SOUND PROFILE SWITCHING

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Abstract – *This is an android application which will switch sound profile of an android device automatically. .Sometimes we cannot attain some important calls as our device is in silent mode. This android application will change the sound profile of android device once we receive calls more than three time from the same number. Also there are some locations where the device need to be in silent mode like hospitals , petrol pumps , colleges etc. Many times user forgot to switch his/her mobile device's sound profile on such locations . This application will change sound profile of an android device to silent mode automatically once we entered in such locations. In this application user can also give preferred locations such as user's office , school etc.*

*Key Words***:** profile switching, android application, global positioning system (GPS),

1.INTRODUCTION

Android devices are more common these days. It will be troublesome if our mobile phone rings on unwanted locations or also if we can't able to receive important calls. This application will switch sound profiles automatically. If user's mobile device is in silent mode then user will not come to know about incoming phone calls. It will be troublesome in case of emergencies. This android application will solve this problem. If user receive calls more than three times from same number then it will treat it as important call and it will switch the device's sound profile to vibrate mode or general mode. So for the next call from the same number, user's device will ring automatically even though the user's device is in silent mode. This application also provides location based sound profile switching. There are some locations where mobile phones must be in silent mode such as hospitals, government offices etc. The application will switch device to silent mode when the device is in required locations. There are some android applications like 'phone weaver' which will change device's sound profile based on time or location but they are not completely automated. This application will provide completely automated sound profile switching.

1.1 Objective

To develop an application which will switch sound profile of user's android device automatically according to user's location or when user is getting call for more than three times from the same number.

1.2 Methodology

We will use android location APIs to fetch the location of android user. There are different classes present under location API package. Location manager class will provide access to location service. Location provider will provide time to time report of device's location. For user defined locations we will use google places API. Google places API will provide information about places that are preferred point of interest using HTTP request. Google places API provides following services which will be used for user defined profile switching.

1) Place searches – Provides array of nearby places based on user defined location.

2) Place details – Provides more information about user defined location

3) Place check-ins – It allows a request that person has checked in to a place.

4) Place reports – It allows user to add new location to place service or delete a location from the database.

For sound profile switching based on incoming calls we will use android sq lite database. User will be asked to enter preferred numbers. On getting incoming calls for more than three times from any of these given numbers user's sound profile will be automatically switched.

2. BLOCK DIAGRAM

The architecture comprises of the GPS System, Android Device, and User component. The User can communicate with Android Device through User Interface. The Android Device utilizes Location Manager Interface and gets location information utilizing Forward Geo coding and furthermore can get address of area using Reverse Geocoding from GPS System.
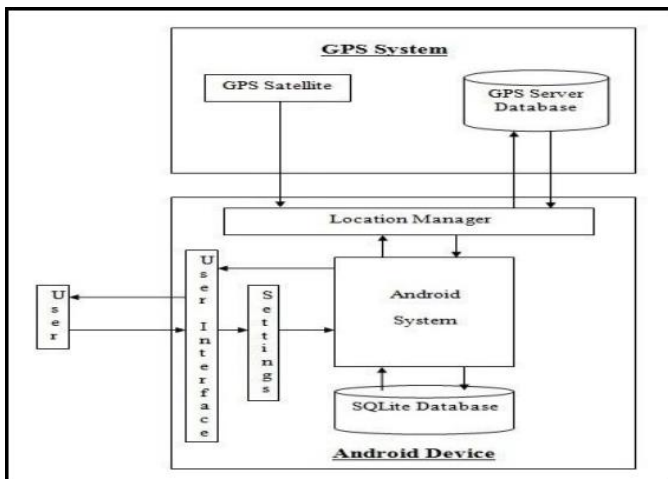
Fig -1: system architecture Block diagram

GPS system consist of GPS satellite and GPS server database. GPS satellite will transmit the signal which contains information about user's location. The GPS server database will store the location information such as co-ordinates , area name etc.

User can interact with the application through user interface. Location manager on the android device is an interface between GPS and and android device. It will take location co-ordinates of android device from GPS satellite. It will get area name and details of those co-ordinates from GPS server database. It will check whether the area belongs to default silent zone or not. If the area belongs to default silent zone the android system will change the sound profile of device from general to silent . If the location doesn't belong to default silent zone , it will search for user defined locations in SQLite database.

User can add preferred locations from user interface. User can change the switching mode i.e. silent or vibrate only . User can also give name to the location like office, college etc. User can change the settings of user defined and default switching through settings .

3. WORKING

For the first time user , user need to create user profile. In the user profile user have to enter his/her phone number , preferred locations and preferred switching settings. User also need to set emergency numbers . On getting incoming calls from these numbers for more than three times the sound profile of an android device will be automatically switched. For this application to work device's GPS must be on. Application will check whether the GPS system is on or not if it's not then it will ask user to switch on the GPS system. Once the application is started it will check the current location. It will match the current location with default silent zone locations and user defined silent zone locations .

If the current location belongs to any of the above locations the android device will change the sound profile from its current profile to silent or vibrate as given in settings.
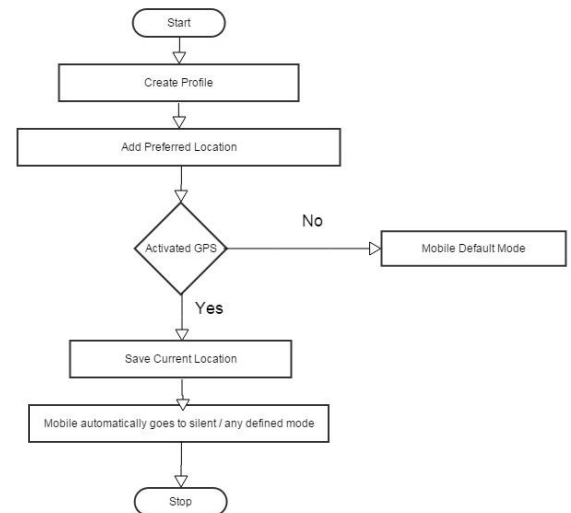
This application consist of four main modules. .Those four modules are as follows :

1) Default silent zone switching

2) User defined zone switching

3) Emergency call switching

4) user settings

In default zone switching the location of default silent zone is stored in GPS database. Android device will match the current location with stored location with the parameters such as area name,longitude,latitude etc. If current location belongs to default silent zone, android device will switch the sound profile.

For user defined zone switching application will ask user to store the preferred location. The preferred location can be selected from google maps or by giving location co-ordinates (longitude, latitude etc). These locations will be stored in SQLite database. Application will switch profile by comparing current location parameters with user defined location parameters.

In emergency call switching user will be asked to enter the preferred numbers. If user's device is in silent mode and user don't receive calls from any of the given preferred numbers the application will switch device's profile to vibrate or outdoor. The application will switch the profile if user gets calls for more than three times from given numbers.

In user settings module user can switch on and off application. This application is able to run in the background. In the user settings user can enable/disable user defined switching or default zone switching .

4. CONCLUSIONS

This application will save the human intervention for simple tasks such as sound profile switching. Sound profile switching will be completely automated and will reduce human efforts.

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