



# Smart Multi Tracking Application

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**Abstract:** The project is, essentially, software that allows superintendent to monitor their employee's cell phone. All incoming and outgoing calls, text, multimedia messages, geographical zones (through GPS). Our aim is to develop an efficient and improved geographical asset tracking. This system uses android based mobile phones for the software to be run. The alerts also stored in the centralized server like details of multimedia messages, calls, texts and the timely location update of the human. Superintendent may later login into the server and view the details of their human's mobile usage.

**Keywords:** GPS-global positioning system, IMEI-International Mobile Equipment Identity, GPRS-General Packet Radio System.

## I. INTRODUCTION

To develop an Employee Monitoring system for the Manager to monitor their Employee through mobile phones. On this phone itself we'll install our application which is supposed to perform all the operations of tracking. So by using this system, we can avoid the unnecessary things happened for the Employee those who are having mobile phones by monitoring their mobile phone usage and also by tracking their current location through the GPS.

## II. RELATED WORK

In the existing system superintendent can monitor their human call log and only outgoing calls details as a statement. The details of their human can be monitored by the help of service provider. So whenever the human change their number then it is difficult to monitor their details because of the change in service provider.

## III. SCOPE OF RESEARCH

The scope of our project is to monitor the Employee each and every activities, current location and sending alert to their Manager by using the android application. The alerts are also stored in the centralized server like the details of incoming call, text and multimedia messages and the timely location update of their human.

## IV. PROPOSED METHODOLOGY AND DISCUSSION

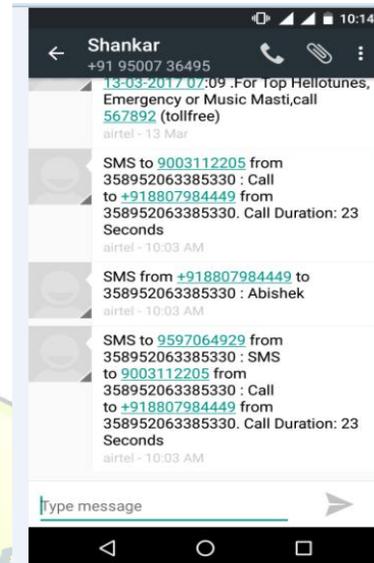
Human mobility enhances System sent the every incoming/outgoing SMS and call, GPS location details are stored in a centralized server. In the tracking phase the mobile device's application developed in Android using the mobile phone GPS receiver fetches the GPS location, after calculating the exact location it further creates a GPRS packet which includes the along with the location details a unique identifier called International Mobile Equipment Identity (IMEI) number and timestamps details. Even though human can delete the call log and SMS details manually this System helps superintendent to monitor the incoming and outgoing call, text messages of their human mobile phone. As an effective and light-weight augmentation to global positioning, GloCal holds promise in real-world feasibility.

## V. EXPERIMENTAL RESULT

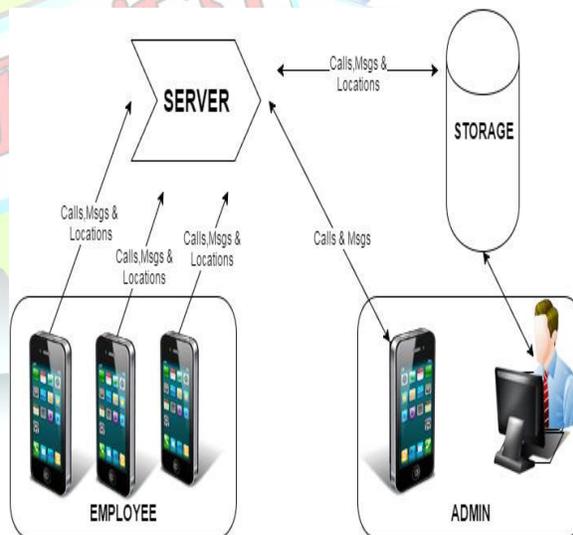
The outcome of this project is to monitor the Employee each and every activities, current location and sending alert to their Manager by using the android application. Implementing this system, we can avoid the unnecessary things happened for the Employee those who are having mobile phones by monitoring their mobile phone usage and also by tracking their current location through the GPS.



A wide range of tracking systems has been developed so far tracking vehicles and displaying their position on a map, but none of the applications has been developed so far which tracks the mobility of a human being. Now a day's tracking a person's mobility has become a crucial issue these days be it tracking a criminal came on payroll or a detective going to detect a case or any other utility. The overall objective of our project is to develop a system which is cost effective and can be used for tracking a human being using a GPS and GPRS equipped mobile phone rather than using a handheld GPS receiver. That smart phone-enabled dead reckoning supports accurate but local coordinates of users' trajectories, while GPS provides global but inconsistent coordinates. Considering them simultaneously, the project device techniques to refine the global positioning results by fitting the global positions to the structure of locally measured ones, so the refined positioning results are more likely to elicit the ground truth. Our project develops a prototype system, named GloCal conduct comprehensive experiments in both crowded urban and spacious suburban areas. Our aim is to develop an efficient and improved geographical asset tracking Solution and conserve valuable mobile resources by dynamically adapting the tracking scheme. Our system uses Android based mobile phones for the software to be run. The alerts are also stored in the centralized server like the details of incoming call, text and multimedia messages and the timely location update of their employee. Manager may later login into the centralized server and view the details of their employee mobile usage.



## VI. SYSTEM ARCHITECTURE





## VII. DATABASE DESIGN

A well database is essential for the good performance of the system. Several tables are referenced or manipulated at various instance .The table also known as relational, provide information pertaining to a specified entity. Normalization of table is carried out to extent possible, while the normalizing tables care should be taken make sure that the number of table do not exceed the optimal level so that the table is convenient and effective, Usually the following steps have to be considered to determine the data to be stored in the database. The relationship between different data elements and their attributes create a logical connection upon the data received in the table.

The database structures are as follows,

### Call Logs

Field	Type	Comment
Sno	Int(5)NOT NULL	
Caller	Varchar(13)NULL	
Duration	Varchar(15)NULL	
Timestamp	Timestamp NULL	

### Message Logs

Field	Type	Comment
Sno	Int(5)NOT NULL	
Sender	Varchar(13)NULL	
Content	text NULL	
Timestamp	Timestamp NULL	

### Location

Field	Type	Comment
latitude	VarChar(50)NULL	
longitude	VarChar(50)NULL	

### Admin Login

Field	Type	Comment
Username	Varchar(30)NOT NULL	
Password	Varchar(30)NOT NULL	

## VIII. CONCLUSION

By using this system, we can avoid the unnecessary things happened for the Employee those who are having mobile phones by monitoring their mobile phone usage and also by tracking their current location through the GPS. We have used available resource i.e. our mobile phone which is any usual Android based mobile phone which has GPS and GPRS facility. By using free Google API we have drastically reduced the cost of the services. Hence this system provides a low cost human tracking system using GPRS GPS on GSM network. The combination of both the technologies i.e. GPS and GPRS provides a constant, continuous and real time human tracking system.

## IX. FUTURE ENHANCEMENT

The cost of the overall system has been reduced by two facts one is using the existing mobile phone and another is using GPRS. It has been hoped that the use of the overall system can eliminate the requirement of first the traditional GPS receivers and second costly SMS based tracking systems. So this system can be used by any person who has a mobile phone.

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#### REFERENCES

- [1]. Integration of Modified Inverse Observation Model and Multiple Hypothesis Tracking for Detecting and Tracking Humans Feng-Min Chang, Feng-Li Lian, Senior Member, IEEE, and Chih-Chung Chou(2016)
- [2]. H. Hassanieh, F. Adib, D. Katabi, and P. Indyk, "Faster gps via the sparse fourier transform," in *Proceedings of ACM MobiCom*, 2012, pp. 353–364.
- [3]. Z. Yang, C. Wu, and Y. Liu, "Locating in fingerprint space: Wireless indoor localization with little human intervention," in *Proceedings of ACM MobiCom*, 2012, pp. 269–280.
- [4]. J. LaMance, J. DeSalas, and J. Jarvinen, "Assisted gps: a low infrastructure approach," *GPS World*, vol. 13, no. 3, pp. 46–51, 2002.
- [5]. Chen-Chia Chuang, Jin-Tsong Jeng, Jih-Ciao Chen, Yu-Chih Liao "Systematic Design for the Global Positional Systems with Application in Intelligent Google Android Phone" (2011)

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