

Cloud based Anti-Theft Application for Android Devices: A Literature Review

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Abstract— In this system we have proposed to implement the technique to improve antitheft for android based mobile phones by using various services like MMS over the SMS. Today's most popular android operating system is contains many scenarios that already been proposed that are related to anti-theft also many applications are available onto play store but these application are not so useful to find the thief e.g. GPS tracking for the devices like smart phones, tablets and phablets. We can use new technology likes Multimedia Messaging Service (MMS), which enhances the present scenario. This scenario is totally dependent on the hardware of your smart phone device that is camera (front or rear) also support for multimedia messages. First, we just need to install this software then, it work's in the background, stores the current SIM number in a variable and keeps continuously checking for SIM change, whenever SIM gets changed from device, it will takes snapshots, record a video in the background with the use of camera of device and also records surrounding audio i.e., without taking user permission and then it will send an MMS to an alternate mobile number and an email id, which was provided during installation for authorized user's registration. The most benefit of this application is very easy to configure and keeps running in the background without interrupting the user. To some extent it helps the authorized user to identify and find the thief.

Key words: Android, GPS tracking, GPRS, MMS, Snapshots, Video, email, cloud

I. INTRODUCTION

In today's world, smart phones are acting like a computer, it also provides facility to store information, documents etc. This data can be shared with everywhere through internet. These latest smart phones are very helpful and useful for doing business smartly. Today every people has, started using smart phone because they are available at low cost in market. The smart phone provides multiple features that attracting peoples. There are above millions of applications and games available to download from Google play store.

An android system shows application which uses a regular mobile phone provided with a GPS receptor and connected to global system for mobile (GSM) network that takes advantage of this technology in behalf of the user safety [1].

In the previous system, text message is sent by SMS (Short Messaging Service) to the alternative number that is provided when application is installed. This text message holds the information such as that the SIM has been changed. It also contains the data such as the new SIM number and the location of lost devices. It uses the GPS facilities provided by Google Maps. The SMS contains information that is given as plain text. Received message is views only when, user will be open that message. And some

applications send the message as a mail to the mail id provided when application is installed. It contains the same information and some may contain snapshots (images) in it. These snapshots can be viewed when user opens the mail that is sent by this application.

In this proposed system, once Anti-theft application is installed, it runs services in the background without interrupting activities of user. It continuously checks for the SIM change then detects the SIM change process. It takes snapshots as well as records a video and surrounding audio without the user's permission after the SIM gets changed. Then it sends an MMS to the alternate number and an e-mail is sent to the mail id that is provided during installation of application. The new SIM number and location of lost device is also tracked and sent to the alternate number as an SMS and the user can make him/her stop misusing any confidential data into the device. Hence, visualization provided helps to detect the lost device and recognize the thief quickly [6] [7].

II. LITERATURE REVIEW

Sonia C.V. [1] applied AALtm - An Android Application to Locate and Track Mobile phones to recognize two user profiles, the client and the server for tracking. The server is requires any android based Smart phone starting with version Android 2.2 or above having AALtm installed in it with GPS and GPRS enabled. In other side that is client side requires any other different OS based mobile phones for sending and receiving SMS. When there is any error in sending the message from the operator side, then there not any message sends to the operator by this application, instead no operation will be perform at the server side.

This [1] technique only works when predefined format SMS is received and read the SMS then it perform the expected task that is Location tracking and GSM cell id. It is totally based on SMS.

D. Abirami [2] applied intelligent theory that is safe and alert mode. Latest android phone supports multiple SIM cards and user is also use one or more SIM cards. The problem in previous system, if user's mobile has two different SIMs when system identifies SIM get's changed it will continuously send notification that the SIM will be changed to the alternate number that is provided during installation. The unwanted notification is also send if the owner will get's changed SIM.

This [2] technique over comes the unwanted notification problems with using safe and alert mode. The user will required application password before changing the mode (alert to safe and safe to alert). In safe mode, the application only detects SIM change process but does not send any notification to number, only user can change the SIMs in safe mode. In alert mode, the application detect

SIM change process and send the notification that is SIM get's changed to alternate number.

R. Archana [3] and A.U.S. Khan [4], they are apply MMS based technique, this application run's services in background without interrupting user's activity. It continuously checking for SIM changed and detects SIM change process. It takes snapshots as well as records a small video clip with help of front or rear camera that are available into device. And track the location of lost device with the help of GPS tracking system and find the location of thief that is provided by Google map.

Most of the above-mentioned systems, provide dedicate solutions using tracking methods to monitor a mobile device. But by just enabling the mobile phones with GPS system and retrieving the information about the new SIM would be insufficient to track the Smartphone. Hence, there came the idea of developing an anti-theft application to become more secure to our android device with help of taking some images, and small video clip of theft with audio recording (surrounding voice). It sends theft information to alternate mobile number and email in encrypted format.

III. SYSTEM IMPLEMENTATION

The system architecture of cloud based Anti-Theft application is given in fig.3.1. The architecture is divided into three layers that are given: system requirements, application layer and cloud server layer.

A. System Requirements

It contains the software and hardware requirements. It is necessary to interact with android device to application.

B. Application layer

This layer contains two phases that is detector and controller. Detector is present on user side, When SIM will get's changed the services will be activated in a background. These services will be validated or not it will be checked. Detector is detect valid service and converted data into encrypted format using AES algorithm, and send this command to controller to control the services [5].

Controller phase is accepted the services from detector phase and it checks services that are valid or not. If service is valid it receives command and starts camera in background for taking some snapshots or capture small video and sent MMS to user also decrypt the data into device [5].

C. Cloud Server Layer

Cloud server provides services for control the device through remote server. Data can be access and control by using cloud server.

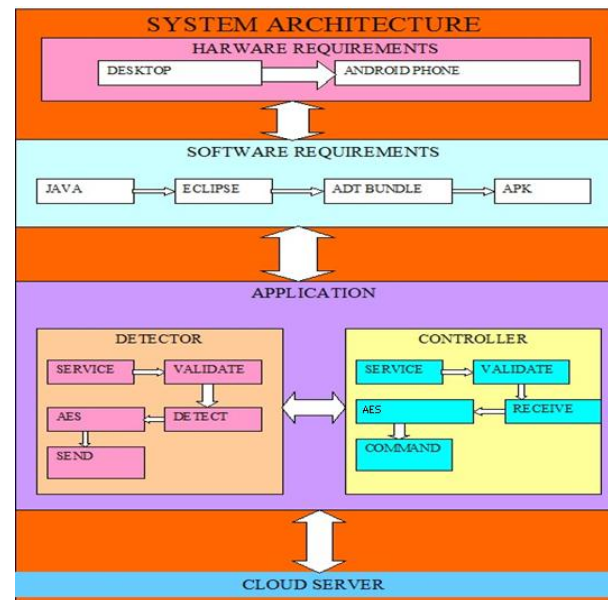


Fig. 1: Proposed system architecture

IV. CONCLUSION

The paper presents a literature review for cloud based Anti-Theft Application it deploys an improved security solution that meets users short term and long term goals by providing the images, small videos and audios of the thief, which gets easy for the user to detect the thief and get him or her captured and arrested. This proposed MMS based anti theft technique is used for tracking the stolen android devices with GPS. This proposed application will be user friendly and it can be installed without any technical knowledge.

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