Abstract

This paper represents an Emergency system which is used in emergency cases. An Android based phones that have been integrated with features that alerts and also provides information that is location based. In the next few years there is likely to be drastic increase in the public services and transportation which are based on location. This system describes a location based system which is used in emergency situation. There are many unblessed situation that have been taking place in women’s case. Problems may come from any direction such as women walking on the road after the work to many other reasons for which they go alone. Accidents can occur anywhere in any situation, in various ways we will require a speedy response. This developed system uses simple online/offline SMS facility for sending message on whatsapp, emails, and hike. With the help of the GPS network, the system traces the exact location of the user/victim whenever in need.

I. INTRODUCTION

Android operating system is used to develop most of the applications. It is one of the versatile operating system. Android operating system is capable of satisfying the user. It is one most popular open source platform that offers the developer full access to the framework API’s so as to develop an innovative application. Due to the wide range of the GPS, numbers of applications are being developed. Location based services can be useful to provide information about tourism guide and roadside assistance to users according to the current locations of them.
The main purpose of this system is to provide services to victim/user based on the knowledge of their locations. This is an SMS based system. Now day security of women is becoming very poor and the need for this kind of application is steadily increasing work wise. Our system provides a realizable, cost effective solution to this problem by simple click on Emergency Button (EB). The message is sent to those contacts whose numbers are saved in application’s databases. Even though if it is in silent mode. When a message called alert is received it automatically changes its profile to general, and gives a message notification. An emergency service is provided by Fire, Police, and Ambulance for user. In this application, the Global Position System (GPS) and a user friendly interface which will track the location of this services is provided. The application is capable for sending emergency notification. Nearest hospitals, police stations which provide services are also enlisted. Due to short circuits in many areas there are chances of fire generation or senior citizens who stay alone, away from their family in old age homes or alone by themselves. Suppose if we consider emergency situations like fire at home due to some unfortunate conditions and as being alone or sleeping at home leads to major injuries and even sometimes death. So at that time, the victim sends an emergency message to the Fire department for the immediate help.

For more general use information is available for user in static format. First Aid information is also given related to Police, Fire, and Ambulance. This information can be used by user also during emergency cases until the emergency service is being served. This information is also useful for user at home for the home remedies. User can also send the recording in messages by using the sound recorder. Pictures, photos can be captured at criminal site and can be sent using the camera.

II. DESIGN

The main motivation of this application is to provide an assistant to the person who is in need. In the developed system, the user sends a message to the emergency service with its location. For this we are using GPS and Google Map to find the users exact location. Using the extracted location information, application will search for any nearby Hospital, Fire, and Police service which is requested by the user. In this application location shown by the GPS is going to be optimized so that user will know the exact location of the services. According to our system, EB (Emergency Button) is also provided for women’s safety and assistance for elderly people. The user sends help request on helper’s phone with its location. Then this message is automatically sent to the 3 or more friends or family members whose numbers are saved in the application.

In this architecture, the android mobile is used to send the emergency message. The Database is used to save the information; it contains the details of the user, application, and also the contact details of friends or family members. The GPS service is used for tracking the location. The location of the user is sent with the message. The cellular network is used to send the broadcast message to the Fire, Ambulance, and Police services. The user may send the predefined message or edit the message and send it to the respective services.
III. ALGORITHM

Algorithm for Registration process
1. Start.
2. Open the App.
3. If already registered then sign in else goto next step.
4. Enter the Registration Details like Name, Address, Email, Mobile Number and Password.
5. If all details are filled and Email-id is valid then goto next step else goto previous step.
6. Registration successful.
7. Stop.

Algorithm for Working of Services
1. Start.
2. Home screen Popup.
3. Select the required service.
4. Enter radius.
5. Select the nearest service from the Map.
6. Send Message or Edit message.
8. Stop.

Set Theory
1. Let $S$ be the System, $S=\{ F, O, P \}$
2. $F =$ Set of input sensors
3. Where,
4. $F = \{ \text{SMS, GPS, Camera} \}$
5. $O =$ Set of output application
6. Where,
7. $O = \{ \text{Location Tracer, Closed Environment, Services} \}$
8. $P =$ Set of technical processes
9. $P =$ Identify the Emergency Service as M
10. $M =$ Fire, Ambulance, Police
IV. MATHEMATICAL MODULE

V. RESULT ANALYSIS

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Existing System</th>
<th>ASPAS</th>
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<tbody>
<tr>
<td>1</td>
<td>A social emergency alert service that makes use of the wide availability of smart phones and activates nearby social contacts in cases of emergency.</td>
<td>A Direct online/offline message is send to user’s/victims friends or family members.</td>
</tr>
<tr>
<td>2</td>
<td>The ISafety (Women Security App) mobile based application.</td>
<td>Using the extracted location information, application will search for any nearby Hospital, Fire, and Police service which is requested by the user.</td>
</tr>
<tr>
<td>3</td>
<td>The emergency alerts in apps like SOS stay safe, SOS, S.O.S, Super SOS are only emergency messages. There is no guarantee of the receiver seeing the message as soon it is sent.</td>
<td>After sending the message a delivery report is received to the user which indicates that the message has reached the requested service.</td>
</tr>
<tr>
<td>4</td>
<td>Various applications provide only first aid related information.</td>
<td>This app also provides necessary first-aid measures that should be taken at the time of emergency situations as well as required information related to fire safety and police rules and regulations.</td>
</tr>
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</table>
VI. CONCLUSION

This system is a completely integrated system which includes three departments and one emergency button for women’s safety. This is a compact system that can be used by the common man in any situation. This developed system is user friendly and easy to handle. This system is simple & gives fast response to the user/victim in need. On a single click in emergency situation on Emergency Button, user’s current location is send to the emergency services and to the friends/family members. In this system user can send message through WhatsApp, Hike, E-Mail and SMS, etc. because it uses both online & offline services. This system is based on GPS service which tracks the exact location of the user/victim and provides immediate service to the user. So, this system is having both safety & security which is important in today’s world.

VII. ACKNOWLEDGMENT

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VIII. REFERENCES


TO CITE THIS PAPER