Traffic lights were invented to control the road traffic flow for road diversions. Studies show that highest number of road accidents occurs at junctions due to careless and recklessness of the drivers especially when the traffic lights go faulty due to various reasons. To ensure all signals are displayed according to the desired timing, sequence and control, priority should be given to guarantee minimal or no traffic light faults are taking place. According to JKR Selangor, there are approximately 7 complaints regarding traffic lights faulty received by them everyday. With the steady rate of vehicles increase in Malaysia, which is around around 0.5 million to 1 million annually, and about 300,000 vehicles in Selangor itself, traffic light failures impact adversely on all road users and must be reported immediately. The existing method for faulty traffic light alert is by calling the hotline numbers provided on the traffic light. This method however is not really effective as the response time varies from few hours to a few days due to the difficulty of identifying the exact location. In response to that problem statement, a Centralized Monitoring System (CMS) or Intelligent Traffic Light Alert System (ITS) has been developed that can notify and identify the location of any faults or trips on the traffic light and alert the technical team automatically to respond when a fault occurs. The technical team can be notified on the status of the traffic light through LAN or GSM communication. The existing method for faulty traffic light alert is by calling the hotline numbers provided on the traffic light. This method however is not really effective as the response time varies from few hours to a few days due to the difficulty of identifying the exact location. In response to that problem statement, a Centralized Monitoring System (CMS) or Intelligent Traffic Light Alert System (ITS) has been developed that can notify and identify the location of any faults or trips on the traffic light and alert the technical team automatically to respond when a fault occurs. The technical team can be notified on the status of the traffic light through LAN or GSM communication. The system software is protected under copyright www.platcomventures.com. The proposed business models are: 1) This system can be supplied straight to the end user; 2) It can also be licensed to the interested industrial partner that can market it. The inventors are looking for commercial partners to jointly commercialise this product. Currently the system has been implemented in Petaling District since June 2012 of which about 100 Traffic light junctions have been installed. There are a total of about 600 Traffic lights junctions under the supervision of JKR throughout Selangor State and more under local authorities. The implementation can be expanded to nationwide with about 10,000 Traffic lights junctions throughout Malaysia and can be promoted regionally and internationally. As JKR is the authority for road in Malaysia, they can set the standard and regulation on mandatory application of this system.

THE NEED FOR TRAFFIC LIGHT FAULTY ALERT SYSTEM

Traffic lights were invented to control the road traffic flow for road diversions. Studies show that highest number of road accidents occurs at junctions due to careless and recklessness of the drivers especially when the traffic lights go faulty due to various reasons. To ensure all signals are displayed according to the desired timing, sequence and control, priority should be given to guarantee minimal or no traffic light faults are taking place. According to JKR Selangor, there are approximately 7 complaints regarding traffic lights faulty received by them everyday. With the steady rate of vehicles increase in Malaysia, which is around around 0.5 million to 1 million annually, and about 300,000 vehicles in Selangor itself, traffic light failures impact adversely on all road users and must be reported immediately. The existing method for faulty traffic light alert is by calling the hotline numbers provided on the traffic light. This method however is not really effective as the response time varies from few hours to a few days due to the difficulty of identifying the exact location. In response to that problem statement, a Centralized Monitoring System (CMS) or Intelligent Traffic Light Alert System (ITS) has been developed that can notify and identify the location of any faults or trips on the traffic light and alert the technical team automatically to respond when a fault occurs. The technical team can be notified on the status of the traffic light through LAN or GSM communication.

THE SYSTEM

This system can be a value add to the existing traffic light faulty alert system with added intelligent functions. At any instance when the traffic light is faulty, the technical team will be notified automatically through LAN or GSM communication. The technical team can remotely reset the system through the established communication link.

MARKET POTENTIAL

Currently the system has been implemented in Petaling District since June 2012 of which about 100 Traffic light junctions have been installed. There are a total of about 600 Traffic lights junctions under the supervision of JKR throughout Selangor State and more under local authorities. The implementation can be expanded to nationwide with about 10,000 Traffic lights junctions throughout Malaysia and can be promoted regionally and internationally. As JKR is the authority for road in Malaysia, they can set the standard and regulation on mandatory application of this system.

- GSM Modem: Receive and send signal via GSM/GPRS
- APU: Advanced processing unit for controls and processes the incoming SMS to display status for:-
  - 100 junctions
  - Expandable up to 200 junctions
- General output card: Interfaces APU Card and the Display Unit
- Display unit: Indicate the status of:-
  - Individual LED display of junction location
  - Individual LED display of junction name
  - Buzzer/beacon
  - Status prompt
  - Buzzer / beacon reset

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IN BRIEF

This system can be a value add to the existing traffic light faulty alert system with added intelligent functions. At any instance when the traffic light is faulty, the technical team will be notified automatically through LAN or GSM communication. The technical team can remotely reset the system through the established communication link.