

A NOVEL APPROACH TO ACCIDENT MONITORING AND MANAGEMENT SYSTEM – BASED ON IOT

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In the current era, road accident has become leading cause of mortality around the world because of the delay in providing essential first aids due to difficulty in identifying the location of the accident. Although there are various remedies available, such as emergency call services, they do not prove effective for accidents in uninhabited areas. The Internet of Things (IoT) is one of the front line strategy, which is utilized for making frameworks that minimize human interaction. We believed that using the IoT, we can make accident monitoring and management more efficiently. This study aims to identify road accidents efficiently to minimize the disasters caused by a delay. The proposed system consists of a micro-controller based accident detection device and a monitoring application. Micro-controller continuously communicates with the vibration sensor to identify impacts and Global Positioning System (GPS) module to identify the location. Once an accident has identified with the values generated by the impact sensor, accident detection device transmits the particular information to the cloud server. When the notification retrieves to the monitoring application, person who operate the application able to assign on-call officers to attend the incident and inform them through a SMS, which includes location and other relevant information. The communication between accident detecting device and the cloud server proceeds via GPRS technology. The system has been shown as more successful by testing it in a simulated environment. Therefore, we believed that the proposed method is capable of identifying accident's location efficiently.

Keywords: *Internet of Things, Accident monitoring, GPS module, GSM module*