



Mobile Prevention from Theft (MPT): A Review

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Abstract

This paper is a literature review on the topic of Mobile Security. The topic has been chosen due to the rise in mobile theft and the insufficient rise in the topic of the security.

Keywords—*Mobile Security, Mobile Theft, GPS, SMS, MMS*

Introduction

Smartphone usage became varied to person to person. Efficient and excellent features of smart phones attract the people. There are various types of smart phones like tablets, iphone, iPod which are handy and has advanced features that leads people to use more. There are chances of mobile theft since it is compact and portable. People store personal information, banking details, financial and business information in phones for easy usage.¹ We can find out the lost mobile without human help since we have the inbuilt app which helps in detecting the stolen mobile.

The app captures the image of the thief and identifies the location of the lost mobile using GPS. It alerts the owner of the mobile by sending SMS and MMS to his alternative mobile number and email id which is already stored in lost mobile. Through SMS the owner receives the IMSI number and through MMS he gets the short video clips. SMS works in offline and MMS works only in online. Mobile phones are increasingly precious not just to the growing classiness of their technology and it holds the mobile payment details² stored. Some estimates put the value of data held on typical smart phones at more than the value of the phone itself. This paper gives the review about mobile theft detection.

Related Works

GPS

Radiolocation tracking systems is an emerging system in the field of wire-less communication. In particular, the US Department of Defence initiated the satellite-based Global Positioning System in 1978. It promises to revolutionize location-tracking technology since there is a increase in commercial usage. Offered free of charge and accessible worldwide, GPS is becoming a universal utility by integrating the technology into vehicles, machinery, computers, and cellular phones decreases.

GPS determines the correct location on moving object or person. However long it takes a satellite signal to achieve a receiver, that generates its own signal. forward that the signals area unit synchronous, GPS compares the satellite signal's pseudorandom variety code—a digital signature distinctive to every satellite—with the receiver's PNC to see the signal's period of time. The system multiplies this price by the speed of sunshine to reason the satellite's distance from the receiver.³

Recently, mobile devices like mobile phones or transportable digital displays (PDAs) area unit equipped with world positioning system (GPS) receptors that enable USA to induce the device's geographic position in real time. Location based mostly Services (LBS) area unit thought to be a key

feature of the many future mobile applications. GPS serves well for many outside applications; but, its dependence on satellites makes it ineffective for indoor environments. This document offers a detail on our current project add the sphere of Location based mostly Services for JAVA enabled mobile devices, equipped with GPS receptor. we have a tendency to gift a unique technique to send GPS coordinates to alternative mobiles through Short Message Service (SMS) supported world Positioning System (GPS) technology. This application conjointly permits the users to induce their current location coordinates (latitude, line of longitude and altitude) and that they also can read their locations on the Google maps4.

Android OS

Android is a mobile operating system (OS) and currently developed by Google and its former owner was Android Inc. It’s based on Linux kernel and designed for smart phones (touch screens) and tablets.

There are two primary attack vectors for mobile phones. The first is when a mobile phone connects the internet; the second is when a mobile phone connects to a network. Because so much personal and financial data is being fielded on a phone, this is making the mobile phone environment more and more appealing to hackers7.

Fig.1. Location of Mobile Phone Theft



The above Fig.1 shows the places where Mobiles will be theft. According to the Crime Survey, other personal theft incidents involving theft of a mobile phone took place on public transport or in another public place, then may be in work place, might be in

street or took place in clubs, while around a fifth occurred elsewhere.

Comparative Study

This section deals with a number of the prevailing works regarding the planned mobile resolution, mainly, victimization chase systems through GPS or GSM cell. Sangwoo Cho et al presents a technique to trace a mobile device by watching the signal powers of the mobile transmitter measured at many base stations. The chase technique uses a strained Bayesian bootstrap filter with signal power.8

Another mobile chase approach is planned by Chao-Lin Chen et.al. It uses a hybrid location theme, which mixes each the satellite-based and therefore the network primarily based signals. The planned theme uses the ballroom dance Least sq. technique to estimate the three-dimensional position (i.e. the line of longitude, latitude, and altitude) of the mobile devices.9

Table-1 Comparative Study

Sr no	Title	Authors	Technology	Advantages	Disadvantages
1	Smart Phone Tracking Application	A.Mondal, M D masud N. K Biswas MD. E Sardar	Tracks through GPS and Send SMS	Mobile tracker	If there is no internet connection it won't works.. It works only for SONY Xperia Smart Phone
2	An intelligent anti-theft android application	D.Abirami, Anantha Surya, S.Annapoorani M. Padmapriya	Safe and alert mode, Sends SMS	Wipes content, Profile change,Locaiion tracking, detecting change	Doesn't work if the phone is switch off
3	An Android Application to Locate and Track Mobile phones	Sonia C.V, Dr. A.R.Aswatha	ICC-IDs are stored in the SIM cards	sending images to email, deleting incoming and outgoing messages	Not functioning if the phone is switched off.

Conclusion

Further implementation can be proceeded by using SMS (offline) and MMS (Online) with short video clippings to find the mobile theft. GPS captures the latitude, longitude and altitude and tracks the location of the theft mobile.

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