Smartphone Based Enhancement in Health Services Using GPS System

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Abstract— Disaster threatens human lives more and mainly road accident is common today. During accident many people lose their life because medical services and family member not getting accidental data on time. In this paper, an afferent vehicle wireless system is designed and implemented for vehicle accident detection and reporting using GPS.GPS give location of vehicle. In case of any accident, the system send automated message to the programmed number such as family member or emergency medical services via GPS. When an accident occurs the information only is sent through GSM but there is no possibility to locate the spot.Currently there is no technology for accident detection. As it is done manually there is loss of life in golden hours. In addition if this there is obstruction in the ambulance reaching the hospital due to the traffic bottleneck between accident location and hospital which increases the chances of the death of victim.

Key words: Global positioning system, Global system for mobile communication, Transport control protocol-Internet protocol, Institute of Electrical and Electronics Engineers

I. INTRODUCTION

To detect and accident in real time in order to provide help to suferer within specific time. Existing system is not sufficient to detect accident in real time without using external hardware the aim of saving millions of people's life by improving the road safety, and remodeling distress contact services help. The aim of this project is to find out the location of the accident site. Notification can be received from the spot. Preservation in travel is primary concern for everyone. GSM and GPS module can be for sending the message and find the position of the victim.

The main objective of this project is to find the accident spot at any place and sending the communique to ambulance, police station and family member through the GPS and GSM networks. When an accident occurs the information about the event is sent through GSM but there is no potentiality to locate the spot.

Now-a-days there is no technology available for detecting accident. As it is done manually there is loss of life in golden hours. Besides this if there is late for ambulance to grasp hospital due to the traffic between victim location and nearest hospital which increases the chances of victim death. We are materializing the system to overcome the drawbacks of the existing system in which we are implementing automatic accident detection by using smart phones sensors.

II. BLOCK DIAGRAM

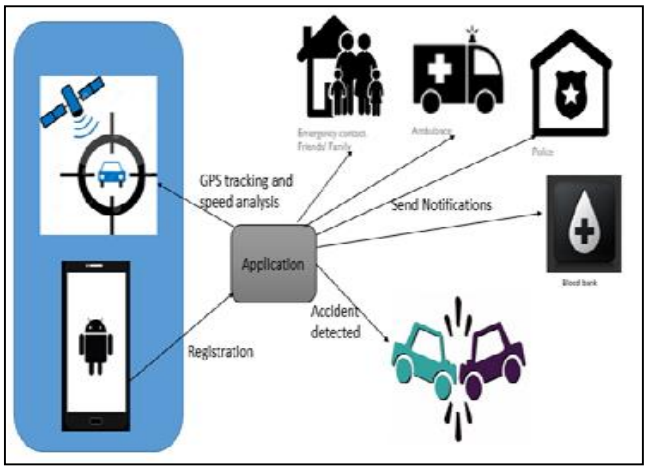

Fig. 1: Block Diagram

III. LITERATURE SURVEY

According to the paper Pocket Fall Accident tracking, using Smart Phone-Based Positioning and Rescue System proposed a system which contains an algorithm and architecture for detecting accident and nearby area emergency service centers system by using mobile phone and network of third generation connection. one another paper is Mobile Application for Automatic Accident Detection and Multimodal Alert consists an Android application for detecting incident by using multimodal alert with eCall and IEEE 802.11p. ecall is automated emergency call for emergency road help. The emergency eCall is naturally calls Europe's emergency contact number is 112 if road accident event happen and also communicates with the location of vehicle's by using car sensors and also call the emergency contact services.

A number of research projects held by research institutes and car manufacturers around the world have been focusing on inter vehicle communication systems. Considering worldwide systems for emergency reporting reckless of their communication method whether it‟s wired or wireless, helped to define the strong objectives about our proposed systems. Some of the related projects to the proposed system are listed below:

Manuel Fogue and his partners [1] proposed a prototype architecture called e-NOTIFY, a novel proposal implemented to improve the chances of survival for passengers involved in car accidents. The proposed system offers automated detection, reports, and assistance to passengers involved in road accidents by exploiting the features offered by vehicular communication technologies. The goal of this system is to provide an architecture that allows 1) direct vehicle to vehicle (V2V) used in the accident, 2) automatic sending of a data file containing important information about the incident to the CU, and 3) a preliminary and automatic assessment of the damage to the vehicle and its occupants, based on the knowledge received

from the involved vehicles, and a database of accident reports. According to the reported information and the prefactory accident computation, the system will alert the required rescue resources to optimize accident assistance.
Tanushree Dalai [2] proposed a Telematic model which has three main modules. The system is predetermined to capture the location of the vehicle through GPS receiver, send the location information to vehicle owners mobile number through SMS and also to the Telematics operator server through GPRS. It consist of modules which are as follows 1) A GPS receiver is required to get the accurate information from the GPS satellites *Accident Detection and Surveillance System using Wireless Technology* www.iosrjournals.org 40 | Page

GSM/GPRS 2) The GSM/GPRS modem utilizes the GSM network to send the location of the accident and other necessary information.

IV. PROPOSED WORK

The proposed application is developed for the Android-based smart phones. In particular, the system relies on the microcontroller to sense accident event and GPS technology to find the perfect location of the accident. With the use of Bluetooth Module, eliminates the need for physical connection, making it more robust against hardware damages. Since a data interconnection communications channel between the smart phone and server is required, it can be established using TCP/IP. Mobile telephony services such as SMS are used. The system is configured to send SMS about accident information, such as current GPS co-ordinates of accident location to Emergency Service Providers.

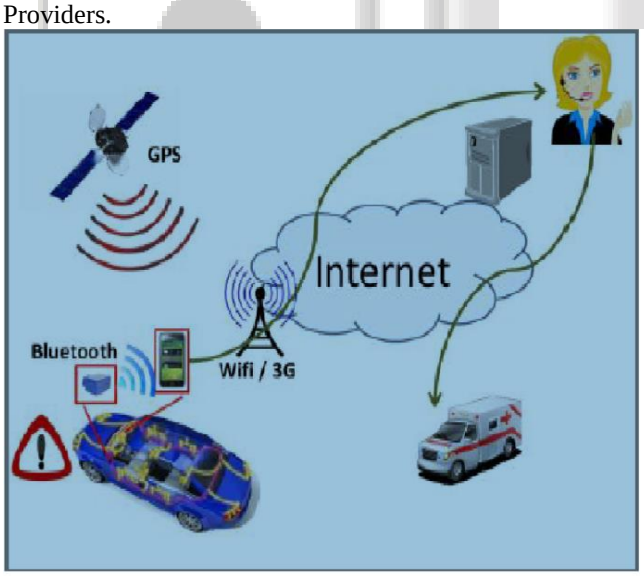

Fig. 1: Overview of proposed system

V. CONCLUSION

We present the design and implementation of Smart Phone Based Enhancement in Health Service Using GPS. To minimize the deaths and the severe conditions due to accidents the GPS and GSM technologies are used where the immediate action would be drawn to a place by the ambulance/police service which might reduce the severity. For Implementation of project design is done successfully.

A major advantage of GPS is to detect victim location and nearest medical service that will rich as early as possible. Hospital and police complaint formalities will done automatically according to registration detail. By using GSM module in Android phone notification messages will send effectively to hospital, family and friends, police station, ambulance, blood bank.

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