

ABSTRACT

Traffic congestion is one of the issues that should be addressed. Losses that occur between other: productive time becomes lost, fuel wasted in useless, the increase of air pollution especially in the railway junction, particularly in Bali Kingdom Ketegan and Bebekan Sepanjang of Sidoarjo. Congestion occurs every passing train there. Coupled with the condition of traffic lights in the area of the intersection that is not functioning at all.

One of the solutions that can be applied to reduce the traffic congestion is making prototype system setting traffic lights at the intersection of the railway-based microcontroller Atmega 16. This system will work if one ultrasonic sensor detects the presence of a train then a traffic light will be automatically and after the rain touched the second sensor system of traffic lights then return to normal conditions. At a time when normal conditions each lamp lights up alternately.

After doing the testing and analysis, the system can be enabled to minimize congestion and accidents that occur around the junction of railroads. This system can also be applied to the areas or rural areas that are still using manual systems.

Keyword : traffic lights, junction railway, ATmega microcontroler 16