Vehicle Overhaul Autonetics Using Arduino

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Abstract – **When it comes about services in an emergency incase of accident,people are to conscious about helping.Even the person who met with an accident might not be in situation to ask for a help,might they would be unconscious.Even now days we have more safety provided to cars like airbags,gps navigation.even in spite of this after car acccident we face the measure problem of prompt medical service.Nearly 40 percent of car accident victims die due to not getting treatment or medical service at the time.In such situation the advancement of the latest technology might not be use full.Vehicle Overhaul Autonetics System will help them and overcome with this critical issue by implementing the gadget where user just have to use this,so in such case when the car meets with an accident the gadget will ON the buzzer sound and will send notification to nearest ambulance with the exact location of accident and also ask for service for toing van later for car care.As in this way the person met with an accident will be helped with the care.**

Keywords- Accident, autonetics, buzzer, emergen gadget, location

I. INTRODUCTION

After solving problems in reality, the new emerging technologies solve the problems in smart way as we expect. In day to day life everyone is habitat of having normal problems such as households issues or vehicles. Taking in consideration of our own vehicles we face problem of repairing it when we are on unknown place and also emergency help in case of accident. Every year nearly 1.3 million people die in road accident where as 40 percentage people die just not getting medical help on time.Unless any outcome to be proposed on this road accident kills this issues can't be overcome as if we dont come with the solution it is predicated to be fifth leading cause of deaths by 2030.Also by survey their is always one death after every four minutes in India.As per survey of WHO in 2013.Each year nearly 400,000 people under 25 die on the worlds roads, on average over 1,000 a day. Whereas public safety[3] is the first aspect, Where as over speed is also measure term for accident[11].

This system uses various technologies developed along years like GPS,GPRS,Microcontroller,Bluetooth to reduce the count of death by road accident atleast by some percentage.It en-hances the automatic detection of crash with vehicle,identifies the location of car[2] at the real time[1] and facilitate the am-bulance,toing van all emergency services to the location.Along with this the system also provide the vehicle service incase of any car failure of its engine or any fault by just click of the button and to get service at the car location.

II. LITERATURE SURVEY

There has various collaborative Ways to implement the car service automation by getting location of car.As Location can be obtained by Real time Google map and Arduino based tracking[1].When dealing with vehicle theft there is way:system puts into the sleeping mode vehicle handled by the owner or authorized persons; otherwise goes to active mode. The mode of operations changed by persons or remotely. When the theft identied, the responsible people send SMS to the micro controller, then issue the control signals to stop the engine motor. After that all the doors locked. To open the doors or to restart the engine authorized person needs to enter the passwords. In this method, easily track the vehicle place and doors locked.[2].By observation of the areas there are some place where we have speed limits so in such cases using gps and speedometer sensor the driver is made alert of speed[3] Where the user or the owner is being continuously send the gps location of the car.Collaboration is also needed as when network is shared by cars[4].Such as by creating vanet for cars,so that no need of creating separate individual network.multiple user associated with sharing location by vanet,information can be identified in the server.For example the school vehicle is being track continuously,also with giving feedback of location and temperature in vehicle which is the safety part[5].Now discussing on car service.in some ways some system deals with the call center and provide the service to the user[6].As we know most of the cases the accident occurs due to driver Fatigue so in this the fatigue will be detected

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ISSN (Online) 2394-2320

International Journal of Engineering Research in Computer Science and Engineering (IJERCSE)
Vol 5, Issue 2, March 2018

immediately and regular traps the events of driver and aware it.[7]In contrast, smartphone accident detection systems must indirectly predict when an accident has occurred based on sensor inputs to the phone. Since phones are mobile objects, they may experience forces and sounds (indicative of a trafc accident) that originate from other sources,such as a user dropping the handset. Accident detection algorithms for smartphones must use sensor data ltering schemes that are resistant to noise, yet provide high enough delity to not lter out valid accidents.[8].Also some of the system uses the heartbeat sensor to identify the accident,such as sudden increase in heart rate and pulse of the driver,the background noise can be filtered and system detect only sound of pulse.[9].The proposed system deals with both Emergency service after accident and car service without any physical interruption of user.

III. PROPOSED SYSTEM

In existing system their consist of call centers or the web portal also the user have to confirm the message to request for Emergency helpline,but this is the main goal of our system where user will not physically interact and system can run even user is unconscious.

Fig. 1.   proposed system architecture

In above Fig. 1. Proposed system is describe as which has various modulessuch as:
Vehicle with limit switches
Arduino Micro controller
Location send by Gps
Response Server
Ambulance and Car service

A. Vehicle with limit switches
Firstly when car meets with an accident the limit switches

placed on car will get pressed.This switches which are con-nected with Bluetooth to micro-controller,so switches sends the signal to micro-controller after accident.

B. Arduino Micro controller
This Arduino refers to an open-source electronics platform or called board and the software used to program it. Arduino is designed to make electronics creating interactive objects or environments.As in this system Arduino will be connected to gps module and the buzzer so to send the location to server after the buzzer turns ON.

C. Location send by Gps
As Arduino consisting of the gps will help to send the real time location to the server till it accepts the request and will also help ambulance to give current status of location,same goes to car service.

D. Response Server
The Response Server is the main system where it is respon-sible to handle everything after the request obtain from user,as further finding nearest ambulance,car service and hospital within minuites.

E. Ambulance and Car service
Ambulance will be send to the obtain location from user to help and further will also get the nearest hospital to reach,similarly in other part system can also send car service as per needed.

IV.   MATHEMATICAL MODEL

Customer (c)
Ambulance(A)
Hospital(H)
Vehicle(V)
Car Service(CS)
Server(S)
Accident(AC)
Overhaul Autonetic Circuit(OAC)
Response Center(RC)
Ambulance System(AS)
Car Service Center (CSC)
Emergency Message (EM)
Part 1:Registration of Customer,Vehicle,Hospital,Car service

(Register(C,RC),S)   (Register(V,RC),S)
(Register(CS,RC),S)   (Register(H,RC),S)
(Register(A,RC),S)

Part 2:When Vehicle meets with an accident,Overhaul Autonetic circuit access the current location and Sends message to Response Center.

(AC(C) Activate(OAC)Send(EM,RC)

Part 3:Response Center will insert the Accident detial on Server, and then find nearest Ambulance or Car Service Center and Send Customer location,then will help Ambulance to find nearest Hospital

Insert(EM,S)Find(A)Find(CS)Send(EM,A)Send(EM,CS)Find(H

Part 4:The Particular Ambulance Car Service will attend Customer and response to Response Center that They have Completed the Task

(Attend(A,C)Attend(CS,V))

V. CONCLUSION

Using Vehicle Overhaul Autonetics system,our gadget gives the opportunity to save life with ease way.When using our service instead of going to dealers or mechanic for car services. As mainly it will have the great impact to emergency services also to the rescue operation department of govt.As we will get the exact location of accident from victim itself,As without any physically interruption of victim which is the main focus of system.This will help user in two ways one with car service and secondly the emergency help at any location.

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