ABSTRACT

Internet of Things (IoT) is a new technology in computational intelligence that can connect everything in the world. One of the utilization of *Internet Of Things* is for monitoring and control from long distance. Implementation of this monitoring and control process are to monitor and book parking lots. Nowadays the problem of parking is very difficult because of the high growth in the amount of four-wheeled vehicles and the lack of available parking space.

To overcome the parking issues, a system that can provide information about the availability of parking space somewhere is required. A system of Wireless Sensor Network technology (WSN) created by using nodemcu as data communication system. For the process of detection of four-wheeled vehicles that will occupy the parking slot using ultrasonic sensors and data display process and booking parking slots done on android applications.

From the results of the performance testing of nodemcu network by using MQTT protocol the value of *delay* and *throughput* highly influenced by the condition of internet network. For *server* testing the delay value for the smallest delay monitoring when testing 3 nodes is 0.0192s and the biggest delay when testing 7 nodes is 0.1772s. For the average delay controlling is 1.1775 ms.

Keywords : Vehicle Detection, Wireless Sensor Network, Ultrasonic, nodemcu, Rasberry Pi, Android Application