ABSTRACT

Monitoring the growth of fruit in a plant is one of several important parameters to determine the phase of a plant's growth. Monitoring fruit growth in cherry tomatoes can be done with image processing. Image processing was used to detect the ripe cherry tomatoes. To mark off the ripe one, first define the range of YCbCr value for ripe cherry's tomatoes, after that color segmentation needs to be done to the picture. Usually, cherry tomatoes touch each other, so separating touching cherry's tomatoes using the distance transform algorithm was the next step. Next, count the ripe fruits automatically. The value of counting cherry tomatoes needed to be shown, it would be sent to IoT platform thingspeak. In this research, this algorithm could detect 72 pictures from 100 pictures correctly. It is needed 4 seconds to send the result to the IoT Platform.

Key Words— Cherry Tomatoes, Image Processing, IoT