Abstract

When accidents occur, help to the victims is delayed mostly due to lack of prompt detection and reporting. Further, an easily accessible electronic motor vehicle accident database does not exist in Kenya. In an attempt to tackle these problems, a technique for automatically detecting and reporting accidents to relevant authorities is presented. In this technique, several technologies have been integrated and they include; impact sensors, Global Positioning System (GPS), Geographical Information System (GIS), Global System for Mobile Communication (GSM), Electronic Database System, the internet and web programming. In evaluating the technique, over fifty impacts were generated in experiments using a software and hardware prototype that was developed as part of this work. It is found that 98 percent of impacts were successfully transmitted and updated on the database as accidents, within an impressive average time of fifteen seconds. Additionally, authorized web clients could access this information immediately.
Web Application and GPS Integration in Motor Vehicle Accident Detection – A Case of Nairobi, Kenya


Index Terms

Computer Science Mobile Communication
Keywords
  Web Application  Geographical Positioning System (GPS)  Geographical Information System (GIS)

Impact Sensors

Global System for Mobile Communication (GSM)