# EMERGENCY ALERT APPLICATION TO ENSURE SAFTEY FOR WOMAN USING SMARTPHONES

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***Abstract*-Google's Android platform for mobile devices has quickly developed into a serious open source alternative. This application collected speed and location information from the Global Positioning System (GPS) receiver, used the Google Maps Application Programming Interface (API) to determine the location of nearby friends and relatives and sends an alert if a person needs help. The platform proved capable of supporting a melding of different services, and we believe such smart phones have broad applicability to public safety problems. This security application is designed to be an aid during distress or panic for women. It acts as the emergency application that alerts your family and friends in possible moments of danger.**

***Index Terms*- Android, Smartphone, GPS, Women Safety**

## I. INTRODUCTION

Smartphones offers much more, and they are full fledged computers that can fit in your pocket. A smartphone can make voice calls, make video calls, access the internet and browse the web, take photos and upload them to the web, navigate with GPS if the phone has GPS built-in, send emails, play in-built games and run new applications and games.Android is the most popular operating system on mobile phones and there are hundreds of phone models from dozens of manufacturers. The statistics show that smartphone usage and data consumption is on the rise. Android users consumes more data on a monthly basis compared to users of other mobile operating systems and download more apps on a monthly basis.The goal of our application is to easily locate a women in trouble and ensure her safety. It normally establishes a link between the traveler and the one who is tracking the traveler. Our security application is designed to be an aid during distress or panic for women and acts as an emergency application to alert our friends and family. In our application we have features to ensure women safety includes panic button, trace route, track location, spot capture and emergency calls.

## II. RELATED WORKS

SMS is also known as a text message which is used to send message to another phone. Smart phones are great for sending text messages, since you can type in complex messages on their screen keyboards without having to fiddle with a number pad. It is basically an Android application which easily locates a child in trouble. The parent's side uses SMS for communicating with the child and maps to view the location of the child map. Thus, it requires telephony services to be enabled in the parent's phone for the system to function. Telephony services must be enabled and up running on the child side for the system to work. A user, parent, will use the interface to send a location request SMS to child. The listener will respond to the request by sending the location with latest location update using the location service.

T5 will respond to the request by sending the location with the latest location update received from the location service. The system uses SMS for data transfer. In location services, the child side also must own an android phone. The child side uses SMS for communicating with the parent side and location services, GPS or Network, to get the location of the child in the form of coordinates. Telephony and location services must be enabled on the child side for the system to work, where as the parent side might have internet connectivity only for the map to show. Once the location request is sent, the location coordinates updates from GPS satellite or Network provider, which ever more accurate is sent. Location Based Service (LBS) has been considered as the most potential part of wireless value-added services. However, the development of LBS, which needs lots of data to transmit, is strictly limited because of the limited bandwidth of wireless network. With the emergence of 3G, wireless network speed is greatly improved, which will provide more information to users easily, and hence LBS will be greatly promoted. Today mobile communication devices are becoming much more technologically advanced and offer more features than just conversation.

## III. APPLICATION DEVELOPMENT

### A. *Requirements*

SQLite is an in-process library that implements a self-contained, zero-configuration and transactional SQL database engine. The code for SQLite is in the public domain and is thus free for use of any purpose, commercial or private. SQLite is currently found in more applications than we can count, including several high-profile projects. SQLite is an embedded SQL database engine. Unlike most other SQL databases, SQLite does not have a separate server process. SQLite reads and writes directly to ordinary disk files. A

complete SQL database with multiple tables, indices, triggers, and views, is contained in a single disk file. The database file format is cross-platform - you can freely copy a database between 32-bit and 64-bit systems or between big-endian and little-endian architectures. These features make SQLite a popular choice as an Application File Format. SQLite is very carefully tested prior to every release and has a reputation for being very reliable. Most of the SQLite source code is devoted purely to testing and verification. SQLite responds gracefully to memory allocation failures and disk I/O errors. The SDK for android 2.2 was released, based on Linux kernel. Its major features are speed, memory and performance optimization. Additional application speed improvements implemented through JIT compilation.

Froyo has USB tethering and WI-FI hotspot functionality option to disable data access over mobile networks. It does quick switching between multiple keyboard languages and their dictionaries and supports numeric and alphanumeric passwords Improved Microsoft exchange support, including security policies, auto discovery, GAL lookup, calendar synchronization and remote wipe. Froyo is a slightly modified navigation bar that assimilates shortcuts for both the phone and web browser. Froyo gives hardware compass access to the browser, handy for orienting maps according to which direction you're facing. You'll be able to access the camera from the browser, as well. Google continues to blur the difference between native and web apps. It introduced Flash, which has become one of the defining differences between Android and its main competitor, the I phone.

*B. .Proposed Architecture*

Mobile technology solutions allow businesses to connect with the consumer like never before. The Mobile device is being positioned to become the world's leading media solution. GPS tracking technology has been applied to many of today's problems in innovative fashions, including as an aid to health services. This paper states the advantages of GPS tracking devices for panic situations and for emergency alert situations. Downloading Emergency Panic Button, an ANDROID application that provides you and your family with access to virtually everything you need if you are ever involved in a dangerous situations. Emergency Panic Button technology provides you and your family with a one-click automated emergency communication system that contacts minimum of 10 stored emergency numbers in the application. It will even send the captured image of the offender and the location of where the woman is to a particular email id, so that the victim will get the evidence to report it later. It also helps to obtain the entire route of where the woman is if she chooses to report her movement. Because of its GPS location technology, Emergency Panic Button makes it easy for you to locate and contact the Police department using the helpline features available.

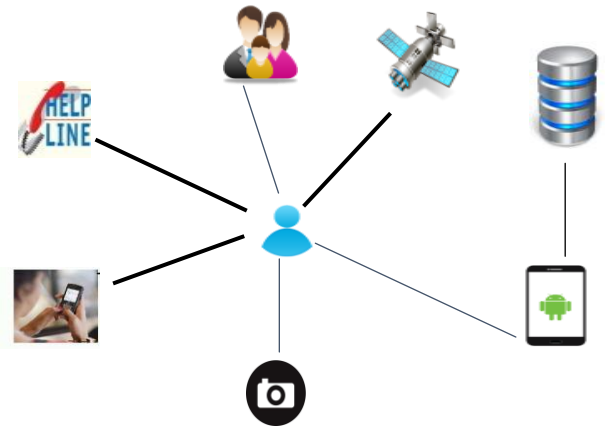
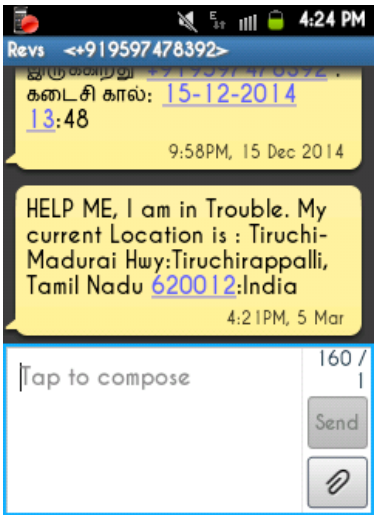



Fig 1. System Architecture

## IV. FEATURES

*A. Emergency Alert Messaging and sending E-Mail*

The heart of the application is the emergency alerts being sent to the contacts in case of emergency. For example, if the person is listed as Trusted Contact by the woman who downloads this application, in case of any emergency, alerts will be sent to the person. So there is no risk of losing any alerts during simultaneous logins.



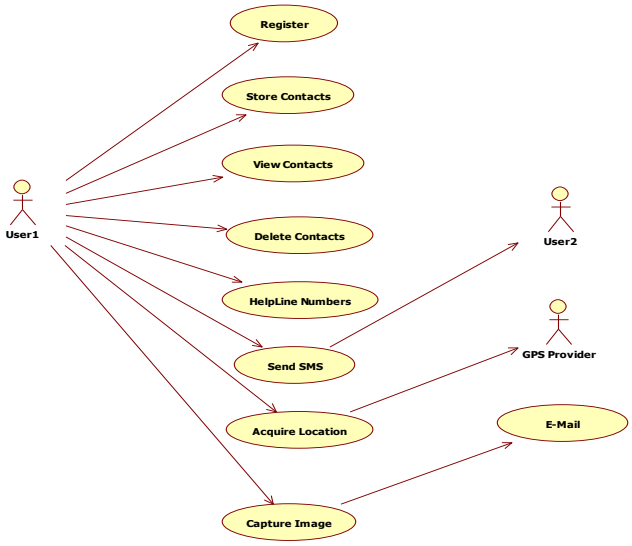




Fig 2. UseCase

*B. Trace Route*

The trace route feature sends SMS and mobile notifications about the current locations of the user to the trusted contacts at regular time intervals. For example, if the user /woman really feels unsafe, the user can press the panic button to ask for help which tracks them continuously until they are out of the application. It's a feature that is handy for the parents and it will be of greater use.

*C.Helpline numbers*

In this application the woman will get the option of storing the helpline numbers, like nearby hospital number, police station number, women helpline numbers depending on the places they travel. Women can change the helpline numbers whenever needed.

*D.GPS Tracking*

User's location (latitude and longitude) has become more and more automated with connected GPS devices, GPS enabled cell phones, location services from various mobile operators and positioning technologies with Wi-Fi and other wireless networks. This application ,after enabling the gps it automatically tracks the longitude and latitude of the user and sends it in the form of SMS to the person stored in the trusted contact list.

*E .Image capture*

When the woman is in distress or in panic situation, women can press the panic button and as soon as the panic button is pressed, automatically the mobile will capture the image or object in front of the user and sends it to a particular mail id so that the victim can retrieve the image later from the mail id which will be the evidence against the offender.

## V. CONCLUSION

Thus "Emergency Panic Button" is important application based on mobile, which is used to provide facility to the customer who suffers from the accident. We can more implement this application using android operating system. This is a new system which enables users to communicate with friends& their family in case of emergency as soon as possible. It normally establishes a link between the women and the one who is tracking her at home. This application answers questions like where am I ? what's around me? and how do I get there?. Thus this application proves to be of help to every women who works at nightshifts and travels a lot. Developing such system was really very exciting, a wealth of information and a very good opportunity to learn process, System analysis, and designing .Thus the goal of the application is to easily locate a women in trouble and ensures her safety.

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