GPS Based Profile Scheduling using Android Smartphone
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Abstract: With Profile scheduling you can automate your profile changing with timer, so you can enjoy your good night sleep being off-line without disturbing phone calls, and be back on-line automatically even before you actually wake up. This app is especially beneficial for working professionals who generally have more important issues to deal with than changing the sound profile! This app is being developed in android platform. It is also enabled with GPS functionalities to change your profile automatically. The basic function of the scheduler is to change the brightness, sound profile, switching on or off Bluetooth. This app will be developed in the android platform. The application is also heavily dependent upon GPS. As in this app we are providing to modes of switching profiles one is GPS disabled mode i.e. manually switching of profiles and other is GPS enabled mode, with the help of which it can automatically change certain functionalities of the phone. Once the GPS mode is ON, Google Maps will be used for the purpose of tracking the current location of the device. For example, when entering in a silence zone, the application will make use of GPS to change certain features of the cell phone.

Keywords: GPS, G-map, Android smartphone, Profile scheduler, File backup, Emergency calls

I. Introduction

In today’s world, mobile phones have become an inseparable part of our lives. Despite all the advantages it does have a problem of ringing anytime and anywhere! To overcome this and many other minor problems we present our project which is a profile scheduler. In our system we are going to change the profile of our Smartphone by using GPS so our system named as GPS based profile scheduling. Our system is working on two mode GPS enable and GPS disable (manual mode). It changes the profile of Smartphone automatically based on location and timer. In this project we can provide some new features such like as profile by timer, profile by GPS, emergency calls. Profile by timer in this feature profiles can change with the help of time (time interval).In profile by GPS it can trace the locations from G-Map and profile automatically change. We can also add the emergency calls, taking the numbers and file backup. This app will be developed in the android platform. The application is also heavily dependent upon GPS. As in this app we are providing to modes of switching profiles one is GPS disabled mode i.e. manually switching of profiles and other is GPS enabled mode, with the help of which it can automatically change certain functionalities of the phone. Once the GPS mode is ON, Google Maps will be used for the purpose of tracking the current location of the device. For example, when entering in a silence zone, the application will make use of GPS to change features of cell phone.

In this project we can also manage the

- Fully customizable sound profiles
- Setup Volume, Bluetooth, hotspot, Mobile data, Aeroplane mode, Call, Screen brightness and Ringtones
- Mute or raise volume for selected contacts using customized profiles

This system has multiple users. It may be,

- Student
- Office Employee
- Doctors, Hospital Staff
- Other worker
- Home use

II. System Architecture

The system consists of following main modules:

A. Server Database

Server database is used for registration of new user. Server Database stores the user information as well as the backup of contact. All these store at server.

B. Client application

Using client application client perform following tasks:

1. New user first registered to the server.
2. Existing user can directly Sign-in.
3. Add new profile.
4. Manage profile.
5. Select profile by GPS or time based.
6. Add emergency contact.
7. Set Keyword for particular profile.
8. Take contact Backup

In the above Figure 1 the flow of the working system is explained such as the user first registered to the server. After that user can sign-in. existing user can directly sign-in. server is required to store user database. after that user set the profile. For e.g for particular profile user set the Wi-Fi ON/OFF, Bluetooth ON/OFF, Brightness, Mobile data ON/OFF, Volume. User can add number of profile at the same time. For any change he can edit the profile. In advance we can add the keyword for particular profile. Next step is we start the GPS scanner. When GPS scanner search the predefined location by matching the latitude and longitude values using G-map. When GPS found that location it automatically change the predefined profile for that location. In other case we can change the profile by using timer. we set the particular profile for any time interval it automatically change predefined profile for that time interval. in advance we can set the emergency contact. when call came from emergency contact number then our phone automatically switch to ringing mode from any mode. as well as we can take the contact back up. And this backup data store at server.

III. System Feature

A. Profiles by locations and keyword
You can automatically switch profiles on the basis of tracking your current location and keyword. Using GPS and you can also add favorite places and let the application switch profiles according to your current location.

B. Profiles by timers
Are you tired of adjusting the volumes manually? With a smart profile scheduler, you can schedule activation of the profile using timers. Are you sick of muting the ringer at night, restoring it in the morning, or even turning the Wi-Fi or Mobile data on and off? Smart Profile Scheduler can do it for you.

C. Emergency call ring-up
This feature allows you to receive certain calls even when your profile is in silent mode. User can create a list of emergency numbers which will ring even when profile is not in general mode.
D. Contact backup
With this feature, you can back-up the important file from your Smart phone at the Office or leaving the Office. In that case type of file which must be back-up and work station should be specified before only.

IV. Results
As discussed earlier the GPS is use to search the location of object around the world. we are taking the advantage of the GPS. And searching the user location it take the help of latitude and longitude. If it matches that location it automatically noticed and change the profile. The analysis is done and it change the profile automatically successfully. At first we set the profile and after that set location for that profile. And when user reaches that location then profile automatically switches normal mode to predefined profile mode. Also analysis is done on contact backup. It successfully take the contact backup and stored at server. The analysis is done on time based profile scheduling it also successfully work on time based profile scheduling. We set the profile for particular time interval at that time interval profile change automatically.

V. Conclusion
Through this paper, GPS Based profile scheduling provides you customizable profile scheduling. You can switch them manually or automatically based on timing or location successfully. It also provides you a features like file back-up, emergency call setup.

VI. Future Work
We plan on extending our work on other attributes such as keyword based profile scheduling in that we set the keyword like college, petrol pump, and then search these predefined keyword through G-map if keyword matches then it change the predefined profile automatically for that location. To increase the usability of this system.

References

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