ABSTRACT

In an age of robotic technology today is an example of technological progress. Where the robot is very influential in human life. This robot is one form of a wheeled robot that has some components as supporters like raspberry pi as its microcontroller that serves as the brain of the robot.

In a series of human-following robot consists of three main parts, namely the sensors, microcontrollers and driver. For the sensor itself using the camera where it is as image processing, microcontroller use the raspberry pi and driver uses 2 motors as the driving. It will be emphasized in the manufacture of this tool is to make detection robot to color, which will use the recognation patern be applied to color, the methods used in processing the digital image mapping of the average color of the dominant values pixel.

In the process of image processing will go through several stages, such as the input image input and determines the level of detection of the image, converting the image into a gray image, change the image of the gray image into black and white images based on the detection level, the process of the removal of the remaining white dots, and refining the image of the detection result, storage of images. And it is had stages in the process of image processing

The output result of this tool is to create a robot that serves as transporting goods for humans and alleviate human tasks by means of follow human while walking.

Keywords*: raspberry pi, wheeled robots, image processing, pixel mapping method*