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ANTI-THIEF ANDROID APPLICATION

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Abstract: This paper gives new techniques to improve anti-theft application for android based operating system devices like mobile phones by using different services like MMS instead of SMS. As the use of smartphones, tablets based on android operating system is increasing, many scenarios related with anti-theft have already been proposed and many software based on anti-theft have also been developed, but most of these software are not freely available and it's difficult to identify the thief by using these software's e.g. GPS Tracking. We put forward a new scheme, which enhances the present scenario, based on new technologies like Multimedia Messages. It is totally dependent on the hardware of your smartphone like camera (front & back) and support for multimedia messages. Once this software is installed, it will work in the background, stores the current SIM number in a variable and keeps checking continuously for SIM change, whenever SIM gets changed from mobile, it will take send the messages to registered number i.e., without taking user permission and then it will send an SMS, and serial number of mobile to an alternate mobile number and an email id, which was provided during installation using this we can get Aadhar card number of thief. The enviable advantage of this software is that it is very easy to configure and it keeps running in the background without interrupting the user. To some extent it helps the owner to identify the thief.

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

I INTRODUCTION

Android powers hundreds of thousands of mobile devices around the world. The smart phones have become attractive targets for the thief. There are a number of precautions that the users of the android phones can take to reduce the chance of their phone being stolen and to ensure that, in the event that the worst happens, the thief is unable to misuse the private data stored in the memory card. An android application that demonstrates a system which uses a regular mobile phone equipped with a GPS receptor and connected to a Global System for Mobile (GSM) network that takes advantage of these technologies in behalf of the user safety. The system is filled on with features like SIM card detection, location fetching through GPS and transfer of images to email address and delete important data from mobile phones. All these features work on the SMS basis. So, incoming SMS format plays an important role. The android application running in the Smart phone monitors all the incoming messages. If the SMS is received in a predefined format it reads the SMS and performs the expected task.

II EXISTING SYSTEM

The existing system describes the features of the previous working model and their drawback. Existing system does all process in mobile phone. Once the application is installed then it get the location of the mobile whenever it is intimated. This location value is send as SMS to the owner of the mobile. There is no image capturing and wipe out features in a existing system. The existing system requires the GPS and mobile data should always be enabled. There is no possibility to enable the mobile data always in the android mobile phone.

1. There is no image capturing and App lock feature in existing system.
2. There is no feature of locking and unlocking of all the app through main application in existing system.
3. To provide security to our phone we have to buy the application in existing system.\
4. Thief can easily uninstall anti-thief application in existing system.

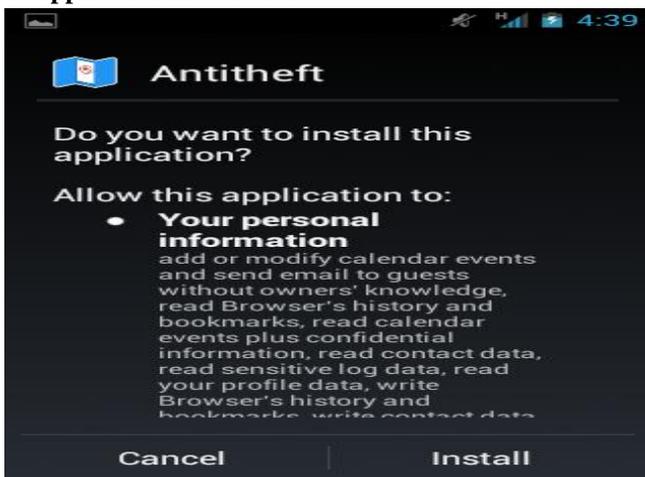
III PROPOSED SYSTEM

The aim of the proposed system is to start the GPS service to track the location, front camera to capture images and data connection when it is intimated by sending a message so that it reduces the battery consumption and then the image of a person is captured and send via Email. This application also enables us to delete the confidential data in the lost mobile phone. With this app, your mobile is immediately enabling the application upon receiving the predefined template message from the pre-registered mobile numbers. When SIM card on your phone is changed, the location is automatically shared with the server. The role of the user in this application is to set the mode as safe when he changes the SIM card and to send SMS to the Android Smart phone having this application installed in it, when it is stolen or lost. The syntax of SMSs that can be set by the user and its functionalities are as follows.

1. If the SIM is changed, the backup number receives the SMS details of new SIM inserted.
2. If SMS is of the format “Detect”, then the backup number receives the GPS value of the lost cell in the form of SMS.
3. If phone is switch on with another number means, automatically enable the camera to capture image and send as Email to target number.
4. If phone is switch on by same SIM card means, send SMS as enable application to enable the anti theft application.
5. If the received SMS contains the body as “format”, then the application delete the confidential data in the lost phone such as contacts, call log, messages and SDcard. Anti theft mobile tracker application provides the modules like

- Application installation
- SIM change detection
- Wipe system
- Alert

A. Application Installation



This module is used to fetch the real data from user and store into database using SQLite. In this module, first user interface where user has to provide SIM, IMSI number,

Email id and alternate number then click submit button. Next it will store information in the database. User can change the alternate number and IMEI number.

B. SIM change detection

This service starts automatically in stealth mode when one SIM is removed and another is inserted. It will receive information as data from the database and check the SIM Serial Number with the database data. If SIM Number does not match with the database, then automatically capture the snapshot of current user without user interaction.



C. Wipe system

In the wipe system the application is enabled with a SMS such as the predefined template message. With this application the lost mobile delete the data automatically at the time receiving the predefined message from preregistered numbers.

D. Alert

In this module the current location of unknown user is send as the SMS to a registered mobile number. Captured image will automatically send to Email. These processes don't need the user interventions.

IV SYSTEM ARCHITECTURE

A system architecture is a conceptual design that defines the structure and behaviour of a system. An architecture is a formal description of the system, organizing in a sequenced way. It shows the system components or the building blocks which provides a plan from which the systems developed, that will work together to implement the overall system. The system architecture shows the various components like application keep checking for SIM changing in user device and send MMS to the alternative user shows in fig.1.1

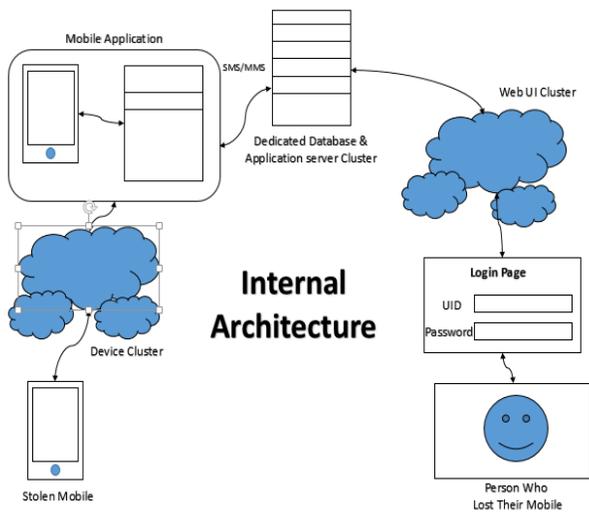


Figure 1.1 System Architecture

V ALGORITHM

- 1) Start the process.
- 2) Install the application into device.
- 3) Sign up with user ID and password.
- 4) If entered correct user ID and password, else go to step 5
- 5) Login successfully into system, else go to step 4.
- 6) Start services into background.
- 7) If system detected for SIM card change, multiple services will be activated else go to step 13.
- 8) Sent alert for SIM card changed to alternate mobile number.
- 9) Camera activated, grab pictures (Snapshots).
- 10) Send pictures to registered email address of user, then go to step 13.
- 11) Activated GPS to track a current location of device.
- 12) Fetch location from device and send it for storing onto the cloud, then go to step 13.
- 13) Stop.



Figure 1.2 design model

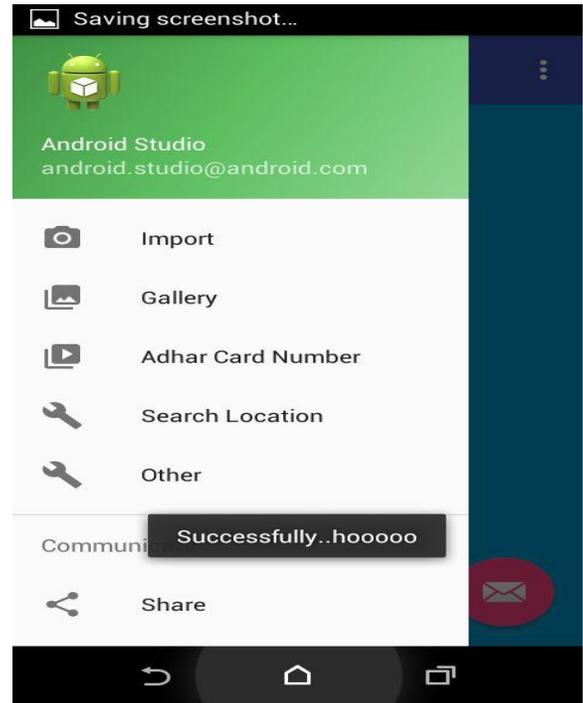


Figure 1.3 navigation Page

VI MATHEMATICAL MODEL

$S = \{I, K, U, F, P, O, A, L, U, T, SUCCESS, FAILURE\}$

I IS SET OF INSTRUCTION

$I = \{I1, I2, I3, \dots, IN\}$

K IS KEY USED FOR ENCRYPTION

$K = \{K1, K2, K3, \dots, KN\}$

U IS USER NAME FOR THE MODULE

$U = \{U1, U2, U3, \dots, UN\}$

P IS PASSWORD TO AUTHENTICATE

$P = \{P1, P2, P3, \dots, PN\}$

F IS SET OF FUNCTION

$F = \{ AUTHENTICATE(), LOCK(), UNLOCK(), TRACK(), UPDATE(), DELETE(), NOTIFY(), PAIR(), INTIATE(), ENCRYPT(), DECRYPT() \}$.

$F1\{ AUTHENTICATE (U,P) \} = A$ $A = \{ D \text{ —} D \text{ CONTAINS THE INFORMATION ABOUT SUCCESS/ FAILURE OF LOGIN} \}$

$F4\{ LOCK() \} = L$ $L = \{ D \text{ —} D \text{ CONTAINS THE INFORMATION ABOUT SUCCESS/FAILURE OF LOCKING} \}$

$F6\{ TRACK() \} = T$ $T = \{ D \text{ —} D \text{ CONTAINS THE COORDINATES OF THE LOCATION OF THE DEVICES} \}$



Figure 1.4 Registrations for new user

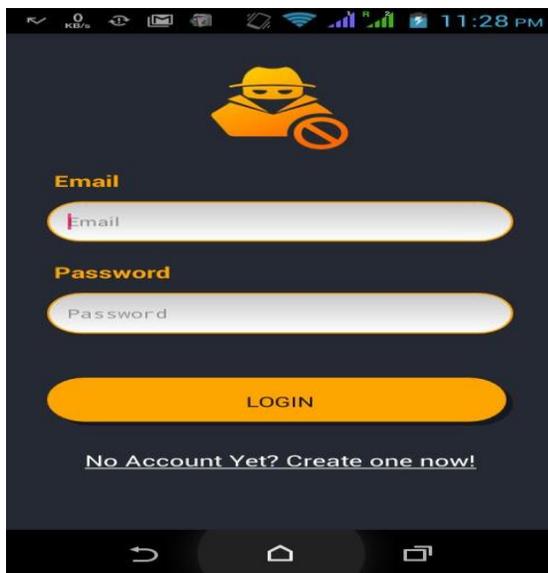


Figure 1.5. User login page

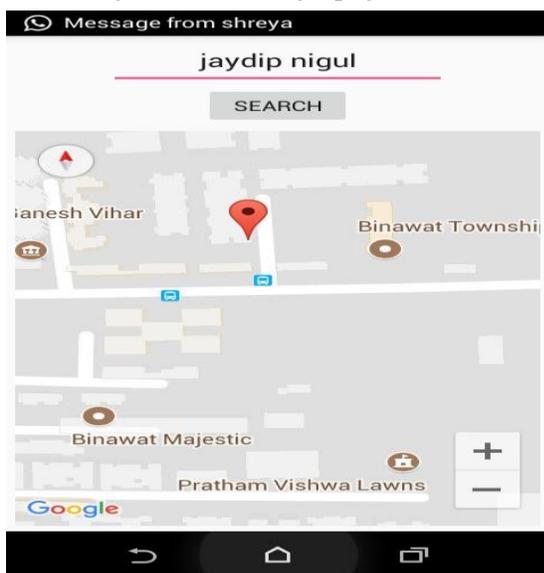
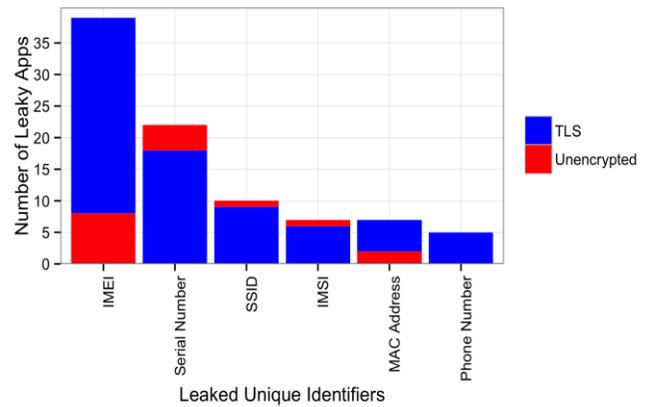


Figure 1.6. Location tracking through GPS



VII 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

VII FUTURE SCOPE

Future work of our project is to make our project for different operating systems like Windows, Mac, and Blackberry. So we can extend the number of users of the software. So he/she can access our software on various platforms. With further enhancements, a software can be developed that can click an image or record a video and send that recorded file to the user entered email-ID. This will help to view the video or image and thus locate the lost cell phone.

VIII CONCLUSION

This is An Android Application to Locate and Track Mobile phones ,This is an unique efficient application which has a variety of features that enhances the Current mobile tracking system as we are using a totally new technology of multimedia message and camera functioning which will surely provide certain ease in tracking the Mobile Phone. For future work, it is proposed to implement some algorithm where the phone itself identifies that it is being lost. Whenever, the phone is off for more than 48 hours it should make it switch on automatically.

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