

## Object Tracking System

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### **Abstract**

*Initially the GPS is mostly used for tracking location of moving objects from anywhere. The GPS is incessantly takes computer file from the satellite and stores the latitude and longitude. With the help of propose system we can track location of moving object by using mobile and technologies. This system helps to women safety purpose. We want to track mobile location then we need to send a message to our device, by which it gets activated. Once application gets activated it takes the current latitude and longitude positions values from the GPS and sends a message to the particular person which is predefined at registration. In now a day's there are multiple cases of missing children's .children having age between 14 to 19 are victim of such cases and their parents are worried for their children. The GPS service is used for tracking exact location of Child. Propose system could be used to track children current location with the help of Child tracking application. System also used for tracking location of women's and provide help them in critical situation by sending their location to nearest police station. Now a day's another cases are of missing mobile phones, which can track mobile location with the help of GPS and change the profile of mobile phone from silent mode to sound mode. This system also help parent to know daily contact of their child with whom they talk on mobile. It gives daily information of child which helps to prevents them from unexpected situations.*

**Keywords:** Location Sensing, Energy Efficiency, Smartphone, I-guard.

### **1. Introduction**

With ever-changing times, the mobile technology has modified tons and within the previous few years we've seen the arrival of varied new types of gadgets within the type of Smartphone, camera-phone, android and tablet phones. In fact, the phone business has turned from easy budget handsets to modern high finish mobile phones. Today's device is sort of everything it's modern, innovative, appealing, high-performing, durable, trendy and multitasking. Latest gadgets will be used for varied functions like browsing mobile, internet, enjoying games, emailing, and blogging, messaging, GPS, YouTube, Google search, Gmail and additional.

The Global Positioning System (GPS) may be a location system supported a constellation of 24 to 32 satellites orbiting around the earth at altitudes of 11,000 miles. Every satellite is high-powered by the Sun via its electrical device. In its earlier years, GPS was developed within the us for military use, for the Department of Defense (DOD). Through the years of development and improvement, we've advanced the use of GPS to tracking our precise location worldwide and as a navigation aiding tool for civilian usage. Currently, it's used as navigation tool device to help us find the shortest route to our destination.

## 2. Literature Survey

**Md. Palash Uddin, Md. Zahidul Islam, Md. Nadim, Masud Ibn Afjal** in their paper [1] they give that how global Positioning System(GPS) is used to track the location of object. Devices which has inbuilt GPS are more costly so we used different features of android devices to track location of object. Here they said that we use GPS in different application to track the location of particular object instead of using costly device which has GPS.

**Maghade Satish, Chavhan Nandlal, Gore Sandip** [2] designed an android based system which helps to track the location of children and send emergency message to their parents to avoid critical situations. They use Global positioning system (GPS) and Short Message Service (SMS) is used to achieve this system to use client. Here there is admin and client to use such system in order to achieve exact output. In this system they used two android applications one for parent side and another for child side to establish communication between them in form of location and emergency message.

**Suhas Pawar, Amar Raskar** [3] in this paper they define that GPS working for location tracking of moving object and find exact location through it. it says that the values of latitude and longitude taken by the GPS from the satellite and then according to that values we can easily track the location of object. Gives the used of GPS and SMS techniques to track location of object.

**P. Santha Raji, V. Anuradha** [4] here they define system for tracking location of object using ARM7, multi-hop clustering, UWB sensors network, it also used different adhoc networks for developing GPS based tracking system. Object tracking system is mainly system is developed using ARM7 to track live location of object and share that location with others with the help of GSM. As it uses ARM7 so it gives better result and exact execution of application to track particular object.

**Trupti Rajendra Shimpi** [5] in this paper she gives that how to know about critical situation and transfer location of women to particular police station. She uses GPS, GSM, Heartbeat Sensors also one Panic key is there working of ARM7 starts after pressing that Panic key. This gives a way to provide safety to women's by using GPS and ARM7 to find location. Here it recognizes the heartbeat of particular women to track location.

**Ms. Sonali S. Kumbhar, Ms. Sonal K. Jadhav, Ms. Prajakta A. Nalawade, Ms. Tamanna Y. Mutawalli** in their paper [6] they introduce one device which uses GPS and GSM for tracking women's location and sending emergency message. This device is small in size and can be fit in any jacket or in pocket. This system can be easy to use and carry to anywhere so that it will be easy to keep track on the location of object.

**Prof. Sankalp Mehta, Prof. Sachin Janawade, Prof. Vinayak Kittur, Prof. Suraj Munole, Prof. Sandhya Basannavar, Assistant professor1, Students** in their paper [7] they define tracking location of women and then send an emergency message to registered person when women shakes their phone in critical situation. Here particular frequency is considered while shaking a mobile phone. When a women shakes his mobile phone the frequency of phone calculated and with help of this emergency message and location will send to authorized person also with the nearest police station.

**Nikita Singh, Harshali Pawar, Shreya Rukari3, Srushti Raut, Prof. B. V. Jadhav** here in their paper [8] they define a self defense system for women safety using GPS and GSM by one click on this application it sends current location and alert message to contacts also calls on first contact. This application work continues until not click on "stop" button. This is an android application which must be installed in women's phone and by just single click it shares current location of that particular women.

**Sonal Kasliwal, Sushma Kotkar, H.D. Gadade** in this paper [9] they introduce an android application for tracking employee in an organization by tracking their mobile activities. To keep watch on activities that perform by employees to provide safety in

organization this system will used and keep continues tracking of activities of employee. They uses dynamic database and k-mean clustering for tracking mobile activities and AES algorithm for data encryption.

**Nitin P. Jagtap, Kanchan A. Patil, Shaziya Sayyed Shakil, Nitin S. Ingle** they introduced [10] that it gives an application of tracking mobile activities which gives daily information about calls and messages also gives time duration of particular call with date and time. In addition it gives alert messages for different type of messages. This system keep continuous tracking on phone calls and messages and if they found different types of messages then gives alert to authorized person.

**Abinaya S, Madhi Vadhani K, Elavarasi V** in this paper [11] they define that we can access the calls and text of mobile phone to another mobile phone to track the activities of that person. This system or android application is work by using a particular technology such as location based services (LBS) and native android applications. also uses GPS and GSM to send private message to achieve exact output. They gives exact output as compare to other application , as this application uses continuous tracking process by using GPS.

**Etuk Enefiok A, Onwuachu Uzochukwu C**, they introduces in this paper [12] An object-Oriented Analysis and design (OOAD) approach was adopted to achieve tracking mobile activities from anywhere to anywhere. Here they provide an application which is used to track activities of particular person from any location. No need to that both android mobile phones must be at same place to track activities of particular person or object.

**V.SriRoja, A.Vineela, Y.SriSanjana, U.Prasannanjaneyulu** in this paper [13] they introduce application which changes silent mode to sound mode by sending private key from another phone by tracking their location. This system uses private key which only known by the user and when user send it key to that phone on another phone then that other phone becomes on sound mode.

**Rajdip kaur Bath, Tyson Fernandes , Akash Jadhav** [14] in this paper they developed an application for changing mobiles profile from silent mode to sound mode they used stored data will be compared via the GPS. The mobile will automatically switch in sound mode after receiving more than 3 missed calls from same number and back to silent mode after attending call. In this system they used GPS to track mobile location and convert mobile phones modes after receiving particular number of calls from same number.

**Sumit Busa, Ameya Kasbekar, Tushar Dey, Parth Nikam and Pratik Kanani**, students in their paper [15] they define automatic changing mobile profile in required mode used technologies like Information and Communication Technology, Mobile Communication, Computer Network. In this system they introduced the way to change mobile phone mode automatically without intraction when mobile phone enters in a particular assign area.

**Sulochanadevi, Siddhesh rane, Lalji devda, Raj phadke** in this paper [16] define an application in which mobile mode changes automatically to sound mode when receives more than call from same number also when we entered in specific areas like school, hospital it automatically changes mode to silent and when we out of such areas it automatically changes to sound mode. It uses GPS and API. It uses GPS to identify particular location to change mobile phone's mode after entering that particular location.

### 3. Proposed System

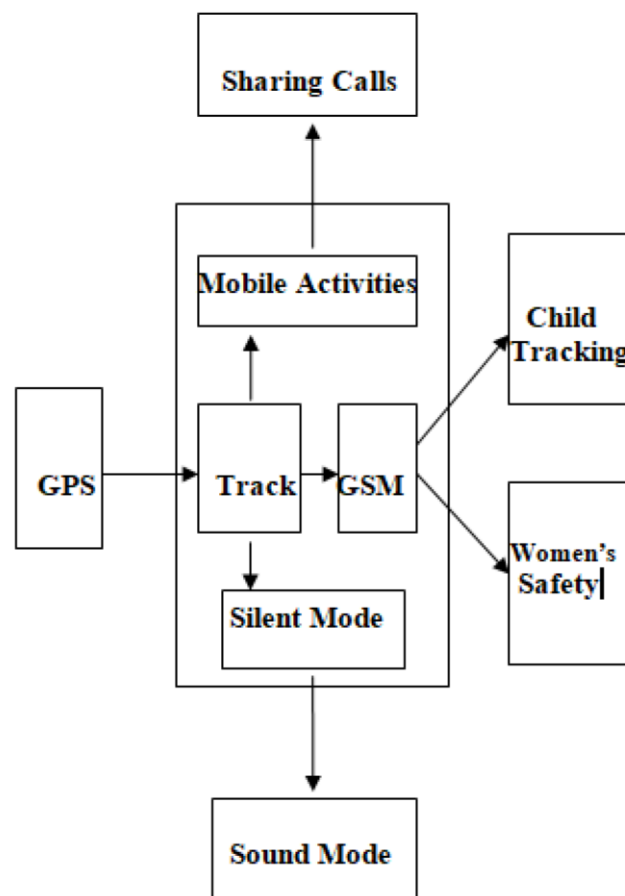
The disadvantages of the existing system are overcome by the proposed system. The User Interface is made available in the form of Android Application. The Android Application is developed using Android Studio.

In the proposed system android application is created for better use of system so that user can easily handle the system and make use of it. Proposed system is mainly to find the location of moving object so in difficult situation authorized person can access the location of application user. This object tracking system is basically contains android based front end application which has different options to use, it has registration page, data entrance page, set location page, authorized person number page, and etc.

Proposed system needs to entered the correct information related to the user and authorized person's, so it can work properly.

In order to maintain security constrains various different technologies are use. Simple working of system is to track the moving object's location and send that location to the authorized person through the SMS.

The proposed system introduced tracking of moving object to find exact location of particular object. It uses GPS and GSM and other technologies to get exact output.



**Figure 1: System Architecture**

#### 4. Result and Discusssion

The proposed system introduced tracking of moving object to find exact location of particular object, keep continuous track on that particular object and send alert message if necessary to avoid difficult situation create huge problem. It uses GPS and GSM and other technologies to get exact output. It rack location of mobile and sends an emergency message to registered person and avoids dangerous situation. It also tracks the different mobile activities and change mobile profile mode from sound mode to silent mode. Object tracking system is an android application which mainly used to track moving object in order to keep continuous tracking and provide safety to that object.

System has following contents:

- 1) Object Tracking System is mainly based on Global Positioning System (GPS) and Global System for Messaging (GSM). System is used for tracking moving particular object.
- 2) Object tracking system is an android application which is used for tracking current location of moving object through GPS and send emergency message to authorized person through GSM.
- 3) Tracking the different mobile activities to avoid difficult situations. Changes mobile profile from silent mode to sound mode when it requires being in sound mode through a single message.
- 4) At particular frequency shaking of mobile gives alert message with a current location to registered person and send location to nearest police station. It needs to shake mobile phone with a particular frequency and track location through GPS system.

## 5. Conclusion

In this review we have attempted to explain the different type of performance of object tracking technique. The proposed technique is effective and will produce the good results according to the data and the information available on the knowledge base. System has some improvements for future extension and development on the proposed model. The proposed system track objects location and provide useful details to authorized person.

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