

ABSTRACT

Modern Technology continues to improve so that humans continue to strive to improve the quality and effectiveness in life. As the population grows, demand for four-wheeled vehicles is increasing. With the increase of four-wheeled vehicles, parking lots eventually became limited. Especially at peak times such as at work or on weekends in shopping centers, where the condition of the parking location is very full of many visitors. Smart Parking system is one solution of limited parking area. Smart Parking is part of smart city development that is carried out to increase the need for facilities for the use of parking spaces.

This Final Task focuses on implementing a system based on IoT (Internet Of Things) with the design of a smart parking system that serves to monitor and control parking locations that can be used by motorists. This research uses QRcode method that contains information about parking slot number and route to parking location using maps. Designing this system requires the functionality of the sensor used to be sent to NodeMCUESP8266, and forwarded to the ThingSpeak Platform as a database used by the user.

Based on the test results that have been done that ThingSpeak Platform on this system can function to read data from NodeMCU and updated in Real-time, using the website platform weebly.com data containing parking slot information and maps put together in QRcode. With a description if the light indicator on the data is dimmed indicates the parking is filled and for light color indicates empty parking. delay in QoS testing averaged 218.4621 ms. According to TIPHON delay standardization belongs to the Good category with an index of 3. And for the average throughput value of 639k bps. By tipphon throughput standards fall into a very good category with an index of 4. From these results the process of sending the amount of data per unit of Time NodeMCU to ThingSpeak Platform is included quickly.

Keywords: Smart Parking, ThingSpeak Platform, maps, QRcode