The Handle Mobile Calls for Safe Driving with Reminder

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ABSTRACT

Now a days mobile phones area unit plays most important role in each human life, however at an equivalent time within the driving of Associate in Nursing automobile, mobile phones exploitation is that the main reason for accidents of vehicles. This Paper is meant and enforced for Safe driving exploitation mobile phones with GPS System. The use of mobile phones affected driving in numerous ways. Drivers incomprehensible exits, didn't observe traffic signals, and forgot to regulate the speed in keeping with the limit. It had been common with incidents or close to collisions with alternative vehicles or objects, or driving off the road, once mobile phones were used whereas driving. So the driver obligatory take some quite safety precaution in conjunction with a movable decision. By exploitation this technique those

problems area unit most reduced and safely drive the vehicles. The another feature that is location primarily based reminder therein user gets reminder of what to try counting on location.

Keywords: Mobile phone, Vehicle, Safe driving, Reminder.

I.INTRODUCTION

Today Android has become the most popular Smartphone operating system as compared to another operating system. Android gives you a platform for creating apps for Android users everywhere, as well as an open marketplace for distributing to them instantly. There is need to develop a custom application for handling incoming calls [3]. Approximately two-thirds of our world's population now has access to a mobile phone, and this number is expected to rise significantly in coming years. Recent surveys demonstrated that majority of mobile phone users while driving is increased day by day. It has been also proved that use of cell phone while driving puts a driver at a significantly higher risk of collision by distracting his or her mind. The use of mobile phone affected driving in different ways. Drivers forgot to adjust the speed according to the limit. So the driver compulsory take some kind of safety precaution in conjunction with a mobile phone call [2]. In this project concept to overcome the vehicle accidents. In this project, we added another feature which is the location-based reminder. The popular reminders are based on electronic on the mobile phone. These reminders are purely time specific i.e. this will give notification only on at the particular time. Many times it is not confirmed that user will be present at the specific location for the work for which user has set the reminder. Instead, it is beneficially if the notification of the alarm triggers when the user is actually present near or at that specific location[4]. This feature is very useful. The user creates reminders for the locations and when they get close to that location the system notifies the user [4].

II. LITERATURE SURVEY

1. Safe Driving Using Mobile Phones

Published in: IEEE TRANSACTIONS ON INTELLIGENT TRANSPORTATION SYSTEMS, VOL. 13, NO.3, SEPTEMBER 2012.

As vehicle makers still increase their stress on safety with advanced driver-assistance systems (ADASs), we have a tendency to propose to advise that's not solely already in abundance however moveable enough yet to be one in every of the foremost effective utile devices that square measure ready to analyze and advise on safety conditions. Mobile smartphones these days square measure equipped with various sensors which will facilitate to assist in safety enhancements for drivers on the road. during this paper, we have a tendency to use the three-axis measuring instrument of Associate in Nursing Android-based smartphone to record and analyze numerous driver behaviors and external road conditions that would doubtless be unsafe to the health of the driving force, the neighboring public, and also the automobile. Effective use of those information will educate a doubtless dangerous driver on a way to safely and expeditiously operate a vehicle. With period of time analysis and exteroception alerts of those factors, we are able to increase a driver's overall awareness to maximise safety drivers recognize that urgent call will be ringing. So when the person need to attend the phone means by pressing call lifting unit, then automatically one signal will be transmitted to vehicle section. When the transmitted signal is received by receiver of vehicle section then automatically relay will be activated. When relay is activated means voltage giving to the motor will be decreases to slowly. In this way motor speed will be decreased .

2. Driver Behavior Analysis for Safe Driving: A Survey Published: IEEE TRANSACTION ON INTELLIGENT TRANSPORTATION SYSTEMS, VOL.16 NO. 6, DECEMBER 2015.

Driver temporary state and distraction ar 2 main reasons for traffic accidents and also the connected money losses. so researchers are operating for quite a decade on coming up with driver basic cognitive process observation systems. As a result, many detection techniques for the detection of each temporary state and distraction are planned within the literature. a number of these techniques were with success adopted and enforced by the leading automotive corporations. This paper discusses and provides a comprehensive insight into the well-established techniques for driver basic cognitive process observation and introduces the utilization of most up-to-date and art movement solutions exploiting mobile technologies like smartphones and wearable devices. Then, a proposal is created for the action of such systems into car-to-car communication to support conveyance impromptu network's (VANET's) primary aim of safe driving. we have a tendency to decision this approach the dissemination of driver behavior via C2C communication. Throughout this paper, the foremost exceptional studies of the last 5 years were examined totally so as to reveal the recent driver observation techniques and demonstrate the essential professionals and cons. additionally, the studies were classified into 2 groups: driver temporary state and distraction.

3. A Location Based Advertisement Scheme using OpenStreetMap, Md. Rashidujjaman Rifat, Shubrami Moutushy, Hasan Shahid Ferdous, May 12 2013.

Location-based mostly advertising (LBA) has become today's most personal and marketing channel that gives customers additional relevant info, personalized message, targeted provide concerning merchandise and permits

marketers to achieve a specific target market by making campaigns. Location-based advertising (LBA) could be a new kind of advertising that integrates mobile advertising with location-based mostly services (LBS) to produce location-specific advertisements on consumer's devices. With the assistance of LBA, it's doable to focus on a population at the correct place and also the right time. By taking advantage of a consumer's globe position, location-based mostly advertising delivers relevant ads for merchandise and services. during this paper, the options and usefulness of the applying, "Location-based mostly Intelligent advertising using OpenStreetMap" area unit explained and the way this kind of OpenStreetMap (OSM) based mostly LBS application is effective for Asian country is mentioned. the applying helps the registered look homeowners to introduce the offers to a shopper UN agency is in shut proximity to form them take those final steps to enter his store and let the patron grasp what's around him with audio and map support. the further feature of this application is for visually impaired folks in order that they will look simply. We also concentrate on the advantages of victimization Associate in Nursing open supply map over an ad one in this respect.
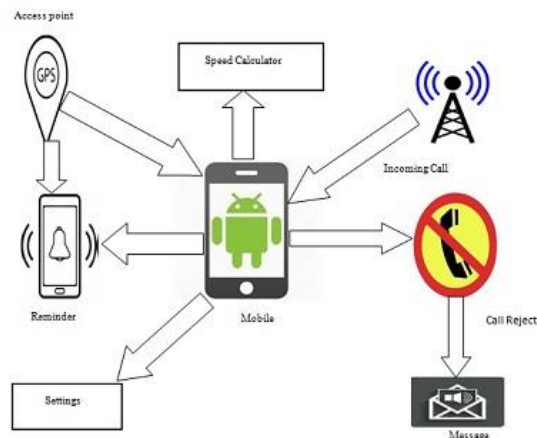
III. DESIGN

1. System architecture:

Fig.System architecture

2. Algorithm:

Step 1: Start

Step 2: User Registration

Step 3: Set Setting

3.1: Emergency Contact Number

3.2: On/Off message service

Step 4: Set Reminder

Step 5: Speed Calculation

5.1: Convert the difference between the two latitudinal/ longitudinal positions into a unit of measurement

5.2: Determine the difference between two timestamp to calculate how long it took to get from point A to point B

5.3: Calculate the average speed based on these results. For example, if the distance was three miles and the time taken was two minutes, then the average speed across that distance would be 90mbh

5.4: This uses the 'haversine' formula to calculate the great-circle distance between two points – that is, the shortest distance over the earth's surface – giving an 'as-the-crow-flies' distance between the points (ignoring any hills they fly over, of course!)

Havesine

Formula- $a = \sin^2(\Delta\varphi/2) + \cos\varphi_1 \cdot \cos\varphi_2 \cdot \sin^2(\Delta\lambda/2)$

$c = 2 \cdot \text{atan2}(\sqrt{a}, \sqrt{(1-a)})$

$d = R \cdot c$

Step 6: Mobile Call Handling

Step 7: Appropriate Message to Caller

Step 8: Remind on Location

Step 9: End.

3. Modules:

3.1 User registration

In this module user should registers with their basic information such as name, mobile no, address etc.

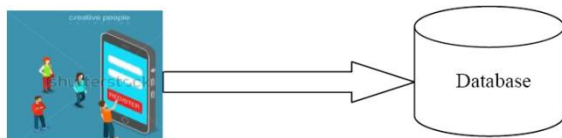**Algorithm:**

Step 1: Start

Step 2: Do register

  2.1: Enter name

  2.2: Enter mobile number

  2.3 Enter password

Step 3: End.

3.2 Mobile Call Handling

In this module, mobile incoming calls are handled. To reject call, the first system checks whether incoming call number is present in emergency contact number or not.If it is the system will allow answering the call but some limitation on speed or if it Sis not the system will automatically reject the call and send audio Message to caller
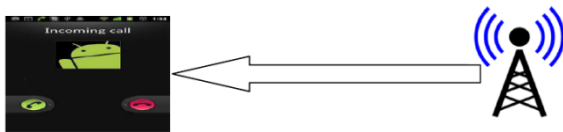
Algorithm:

Step 1: Start

Step 2: Check incoming call status

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2.1 If number present in emergency   contact list.

2.1.1 Check user speed

If it is less than 20 allow to   answer call

Otherwise

Reject the call
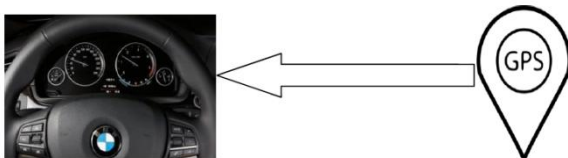
Step 3: Send proper message to caller

Step 4: End

3.3 Speed Calculations

In this module, speed is calculated in the motion of vehicles and mobile current location by using an algorithm and related parameters.

Algorithm:

Step 1: Start

Step 2: Take location from GPS system

Step 3: Use system time

Step 4: Calculate speed

Step 5: End.

3.4 Setting

In this module, the user can set emergency contact number list and on/off the Message service.

Algorithm:

Step 1: Start

Step 2: Set emergency contact number list

2.1: Add or delete contact number from   emergency contact number list

Step 3: Set message on/off

Step 4: End.
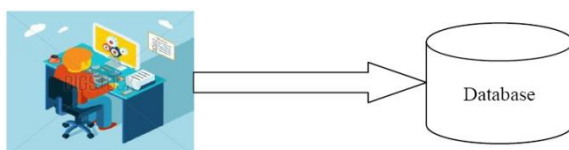
3.5 Set Reminder

In this module, the user can set the reminder with appreciate location. This reminder reminds the user they have work in the current area.
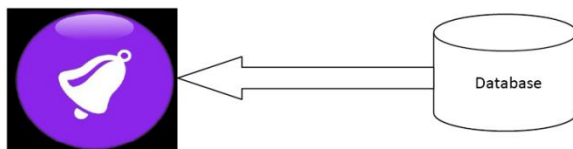
Algorithm:

Step 1: Start

Step 2: Set reminder

   2.1: Choose destination

   2.2: Define work

   2.3: Set alarm

Step 3: End.


IV. SOFTWARE DEVELOPMENT MODEL

Incremental Model:

In the progressive model, the full demand is split into numerous builds. Development cycles happen here, creating the life cycle a "multi-waterfall" cycle. Cycles square measure shared into smaller, additional simply managed modules. every module passes through the wants, design, implementation and testing phases. A operating version of the package is created throughout the primary module, therefore you've got operating package early throughout the package life cycle. every subsequent unleash of the module adds perform to the previous unleash. the method continues until the entire system is achieved.

Fig.2.1 Incremental Life Cycle Model
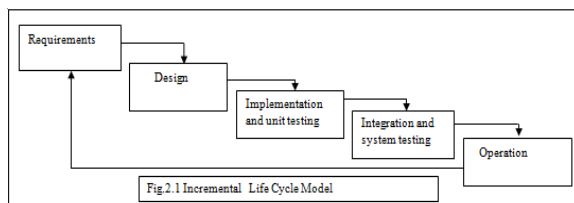
Fig. Incremental Life Cycle Model

In our project, there are five modules, namely user registration, mobile call handling, speed calculation, setting, set the reminder. We are using incremental software life cycle model for developing the project. In this software life cycle model now we pass registration and speed calculation module through the requirements, design, testing, implementation phases. Each module of the project works independently so we have working software early on during the software life cycle. Each module of our project acts as build, so incremental module is applicable to our project effectively.

V. RESULT
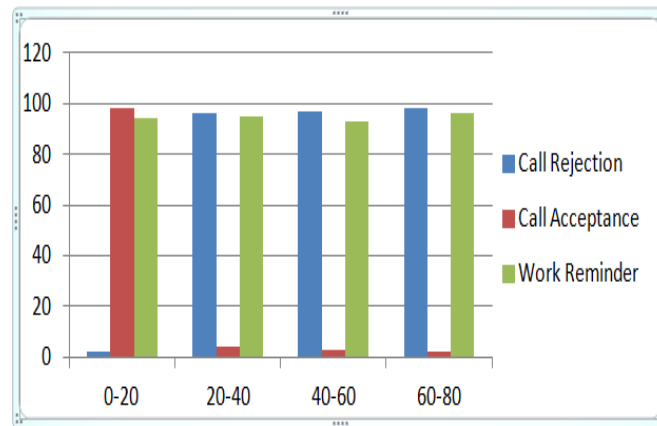
VI. CONCLUSION & FURTHER WORK

The use of mobile phone affected in driving by different ways, Driver forgot to adjust the speed. By using this system driver can safely drive without incoming call interruption and gets reminder depending on specific Location.

Further work:

- This system may improve ability to efficiently work in traffic.

- This system will be connect to traffic control system for rules and regulations.

VII. ACKNOWLEDGEMENT

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Prof.Z.M Shaikh Solapur University, Department of Computer Science and Engineering N.K.Orchid College of Engineering, Solapur, Maharashtra, India , sonumkumbhar@gmail.com

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