E-JEEVRAKSHAK PERSONAL SECURITY SYSTEM USING ANDROID MOBILE

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Abstract- This document gives us information about the implementation of a location awareness system which gives the user's current location sends this location co-ordinates using SMS (Short Message Service) plus sharing location with friends and family. Users can take benefit of this application can be used emergency situations by using emergency feature of this application. To get the location coordinates, application is using GPS (Global Positioning System) as location provider. The application design has five parts: a mobile client (user) , a web server (middle tire),a database, GPS system and a map service. A mobile user which has amobile and GPS receiver finds the location of the user to get user location. for share this location the mobile user sends this location to the web server from where guardians users can get this location information if they have the authentication provided by the user.
*Keywords:*Android, Wireless communication,GPS, LBS (Location Based System).

I. INTRODUCTION

The best way to minimize your chances of becoming a victim of violent crime is to identify and call on resources to help you out of dangerous situations. These Android apps put those resources at your fingertips quickly, and several of them have both free and premium editions. Whether you're in immediate trouble or get separated from friends during outing and don't know how to get home, having these apps on your phone can reduce your risk and bring assistance when you need it. Although several were originally developed for students to reduce the risk a personal safety alarm that sends an emergency message to your chosen contacts with the push of a single button, Safety App's slogan is never walk alone. The app allows you to set up a safety net of Guardians who can respond to your SOS text message; one Guardian you designate will receive a phone call. All Guardians receive a text message with a link to a map showing your location via GPS. The subscription version of Safety App gives you two additional levels of safety: a Risk Mode with real time GPS tracking of your position, and a Timer Mode withautomatic alarm activation (e.g. if you don't log in after the programmed time period, your Guardians will receive an alert with your entire route mapped out.) Application lead to safety against criminals, driving accidents emergency and personal safety. Safety App is a personal safety service that instantly connects you with your safety network and authorities in an emergency. This paper provides three contributions to the study of using Smartphone- based emergency detection systems. We present the architecture of our prototype Smartphone-based emergency detection system and empirically analyze its ability to resist false positives as well as its capabilities for emergency reconstruction. We discusshow Smartphone-based emergency detection can reduce overall traffic congestion and increase the preparedness of emergency responders.

II. PROBLEM STATEMENT

Person in emergency will not be in position to inform rescue team on fly and wait for their help; perhaps he/she try to escape if they are conscious and know about emergency. More dangerous situations occur when person is unconscious or not able to take action against emergency for example physically handicapped person or old age citizen who can't step down immediately from emergency place. "Right information at right time will lead to rescue lives.

III. EXISTING SYSTEM

The previous generation phones only had the capability of speech communication between several users and text messaging with few numbers of inbuilt hardware. But now a mobile has the capability of image capturing, video recording, Bluetooth, file sharing,touch screen display, low power consumption, GPS receivers to get location coordinates and many other advanced features and inbuilt hardware's. These eye catching features attract more users. Here we are concerning only about the internal GPS receivers in mobile phones. The GPS receiver is able to calculate the location using GPS satellite system.

IV. PROPOSED SYSTEM

Proposed system will be using this data transfer technology. We are proposing the Emergency reporting system which will record and report emergency in real time. We have built three models regarding to the emergency, this software on smart phone is also responsible for uploading that data along with other information like current location tracked via GPS, mobile number, and incident time over internet (long range protocol) that time and location will embed with message to inform to rescue system immediately. In our application, when new user wants to use this application they need to register themselves .In registration session user just add their relatives mobile number along with some basic information. When user use application and if emergency occurs then using GPS location will be tracked and that location will be added with message to send pre stored number. Data upload nothing but message along with location will be send .Finally that data along with location and emergency information will be send to registered user.

V. SYSTEM ARCHITECTURE

The internet is the medium that is used to transfer the user data and service request from the mobile to the server and then the requested information back to the user. Fig. 1 shows the main 5 elements that construct the system which are the GPS system, the mobile clients, web server and the database.

A. Mobile Clients (Mobile)
The mobile requests its location from the global positioning system periodically and sends it through the communication network to the server. The user can request the location of a family member at any time from the server. Mobile client can also send its current location via SMS to any mobile number. Mobile client also has an internal database to store application settings.

B. Server
The server receives users' location and updates the user about the location of family members.

C. Database
The database contains all users subscribed in the service with their location. The database also stores the user's mobile number along with the other user's mobile number with whom user wants to share his location. Whenever, user updates his location the time is also updated.

D. GPS

Every time the mobile phone updates the user location in the server, it requests the location of the user from the GPS. The GPS determines the longitude and the latitude and sends them to the mobile phone.

E. Map Service

Map service provides the Google maps and several map handling functions as required by the user. However the map service is an indirect part of this system, and it will be supplied by an external source. Then latterly sends to the mobile phone.
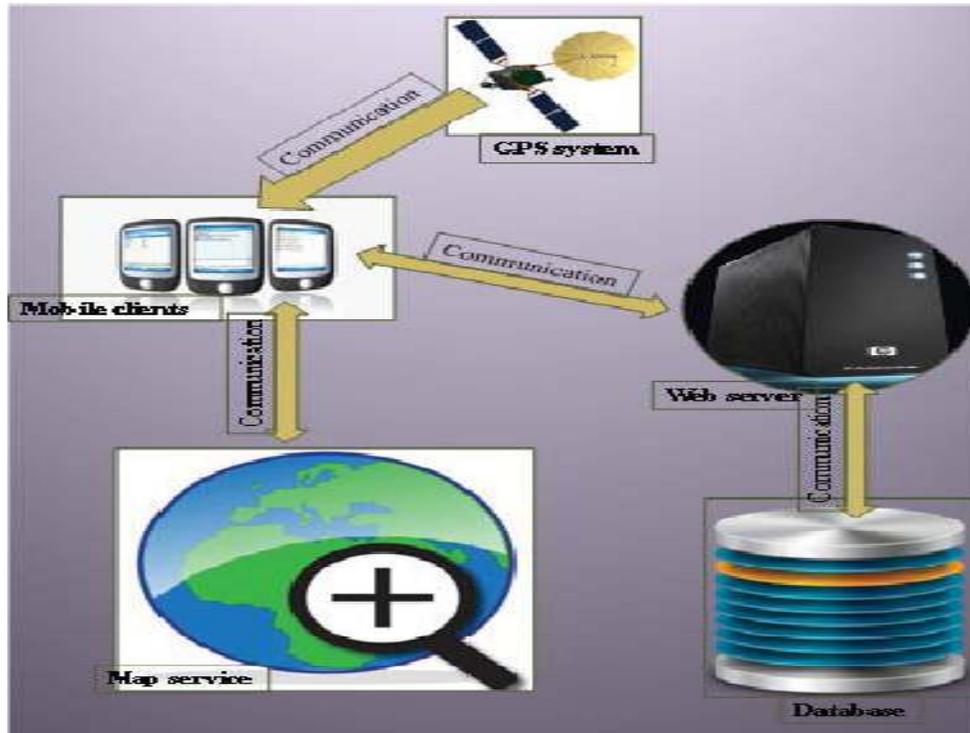
FIG5.1. System architecture

Basically our system is consist of three main modules, which are helps to rescue live in emergency condition.

VI. METHODS

The method section of our paper provides the information by which the study's validity is judge. Therefore it gives a clear and precise description of how a project was
done. Basically, there are two main parts of methods:

 1) Project Selection Method
 2) Project Delivery Method

1) Project Selection Method:

 From the past few years, women's securityhas been a very serious issue all over the world. Women are not safe, they can't even go anywhere alone. You may have heard about the incident that took place at Delhi. If I tell you the crime statistics from last 5 years, you compel to think "What kind of society I am living in?" Also we emergency unconscious people can't run away from emergency place, so that time they need personal safety. Also we heard much news that accident death ration is themselves. In registration session users just add their relative's mobile number along with some basic information.

Application increasing, sometimes people in emergency beg for help but no one is there to help them, so we decided to build application to save people from accident emergency, so we include module for **accident based scenario**. And as you know government took various steps to stop the crime that takes place in India, but government alone is not sufficient to guarantee the safety of women. We have to give our contribution to make India a safer place. This doesn't mean you have to protest somewhere or fight against crimes, your job would be so simple. By using GPS and Location Based Services application trace location of particular user and if emergency occur then that location is share by user via application on single click.

2) Project Delivery Method:
Once the app is installed completely on your phone, open it by clicking on its icon. Using this app is easy. The app will ask you to enable the GPS connection of your phone. It will also be explained to you in the app, too. A message is displayed that tells you exactly how you can use the app whenever you are in danger. It is as simple as pressing the click button of your Android phone. And long press of same click button will generate call to one of the contact that you have registered but before that you need to do the following:

- Settings (add contact or change contact): You can add as many contacts as you want from the phone book of your Android phone. Message will be sent to the added contacts only. Do so, and then click back to return to the app.

VII. PROCEDURE

Crime is increasing nowadays and how we ensure our safety? Want to report your safety and location to your friends or loved one automatically. How we ensure our kids safety or loved one safety? The solution is here. In our application, when new user wants to use this application they need to register storage stores that information for primary use. When user use application and if emergency occurs then using GPS location will be tracked and that location will be added with message to send pre-stored number. Data upload nothing but message along with location will be send. Finally that data along with location and emergency information will be send to registered user. Basically our system is consist of three main modules, which are helps to rescue live in emergency condition, that are as follows-

- **Person Safety**

   This is flow of person safety. In person safety press symbol when that person in emergency condition. After pressing symbol it occur interaction. User is interactive in 14 sec then process is stop but user is not interactive in 14 sec then it gives some beep that means that person in emergency condition. Then track the location of person using GPS. It gives the location information to cell tower that location is forward to switch it contain public service location access pt then that location is forward to DB & store in DB that exact location is forward to application server. Application server is access the application server DB pre- stored information. application server DB pre-stored information it contain exact location information, pre-stored no for message & call, pre-stored email address & other DB. This DB is generating the alert message for e.g. Please, help me! etc using location information & pre-stored DB that alert message is go to pre-stored no & call is go to nearest police station. After sending the alert message it gives the delivered report as SMS send successfully.

VIII. RESULTS

Our application consists of three modules that is person's safety, personal safety. When we open application in emergency. First, we have to click on setting button to pre-store the contact numbers of guardian, police station and hospital. Also we have provided three buttons personal safety, person safety. On pressing the required option and further on click button the application will be process with the beep of 14 seconds. There are ok and cancel option, if we press ok option the message will be send to the pre-stored numbers and on long press alert call will be send to contact numbers. Location will be tracked with the help of GPS and provided Google map link. To exit from the

required option press cancel option. On receiving side we have provided the link of Google map for getting the proper location through that longitude and latitude value.

IX. APPLICATION

- Can be used for handicap.
- Can be used by health department of government to survey the number of accidents if deployed in larger scale.
- With slight modification, can also be used in LIFTs in case damaged being done.
- With some modification we can also use this system for traffic estimation.

X. CONCLUSION

In our project, Person safety, Personal safety can be incorporated by alert message and call which contains the GPS location information is send via message.Similarly accident based emergency scenario and Personal safety can be incorporated, and alert message which contains the GPS location information be sent via SMS and call successfully sent to registered number . Hence, As Android is versatile operating system which allowed us to manipulate various inbuilt features of an Android mobile. So we decided to develop application on mobile platform.

XI. FUTURE SCOPE

This application is android application based and is useful when the emergency is occurred. This application consists of three modules that is person's safety, personal safety. Since, the future scope for overall module is as follows:

To find nearest location of hospital and police station contact numbers are been prototype currently, but we would like to make it dynamic. Since, we used GPS to find the nearest location of the person who is in emergency. We have used GPS API as they are available at free of cost, but time consumption is more. To cover this problem, we would need satellite medium API like military to get accuracy of location. Since, we have provided the link of Google map for getting the proper location, so in future we would work to get direct address of location occurred to person who is in emergency.

XII. REFFERENCE

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