RESEARCH ARTICLE

Analysis of Android Applications & Missed Call Alerts to Registered Email Address

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Abstract— Mobile device is most popular role in society like social networking for billions of regular users, even that mobile as problem. When we are in unexpected meeting, need to switch off the device to avoid from call disturbance exactly that time some important call will happen, the person did not have any information that he had missed call or some information is missing. Mobile connection networks provides facilitate missed call information but it would be charged per one SMS or number of information messages to get our mobile device. Missed Call and SMS Mailer is a free Android application to get missed call and sms alerts on our mobile device or email. The application identifies the missed calls on mobile Android and sends you the caller information on the mobile or email registered with the app. The mail sent by the application contains the name of the caller person, time date, month, year, if it is saved in contact list. In case the caller number is not saved, then the application sends you the caller number along with the exact time of missed call. To use the android just need to register the mail ID, choose the phone mode at which the app should send the missed call email alert and you are all set. Now, the application will start sending the emails of each and every missed call which you missed to receive on your Android phone.

Key Terms: - Android Application; Missed call alert; Mobile devices

I. INTRODUCTION

At present, people's consumption structure is improving steadily, for the sake of recreation and entertainment. Largest industry in the global economy world, generating an estimated 11% of the global applications and employing 200 million people and serving 700 million worldwide which is expected to double by the year 2020. Therefore, we intend to explore how to build a mobile application system based on mobile and email technology to solve communication problem [1].

Current mobile services are enhanced with location aware features, providing the user with better use experience. A great number of mobile phone applications appeared recently, many of which are location-related. Location-dependent services, which answer location-related queries, are an important class of context-aware applications. With kinds of promising applications, like local information obtain (traffic condition, navigation messages and so on) and neighboring environment queries, such as finding the nearest restaurant, location-dependent query service will soon become an necessary part of our daily lives. We will describe the design, implementation and deployment of a communication-based application, named Smart Alert solution, with the Android phone as a platform. This application permitted users to get missed call information they need anytime and anywhere to communicate their friends. In particular, the alert data could be captured or recorded through an Android.

The mobile client's current location is one of the most important information for email related system. Mobile phones need to report their own email to the remote server periodically, so that the information they want can be suitably gets in the email address. The advantage of this method is that the users do not need worry about the calls. Android has become a mainstay of operating system worldwide. It provides accurate application information for an unlimited number of people anywhere in the world. [1].

Android delivers a complete set of software for mobile devices, act an operating system middleware and key management applications.

Figure 1 Android mobile device

II. RELATED WORK

Android, Inc. was founded in Palo Alto California in October 2003 by Andy Rubin (co-founder of Danger), [26] Rich Miner (co-founder of Wildfire Communications, Inc.), [27] (once VP at T-Mobile) and Chris White (headed design and interface development at Web TV to develop, in Rubin's words "smarter mobile devices that are more aware of its owner's location and preferences". [13]. The early intentions of the company were to develop an advanced operating system for digital cameras, when it was realized that the market for the devices was not large enough, and diverted their efforts to producing a smart phone operating system to rival those of Symbian and mobile (Apple's iPhone had not been released at the time). Despite the past accomplishments of the founders and early employees, Android Inc. operated secretly, revealing only that it was working on software for mobile phones. [13] That same year, Rubin ran out of money. Steve Perlman, a close friend of Rubin, brought him $10,000 in cash in an envelope and refused a stake in the company [31]. It is a type of Java Virtual Machine used in android devices to run apps and is optimized for low processing power and low memory environments. Unlike the JVM, the Dalvik Virtual Machine doesn't run .class files, instead it runs .dex files. A .dex file is built from .class file at the time of compilation and provides hifger efficiency in low resource environments. The Dalvik VM allows multiple instance of Virtual machine to be created simultaneously providing security, isolation, memory management and threading support. It is developed by Dan Bornstein of Google

Speculation about Google's intention to enter the mobile communications market continued to build through December 2006 [35]. Print and online media outlets soon reported rumors that Google was developing a Google-branded handset. Some speculated that as Google was defining technical specifications, it was showing prototypes to cell phone manufacturers and network operators. In September 2007, Information covered an Evaluserve study reporting that Google had filed several patent applications in the area of mobile telephony [36][37]. Since 2008, Android has seen updates which have incrementally improved the operating system, adding new features and fixing bugs in previous releases. Each major release is named in alphabetical order after a dessert or sugary treat; for example, version 1.5 Cupcake was followed by 1.6 Donut. The latest release is 4.2 Jelly Bean. In 2010, Google launched its Nexus series of devices—a line of smartphones and tablets running the Android operating system, and built by a manufacturer partner. HTC collaborated with Google to release the first Nexus smartphone [39]. The series has since been updated with newer devices, such as the 4 phone and 10 tablet, made by LG and Samsung, respectively. Google releases the Nexus phones and tablets to act as their flagship Android devices, demonstrating Android's latest software and hardware features.

III. ANDROID

3.1. Android: We know the windows, Linux and mac operating systems which are made for computers. Windows is the most popular operating system on computers. Android is also an operating system started by some other company which was taken by Google. Google improved the operating system and made it a open source platform. It was widely adapted over the world. As it is open source it is so popular amongst the smart phones and also be used on tablet PCs. Android is based on Linux and offers you a great deal of customization in widgets and over millions of apps. Most of them are free of cost and can be installed on your phone just by clicking on install tab of the respective app in the Google Play Store app which comes along with the android

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Phone. One of the most widely used mobile operating system these days is Android is a software bunch comprising not only operating system but also middle ware and key applications. Android Inc was founded in Pa lo Alto of California, U.S. by Andy Rubin, Rich miner, Nick sears and Chris White in 2003. Later Android Inc. was acquired by Google in 2005. After original release there have been number of updates in the original version of Android.

3.2. Android Used Mobile Phones: Android is a open source platform which can be used by any phone manufacturers on the world unlike other operating systems for mobile phones like i OS (Operating system by apple for i Phone, i Pad and other i Devices). Symbian is owned by Nokia and it comes only on Nokia Handsets. Android can be used by any manufacturer. So that if the latest research is to be believed over half of the smart phones in USA run on android. Android is one the hottest mobile operating systems available today. Samsung is the Largest Manufacturer of android phones and tablets. LG, HTC, Sony, are other top manufacturers of android phones and tablets. Some local manufacturers like Micro-max, Karbon, Hawaii, also use android Phones on their portable devices.

Android has a growing selection of third party applications, which can be acquired by users either through an app store such as Google Play or the Amazon Appstore, or by downloading and installing the application's APK file from a third-party site. The Play Store application allows users to browse, download and update apps published by Google and third-party developers, and is pre-installed on devices that comply with Google's compatibility requirements. The app filters the list of available applications to those that are compatible with the user's device, and developers may restrict their applications to particular carriers or countries for business reasons. Purchases of unwanted applications can be refunded within 15 minutes of the time of download, and some carriers offer direct carrier billing for Google Play application purchases, where the cost of the application is added to the user's monthly bill. As of September 2012, there were more than 675,000 apps available for Android, and the estimated number of applications downloaded from the Play Store was 25 billion.

Applications for Android: Developed in the Java language using the Android software development kit (SDK). The SDK includes a comprehensive set of development tools, including a debugger, software libraries, a handset emulator based on QEMU, documentation, sample code, and tutorials. The officially supported integrated development environment (IDE) is Eclipse using the Android Development Tools (ADT) plugin. Other development tools are available, including a Native Development Kit for applications or extensions in C or C++, Google App Inventor, a visual environment for novice programmers, and various cross platform mobile web applications frameworks.

In order to work around limitations on reaching Google services due to Internet censorship in the People's Republic of China, Android devices sold in the PRC are generally customized to use state approved services instead.

IV. ANDROID DEVELOPMENT

4.1. Android Development: Android is developed in private by Google until the latest changes and updates are ready to be released, at which point the source code is made available publicly. This source code will only run without modification on select devices, usually the Nexus series of devices.

Figure 2 Android Architecture diagram

Android consists of kernel on Linux version 2.6 Android uses the Dalvik virtual machine with just-in-time compilation to run Dalvik 'dex-code' (Dalvik Executable), which is usually translated from Java byte code. The main hardware platform for Android is the ARM architecture. There is support for x86 from the Android x86 project, and Google TV uses a special x86 version of Android. Android's Linux kernel has further architecture changes by Google outside the typical Linux kernel development cycle. Android does not have a native X Window System by default nor does it support the full set of standard GNU libraries, and this makes it difficult to port existing Linux applications or libraries to Android. Support for simple C and SDL applications is possible by injection of a small Java shim and usage of the JNIlike, for example, in the Jagged Alliance 2 port for Android. Certain features that Google contributed back to the Linux kernel, notably a power management feature called "wake locks", were rejected by mainline kernel developers partly because they felt that Google did not show any intent to maintain its own code. Google announced in April 2010 that they would hire two employees to work with the Linux kernel community, but Greg Kroah-Hartman, the current Linux kernel maintainer for the stable branch, said in December 2010 that he was concerned that Google was no longer trying to get their code changes included in mainstream Linux. Some Google Android developers hinted that "the Android team was getting fed up with the process," because they were a small team and had more urgent work to do on Android.

4.2. Proprietary binary dependencies: With many devices, there are proprietary binaries which have to be provided by the manufacturer, in order for Android to work. Since Android devices are usually battery-powered, Android is designed to manage memory (RAM) to keep power consumption at a minimum, in contrast to desktop operating systems which generally assume they are connected to unlimited mains electricity. When an Android app is no longer in use, the system will automatically suspend it in memory while the app is still technically "open," suspended apps consume no resources (e.g. battery power or processing power) and sit idly in the background until needed again. This has the dual benefit of increasing the general responsiveness of Android devices, since apps don't need to be closed and reopened from scratch each time, but also ensuring background apps don't waste power needlessly.

Android manages the apps stored in memory automatically: when memory is low, the system will begin killing apps and processes that have been inactive for a while, in reverse order since they were last used i.e. oldest first. This process is designed to be invisible to the user, such that users do not need to manage memory or the killing of apps themselves. However, confusion over Android memory management has resulted in third-party task killers becoming popular on the Google Play store; these third-party task killers are generally regarded as doing more harm than good.

4.2.1. Update schedule

Figure 3 Updated Android applications in different mobile device

From left to right: HTC Dream (G1),Nexus One, Nexus S, Galaxy Nexus See also: Android version history
Google provides major updates, incremental in nature, to Android every six to nine months, which most devices are capable of receiving over the air. The latest major update is Android 4.2 Jelly Bean.

V. PROBLEM DEFINITION

Mobile technology become vital role in modern society with all update features even with this we have some problems. If our mobile is not able display the screen, mobile piece voice is not clear, mobile phone do not have charging and phone is switched off. At that time we miss so much of information and the other person may get irritated to avoid such problems we introduced solution. Missed Call and SMS Mailer is a free Android application to get missed caller information and sms alerts on email. To use the app, you just need to register the mail ID address, choose the phone mode at which the application should send the missed call email alert and you are all set.

VI. ANDROID APPLICATIONS

Android Mobile phone users to reach the destination in new city easily when we are going to the new city it is difficult to find the path from one place to another place even though we travelled many times in that route. So this application will help the user to record the route and show the route to the user when they need it. The user has to start this application and press the record button to memories the path, then this system will track the location of the user using GPS and the co-ordinates are stored in database, this process will continue until the user press the stop button. In this we can able to store more than one route.

The main idea of this application is to maintain all the details of ATM, Restaurant, Hospitals, Malls, etc in mobile phone database along with their GPS co-ordinates category wise. Whenever the user want to know the nearest location of ATM or Hospital, he has to run this application and select the category, once the category is selected this application will find the current location of the mobile based on the GPS facility and search the corresponding nearest location based on the GPS co-ordinates stored in the database and list the top 10 nearest items.

To develop a system which will send a face image from Android Mobile to We? Server where web server has an application which will maintain the criminal face images and details, once the web server receives the Face Image as input and compare the Face Image with Criminal Face database and retrieve the matching face.

Textual passwords are the most common method used for authentication. But textual passwords are vulnerable to eves dropping, dictionary attacks, social engineering and shoulder surfing. Graphical passwords are introduced as alternative techniques to textual passwords. Most of the graphical schemes are vulnerable to shoulder surfing. To address this problem, text can be combined with images or colors to generate session passwords for authentication. Session passwords can be used only once and every time a new password is generated. These methods are suitable for Personal Digital Assistants.

VII. CONCLUSION

In this paper, mobile device information missing when phone is in switch off mode, Android application is one to provide facilitate for end users, it sends the caller information to registered mobile number or email. Also present how android will work and its architecture and android applications. Future work extends to investigate more analysis services and facilitate implementation on android application.

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Author's Bibliography

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