ABSTRACT

Electric car is a solution for lack of oil in the world. This final purpose is to make an electric car that used 4 engine that placed on each of wheels, because there are a few benefit of it, less of engine dimension so that car can carry bigger battery for its supply, high stability car because there is no slip wheel because of moving too slow/fast in every turn. But the main problem is about engine controlling mechanism.

First step to find that solution is worked on this final project. This final project purpose is to get valid wheel spin data from measurement process, then the data is analyzed using the application software to determined its precision level. This final project also has another purpose to make a car-model that will be used in measurement process and also useful for next research.

The car-model is made based on the dimension of real car. The real car that used is Suzuki ST10S that well known by “Truntung”. The limitation from this car model just made based on chassis and wheel dimension, because the data is related with these parameter. The electrical system is used to read wheel spin data with high precision result and send it to computer through serial port. The electrical system is featured with 16 bit binary counter, AT89C51 microcontroller as main processor. And the application software is made with Visual Basic 6.0 that have 2 functions, first is to read binary data for car model convert it to decimal format and save it, second is to determined the precision of the data by comparing it with data from calculation process.

The result is wheel spin data at its degree of bent contain average error 135 Cm from 1325.965 Cm average distance of measurement, and this is satisfied. The couse of error is on every moor in wheel and sensor that get loose.

Keyword: Electrical vehicle, Suzuki ST10S, Counter 16-bit and Visual Basic 6.0.