

# Anti-Theft Application for Android Based Devices

Shweta Dhanu<sup>1</sup>, Afsana Shaikh<sup>2</sup>, Shweta Barshe<sup>3</sup>

Bharati Vidyapeeth College of Engineering, Navi Mumbai, India.<sup>1,2,3</sup>

**Abstract:** This project aims to improve anti-theft for android based mobile phones by using different services like MMS instead of SMS. The scenario proposed in this project is totally dependent on the hardware of your smart phone like front camera, back camera and support for multimedia messages. Once the installation of this software is complete, it will work in the background, it will store the current SIM number and keep on checking continuously for SIM change, whenever SIM card gets changed from mobile, it will take few snapshots and record a video in the background, without taking permission of the user and then it will send a multimedia message, and number of snapshots, to an alternate mobile number and an email id provided by the particular user, during installation of the software.

**Keywords:** Android, MMS, Multimedia Messages, Snapshots, Email.

## I. INTRODUCTION

The latest mobile phones like android based mobile phones, also called as smartphones has become a very important part of our life. Smartphones change the ways of communication, it provides an advantage of communicating with anyone virtually through video-conferencing, email, etc., and it also provides a facility to store contact numbers, email id's, in phone memory which reduces the concept of File-System to store personal information.

Nowadays, smartphones are acting like a computer, it can be used to store information, documents etc., these documents can be shared with anyone through the internet. These latest smartphones are very helpful for doing business work. Company related information and documents can be viewed anywhere and can be shared with anyone. These days android based mobiles phones/devices are very popular because it provides a large number of utilities for hand-held devices through which it acts as a computer in a pocket. Because of its open-source nature a large number of utilities has been developed for android operating system and it is getting used in many mobile phones.

Because of its small-size, it can be stolen very easily and the confidential-information of any organization or personal details of people stored in the phone memory can be easily exposed.

Our project aim is to put forward a technique through which the thief, who steals any android based mobile phone installed with this application, gets captured and the user can make him/her stop misusing any confidential information. This application includes the latest technology like MMS (multimedia messaging service) where you can send video clips and photos to any other mobile phone, unlike SMS which includes only text. It gives the information about the thief by sending the snapshots and a small video clip of the thief to an alternate mobile number, which helps us to recognize the thief.

## II. REQUIREMENT ANALYSIS

One of the biggest challenges in the current Anti-theft management system is that, the exact location of crime place is not found as early it is required. Due to the delay in this procedure the crime is already done and no one people can give the correct information, because they have to face the police investigation.

The latest smart phones provide lots of capabilities like personal computers and in addition it provides different kinds of application which are used to store lots of information in an organized form. Because smart phones are getting smaller in size day-to-day, there is a lot of chance to drop it somewhere and also anyone can steal it without your knowledge. It contains lots of confidential documents, data and personal information which will be in danger. So it is important to find the thief, all the existing applications could not be able to identify the thief, it is only capable of locating the device.

Mobile anti-theft system is a project which helps us to track the location of the smartphones. It consists of Android client application which will automatically send SMS when SIM card is changed. Position tracker works on Global Positioning System(GPS) and GPRS. When requested MATS will fetch latitude and longitude satellites and send it as a SMS but this information is not enough so it is difficult to identify the thief by using this information. Many software based on anti-theft have been developed, but most of these software is not free of cost. It is difficult to identify the thief by using this software. The Existing anti-theft system do not get perfect information of the thief. In most of the cases, the innocent is accused in the existing system.

The existing system is criticized for being inefficient, time consuming, poorly managed, and lacking. This paper presents a technique to improve anti-theft for android based mobile phones by using different services like MMS. Once this application gets installed in your android mobile device, it will store your email id, alternate mobile

number, and SIM unique identity number in the phone memory and keep running in the background by using services. Then it will keep checking for SIM number, once a user/thief changes the SIM, it will detect that SIM is changed by comparing new SIM unique number with stored one and send the signal to start services.ng flexibility. Now as soon as signal is received, services gets started in the background which will start making video recording from front camera if present otherwise from back camera (at least one camera is necessary) and also take few snapshots, which are stored in the SD card. Now once these services get finished it will send signal to another service, where a service will send a multimedia message and an email with attached snaps or video clips to an alternate mobile number and to an email address respectively, once it receives proper setting for multimedia messages and internet connectivity. The major goals of this system are:

- It is user- friendly and easy to use.
- Track the location of the smartphones.
- Automatically send SMS whenever sim card is changed.
- Recover the lost smartphone.
- Identify the thief who had stolen the smartphone

### III. SYSTEM ANALYSIS

The main components of this system are user registration, MMS, email and location tracker.

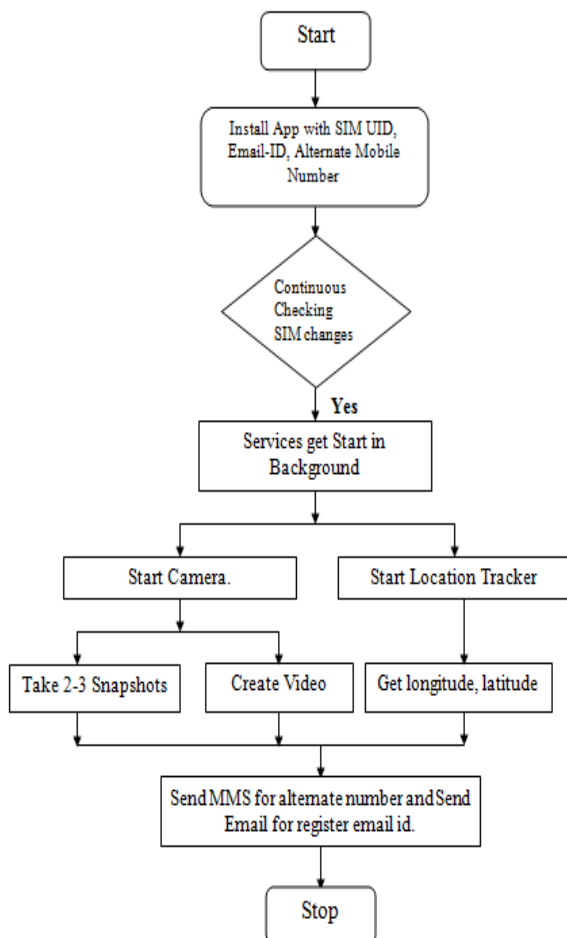


Fig. 3.1 System Flow Chart

When user installs this application in the device it is required to register the e-mail id and alternate three mobile numbers. The MMS module in the system will start making video recording from front camera if present otherwise from back camera (at least one camera is necessary) and also take few snapshots, which are stored in the SD card and send MMS for alternate number which is saved in the software. The email module in the software will send mail with the thief information like longitude and latitude and few snapshots to an alternate mobile number and to an email address respectively. By using the location tracker module cop can track exact location of android device i.e. the exact location of the thief.

### IV. SYSTEM ARCHITECTURE

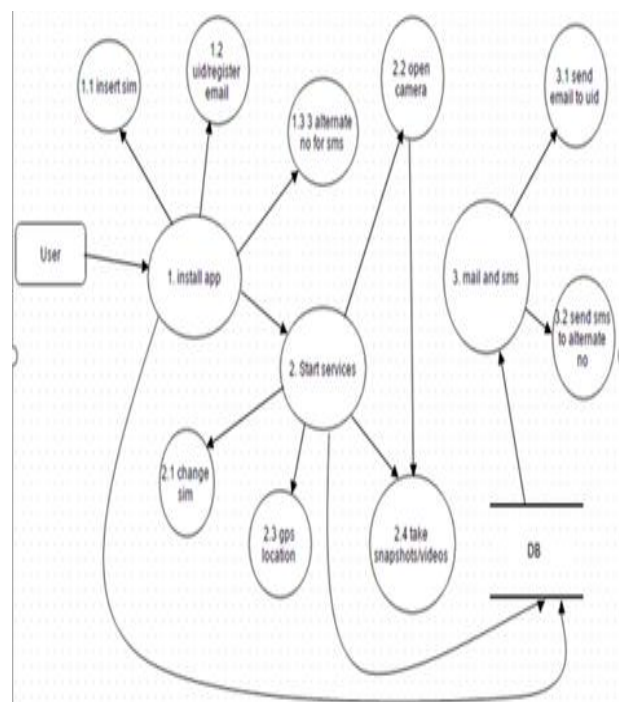


Fig. 4.1 Data Flow Diagram

The system architecture consists of three major parts namely Graphical User Interface (GUI), front end and back end. The architecture displays the basic process flow. GUI is the interface visible to the user. A GUI allows the icons and other visual indicators to interact with electronic devices; rather than using only text via the command line.

Java & Wamp server are used as front-end technologies. When user installs the app, the user will register email and three alternate mobile numbers, the query goes to the back end part. After that front end will store the user entered data into the database i.e. Back end. The results are returned to front end and from there, to GUI for displaying as shown in fig.4.1.

There is a database in the back end. It contains all the information regarding email id's and numbers of all the users. Here, MySQL is used for this purpose. When user fires a particular query, the query is given to database and the corresponding result is segregated from large volume of information.

## V. ADVANTAGES

- This software is freely available.
- The main advantage of this application is anyone can use it without having much knowledge about the device.
- The application meets user's immediate and long term requirements by providing the images and videos of the thief.
- Easy for the user to identify the thief and make him/her get caught and arrested.
- This application provides the information about the location of the android based smart phone with the help of e-mail.

The developed anti-theft app will enable user to use his android based smartphone with freedom of getting stolen. It will enhance the security of the android based smartphone.

## VI. CONCLUSION

This paper presents a novel anti-theft application for android based devices. The application deploys an enterprise security solution that meets users immediate and long term requirements by providing the images and videos of the thief, which makes easy for the user to identify the thief and make him/her get caught and arrested. We are enhancing this application by providing the information about the location of the android based smartphone with the help of text messages. With the advent of time, technology is evolving every day. Our application will further be developed and improved. Currently this application is available for android based mobile phones.

## REFERENCES

- [1] J.F. DiMarzio, *Android a programmer's Guide*, 1st edition, McGraw-Hill Companies, 2008.
- [2] Ed Burnette, *Hello, Android: Introducing Google's Mobile Development Platform*, 3rd edition, Pragmatic Bookshelf, 2010.
- [3] Chandra, Ankur, Shashank Jain, and Mohammed Abdul Qadeer. "GPS Locator: An Application for Location Tracking and Sharing Using GPS for Java Enabled Handhelds." In *Computational Intelligence and Communication Networks (CICN)*, 2011 International Conference on, pp. 406-410. IEEE, 2011.
- [4] Kumar, Sandeep, Mohammed Abdul Qadeer, and Archana Gupta. "Location based services using android." In *IMSAA'09: Proceedings of the 3rd IEEE International Conference on Internet Multimedia Services Architecture and Applications*, pp. 335-339. 2009.
- [5] *Communication Technologies*, 2009. *IMPACT'09. International*, pp.217-220. IEEE, 2009.
- [6] Qadeer, Mohammed Abdul, Ankur Chandra, and Shashank Jain. "Design and Implementation of Location Awareness and Sharing System using GPS and 3G/GPRS." (2012): 125-140
- [7] Reto Meier, *Professional Android 2 Application Development*, 2<sup>nd</sup> edition Wiley Publishing Inc., 2010.