ABSTRACT

Each year is Congestion in Indonesia increasing particularly in the area of the city-a big city, traffic jams occur not caused by an accident or natural disaster, but when the clock-for example its specific hours for work hours, breaks and after work. Although the city government has set the path in one direction in the morning but it is not yet a solution to solve the problem of congestion.

At the end of this project is only working on a traffic light control program and the solutions obtained in the form. The tools used to control the traffic lights by using the system on a chip that Intel galileo and will be connected with a Graphical User Interface (GUI) so that a long time and the color of the green light on a traffic light can be changed at any time. In order to increase the distance range from your computer to the system on a chip, connecting an Ethernet cable connected to the switch later on will be linked again to the access point and then from the computer will be connected through wireless fidelity (WIFI).

Based on test results, showed that the an intel Galileo gen 2 can control a maximum of four lanes or one intersection and maximum timing green lights (normal setting) that can be sent from the Graphical User Interface (GUI) is 99 seconds, functionality testing emergency setting in accordance with the output of green light on the prototype, then to create a system on the grid required capacitor minimal 16600uF, and when the termination occurs between intel galileo gen 2 with a Graphical User Interface (GUI), the latest data is sent from the Graphical User Interface (GUI) which will galileo will still be processed by intel gen 2.

Keywords: Traffic light Controller, System on Chip, Graphical User Interface