

ACQUIRE LOCUS OF VICTIM USING GPS

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Abstract: Now a day's horrific crimes are coming to public eyes. Like many assault cases, murders, snatching, kidnapping. Etc. here the victim doesn't even get a chance to fight for her/his rights. Because the victim doesn't get a chance to inform the friends and relatives about the life censorious situation. To overcome this situation, we are developing a project for which the victim can get at least one chance to fight for self-protection.

Keywords: GPS, smart phone, cloud, message.

I. INTRODUCTION

Many innovative ideas are being incorporated in the mobile phones to make the device more and more consumer oriented. 'Acquire locus of victim using GPS' is a mobile based application developed using Android technology. The main objective of the application is giving a hope to the victim who is in danger situation. The user should install the app first in their android mobile and then select the contacts and store those contacts in special file. The victim should activate GPS and then click the warn button then latitude and longitude values of the victim will send to the selected contacts. As this application supports Google maps, selected contact persons can able to see victim's current location in mobile using maps so that they can find the correct way to the destination address.

II. PROPOSED WORK

"Acquire locus of victim using GPS" is an android application which is used for knowing the victim's location using GPS. Global Positioning System (GPS) navigation is a popular assistant in smart phones. By using GPS navigation in smart phones, the victim's location can easily trace even though the location is unfamiliar. Thus, this paper proposes a GPS navigation system for track the location of the victim and posting the emergency message on behalf of the victim. This application also enables the users to get their current location coordinates (latitude and longitude) and they can also view their locations on the Google maps and the victim friends or relatives can know which type of life crisis his friend is facing.

III. SYSTEM BUILDING BLOCKS

GPS TECHNOLOGY:

Global Positioning System (GPS) is a system composed of a network of 24 satellites of the United States, which are originally used in military services, and later allowed for commercial use. The satellites periodically emit radio signal of short pulses to GPS receivers. A GPS receiver receives the signal from at least three satellites to calculate distance and uses a triangulation technique [1] to compute its two-dimension (latitude and longitude) position or at least four satellites to compute its three-dimension (latitude, longitude, and altitude) position. Once a location is computed, it can calculate an average speed and direction of traveling. Therefore, GPS is a key technology for giving device its position.

GCM:

Google Cloud Messaging for Android (GCM) is a service that allows you to send data from your server to your users' Android powered device, and also to receive messages from devices on the same connection. The GCM service handles all aspects of queuing of messages and delivery to the target Android application running on the target device. GCM is completely free no matter how big your messaging needs are, and there are no quotas.

Google Map:

Google Map is very popular free software that provides maps by satellite images around the world. Google Map is a version of Google Earth that shows the maps on-line using with a web server and a web browser. The program provides plug-ins for community to show objects in the program.

IV. The Birth of Android

Google Acquires Android Inc: In July 2005, Google acquired Android Inc., a small start-up company based in Palo Alto, CA. Android's co-founders who went to work at Google included Andy Rubin (co-founder of Danger), Rich Miner (co-founder of Wildfire Communications, Inc), Nick Sears (once VP at T-Mobile), and Chris White (one of the first engineers at WebTV). At Google, the team, led by Rubin, developed a Linux-based mobile device OS which they marketed to handset makers and carriers on the premise of providing a flexible, upgradeable system. It was reported that Google had already lined up a series of hardware component and software partners and signalled to carriers that it was open to various degrees of cooperation on their part.

Application Framework: Developers have full access to the same framework APIs used by the core applications. The application architecture is designed to simplify the reuse of components; any application can publish its capabilities and any other application may then make use of those capabilities (subject to security constraints enforced by the framework). This same mechanism allows components to be replaced by the user.

Libraries: Android includes a set of C/C++ libraries used by various components of the Android system. These capabilities are exposed to developers through the Android application framework.



Fig. 1. Android Architecture

Android Runtime: Android includes a set of core libraries that provides most of the functionality available in the core libraries of the Java programming language. Every Android application runs in its own process, with its own instance of the Dalvik virtual machine. Dalvik has been written so that a device can run multiple VMs efficiently. The Dalvik VM executes files in the Dalvik Executable (. dex) format which is optimized for minimal memory footprint. The VM is register-based, and runs classes compiled by a Java language compiler that have been transformed into the . dex format by the included "dx" tool. The Dalvik VM relies on the Linux kernel for underlying functionality such as threading and low-level memory management

SQLite: Extremely small (~500kb) relational database management system, which is integrated in Android. It is based on function calls and single file, where all definitions, tables and data are stored.

Data Storage: SQLite is used for structured data storage. SQLite is a powerful and lightweight relational database engine available to all applications.

Connectivity: Android supports a wide variety of connectivity technologies including GSM (Global System for Mobile Communications), CDMA (code division multiple access), Bluetooth, EDGE, EVDO, 3G and Wi-Fi. Messaging SMS (Short Message Service), MMS (Multimedia Messaging Service), and XMPP (Extensible Messaging and Presence Protocol) are available forms of messaging including threaded text messaging.

Web Browser: The web browser available in Android is based on the opensource Web Kit application framework. It includes LibWebCore which is a modern web browser engine which powers both the Android browser and an embeddable web view.

Development Environment: Includes a device emulator, tools for debugging, memory, performance profiling and a plug-in for the Eclipse IDE. There are many hardware dependent features, for instance, a huge media and connections support, GPS, improved support for Camera and

simply GSM telephony. A great work was done for the developers to start work with Android using device emulator, tools for debugging and plugin for Eclipse IDE.

V. DESIGN AND IMPLEMENTATION



Fig. 2. System Architecture

“Acquire Locus of Victim Using GPS” is a process of sending the victim location with a warning message to their dear ones using GPS and GSM service providers. In this victim can open the smart saver app in their smart phone with mobile data as on mode and then he/she can select the contacts which are in mobile. Those contacts are stored in database which has called SQLite for android.

After the storing Victim can click on the button of WARN, then the contacts which are stored in database in temporary memory are will send to server with a default message, then the server will fetch the victim latitude and longitude co-ordinates using GPS, will send to the contacts stored in database.

The person who got the message from victim can view their location using co-ordinates and may get chance to help his/her from that pathetic situation.

We are using the GPS and GSM in-built service providers here for getting the latitude and longitude of the position and for sending the messages to stored contacts.

Android has an excellent database which is SQLite stores the nominal and structural data for anytime store and retrieval the data.

VI. EXPLANATION OF KEY FUNCTIONS

Welcome Activity: This activity I put an image view named as ivsplash which is stored in RES/drawable folder and applied an animation on that. Here onResume is a life cycle method of android. In this the loadanimation is a method get

from the animationUtils package to perform animation. onPause method is used for clearing the animation. And the welcome activity should be moved to the main activity class by using intents. Intents are used for change of one activity to another. It is always used with start activity. Imp_ids.txt is a file which stores all the selected contacts phone numbers. **Main Activity:** This activity is mainly focused on two methods those are funcfeed and funcwarn. In funcfeed method we maintain an intent to move to next activity display from this main activity. Here we can get the phone numbers from mobile by using the content provider such as ContactsContract.Contacts. Location Manager will give the updates of location. getlatitude (), getlongitude () methods are used in location changed class for getting the meridians of victim. SMSManager is used for sending the default message to the selected contacts. If the selected contacts file is empty the message “you need to select one number” will be shown. If the message sending is successful “message sent” message will be shown.

Display Activity: In this activity we maintain two array lists. One list for keep all the mobile contacts, another one is for keep selected contacts. getContentResolver is a method which takes client requests and resolves those and returns the result. In this activity func store method is used for store selected contacts phone numbers. It will take the phone numbers of contacts if imp_id file is not empty. If that file is empty then you need to select at least one contact message will be displayed. After store the contacts the display activity changes to main activity.

VII. CONCLUSION

Acquire locus of victim using GPS is an application which overcomes the disadvantage of the time-consuming message sending system. Its main objective is to map the person's position geographically using Google Maps and GPS. Using this application, a person in danger situation can tell their circumstances to their dear ones. The latitude and longitude co-ordinates of victim will send to the selected contacts, by using the Google maps, the selected contact member can get the victim's location.

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