so that the edge shape will be gained clearly.

In this final project, we will analyze the edge detection algorithm which has a different approach, that is Smallest Univalued Segment Assimilating Nucleus (SUSAN) method. An evaluation to the SUSAN method is done visually to the edge detection result to get the analysis subjectively and evaluation based on 4 Canny criteria concerning edge detector quality to get the analysis result objectively.

From the testing of SUSAN method to Prewitt, Sobel, and Laplace method as the comparators, it is concluded that SUSAN method produces edge shape which doesn't change the original shape of the image. SUSAN method also performs better in the noisy image, specially through the brightness value changing, and performs faster in edge detection processing. But, SUSAN method change the vertical edge detection position of the image, which change the original position of the original image.

Key words : edge detection, edge detector, brightness value, convolution