Location Based Emergency Medical Services Using Android Mobile OS

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Abstract: Location based service is a technology which utilizes the ability of a mobile device to track its own location to provide information and entertainment services. They give people the ability to share where they are with friends and with business around them. Our project, i.e, Location Based Emergency Medical Services Using Android Mobile OS, helps the user to find the nearest hospitals, medicals, ambulance numbers, police station numbers, and all the necessary medical services on your mobile app. This app not only provides the online data but also provides offline data so that when you lack internet connection so still can search for emergency services.

Keywords: Android, Location, Medical services, offline data, GPS.

I. INTRODUCTION

A location based services (LBS) is a software level service that uses location data to control features. As such LBS is an information service and has a number of uses in social networking today as information, in entertainment, or security, which is accessible with mobile devices through mobile network and which uses information on the geographical position of the mobile devices. An LBS requires five basic components, they are Service providers, Mobile network to transmit data, Content provider to supply subscribers location, Positioning Component like GPS, Subscribers mobile device.

This application uses these LBS component to help user find nearest hospitals, clinics, ambulance numbers, nearest blood banks, and all the necessary emergency services which help to save a suffered person’s life.

II. PROBLEM DEFINITION

What if you are travelling on a very busy highway and you met with an accident or you see someone who is seriously injured and he needs urgent help and you don’t have any source or a way to find the necessary help to provide to the affected person?

What if you need to find a nearest blood bank because someone you know is in urgent need of blood? What if you want to find the number for nearest Ambulance, Police Station? This app will help you find the necessary resources to help that person with just a click of few buttons.

III. LITERATURE SURVEY

In [1] this system, they have proposed location based reminders resulting from a qualitative study performed at small area in the city how location based reminders work. Within this architecture, they discussed the challenges for context management, service trigger mechanism and preference based services.

In [2] they have discussed ow LBS is emerging as a killer application in mobile data services thanking to the rapid development in wireless communication and location positioning techniques. They also explained how LBS is an information and entertainment service, accessible with a mobile device through a mobile network and utilizing the ability to make use of geographical position of mobile device.

In [3] we have explained how LBS provides the mobile clients personalized services according to their current location. And how they also open a new area for developers, cellular service network providers, and service providers to develop and provide value-added services: advising client of current traffic conditions, providing routing information, helping the users to find nearby shopping malls.
### Table 1: Summary of literature survey

<table>
<thead>
<tr>
<th>Serial number</th>
<th>Title</th>
<th>Year</th>
<th>Author</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Location Based Reminder Using GPS for Mobile</td>
<td>May, 2012</td>
<td>Priyank S., Ruta G., Neha T.</td>
<td>Our application provides better GPS tracking.</td>
<td>It does not give any more details about your location</td>
</tr>
<tr>
<td>2.</td>
<td>LBS using Android Mobile OS</td>
<td>March, 2011</td>
<td>Amit K., Vineet K.</td>
<td>Our application not only uses LBS but implements them, such as Mobile device, Content Provider, etc</td>
<td>No application has been coded/programmed but only the theory behind it.</td>
</tr>
<tr>
<td>3.</td>
<td>Implementation of LBS using GPS &amp; Web-services</td>
<td>January, 2010</td>
<td>Manav S., Anupam S.</td>
<td>Our application provides many useful data apart from just GPS tracking.</td>
<td>Services provided are limited as the concept is really vast, even we haven’t covered all of it.</td>
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</table>

### IV. PROPOSED SYSTEM

In this project, the main aim is to provide a better interface to the user so that he can access its location for better purposes than just entertainment.

In this project, user will be able to find its precise location information, he will be able to search results from the static data that is provided along with the application if he lacks an internet connection, dynamic data for online searches, and he will be able to search emergency services like nearby Hospital, clinics, etc. Offline maps will also be provided along with Google markers for better placement of the static location.
V. SYSTEM ARCHITECTURE DIAGRAM

The block diagram mainly consists of five components, they are SQliteDB which will store all the users information, static data will be provide by application to the user, Android Mobile Phone having API 21+, Network Service Provider like JIO, and a working internet connection to fetch data from the internet, GPS for better location tracking. User will request GPS for its current location, and after that, it will ask network service provider for sending query to internet block for results.

VI. ADVANTAGES

A. Faster search results.
B. Static as well as dynamic data available.
C. Custom Google markers for better geo-tagging.
D. Emergency services available at a click of few buttons.
E. Offline data provides various emergency contact numbers.

VII. RESULTS

Fig 2: System Architecture

Fig 3(a): Home Screen  
Fig 3(b): Medical Tab  
Fig 3(c): Medicine details
VIII. CONCLUSION & FUTURE SCOPE

The Location Based Emergency Services is a better application to search the emergency services, as it provide both dynamic and static data for the user, dynamic being online data search results and static being offline search results provided with the app. It provided many services and you can use all this in a faster way even if you lack an internet connection because static data is present. If we can add custom navigation, more services can be added too.

REFERENCES