

# GPS and SMS based Child Tracking and Friend Finding System using Smart Phone

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## ABSTRACT

Recently many cases of missing children between ages 14 and 17 years are reported. Parents always worry about the possibility of kidnapping of their children. This paper proposes an Android based solution to aid parents to track their children in real time. Nowadays, most mobile phones are equipped with location services capabilities allowing us to get the device's geographic position in real time. The proposed system explains for getting the information about the missed child on periodical basis. Addition to the proposed system is that parents don't have to continuously monitor the location of child, if child is going outside of define area then alert message will be given to parents. A parent's device main duty is to send a request location to the server to get the location of the child. On the other hand, the child's device main responsibility is to reply the GPS position to the parent's device upon request.

**Keywords:** GPS, Location track, Alert SMS, Android application.

## ARTICLE INFO

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## I. INTRODUCTION

Now a days 80% of people in the world having smart phones the smart phones uses the people by different purposes. The major issue of child missing can be solved with the help of child tracking system android application. The android application uses GPS and SMS services and GPS help in locating the missing childs location by the survey of missing children in 2004. There are of total 5996 Childs are missing. Out of these only 4092 children return or found by police. However 1904 children are missed. And the children ages 14 years and 17 years are missed or ran away from home. The parents are worried about there children. By missing the children the parents are scared to go to the family trip. These are lots of chances to miss the child in trip. The project is developed for those parents that they have worried to miss their child. In Today's world lots of childs have smart phones. With the help of smart phones GPS and SMS based tracking application parents can watch on their child. GPS is combined to GSM based SIM card into mobile to watch on child's location. The GPS uses longitude and latitude to track the location the SMS(Short Message Service)is used to communicate child side and parent side application. SMS service used when smart phones does not support internet connectivity. System able to send the childs smart phones

exact location in the parents smart phone when parent demand to check the childs location.

## II. LITERATURE SURVEY

In [1] C.-K Huang, L.-F Chien, and Y.-J Oyang, \GPS and SMS-Based Child Tracking System Using Smart Phone "",2015In A.Al-Mazloun,E.Omer,M.F.A. Ab-ullah,they solved the problem by application GPS and SMS-Based Child Tracking System Using Smart Phone.Recently many cases of missing children between ages 14 and 17 years are reported. Parents always worry about the possibility of kidnapping of their children. This paper proposes an Android based solution to aid parents to track their children in real time..

In [2] In A.Al-Mazloun,E.Omer,M.F.A. Abullah,they solved the\Smartphone Usage Statistics 2012 ""problem by application GPS and SMS-Based Child Track-ing System Using Smart Phone. Anson Alexander, Smartphone Usage Statistics 2012,available Solution for missing childs with the help of GPS and GSM technologies. The application uses two main services that is GPS and SMS.For location services is GPS and telephony services is SMS, Generally.

In [3]K. Michael, "The Emerging Ethics of Human centric GPS Tracking SYNOPSIS and Monitoring", University of Wollongong, Year 2006. Personal Track-ing Systems are the tracking devices specially built up for personal information. The person takes it with him and the information of where he is presently is provided. The same system has been implemented in this mobile tracking application i.e TrackMeApp but various extended features that the existing system does not have. This system is GPS enabled android mobile phone whose location is tracked. Our application provides the functionality of defining the geo-fence areas as safe, risky and highly risky.

**III. PROPOSED SYSTEM**



Fig 1. System architecture

We propose a solution to solve the problem based mainly on GPS. It takes advantage of the two main rich features that is offered in advanced smart mobile platforms nowadays. Those features are location services, mainly GPS and web services. The solution proposed will be implemented to support Android platforms in a later work. The system proposed is based on a simple idea that is the use of web services for communicating between the parties involved, parent and child. It is designed in a simple way so that it will involve few elements and less user interaction. This way it will result in a system that is simple and easy to implement and use, making it more user-friendly.

The architecture of the system proposed, illustrated in Fig. 1, consists of two Modules:

**Parent Module:**

First is the parent side which acts as a server for the system though it is not actually a server. It is basically an Android phone owned by the parent of the child to be located. The parent's side uses web services for communicating with the child and maps to view the location of the child on a map. Thus, it requires internet services to be enabled in the parent's phone for the system to function.

**Child Module:**

Second is the child side which acts as a client for the system. The child side is also another Android smart phone but owned by the child to be located. The child side uses web services for communicating with the parent side and location services, GPS or Network, to get the location of the child in form of coordinates. On the child side, location services must

be enabled and up running on the child side for the system to work. Where else the parent side might need internet connectivity only for the map to show.

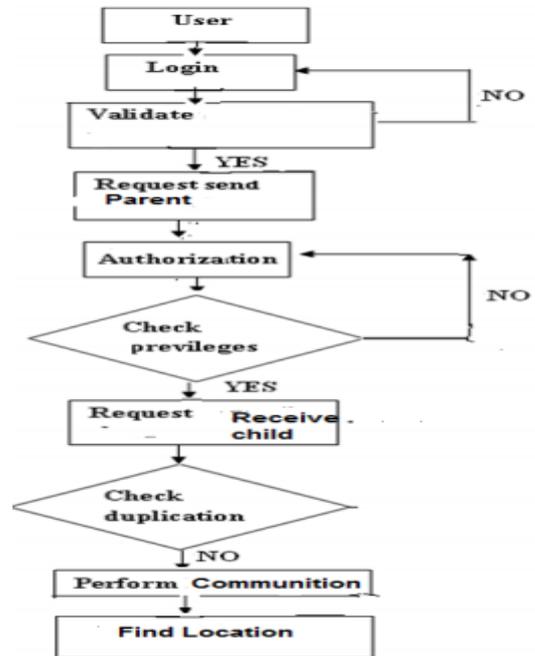


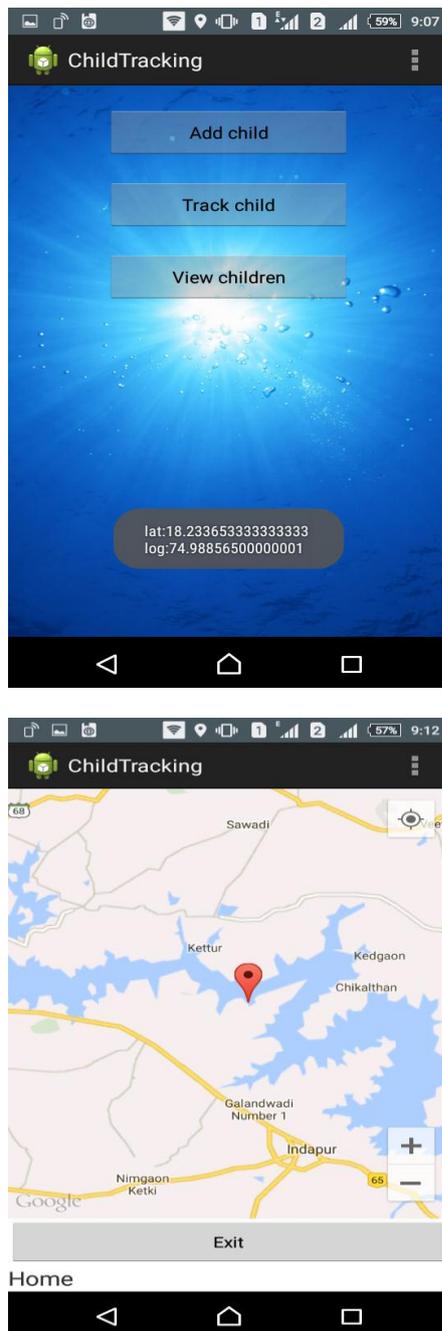
Fig 2. Data flow diagram of proposed system

**Application:**

1. Application automatically operates location requests without user interaction.
2. Another advantage is that application uses SMS when internet connectivity is not available.
3. Third advantage is it can be used at indoors where GPS satellites connectivity is not available.
4. Easy to Use.

**IV. RESULT**





## V. CONCLUSION

In conclusion, this project was developed to aid locating missing or lost children. The solution proposed in this paper takes advantage of the rich features offered in Androids smart phones. The architecture of system built on two main component, GPS satellite, web services. Developing this project would not have been possible without studying related and existing works. Some of these works relies on internet connectivity or a server that has to be up running. The proposed system relies only on two main services, location, thus eliminating the need for internet connection or a dedicated server. Finally, like any software product or design, there is still room for enhancement.

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