A fuzzy-fault classifier system for malfunction traffic light system classification.

ABSTRACT

The fuzzy-fault classifier (FFC) is a method which is employed as a subsystem in fault detection system. The system is normally utilized in a large and complex traffic light management system. This paper proposes a FFC system to classify the level of seriousness for traffic light failure based on two criteria which is faulty indication and road user manners. The system has been designed using 2-stage fuzzy approach techniques with two module classifications. The seriousness of the traffic light failures are classified to four conditions such as normal, non-critical, critical and highly-critical and a signal will be sent to the contractor and authority department via Short Message Service (SMS) for further action. The system has been testified using simulation and successfully implemented in Kuala Lumpur.