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Fast and Safe Mobility of Patients through Smart Vehicle Communication System

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ABSTRACT

Vehicular communication systems are a kind of network oriented system in which vehicles and wayside units are the communicating nodes and given that each other by means of information, for example protection alarm and traffic information. As a supportive approach, vehicular communication systems can be further efficient in protecting accidents and traffic congestions than if every vehicle tries to resolve these troubles independently. We developed an application for life saving system in android for the fast and safe mobility of patients to hospitals. In case of emergency requirement for First aid service, the affected person can send free message to other registered people who are using this application. So, they can give first aid service with help of GPS and if any doctor being a registered user can give first aid on that location.

1. INTRODUCTION

This article proposes a vehicle vice versa communication procedure for supportive collision warning. Emerging wireless technologies for vehicle-to-vehicle and vehicle to- roadside communications are promising to dramatically reduce the number of fatal roadway accidents by providing early warnings. One main technological challenge addressed in this discussion is to accomplish low-latency in delivering crisis warnings in a range of road situations.

The development in mobile and wireless communication technology allows passengers and drivers in vehicles to use the Internet while they are on the road. Built-in tools in vehicle or trucks related vehicle can simply access traveling-related active information, for example, the present circumstances on the roadsides, weather conditions or statistical information on local points of interests.

In case of emergency requirement for First aid service, the person can send free message to thousands of people who using this application, so can give first aid service with help of GPS. Additionally if any user as doctor in this group they can give first aid on the spot.

In this paper we are using the following software and hardware such as window Xp, Front End Java JDK1.5, Back End MySQL and Android OS. Android is an open source and Linux-based Operating System for mobile based devices like smart phones and tablet computers.

EXISTING SYSTEM

In existing using ambulance service to protect the patient life, normally user has to make a call the call center of ambulance service. They will take more time to reach the spot because of the traffic. In ambulance using the sound system to get the way from the traffic and also the traffic police will control the traffic while getting sound from the ambulance. The ambulance carrying basic equipment like oxygen cylinder, ECC machine so can easily give the first aid while patient moving in ambulance. But sometime peoples are using their own vehicle in emergencies situation. It's difficult to reach the hospital in traffic because they are using own vehicle.

PROPOSED SYSTEM

In proposed we develop an application to protect the patient while moving in own vehicle. First the user will registered their details in these apps and details are stored in database. Next user will send the message through this application to which peoples are using these apps. Immediately the message will receive all users. So that vehicle get the way to move hospital quickly in traffic and additionally if any user as doctor in this database. They can forward the message to the patient for giving first aid service and send the message to people who are using the application so they can get move easily in traffic and Patient can get First aid.

ORGANIZATION OF THIS PAPER

This paper consists of the following section as follows, section I gives on introduction, section II provides related works, section III shows the system architecture and implementation and section IV gives conclusion.

2. REVIEW OF LIRTERATURE

Manav Singhal et., al.,[1] In this paper proposed the implementation of Location based services through Google Web Services and Walk Score Transit APIs on Android Phones to give multiple services to the user based on their Location.

Hamid M. Ali et al.[2],In this paper concentrated on low speed car accident detection. The main obstacle that encounters the low speed accident is how to differentiate whether the user is inside the vehicle or outside the vehicle, walking or slowly running.

Maradugu Anil Kumar et.,al.,[3], In this paper given, we are using a novel idea for continuous monitoring patient's health conditions.

Patil Ashish N.,et.,al.,[4], In this paper provided, The rapid growth of technology has made our easier this advancement in technology also increased traffic hazarded. Hence ratio of road accident increases.

IMPLEMENTATION

The overall Architecture diagram represents entire communication process of the affected user to the doctor is mentioned in figure 1.

ACTIVITY DIAGRAM

The activity figure shows the overall activities of the car communication process in figure 2.

LOGIN AND VALIDATION

In this process, already registered user can login into this android Application using username and password. If the user is new to this android Application then they should do the registration first and then login. The application will check whether the username and password is valid or not. If not valid application will show error message. Otherwise they can proceed to next page. This process represented diagrammatically in figure 3.

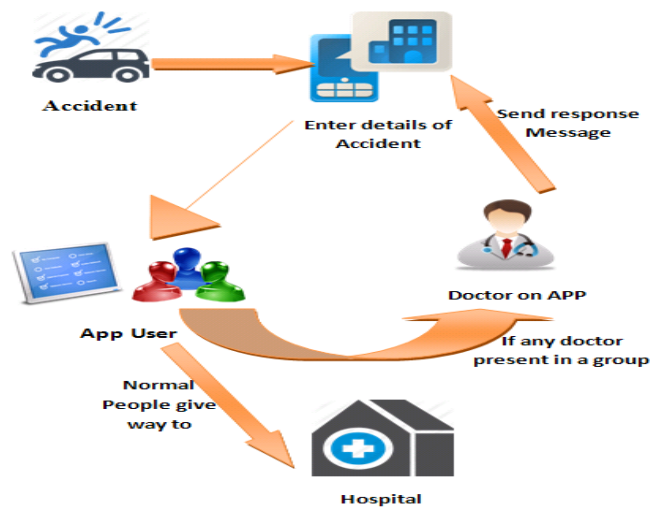


Fig: .1 Overall System Architecture

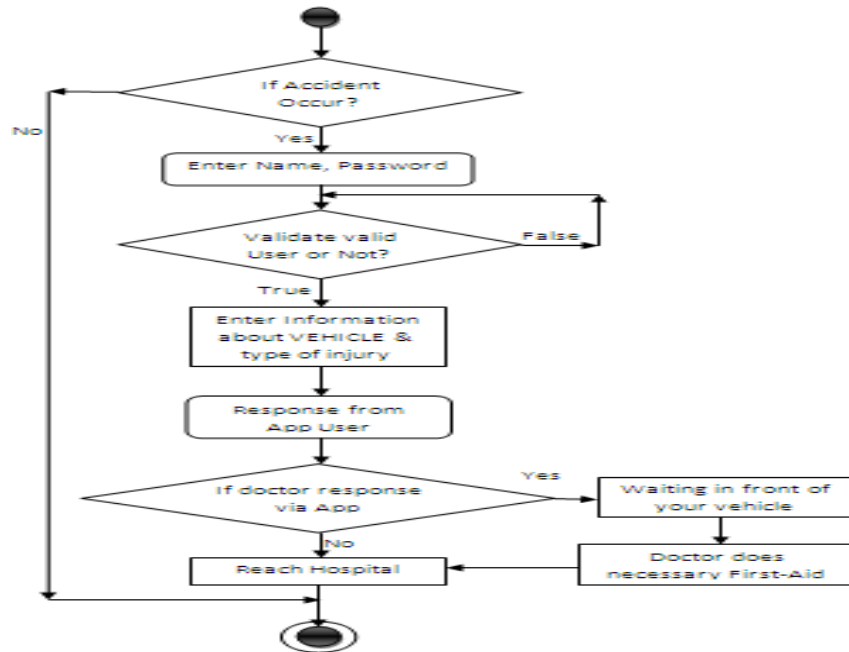


Fig: 2 Activity Diagram

In this paper consists of the following three process. They are listed below

- Login and Validation
- Send Alert Message to Doctor Group
- Response from Doctor Group

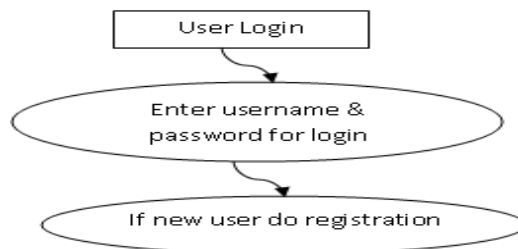


Fig: 3 Login And Validation



Fig: 4 New Role Registrations



Fig: 5 Login Page

SEND ALERT MESSAGE TO GROUP

In this process, after performing login they will enter the details about the type of accident occurred. Next they will enter at which place that accident occurred and also enter to which hospital they are going by their vehicle. Next enter the vehicle number, name, color information for identification of their vehicle by others. After entering these details click Alert button. Next Alert information is send to group of this android app user.

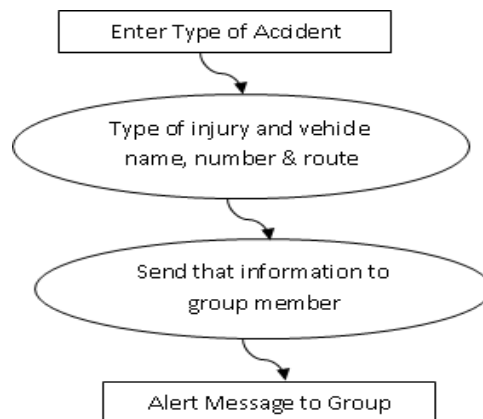


Fig: 6 Send Alert Messages To Group

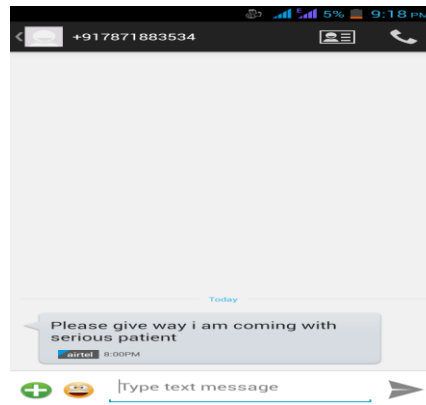


Fig: 7 Emergence Alert

RESPONSE FROM GROUP

In this process, after sending alert message to all and every user of app can view their information. If any doctors are in that app they will be listed and they can replay stating that they are also on the same route and also they can give necessary first aid to injured person. If there are no doctors in the route, then people will give way to the vehicle. So that the injured person can go to hospital safely on time.

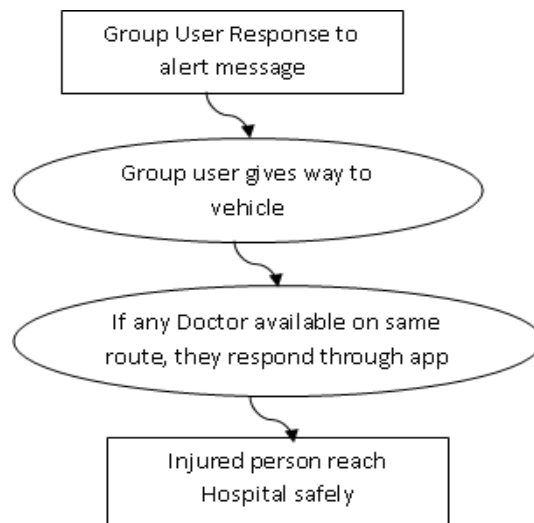


Fig: 8 Response From Group

3. CONCLUSION

In this Vehicle Based Android Application protect the patient while moving in their own vehicle. First the user will registered their details in these application and details are stored in the database. Next user will send the message through this application to which people are using this application. Immediately the message will be received by all users. So the vehicle can get way to move to hospital quickly in traffic and additionally if any user is doctors in the database, they can forward the message to the patient for giving first aid service. This vehicle based android application send and receive alert messages only application user. In future, collect the mobile

number of surrounding people using GPS value and send alert message to that people. This application can send common emergency alert message to surrounding people.

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