

ABSTRACT

Accident is an incident or tragedy of a vehicle hitting or hitting something in front of it which causes damage to the vehicle and results in minor, serious injury, or death for road users and vehicle users. The rapid development of the automotive sector has a major impact on increasing traffic density, especially in terms of carelessness of vehicle users, especially with modern developments. In this problem, the author provides a solution by designing a study that can facilitate the police and the nearest medical personnel in handling accidents with the presence of a tilt detection sensor on the vehicle using the MPU6050 accelerometer sensor. The MPU6050 accelerometer is a sensor that has two functions in it, namely an accelerometer with a micro electro mechanical system (MEMS) and a gyroscope with a micro electro mechanical system (MEMS) on a chip. The SW420 vibration sensor module is a sensor for detecting vibrations. These sensors can be used as bicycle, car, window and door alarms. In this study, additional sensors are needed to determine the location of the incident, namely the author uses GPS NEO 6m to determine the location of the accident. Information is sent using the SIM800C module which is a GSM/GPRS sensor module that supports quad-band frequencies which are used to send and receive SMS from one microcontroller to another. The mpu6050 accelerometer sensor detects a slope value of 21 degrees and the vibration sensor will detect vibration which will then be indicated as a collision detector where the vibration value when the value of 3404 is detected in an accident then GPS will provide the location of the scene in the form of a google maps link and then sent by the SIM800C module to user.

Keywords: Accident, Accident information, GPS NEO 6m, MPU6050 accelerometer, SIM800C Module, SW420,