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# A Design Paper On Salesmen Location Tracking System Ramji Badlani; Avinash Awachat; Sujata Walkar & Prof. Ms.Vaishali Pahune

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# Abstract-

This paper describes about Smartphone application which will be able to track salesman's location in real time. Though Smartphone can be used to track salesman, but tracking salesman is different from other as salesman generally work for 8-10 hours daily travelling all day long, the battery running for such a long time is not easy. This salesman tracking system will be able to track salesman for a long time without draining his battery. The manager would be able to get detail about location of salesmen under him. The salesmen would be able to see the current location of their co-salesmen so they will not visit the same place twice. This application will also allow them to submit immediate order and generate immediate reports.

Keywords- Salesman tracking using Smartphone; GPS; Android

# I. INTRODUCTION

Smart mobile devices are the fastest growing computing platforms. This rapid development and growth of smart phones in consumer market over the last few years has alarmed the platform that is utilized for social business, entertainment, gaming, productivity marketing using software applications involving global positioning sensors (GPS), and wireless connectivity, pho-to/video capabilities, built in web browsers, voice recognition and various other native capabilities of the smart phone. These features present in mobile devices present new challenges and requirements to application developers that are not found traditional mobile apps [2].

There are many companies where they have a need to track their salesmen periodically throughout the day reasons being to avoid salesman cheating the manager by not visiting the places he has been asked to . To track salesman performance by a real time data or showing miscellaneous expenditure without actually spending or using it example, travelling charges. Salesman location tracking app will allow a company to track their salesmen location in real time, the salesman will be able to submit immediate order and generate report automatically.

The daily schedule of salesman will be provided to them through the app by the manager. This will save the salesman's time that he uses to report to the office before and after going to the field thus he then only needs to travel between his home and field thereby minimizing the reporting time to the office and increasing the efficiency



Fig. 1 Android based salesman location trackng system



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Organizing of the paper in this as section II describes the literature review, Section III provides the proposed work, Section IV describes the Conclusion.

## **II. LITERATURE REVIEW**

The authors in this [1] say that for indoors and closed environments GPS systems fall short and it becomes difficult to acquire the necessary satellites for accurate position computation. Some of the alternate techniques that are proposed for indoor location tracking include the integration of Bluetooth technology with 3G networks. The proposed solution suggests that Bluetooth terminals can exchange information with each other and then a Bluetooth access point provides the interface to a mobile network.

The author of this [2] says that One could probably say with some certainty that the set of sensors selected by a design team is heavily influenced by the team's dual goals of maximizing the system's performance while minimizing its total cost. Unfortunately for system designers, however, system cost and performance are usually directly, rather than inversely, related-very accurate sensors may improve the performance of a system, but they tend to cost more than similar, less accurate sensors.

In this paper [4] the concerned party when want to get the location of the second party, will send a simple message from their multimedia phone which has a hidden code out of the scope of user understanding. The smart phone will automatically detect the code and will send user's location without even turning on the GPS.

This paper [5] proposed an architecture for developing battery efficient employee tracking systems in fact any app which uses GPS and sends data frequently can use this architecture.

The author in [6] includes one essential issue in PCS network is the location management or mobility tracking problem . to keep location up-to-date ,a mobile subscriber must update its current location

with its HLR from time to time.

In this paper [7] target tracking, MNTS utilizing SMS mainly adopts two proposed novel approaches: location prediction and dynamic threshold to reduce the number of short message transmissions while maintaining location accuracy within an

acceptable range. Location prediction utilizes the current target's location, moving speed, bearing to predict its next

location.

The author in [8] says that Disruption tolerant networks (DTNs) are sparse mobile-ad hoc networks where nodes connect with each other intermittently. Since DTNs allow people to communicate without network infrastructure, they are widely used in battlefields. wildlife tracking, and vehicular communications. Location information is extremely important to enable context-aware and location-based applications. However, due to the lack of fixed infrastructure and continuous network connection in DTNs, identifying the location of mobile users and tracking their movement trajectories are challenging.

This paper [9] includes the concept of CRM. One of the possibilities is to have the better client support not only in the after sales phase, but also in all other phases of the client communication process, i.e. in the acquisition phase or in the loyalty phase. To develop solutions which integrate the high potentials of multimedia, internet and mobile communication as well as the potentials of Collaborative Systems (CS). In a certain manner, clients of a company or organisation can be part of a collaborative solution.

In this paper [10] author proposed a system that include a child module and two receiver modules on getting the information about the missed child on periodic basis.

This paper [11] proposed a smart tracking System an android based application for travellers to obtain the geo-location and tag it with multimedia features. This application also allow users to create, store and view their vehicles. Vehicle tracker combines places visited, notes taken and image captured.

In this paper [12] authors proposed a mobile application along with web enabled PC application for sales manager and the salespersons. This application has the main feature of scheduling the meetings and the follow up of meetings which is Lead management. Manager can schedule meeting of salesperson with the client through Web application using SaaS on cloud. An Email alert and message notification will be sent to client and salesperson, also the later will be able to give the reviews of meetings through Android application using SOAP protocol used to communicate with Web application.



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This paper [13] gives an idea about Location-based services (LBS) which are used more frequently by the mobile users. A location based service is a location provider that is used to track the location of any mobile node through the mobile network that includes vehicular tracking system called fleet net. In mobile communication the tracking of location plays a major role using this LBS services. In order to track the location of the user's mobile device it checks the nearest base station available to the mobile network and GPS for tracking location. The GPS satellite is used for navigation purpose and it is combined with LBS is used to track the location of mobile device

### III. PROPOSED WORK

We are going to develop an application on real time salesman location tracking system for overcoming the issues present in previous salesman tracking system. One of the issue is draining of battery of Smartphone while continuously tracking the salesman as salesman works for more than 8-10 hours daily. To overcome this issue we are going to develop a battery efficient salesman location tracking system. We will use the concept of dynamic timing, and Google Cloud Messaging (GCM), application is going to change time interval for getting location dynamically by determining salesman's speed of travel. Using this concept this application will dynamically predicts the mode of travel and changes its current interval time accordingly.

Another issue is there is no way provided for knowing which places has been visited by another salesmen so that the salesman will not visit same place twice or more due to this salesman visit same place again and again that his fellow salesmen has already visited. In this proposed application the salesman will place the location visited by him and notification will be send to other salesmen immediately so they will not visit that particular place again.

In proposed system there will be a provision provided to the salesman to submit the immediate order placed by the customer and to automatically generate their report based on place visited and distance travelled. This will reduce the burden of salesman to prepare report manually and visit company again and again to place order given by the customers. In this proposed system, the managers of the company will be registered first and an unique secret code will be generated and provided to each of them and then salesmen of the company is going to be registered and by using the secret code provided to managers, they are going to includes respective salesmen under them. After then managers will able to track location of salesman and their performance of his team whenever he wants.

There will be an option provided to registered managers to place the daily schedule of the salesman and the salesmen will get notification about their respective schedule due to this lots of time of salesman will be saved as there is no need to visit company first for getting is daily schedule and he can directly go to his visiting place directly from his home.

Since the data which is going to be stored in the database of the company is of great importance and to let the data not be misused by the outsider an encryption mechanism is going to be applied to the data so that no hacker can hack the data of the company.

### III. PROGRESS OF PROPOSED WORK

Until now we have develop 30% of total work. The different modules in our application are as follows:-

- Login
- Place Schedule
- View as Salesman
- Place order

We have till now completed first phase of our project which includes login module having sub modules which are login as admin, login as manager and login as salesman. When we login as admin there are options provided to add manager, add salesperson and logout.

As we open the application we seen a login page contains User-Id and Password. We have introduce the concept of SuperAdmin who has rights to add the manager as well as salesperson. As seen in the bellow screen shots:



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fig.(a) Login Activity

The above fig.(a) shows the snap shot of the Login Form of our application. Two fields are provided to enter mobile number and password.

#### - Login as Admin:



fig. (b) Super Admin Activity

The Above fig. (b) shows the snap shot of the Super Admin activity when user login as admin. The super admin is the main admin of the organisation and have all rights to add or remove the managers and sales persons. Super admin can keep track on the overall progress of the organisation and keep control on the managers of the different departments. The super admin activity contains three options which are:

- Add Manager
- Add Sales Person
- Logout

When user select the add manager option the new page is open.

Fig.(c) shows the snap shot of the Registration of the Manager. It includes various fields which are First name, Last name, Gender, Mobile number and city. After entering all the field select register option.

When user select the add Sales Person option the new page is open.

Fig(d) shows the snap shot of the Registration of the Salesperson. It contains all personal details of the salesperson.

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fig.(c) Registration Activity for Manager

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fig.(c) Registration Activity for Sales Person



# **International Journal of Research**

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When user select the Logout option the login activity is opened.

#### - Login as Manager

The below fig(e) shows the snap shot of the Manager Login activity. The manager is the in charge of the specific department of the Organisation, he has all rights regarding to that departments. The login Manager activity contains the different options to handle the tasks of the Sales Person working for the particular department of the organization. This activity has different options which are:



(fig.(e) Manager Login Activity)

- Locate Salesman
- Track Salesman
- Schedule visit
- Financial Report
- Logout

Locate sales man option is used to locate the global position of all the salesman's at the same time.

Track Salesman option is used to track the particular sales man whether he visited to the customer properly or not.

The salesman can be tracked with the help of the latitude and longitude coordinates .

The below fig.(f) shows the the snapshot of the get location of the sales man and sends this coordinates to the manager's device to show the exact location of the salesman.



The below fig.(g) Shows the Set location of the salesman by getting the position of the latitude and the longitude from salesman's device.



Schedule visit is used to create the schedule of the salesman.

The Financial report option is used to check the financial reports of the customers which are generated by the salesmen at the run time.

Logout is used to logging out from the application.



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- Login as Sales Person

The below fig. shows the snap shot of the Sales Person

#### Login activity.

The salesman is actually responsible for all the sales of the organisation. The salesman visit different places to sell the product produced by the organization. For ensuring that the not two or more than two salesmen should not visit to the same place repeatedly. The salesman checks the schedule of the visit formed by the manager.

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| \$         | Setting                            |
|            | (fig. Sales Person Login Activity) |

- The Above activity has different options which are:
- Schedule Visit
- Financial report

- Logout

The schedule visit is used for the getting the schedule placed by msnager that the salesman have to visit .

Financial report option is used to send the the financial report or order list of the customer for the instance processing on the customers requirement list. Logout option is for logging out.

IV. Conclusion:

Hereby we conclude that, 40% of our application has been completed till now. We are also going to solve the issues of existing system and make our application more userfriendly.

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