Android Timer-Based Phone Silencer

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Abstract: Many locations, including hospitals, universities, corporate offices, etc., have prominent signs that read "KEEP YOUR MOBILE PHONES SILENT!!". It is common for people to forget to place their phones in "Silent Mode," even though it isn't always possible—for example, during important meetings or presentations. Almost fully automated profile switching will be available via an Android app for automated profile switching. This application will enable the device to go into silent mode based on the data users enter into the database, based on what they need.

Index Terms - Auto Silent, Silent modes, automatic profile switching.

1. INTRODUCTION

The SILENT SYSTEM enables the device to switch to the Silent Mode in settings such as offices, hospitals, colleges, universities, and so forth when the user customizes the device. To enter the silence zone, the user only needs to enter the required coordinates of the locations and the radius measurements they wish to be inside. The stored data will be compared with the GPS, and any necessary adjustments to the profile will be made. The user may store specific phone numbers in the database. The profile will automatically switch to general mode after more than three missed calls and return to silent mode once the call has been answered when a call comes in while it is in silent mode, such as during a meeting.

A message indicating that the number is busy will automatically be sent to that number. If the user contacts them again in the future, they won't be bothered. With user-defined switching mode, an Android device's built-in SQLite database can have a location specified by the user. The application will use GPS satellite services to determine its location. The ringer mode of the profile is actually altered by the profile switching program.

Here, the user can choose between the silent and only vibrating ringer modes. A feature that allows calls to be ignored while using the silent profile has been implemented to prevent disruptions.
emergency numbers that users have saved are the only calls that can be answered.

1. OBJECTIVES

- Simple to operate
- Automatically changing profiles
- Precision
- Enhanced
- Usability Easy to use.

1. Problem Definition

This new application will provide completely automatic profile switching based on location. This program will enable the device to go into silent mode in places like government buildings, hospitals, big businesses, colleges, and esteemed educational facilities. The user can designate a location that is saved in the SQLite database that is integrated into Android devices by using the user defined switching mode. The application will use GPS satellite services to determine its location. The ringer mode of the profile is actually altered by the profile switching program. Here, the user can choose between the silent and only vibrating ringer modes.

1. IMPLEMENTATION

System Module:

Our project aims to provide nearly fully automatic profile switching so that the device can switch to the Silent Mode based on the data saved by the users in the database according to their requirements.

Group module: This module manages the creation of different contact groups according to the user's requirements. These groups can then be used to connect to the selected locations in order to make changes to a profile. For one or more locations, multiple groups can be created and activated.

Location module: The user can specify the locations required to update their profile by using the Google maps included in this module. Together with the coordinates of the chosen locations, the location's name and radius range are defined.
Profile Changer Module:

This module activates the locations for the call rejection and profile-changing features. Mapping the groups to the appropriate locations requires it.

Call Module Reject:

The assignment of groups to activation points for call rejection is made easier by this module. Multiple groups may be allotted a single spot.

Records:

This module activates the locations for the call rejection and profile-changing features. Mapping the groups to the appropriate locations requires it.

Exit:

This module is used by the user when they wish to quit using the application. When this occurs, the application stops working and the user has to log in again in order to use the services.

1. EXISTING SYSTEM

When using the current method, users have to schedule the silent time for their mobile device. They can also specify which day of the week the phone has to be switched off. The phone's profile will automatically change based on the time and settings. Whenever offices and classes change, the user has to reset the time. There is a high degree of user participation in the current system.

1. DISADVANTAGES OF EXITING SYSTEM

1. There needs to be more human interface.
2. It is not compatible with services that rely on location.
3. Generally, users must indicate the time.
1. SYSTEM ARCHITECTURE

The system architecture consists of the Android device, the GPS system, and the user components. The User can interact with an Android device by using the User Interface. Using Forward Geocoding and Reverse Geocoding, the Android device uses the Location Manager Interface to get location data from the GPS system.

As seen in the figure, GPS satellites and GPS server databases comprise the GPS System. The GPS satellite continuously transmits a signal containing information about the receiver's location, including the time and the receiver's current location in relation to the GPS satellite. Using this information, the GPS receiver calculates the location's coordinates (longitude, latitude, and altitude). Location-related information, such as coordinates for name, longitude, latitude, and altitude, can be found in the GPS Server Database.

1. SCOPE

Comprehensive Rule-Based Automation:

Users can customize the behaviour of "Auto Silencer" to suit their own needs and scenarios by creating detailed rules that dictate when and how their device's sound settings should be changed. These rules can be created based on a variety of variables, such as time, location, calendar events, and other contextual triggers like connecting to a particular Wi-Fi network or pairing with a Bluetooth device.

Advanced Contextual Awareness:

The fundamental function of "Auto Silencer" is its capacity to precisely identify and comprehend the user's current context by utilizing information from the device's sensors, GPS, and third-party apps like calendars. This feature enables the app to automatically apply the best sound settings according to the user's location (e.g., offices, classrooms, theatres), upcoming events, and even their activity patterns.

1. CONCLUSION AND FUTURE WORK

The Android Mobile Silent System, the next generation of location-aware intelligent software, reduces the need for human intervention for common tasks like adjusting the sound profile. Android smartphones become significantly smarter with the aid of this app.

A wide range of default locations can be considered, such as corporate and governmental buildings, healthcare and educational institutions, and more. The feature that allows the user to add the locations they require in the silent zone, locations chosen by the user along with accuracy parameters chosen by the user.
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