FACULTY OF ELECTRICAL ENGINEERING
UNIVERSITI TEKNOLOGI MARA
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FINAL REPORT:
DENSITY BASED TRAFFIC SIGNAL SYSTEM USING PIC16F877A AND IR SENSOR

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ABSTRACT

The Density Based Traffic Signal System using PIC 16F877A and IR sensor is designed to reduce possibilities of traffic jams, caused by traffic lights, to an extent. The microcontroller used in the system is PIC 16F877A. The system contains IR transmitter and IR receiver which are mounted on the either sides of roads respectively. The IR system gets activated whenever any vehicle stopped on road between IR transmitter and IR receiver. Microcontroller controls the IR system by programming that had been setting in the microcontroller. The flow of traffic light system began when IR sensor starts detect the existence of vehicles. So, IR sensors are placed in the left and right in front of the road. If it detects the existence of the vehicles on particular road, the traffic will glowing green colour for 20 seconds. At the same time, the 7-segment will display countdown timer. But if no vehicles are detected, green colour of traffic light will not glowing and skip to the others particular junction that having a vehicles. So, IR sensors is major role in this project of traffic light system.

It is observed that the flow of traffic light system is improved when IR system is added to the projects.

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