

Location Based Profile Manager

Srinivas H¹, Tulasi Raghavendra², Krashna³, Naresh Babu P⁴, D Sai Madhavi, M.S, (P.h.D.,)⁵

^{1, 2, 3, 4}Students Department of Computer Science, RYMEC, Ballari

⁵Associate Professor Department of Computer Science, RYMEC, Ballari

Abstract: *The existing profile manager needs the user interaction everytime to change the mode, but we living in digital world or automated world we are still using an manual profile system to update it we are trying to develop the android application as 67% of the smartphone users are android users, hence we choosed the android as platform for developing this application, that takes location as input to change the profile automatically.*

Keywords: LBS, GPS, GPRS

1. Introduction

A location-based service (LBS) is a mobile application that is dependent on the location of a mobile device, like mobile phone. LBS services defined as follows: "Information services accessible with mobile devices through the mobile network and utilizing the ability to make use of the location of the mobile device" Open Geospatial Consortium defined LBS service similarly: "A wireless-IP service that uses geographic information to serve a mobile user, any application service that exploits the position of a mobile terminal."

A Location Based Service (LBS) is an information and entertainment service, accessible with mobile devices through the mobile network and utilizing the ability to make use of geographical position of the mobile device. A LBS services can be used in a variety of contexts, such as health, work, personal life, etc. LBS include services to identify the location of a person or object, such as discovering the nearest banking cash machine or the where about of a friend or employee. LBS services include parcel tracking and vehicle tracking services. LBS have two major actions, that is:

1. Obtaining the location of user
2. Utilizing this information to provide a service.

2. Aim of the Project

Every handset or mobile has got a profiling system. The existing profile systems can be used to configure the mobile alert profiles. Basically changing the profiles automatically based on requirement is really very hard to remember. With the advancement in technology, now majority of the handsets are provided with GPRS and GPS. Using the location provided by the GPS, profiles can be made to change automatically when the user enters/enters the location.

2.1 Existing System

In the existing system, we have profile manager using which we can change configure, edit, set the profiles. The user can change it whenever he needs to have a different profile as per the requirement. The user finds it tedious to change the profile repeatedly.

Scenario:

- The user need to change his/her mobile profile from General Mode to Silent mode on reaching the college premises and again need to change it back to General Mode after coming out of the college premises.
- The user need to change his/her mobile profile from General Mode to Vibrating mode on entering into the Hospital premises and again need to change it back to General Mode after coming out of the Hospital premises.
- The user need to change his/her mobile profile from Silent/Vibrating Mode to General mode on entering into the Market and again need to change it back to Silent/Vibrating Mode after reaching home.

2.2 Proposed System

This application provides the easiest way of overcoming the tedious work by configuring the profiles based on location. The user needs to configure our application by providing the location and the profile to be activated. As and when the user reaches the particular destination, it configures the profile to the pre-defined mode automatically by keeping track of the user's present location and the comparing it with the location configured for changing the profile. This isn't designed to replace existing profile manager, but instead work alongside.

Features:

- Configuring profiles and Setting to physical locations.
- Edit/View/Delete the configured profiles.
- When arriving at a marked location, the application itself will change the profile.

3. Requirements

Software

- JAVA jdk1.6
- Android SDK-r18
- Android emulator-1.6 and later.
- Eclipse indigo3.2

Hardware

- Pentium Dual Core and onwards
- RAM-1GB
- HDD-40GB
- A GPS enabled android phone.

4. App Architecture

In this section we discuss the design and architecture of the Location Based Profile manager App. The figure below shows the flow diagram of the Location Based Profile Manager app.

4.1 Application flow diagram

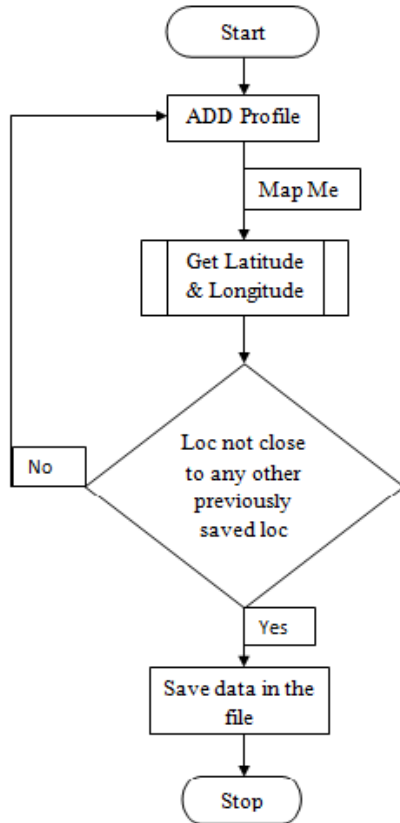


Figure 4.1: Application flow diagram

4.2 Profile Manager System

The profile manager system consist of 3 key components (1)a profile lists(files) that stores information about each profile created by the user, (2)a background service that triggers location, and (3)a profile changed notification profiles based on user's current alerts the user when the profile is triggered. Each component is described in more detail below.

4.3 Background Service Diagram

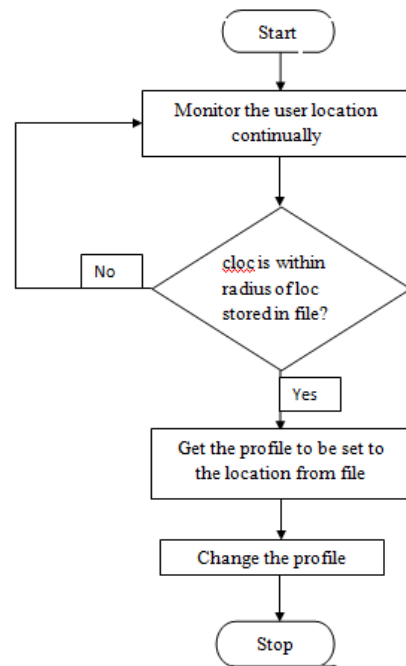


Figure 4.2: Background Service Diagram

5. Use Case Diagrams

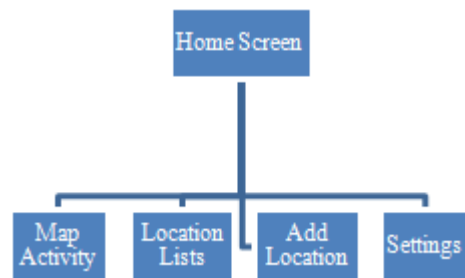


Figure 5.1: Home Screen of the application

When the user clicks on Add location, he is provided with the Add Location Functionality. Here he gives a name for the location. Then he chooses the location by tapping on the Google maps which will be displayed after user presses the Map button in add functionality. For the selected location user will then have to set the profile to be set and click on save.

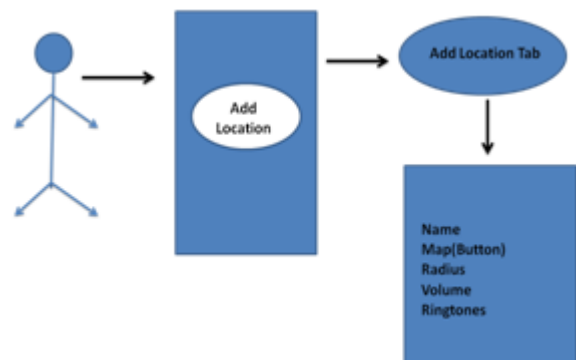


Figure 5.2: Use Case of Add Location

User can configure the application to use GPS or not, set minimum Intervals for location updates in order to conserve

the battery and to stop or start the service by selecting the settings from the home screen.

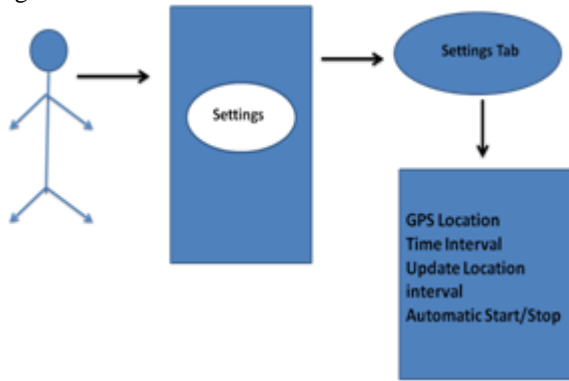


Figure 5.3: Use Case of Settings

When user selects AddLocation, he is provided with a tab UI using which he can easily switch between activities. When user clicks on Map tab he is displayed with a map showing all his previously saved locations and also his current location.

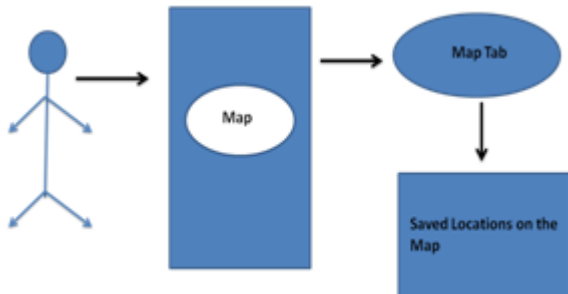


Figure 5.4: Use Case of Map Activity

6. Snapshots



Figure 6.1: Add Location

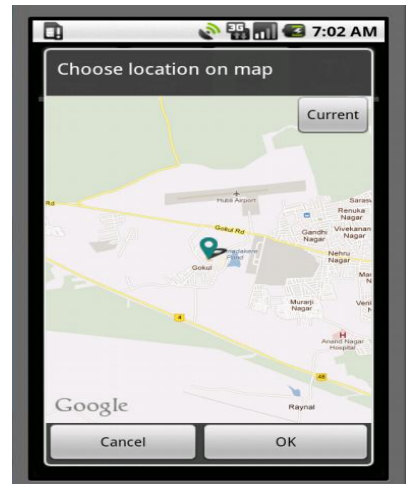


Figure 6.2: Selecting Location on Map



Figure 6.3: Settings

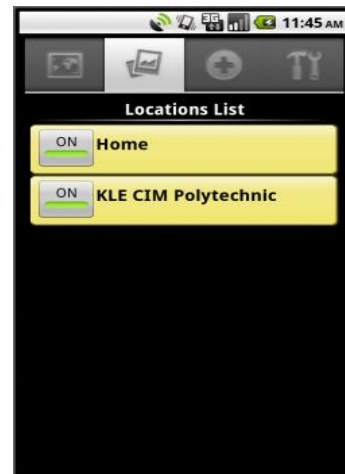


Figure 6.4: Location Lists

7. Conclusion

As mobile handheld devices continue to evolve, they will be capable of supporting increasingly sophisticated and feature-rich applications, which truly have the potential of making a profound impact in people's everyday lives and changing the dynamics of social networking, communication and mobile entertainment. The possibilities are endless and we have only just begun to scratch the surface. Our application acts as a smart app which uses Google Maps API and Android services to achieve changing of profiles with respect to locations. The main advantage of this app would be the user

need to set the profile for that location only once. Rest of the things like changing it on reaching the respective location will be taken care automatically.

References

- [1] Android Developer Guide:
<http://www.developer.android.com/guide/index.html>
- [2] GoogleMapsAPI:
<http://www.code.google.com/android/addons/googleapis/reference/com/google/android/maps/package-summary.html>
- [3] Google Inc. Google Code Project Hosting.[online].<http://code.google.com/>
- [4] W.Hartnett. Google Maps vs. Virtual Earth: A geocoding accuracy showdown in West palm Beach. [Online].
<http://www.wmhartnett.com/2008/01/15/google-maps-vs-virtual-earth-a-geocoding-accuracy-showdown-in-west-palm-beach/>