

ABSTRACT

Genset operation requires continuous supply of fuel as needed. In rural areas such as in eastern Indonesia, BTS is a site where is located some distance from the fuel supplier and make a problem in fuel delivers. Fuel requirements must be filled before it runs out. Therefore, we need a technology that capable to monitor the volume of fuel from some distance in real time as know as telemetry.

This final project aim to design a miniplan system that capable measure the volume of diesel fuel using level sensor based on microcontroller ATmega 8535. The system is able to measure the volume of diesel fuel using three method, regular (every once an hour), notification (sent data when reach the threshold), and request (sent data depend on request). Linear Interpolation method is used to formulate level of solar with volume solar.

On volume measurements from 1 Liters to 2.2 Liters, Linear Interpolation method has an error rate 3.49 % to 10.20 %. Timing using timer 1 as the basic of time delivery is running well because it has error ranged between 0 % - 1.23 %. The system is capable sending data use regular, notification, and request system. The operational cost estimate for this system in a month reached Rp 92.000,00.

Keyword: Telemetry, ATmega8535, SMS, Level Sensor, Linear Interpolation