

Location Based Tracking Application Using Android Mobile Operating System

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Abstract— The motivation behind this system is that to develop a user friendly environment so on demand track the location of the user and help in various ways. The proposed system is implemented in android using location based services, SQLite database. With the location based services we can implement wireless communication and location positioning technologies. The proposed system sends current location of user to the nearest police station as well as respective numbers using GPS (Global Positioning System) along with his unique id. For authentication speech recognition is used.

Index Terms—GPS,GPRS, GSM, SQLite, Speech recognition, Service.

1. Introduction

Location based service (LBS) is a good application in mobile data services due to the rapid development in wireless communication and location positioning technologies. It is mainly implemented using Global Positioning System (GPS). Users with location-aware wireless devices can query about their surroundings at any place, anytime. This ubiquitous computing paradigm brings great convenience for information access. Using this environment the application is been implemented in which the user can on demand message to its contact its current position with the other attributes such as photograph of its surrounding. Using various other media applications the main application is generated to provide more efficiency and security to user.

2. System Overview

2.1 Design overview

The application is designed using two models in consideration

1. Client and server
2. Pipe and filter

Out of which the main application uses the client server architecture whereas speech recognition uses pipe and filter architecture.

The diagram is shown below.

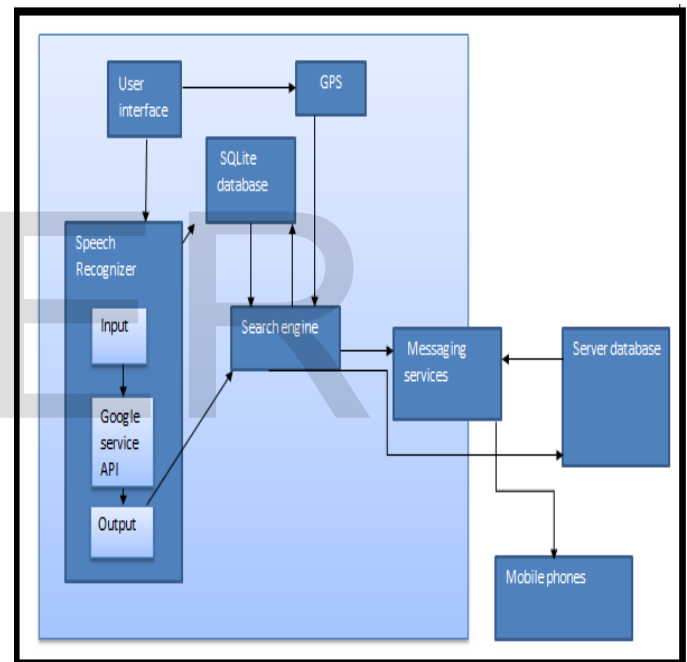


Fig 2.1 Architecture Diagram of proposed system

2.2 Application flow description

Initialization Sequence algorithm

1. User installs the application.
2. User enters his name and unique id.
3. User sets the password by using speech recognition.
4. User enters five contacts to whom he/she wants to send message.
5. Whenever user opens application recorder starts recording surrounding noise which will be saved in user's phone.

6. When user click on send button the application sends user's current location to respective contacts and nearest police station.

Database Sequence algorithm

1. Initialize the application.
2. User enters five contacts to whom he/she wants to send message that will be saved in SQLite database.
3. When user presses send button application generates message by taking user's current GPS location.
4. Application will search contact log in the mobile database and will send message to respective contacts and nearest police station.

Operational Sequence algorithm.

1. When user opens application he/she has to say his/her password.
2. After proper authentication, application will start.
3. It starts recording surrounding noise.
4. When user presses send button, application will start service in backend which will access the location and send message to the saved contacts.
5. Receiver will call this service every 5 minutes.



Fig. 2.2 Application flow diagram

3. Conclusion

This paper shows location based application using android operating system. The application supports new concept of speech recognition for authentication and also implements various other Medias apart from the messaging such as recorder and camera which will start automatically and the information gathered by this will be saved on the server. Therefore with the user location information the police will also have more information for further investigation.

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