ABSTRACT

Car is one of the important public transportation at this time. Car is currently equipped with an Electronic Full Injection (EFI) system which is regulated by the Engine Control Unit (ECU). ECU is an Electric Control Unit that regulates car engines to obtain optimal engine performance. The ECU also regulates several electronic systems embedded in the car. Telemetry system can send data obtained from ECU to a server platform IoT to display the data obtained. A monitoring system is a system that can collect data from a distance places and is sent to supervisors via the IoT platform server. The data obtained can be stored and displayed on the server platform IoT.

In this Final Project, "Designing a Car Monitoring System with Real-Time Internet-Based Car ECU Data" to obtain data from the ECU via OBD-II in real time sent to the server platform IoT. With this monitoring system can monitor cars that are used in real-time and sent on the server platform IoT. The car ECU parameter data sent is then displayed on the website monitoring.

The results of tests that have been done, the system obtains the car ECU parameter data by the ECU parameter data reader. Delay of sending car ECU parameter data on toll roads with an average delay of 1052ms and urban roads with an average delay of 1176ms. The data obtained is sent to the server platform IoT and displays the car ECU parameter data that is Vehicle Speed (km / h), Engine Speed (rpm), Requested Throttle (percent (%)), Engine Coolant Temperature (°C) on the monitoring website. The car ECU parameter data is also stored on the microSD card as a backup when the car ECU parameter data cannot be sent to the server platform IoT. So, the supervisor can monitor each car remotely.

Keywords: Monitoring System, Internet of Things, OBD-II, ECU, real time.