

ABSTRACT

The detection of a person's face today can be easily obtained through the imaging system. Image obtained in the form of a digital image using digital camera technology. One of the constraints of the image generated by digital cameras is the lighting, but this constraint can be handled by converting RGB images into black and white image to distinguish the facial area and not the face. Furthermore, edge detection system can simplify the face detection process by obtaining an appropriate template face.

Edge detection (edge detection) in an image is a process that generates the edges of an object. The goal is to mark the part that becomes at once to improve the image detail image detail is blurred due to error or the effect of the image acquisition process. A point (x, y) is said to be the edge of an image if that point has a height difference with their neighbors. Centroid is a position on a matrix derived from the middle or center of gravity of an object that passes through the labeling process.

The final task is to realize the face detection system using edge detection by taking an image (image) by using digital camera in the room. The pictures has been taken in every different conditions and then we have to analyze the result, so that the system can count the number of people based on the amount of the label from the centroid which is detected.

The analyze system consist of paramater test, speed test, accuracy test and also reliability test. The best accuracy get from the system is in the afternoon which has enough lighting is 90% with the time that needed fast enough is only 1.923122 second.

Keyword: edge detection, *centroid*, labeling