ABSTRACT

When a population is increasing, then the need for vegetables is also

increasing. To store their harvest a vegetable needed storage that is fresh and hygienic,

for cleanliness and freshness of vegetables are maintained. But now there are many

vegetable storage areas that have not been maximized in maintaining the quality of

vegetable crops of the farmers. Therefore it takes storage that can make vegetables to

last longer and fresher.

With the rapidly growing technology today it is possible to design a prototype

of moisture regulator on vegetable storage based arduino and Monitoring data with the

concept of internet of things (IOT). This prototype uses arduino uno as the main

controller DHT11 as the main sensor reads humidity and temperature, as well as relay

as automatic watering regulator. To transmit data to the internet this prototype uses

NodeMcu ESP8266 wifi module using HTTP and MQTT protocol.

Based on testing and analysis of Quality of Service (QoS) conducted on

prototypes using the MQTT and HTTP protocol methods. In the MQTT protocol the

value of the delay obtained is 157.749772 ms and the jitter value is 5.8323392. Whereas

in the HTTP protocol the delay value is 156.436981 ms and the jitter value is

5.79794392 ms. In testing this prototype is able to keep cabbage and spinach conditions

fresh within 4 days.

Key words: IoT, NodeMcu ESP8266, Arduino Uno, HTTP, MQTT, DHT11.