IPROB – EMERGENCY APPLICATION FOR WOMEN

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Abstract: This project presents an alert system for PROB detection using common commercially available electronic devices to both detect the PROB and alert authorities. We use an Android based smart phone with an integrated tri-axial accelerometer. Data from the accelerometer is evaluated with several threshold based algorithms and position data to determine a PROB. The threshold is adaptive based on user provided parameters such as: height, weight, and level of activity. The algorithm adapts to unique movements that a phone experiences as opposed to similar systems which require users to mount accelerometers to their chest or trunk. If a PROB is suspected a notification is raised requiring the user's response. If the user does not respond, the system alerts pre-specified social contacts with an informational message via SMS. If a contact responds the system commits an audible notification, automatically connects, and enables the speakerphone. If a social contact confirms a PROB, an appropriate emergency service is alerted. Our system provides a realizable, cost effective solution to PROB detection using a simple graphical interface while not overwhelming the user with uncomfortable sensors. IPROB is very powerful software especially developed for the safety of girls, whenever some body is in trouble they don't have to sit and find contacts or find ways to send short message service, or message the near ones. They might not have so much time.. All that they have to do is shake the smart phone above the threshold value, vigorously. Immediately a message alert is sent to the person's mom, dad and whoever they wish to, if their guardians also have a smart phone. Even though if it is in silent mode. When a message called ALERT is received it automatically changes its profile to general, and gives a voice notification YOUR SON // DAUGHTER IS IN TROUBLE PLZ HELPS…. PLZ HELP…. PLZ HELP….   REPEATEDLY AS A RING TONE until they listen and stop it

I.   INTRODUCTION

This application is generally meant for the attention of the authorities or public in the emergency response capabilities such as terrorist attacks and the natural disaster by facilitating the communication with their respective along the mobile phones.

The difficulties in the existing application are the lack of situational awareness and communication terminology among their respective. Due to this response and recovery is Difficult to the authorities. In respect of the public safety with the support of the network provider the application runs in the android phones in   efficient way to identify and recover the problem by the natural disaster or terrorist attacks etc…

Furthermore users are likely to operate the mobile devices for the security purpose to intimate the problem detection to their respective in the emergency cases.

II.   APPLICATION REQUIREMENTS

To develop the IPROB android based mobile application the station and the environment of the surrounding has to been interviewed then the dangerous and the suspicious activates should be notified to the device by the user .if the device detects the problem then only other process creates the attention for reporting to the authority.

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A.   Tri-axial accelerometer:

Tri axial accelerometer is a device which is used for the detection of trigger using the higher threshold value, which is generally works on the basis of three parameters such as height, weight, and level of activity. The algorithm adapts to unique movements that a phone experiences as opposed to similar systems which require users to mount accelerometers to their chest or trunk.

B.   Detection of speaker phone:

Detection of the speaker phone is the part as the unique movement of a phone is triggered, the speaker phone enables and recognize the voice and identifies the detection of problem.

As the problem is detected it creates the command as ALERT and sends to the control and monitoring system through the network provider.

C.   Network provider support:

Network provider has got the important role, by sending the commands through the short message type to the different applications.

D. GPS (Global positioning system)

GPS is a Global positioning system which is used to track the location by receiving the LOC, ENABEL command from the Control and monitoring application. And it stops working by giving command as DISABLE using the network provider support.

E. SMS Manager Module

Text messaging, or texting, refers to the exchange of written messages between fixed-line phone or mobile phone and fixed or portable devices over a network. SMS Manager contains a powerful rule editor which can be used to automate message processing. This allows deploying common scenarios such as SMS voting polls, but also much more complex schemes.

- React to events like message being received or connection going down.

- Reply to messages.

- Create contacts and add them to distribution lists.

III. APPLICATION DESIGN

Once the requirement of the application are fulfilled then the application can be designed in the way of detecting the problem by shaking the mobile phone by the user and the mobile phone detects the voice which can be recognized and identifies the problem .as the problem detected the alert message should be created by the user application and sends to the authorities application through the network provider when the authorities Application receives the alert message which runs the applications and alert the authorities by giving the voice notification .When the authorities application get notified then the location can be identified and traced by the enabling the GPS, by creating enable message and sends to the user application through the network provider.
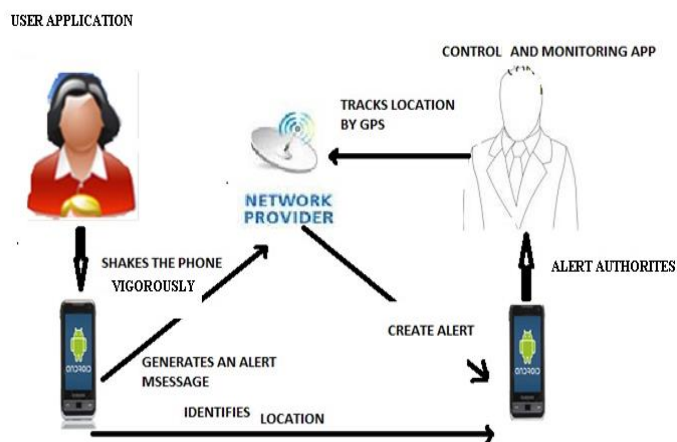

Figure 1 overview of application

IV. OPERATING SYSTEM

By considering the today's environment most of the people using the android based mobile phones and android is the open source which can be used and adapted easily so android operating system can be used.

Android is an operating system based on the Linux kernel, and designed primarily for touch screen mobile devices such as smart phones and tablet computers. Initially developed by Android, Inc., which Google backed financially .Android was unveiled in 2007 along with the founding of the Open Handset Alliance: a consortium of hardware, software, and telecommunication companies devoted to advancing open standards for mobile devices. The first publicly available Smartphone running Android, the HTC Dream, was released on October 22, 2008

The user interface of Android is based on direct manipulation, using touch inputs that loosely correspond to real-world actions, like swiping, tapping, pinching and reverse pinching to manipulate on-screen objects. Internal hardware such as accelerometers, gyroscopes and proximity sensors are used by some applications to respond to additional user actions, for example adjusting the screen from portrait to landscape depending on how the device is oriented. Android allows users to customize their home screens with shortcuts to applications and widgets, which allow users to display live content, such as emails and weather information, directly on the home screen. Applications can further send notifications to the user to inform them of relevant information, such as new emails and text messages.

Android is open source and Google releases the source code under the Apache License. This open-source code and permissive licensing allows the software to be freely modified and distributed by device manufacturers, wireless carriers and enthusiast developers. In practice, Android devices ship with a combination of open source and proprietary software. Android has a large community of developers writing applications ("apps") that extend the functionality of devices, written primarily in the Java programming language. In October 2012, there were approximately 700,000 apps available for Android, and the estimated number of applications downloaded from Google Play, Android's primary app store, was 25 billion. A developer survey conducted in April–May 2013 found that Android is the most popular platform for developers, used by 71% of the mobile developer population.

Android is the world's most widely used Smartphone platform, overtaking Symbian in the fourth quarter of 2010. Android is popular with technology companies who require a ready-made, low-cost, customizable and lightweight operating system for high tech devices. Despite being primarily designed for phones and tablets, it also has been used in televisions, games consoles, digital cameras and other electronics. Android's open nature has encouraged a large community of developers and enthusiasts to use the open-source code as a foundation for community-driven projects, which add new features for advanced user or bring

Android to devices which were officially released running other operating systems.

As of November 2013, Android's share of the global Smartphone market, led by Samsung products, has reached 81%.The operating system's success has made it a target for patent litigation as part of the so-called "Smartphone" between technology companies. As of May 2013, 48 billion apps have been installed from the Google Play store, and as of September 2013, 1 billion Android devices have been activated.

A. Applications**:**

These are applications written in Java. Some of basic applications include a calendar, email client, SMS program, maps, making phone calls, accessing the Web browser, accessing your contacts list and others.
If you are an average user, this is the layer you will us most, rest all layers are used by Google programmers, developers and hardware manufacturers.

B. Application Framework

This is the skeleton or framework which all android developers has to follow. The developers can access all framework APIs an manage phone's n to keyword ki:
basic functions like resource allocation, switching between processes or programs, telephone applications, and keeping track of the phone's physical location. The **architecture** is well designed to simplify the reuse of components. Think of the application framework as a set of basic tools with which a developer can build much more complex tools.

C. Libraries

This layer consists of **Android** libraries written in C, C++, and used by various systems. This library tells the device how to handle different kinds of data and are exposed to Android developers via Android Application framework. Some of these libraries includes media, graphics, 3d, SQLite, web browser library etc. The Android runtime layer which includes set of core java libraries and DVM (Dalvik Virtual Machine) is also located in same layer.

D. Runtime Android

This layer includes set of base libraries that are required for java libraries. Every Android application gets its own instance of Dalvik virtual machine. Dalvik has been written so that a device can run multiple VMs efficiently and it executes files in executable (.Dex) optimized for minimum memory.

E. Kernel – Linux:
This layer includes Android's memory management programs, security settings, power management software and several drivers for hardware, file system access, networking and inter-

process-communication. The kernel also acts as an abstraction layer between hardware and the rest of the software stac.

V. CONCLUSION

The problem of the women safety is increased rapidly in this environment, so I proposed as an effective Android application to prevent such type of the suspicious or natural disaster, by alerting the concern authorities using the android mobile phone which helps to stop such type of illegal activates and to trace the concern..

VI. ACKNOWLEDGMENT

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