



LifeSaver – Android Application for Ambulance Service from Nearest Hospital

Shekhar Wadwale¹, Kunal Raurale², Megha Nirale³, Rupali Meshram⁴, Prof. Rupali Meshram⁵
Department of Computer Science & Engineering
PRMIT&R, Badnera, Amravati, India

Abstract:

In present scenario, most of people do not get immediate ambulance service on the accident spot sometimes which may be reason for death. The proposed LifeSaver an android application is a small practice of helping people by means of providing immediate service. The main motto of this application is to provide emergency ambulance service to those people who are in trouble by simply tracking their location and alerting the nearest hospital to provide the ambulance facility. If minor accident happens and victim is able to operate the mobile then he can inform to his family members. It also provides the facility to inform the police so that they could take any legal action over the reason of accident and some other issues.

Keywords: LBS (Location Based Services), GPS (Global Positioning System), Cell Tower, Android Mobile Operating System, BTS (Base Transceiver Station), Android API (Application Programming Interface), GIS (Geographical Information System).

I. INTRODUCTION

LifeSaver is a user friendly way to request ambulance service from hospital close to you. It is GPS based technology platform to first point medical attention that is fast and reliable. The speed and reliability of Life saver offer much needed assurance to users during an emergency.

The app immediately provides the coordinates to the nearest hospital and notifies the urgency of the condition. Apart from requesting an ambulance that is closest to you, users will also be able to request for the complaint to the nearby police station to inform about the accident. LifeSaver App has come up with a solution which sends ambulance from the nearest hospital available to the patient's location in 10-15 minutes. It is the fastest possible ambulance service providing flexibility to choose preferred hospital because reaching the desired hospital is one of the biggest challenges individuals face otherwise.

A reliable ambulance calling App, which empowers its users with precise provision ambulances, is the need of the hour. It is distinctly designed for patient transport. It aims to overcome the challenge of availing a good ambulance and thereafter, procuring the desirable hospital.

II. MOTIVATION

India is having one of the highest road accident rates in the world. Some of the factors that are responsible for this sorry state of affairs are the bad condition of roads, lacks of road drivers, presence of two wheeler and auto rickshaws, lack of driving discipline, poor condition of trucks, deficient driving skills, driving under influence etc. Time and again, we read in the newspaper that after a road accident, pedestrian victims or victims in a vehicle or two-wheeler continued to remain fallen at the accident spot unattended. This is particularly true about accidents that occur on the highways. Most of the people do not pick up the injured person and transport them to the hospital. Often they fail to do so and escape from the spot view to avoid being charge as per law. While walking by or driving by we may encounter an accident spot. But no one comes

forward and hesitates to check the condition of the injured even if they are in condition to be moved. We can shift them to the nearest hospital without delay. If we are unsure whether it is safe to move the injured, call ambulance and police helplines and in the meantime try to give first aid to the injured. [9]

III. LITERATURE REVIEW

Location base services (LBS) is a set of applications that gives the content of geographical location of device to provide the multiple services based on that information. Using location base services in android user can retrieve the current location of device and can use this coordinates to get more useful information near to traced location. [1].

It is mobile service which provides real time information based on the user's location. Geographical Information System (GIS) is heart of LBS that provides the complete functionalities in LBS like we may send location information to remote parties, use location information to make communication decisions and location changes can trigger communication actions. [4] The services provided by LBS can be categorized into two types:

1) Public safety or Emergency Services:

It includes the services like tracing the location of stolen or criminal's cellphones, alerting the hospital and police station for accident or crime.

2) Consumer Services:

- Map navigation
- Marketing/Advertising
- Location base Reminder
- Preferred location Services

It includes the services like the providing the routing and traffic condition information to user while travelling, helping

user to find nearby hotels, hospitals, ATM, shopping malls etc. and user can receive alert through notification regarding the updates from nearby places e.g. sales from nearby mall.[2] The traced location can be represented in spatial terms or as text representation. Granularity of location is its latitude, longitudes and radius Location base services can be implemented by two ways:

1] Mobile phone service provider network

The current cell ID is used to locate the Base Transceiver Station (BTS) that the mobile phone is interacting with and the location of that BTS. Cell tower and Wi-Fi signals are used to implement it. [1]

2] Satellites (GPS):

GPS(Global positioning system is a satellite base service which is available all the time everywhere in the world. 24 satellites orbiting the earth finds the user location by calculating the difference in times the signal from different satellite take to reach the receiver. GPS signals are encoded so the smart phones must have the built in GPS receiver. [6] Location base services can be implemented programmatically using android API (Application Programming Interfaces). Different classes present under location API are as follow [3]:

- Location Manager
- Location Provider
- LocationListener

IV. PROPOSED WORK

People can get the immediate ambulance service during emergency by using LifeSaver application. Whenever accident happened and the person suffering through it will open the application, he or she will get the list of hospital as well as the list of police station nearest to the accident spot which is traced by using GPS. By selecting one of the hospital name alert will be generated and send to the hospital.

The hospital will acknowledge user by sending notification. In the same way as like hospital, user can inform to the police by sending alert message to the nearest police station and then police station will acknowledge user through notification.

Proposed system contains mainly four Modules:

1. Hospital Module
2. Police station module
3. User module
4. Admin Module

Every module include registration activity and admin is having the authority to check the hospital and police station availability and also have right to accept or reject their request. Until admin approval no hospital or police station will activate.

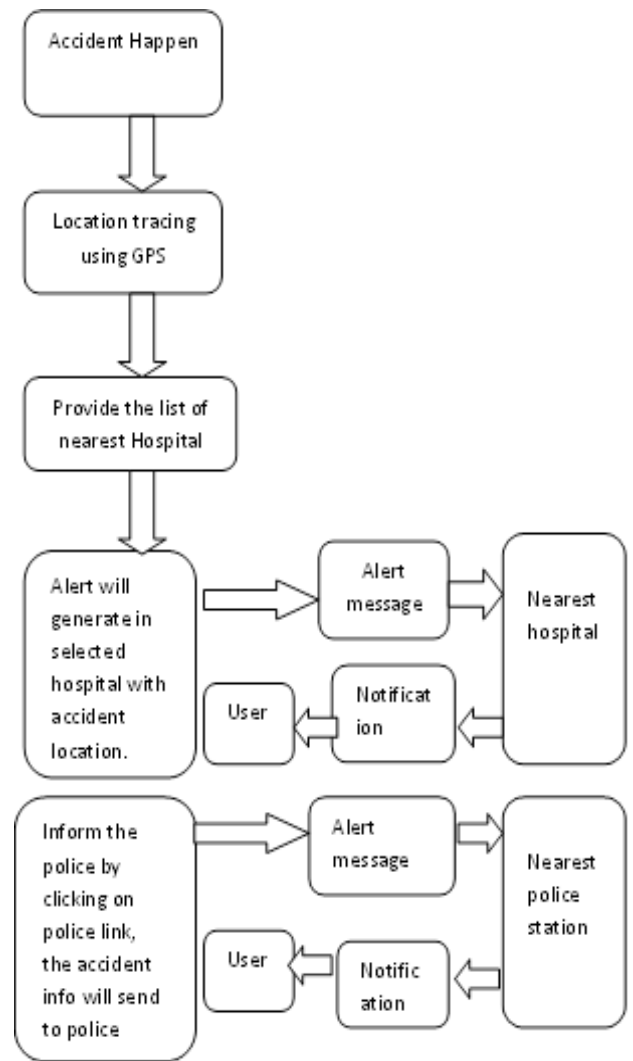


Figure.1. System Architecture

V. CONCLUSION

We propose a new Android Mobile application “LifeSaver” over the existing “LifeHover” application in which user can trace the location of accident spot and can request to nearest hospital by measuring the distance between the accident spot and hospital to get ambulance service as fast as possible in an emergency. In this paper we provide the architecture of proposed application and its work flow. Location base service that is already provided in android application development is used for tracking the location of the user. We are implementing the location base service using GPS.It provides the location information by calculating the time required by the signals from different satellite to reach to the mobile receiver. We extend the features like informing to the nearby police station to take some legal action against it.

VI. REFERENCES

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