Mobile Theft Detection and Self Tracking

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Abstract— **the tracking the stolen mobile phone is having the more amount key challenges. This paper is proposed the self-tracking to our stolen mobile phone. It provides the higher security to our mobile phone and allowed to control the phone in remote commands. This mobile phone security system is allowed to track our mobile phone in plunge out situation. Our proposed system will help to provide the security to future mobile phone users. The users are having the option to access mobile phone in the remote commands. In this remote command access is help to provide the good security to the mobile users.**

Keywords—**Mobile phone tracking, Mobile theft Self Tracking, Remote Access**

I. INTRODUCTION

Mobile phone is the one part of our life. It is help to do more number of activities in easy way. Development of mobile phone devices can be traced back from the invention of telephone by Alexander Graham Bell in 1876 to a smart mobile phone of today. This discovery is completely changing the human life style. In the initial period the telephone is used only to calling purpose. First mobile phone is developed by A. Jahnke in 20th century. Martin Cooper is the father of the now days mobile phones. He using the Motorola Mobile Product and specification of this mobile includes weight of 2.5 Pounds and battery life is 20 minutes. Later in 1983, the first commercialized cell phone is developed as Motorola Dyna Tacata. In 1989, Motorola designed another cell-phone using Micro technology the first "Flip". First" smartphone" was launched in 1993 by BellSouth of IBM Simon. Android is the one of the famous a mobile operating system. In this operating system was developed by Andy Rubin. In the Android operating system is based on the LINUX KERNEL and other operating system designed primarily for touch screen mobile devices such as smartphones and tablets. In addition, Google has the further developed Android TV for Televisions, Android Auto for cars and Android Wear for wrist watches, each with a specialized user Interface. Variants of Android are also used on game consoles, digital cameras, PCs and other electronics.

Initially developed by Android Inc., which Google bought in 2005, Android was unveiled in 2007, with the first commercial Android device launched in September 2008. The operating system has since gone through multiple major releases, with the current version being 8.1 "Oreo", released in December 2017.Android has been the best-selling OS worldwide on smart phones since 2011 and on tablets since 2013. As of May 2017, it has over two billion monthly active users, the largest installed base of any operating system, and as of 2017, the Google Play store features over 3.5 million applications
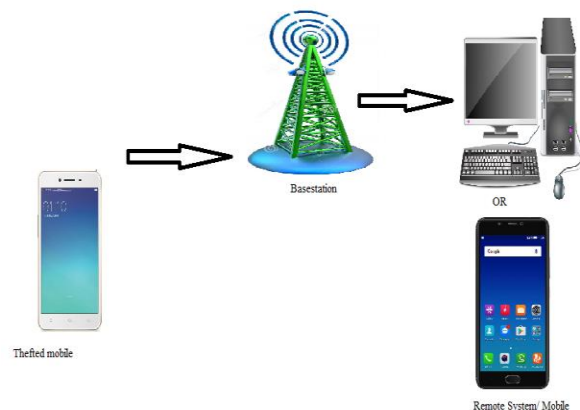
II. SYSTEM ARCHITECTURE

Fig.1 System Architecture

III. SYSTEM PROCESS

If the person identifies the situation of loss the mobile phone he tries to track the mobile phone using the remote command. First step of the tracking process is

phone owner using the TRACK command. The command is help to locate the mobile device. The theft tries to switch off the mobile phone it is need to the authentication. The theft can't open the mobile phone .If the theft tries to insert the new SIM card the software is miss match the SIM number. It automatically sends the Geographical information; theft snapshot, voice record, and call history information. In this application is giving number of features. SIM command module is help to identify the location, SIM details, snapshot, call logs Information. The SIM change alert module is help to provide the information about to change SIM card. In this application is allowed to wipe operation. The wipe option is help to remove our personal details and contact number memory card. It is help to user remotely access our mobile phone in back ground process. The theft cannot know the application working. In this application is allowed to screen lock module. The users are able to change the screen pattern and the password in dynamic manner. The users are able to change the number of patterns. It is give the good security for our mobile phone. Wrong password alert module is indicating the wrong password. It helps to control the number of attempts to the mobile phone. It is giving the voice recording facility. The application is automatically record the theft voice. It is help to getting the strong evidence to identify the mobile phone.

3.1 SPECIAL OPTIONS

In this application having the option to create the warning message .It is help creating the awareness of our mobile phone. It is give the alarming options. The SIM card change, enter the wrong password. It is giving the alarm.

3.2 INTERNET

The device was stolen or simply lost; you can remotely track, lock, and wipe it. This requires that the device is powered on and has a connection to the internet. This is easy if you're tracking a phone with a data connection, but harder if you're tracking a laptop that may be offline or powered off.

IV.   LITERATURE SURVEY

In this paper contains incorporating BIOS cell to keep the tracker SIM in the one state. The SIM Tracker which can only use for tracking the device only not for making the calls and messages. The existing system uses BIOS cell. The mobile can trace even the SIM and battery is plugged out. The advantage of the system is the owner can get necessary information of his mobile and thief. This application can be uninstalled easily.

Mobile theft tracking application in deals with the GPS tracking, SIM change alert, remote erase of data .It is help to gathering of location information and secure personal details .It required internet facility. Mobile reset will uninstall the application.

Mobile Tracking based on Phone theft detection says details of changed SIM can be obtained. The location details can be interrupted by week strength of the signal.

Limitations in the existing tracking system:

The tracking applications are uninstalled easily.

GPS is required to track the mobile phone, but with GPS an android device could also be used for tracking.

It may not be a reliable method, and it does come with certain limitations, but it can get the job done.

V.   PROPOSED SYSTEM

5.1 Modules

➢ Read sent and receive SMS messages
➢ Wipe phone
➢ Lock phone
➢ Locate by GPS or network
➢ Start alarm with flashing screen
➢ Start and stop GPS
➢ Start and stop Wi-Fi
➢ Hide from Launcher
➢ Take picture from front camera
➢ Email when SIM card changed

5.2 Modules Description:

5.2.1Read Send and Receive SMS Message

 It is help to provide the information about to sending and receiving information about to the theft. In this information is help to easily identify the theft.

5.2.2 Wipe Phone

The wipe command is use to remotely delete the memory, contact details. It is help to the user able to access the `phone in remote manner. It is help to theft access our personal information.

5.2.3 Lock Phone

It is allowed to user lock the phone screen in remote manner. The user can able to change the pattern type to the mobile phone.

5.2.4 Location Identification Module:

 It is allowed to identify the theft location information. The theft connecting to internet the theft

location is sanded via internet otherwise it transferring to the mobile network.

5.2.5 Start Alarm with Flashing Screen

The remote command is help to starting the alarm in the theft mobile phone. "START ALARM" command is help to start the alarm and "STOP ALARM "is help stop the alarm. It is also allowed to flashing our message. It is giving the warning to the theft.

5.2.6 Hide from Launcher

Hide from the launcher and it not allowed to the unauthorized users to use the mobile application .It is asking the password to the users. It provides the security to our mobile phone.

5.2.7 Take Picture from the Frond Camera

It is help to taking the theft picture in the usage of the front camera. The "TAKE PICTURE" command is help to take the picture in the remote manner.

5.2.8 Email When SIM Card Changed

It is giving the information when the theft changes the SIM card. The application is initially store the SIM card details. If the details is miss matched it automatically send the information about the change SIM card.

VI. PERMISSIONS:

The mobile tracking task requires permission for perform the tracking activities.

6.1 HARDWARE PERMISSION:

- ✓ android.hardware.location
- ✓ android.hardware.telephony
- ✓ android.hardware.location.network
- ✓ android.hardware.location.gps
- ✓ android.hardware.touchscreen
- ✓ android.hardware.camera
- ✓ android.hardware.camera.autofocus
- ✓ android.hardware.camera.flash
- ✓ android.hardware.camera.front
- ✓ android.hardware.microphone

6.2 OTHER PERMISSIONS

- ✓ android.permission.MODIFY_AUTO_SETTINGS
- ✓ android.permission.ACCESS_CORE_LOCATION
- ✓ android.permission.INTERNET
- ✓ android.permission.READ_SMS
- ✓ android.permission.RECEIVE_SMS
- ✓ android.permission.SEND_SMS
- ✓ android.permission.ACCESS_WIFI_STATE

- ✓ android.permission.CHANGE_NETWORK_STATE.
- ✓ android.permission.CAMERA
- ✓ android.permission.WAKE_LOCK
- ✓ android.permission.BIND_DEVICE_ADMIN
- ✓ android.permission.READ_PHONE_STATE
- ✓ android.permission.COARSE_LOCATION
- ✓ android.permission.GET_ACCOUNTS
- ✓ android.permission.USES_POLICY_FORCE_LOCK
- ✓ android.permission.ACTION_SHUTDOWN

These other permissions are performing the task that is used for the hardware of the particular smart phone.
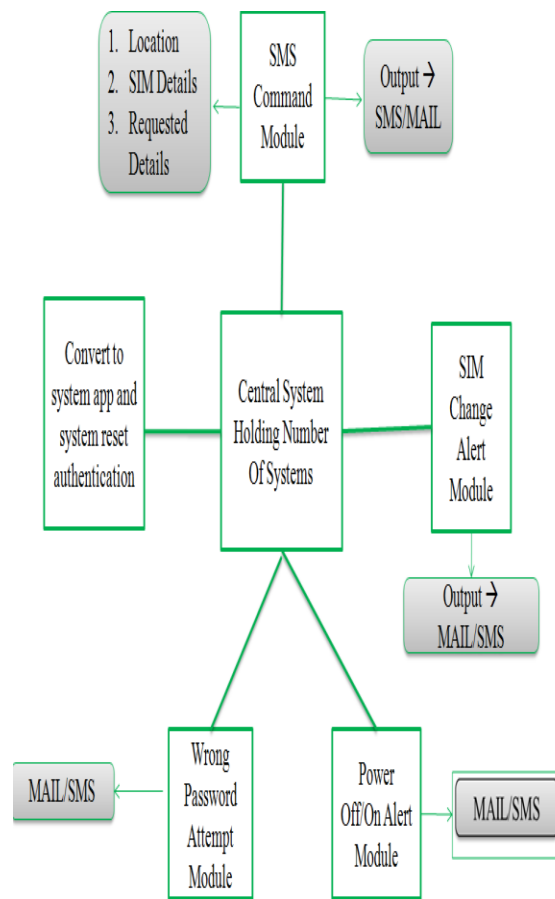

Fig 2. Overall Process Structure

VII. SECURITY FEATURE

In this anti-theft detection application is giving the more security to the users. In this application is running in the back ground. The theft not knowing the back ground process. In the installation time this application asking some amount of the permissions. It is asking the dial code to user. In this dial code is use to direct calling the application without SIM card. In older applications are having the main disadvantages is that applications are need to the inert net connection and power on mode of the mobile phone. The theft easily uninstalls the application. In this application is overcome this kind of the problems. The anti theft application is working in the offline mode. If the theft tries to click the power off button it is asking the password. It is the main security feature of this application. The user can able to change the number of attempt to put the password. If the theft tries more number of attempt it automatically taking the snapshot, password. In this details are sending by the users in online mode or off line mode. The theft cannot open the mobile phone without using the password.

VIII. **FEATURE WORK**

This mobile theft identification and self tracking application is only for android based smart phones .In future it can implement in IOS and windows smart phone operating systems. If the mobile phone is contains no charge means this application does not work.

These problems will be overcomes by the future. This self tracking application helps to track the mobile lost or theft means that can identified by the owner in   smart phone. This Application performs remote task in smart phones. Internet is not required for tracing the mobile. This Application will help for android users. This application will be provided by very low cast. It is help to increasing the number of users.

8.1 ADVANTAGES

- Remote Access
- It works in Offline
- Less power consumption
- Wide range
- Theft can't uninstall the application.

8.2 DISADVANTAGE

- Easy uninstallation of application
- Mobile reset
- Internet Enabled
- Loss of Personal Details
- High Cost and Short Range
- Hardware Failure

IX. CONCLUSION

In this paper have the novel idea about self tracking our mobile phone .This application is provide the higher security to the mobile phone. It is allowed to the access stolen mobile phone via remote command. It give the location of the mobile phone, theft image, voice record, contact information and SIM card change details to the users email, alternate phone numbers provided by the users with the advent of time, technology is updating every day. Our application is future will be update and improved. Currently this application is Android application system. If the future we are we are trying to make this application for IOS & WINDOWS mobile OS. This will be future scope.

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