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Development of a tracking system for visually impaired people using Location Based Delivery (LBD)

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Abstract— visual imparity is a very big problem affecting about 285 million people across the world .A major proportion of the visually impaired people face with mishaps like accidents while availing problem transport and whilst walking .The main idea of this paper is to build a system for tracking and monitoring blind people with the help of location based delivery (LBD). With the help of this system . Once can ensure increased safety for visually impaired people.GPS will be used to retrieve location data accurately. After retrieval of the location data, it sends the required longitudinal and latitude coordinates to the tracker via SMS.

***Index Terms*— GPS-Global Positioning System, SMS-Short Message Service, LBD-Location Based Delivery**

I. INTRODUCTION

In today's environment the major problem is to track the blind people when they are in trouble. The problem's objective is to monitor the blind people by using location based delivery (LBD).

Proposed method uses android application for tracking the target and can use the application for sharing the location details of the target to the tracker via wireless network which is more effectively compared to the traditional technology. Proposed system can track the target's location when the target is in wifi region .Targets location conditions. If target loses network connection in his/her device then the location details will be shared through SMS based delivery which is more reliable

Proposed system uses Location based delivery which is more effectively and frequently used in the present trend. Location Based Delivery is a real time application where geo location is accessed from the mobile device or smart phone applications like Android, IOS, Windows. LBD is a service accessed by several application for the tracking purposes. LBD can be used at services like business applications which plays a big role in the present trend.

Proposed method uses SMS delivery for tracking the target in absence of geo location services. SMS is a short message service which is used as a texting message service handled by several applications. SMS delivery is a standardized protocol for communication across mobile phone devices to exchange the short text message. SMS delivery is a modern application which is used on modern handsets as part of the Global System for Mobile Communication. SMS ensures a different trend in the mobile marketing and used in several projects.

Proposed Method uses location prediction which is performed based on the current location of the target along with his moving speed and able to predict the next location of the target. In this proposed method threshold value gets fluctuated by means of changing in the distance between the current location and the actual location.

In proposed system on the basis of the moving speed of the target dynamic threshold maintains the location of the target precisely by sending SMS. The change in threshold results in sending the SMS to the target by tracker. Dynamic threshold is a threshold which determines the change in performance gets tracked.

II. LITERATURE SURVEY

[1] In this paper novel Dynamic vehicle detection and tracking system are used to track the vehicles to overcome the problem faced from the beam model based algorithms. Scaling series algorithm coupled with a Bayesian Filter (SSBF) is used for the improved tracking which runs in the dynamic environments and prepares the KITTI datasets. By using the above filters and the algorithm tracking can be improved without flaws and the self driving can be done easily. Moving vehicles can be easily tracked by using the wifi network and the GPS tracking for which the improved version of the tracking.

[2] Now a day's Location based services plays major role in the smart world in the major smart phones and so many gadgets. For example even in the cab services they follow the location of the customer. In this paper Location based services are used to track the device with the help of Geographical location of device. It helps for the woman who is in trouble

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and the works as the anti theft for the devices by using this application. The work scenario of this concept is when admin sets the radius of the device while the device passes away that radius then the suggested contact list gets the alerts of that device and coming to the women scenario the nearest police station get the alert messages about the device when device crosses the radius.

[3] Location based attendance is processed in this paper. The geographical location of an workstation is set in the application and then when the employee of that company comes to the workstation then application matches the Geographical location by using the GPS of workstation and the employee then the attendance is automatically marked. The coordinate of the GPS at the workstation should match the employee coordinate. This concept can be used in many ways like attendance in the Educational institutions and IT industry in an very smart way.

[4] Location based tracking is used here for the tracking of location of an user, and gets the map for the user and uses the application for route tracking and then which gives the route in the red line with the black dots. After travelling it shows how much distance travelled by the user and what is the average distance travelled by the user.

Here the location based tracking algorithms are used for finding the location in which the coordinate of the GPS of the user stored and the destination of the user stored and checks the coordinate of the GPS of destination and then tracks the route. This saves the time and gives the large impact when and unknown user goes to an unknown place.

[5] In this paper the smart way of tracking the Location is explained where LBS uses the GPS of the device and then tracks the devices. By using the GPS, Network provider and the go ogle maps are used to retrieve the location the device i.e., in the Longitude and Latitude of the device currently. The internet is mandatory here and the location of device should be always switched on anytime. By migrating the GPS and goggle maps we use the LBS for the tracking of the user location.

[6] In this paper the location of the user can be tracked and the location of the user can be shared to anyone who wants it. When employees of the IT industry do work from home then this concept is very useful. In this concept the calling of the nearest friend of any user can be done, video calling is made by using the webRTC. In this application the longitude and latitude is tracked and the address is also tracked through the GPS and the go ogle maps, through this application the location of an user can be easily shared and then easily tracked.

III. PROPOSED SYSTEM:

A novel method of approach is implemented for the development of tracking system for blind people using SMS delivery and GPS. Tracking system is developed using LBD and SMS . The Tracking System is an application based delivery used on android devices for the tracking of blind people by the tracker. mainly we will use a method called tracking in this method we will track a blind people by using location based delivery and GPS . In this method SMS is a relative pay service we can get his exact latitude and longitude location of the tracker. If suppose both target and tracker are not in internet access therefore SMS is a relatively pay service . Firstly, the tracker and target has to install an android application. Then the tracker has to login in an application . Then the account has been created then we need to select the particular person whom you need to track . then we need to set the visibility and then we need to start tracking . then finally we will get the exact distance finally we will view a map there we will find the target location with his latitude and longitude points.

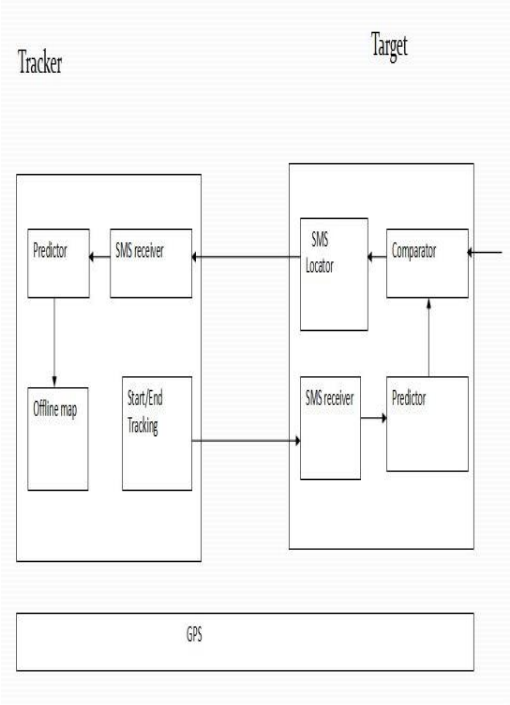

Fig1Block diagram

Fig shows the block diagram of the proposed method which represents the tracker and the target where the tracker use this methodology to track the target using this application with the help of Global Positioning System(GPS) and sends the target location when the tracker and target are not in the internet access therefore SMS is relatively more reliable and flexible solution. However, SMS is a user-pay service.

Comparator is used to compare the current location and next location. Firstly, the proposed method uses to compare the current threshold frequency. In this proposed method also uses SMS locator and SMS receiver which is used as the service for the getting notification of the location of the target of current location and moving location. In this proposed method the system sends the location of the target via maps using geo location satellite when the target is present in the Wifi region. If the target moves away from the wifi region then the proposed method sends the location details via SMS. By using this proposed method tracker can notify the

target when he moves away from the safety location or wifi region.

Location Based Services are the services which are provided for the users according to their geo location to track the target which are used. LBD is used when the device is connected in the network region for getting the location of the device. LBD uses GSM architecture where it involves with the radio subsystem and network subsystem and operating subsystem to get the exact location of the mobile device. GSM also has the SMS module where the proposed system uses for getting location notification. LBS is linked with the dynamic threshold where it gets updated when the change in location of the target occurs then sends the notification to the tracker.

Level 0:

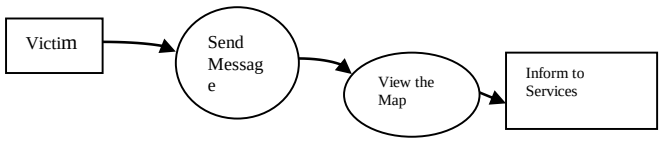

Fig 2.2 Accessing the victim location

Explains the problem's objective is to monitor the blind people. Once the victim's location is found a message will be send and the map will be viewed and the details of the target will be accessed by Tracker.

Level 1:

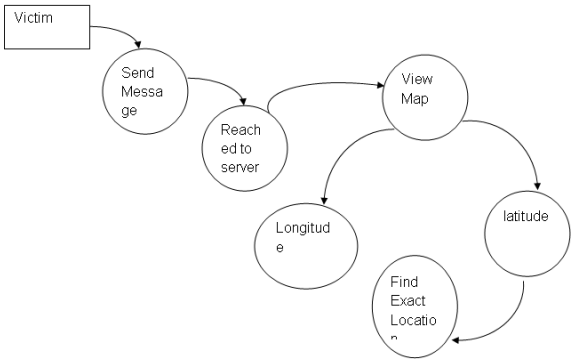

Fig 2.3 Monitoring the blind people with GPS

Explains the development of Location Based Delivery by combining the features of Short Message Service (SMS) and Global Positioning System (GPS) for predicting the exact latitude and longitude location of the target.

a. Advantages

It provides more safety to the blind people, and also easily we can track the location of any person.

IV. IMPLEMENTATION

Proposed system is of four modules

- Well defined SMS format
- Location prediction
- Dynamic threshold
- viewing map

Proposed system uses SMS delivery to transfer the location details to the tracker.SMS is a world wide application where the message gets transmitted from the mobile station to the GSM base station along the network provided by the service vendors .In proposed method targets device is set to home location by using Home Location register and determines the change of location when the target moves away from HLR to VKR (Visitor Location Register)

Location prediction in the proposed system predicts the location of the target which is built in it and gets notified with the tracker side. It predicts the current location where the target is located at certain time . By using LBD service the moving speed of the target is identified by the location predictor and even predicts the next location of which the target wants to move. Dynamic threshold is identified when the distance between the predicted the location and the actual location is changing then the device available along with the target transmits a short message to the tracker to update its current location.

Proposed methodology uses Dynamic threshold module which is used at the target side and minimizes the number of short messages by adjusting the threshold to certain value based on the moving speed of the target. Dynamic Threshold modulates both the number of short messages and the accuracy of the location. By using this dynamic threshold propo1sed system can predict the exact location of the target.

proposed system is attached with the geo satellite location settings where the tracker receives a response message from the target device .The accuracy of the predicted targets current location is high when the tracker wants to track the target. If the view map is not able to access then the short message service gets activated and send the target's current location to the tracker.

V. RESULTS AND DISCUSSIONS

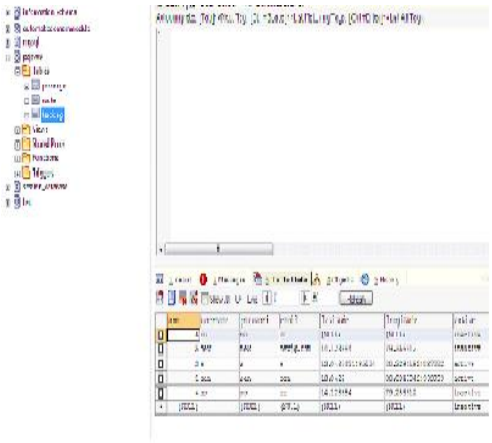

Fig2.4Log File Of User

Figure describes about the target information of the users , such as user name password and his email address.

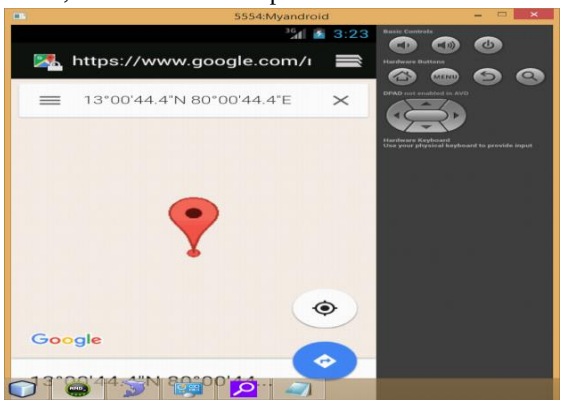

Fig2.5Target Locator

The Location of the target can be viewed by using the goggle maps and can find out the exact location of the target which is showed in the form of Longitude and Latitude.

VI. Conclusion

A modest bunch of studies have created area following applications through SMS. Be that as it may. SMS is a client pay benefit .The quantity of SMS transmissions must be limited while keeping up the area following precisions inside the satisfactory range to lessen the transmission cost .This review proposes a novel arrangement , LBD ,to this issue and further builds up a sensible framework for following the objective area .Not withstanding characterizing the short message design.LBD utilizes the present area .In LBD the moving example data of the objective is transmitted just when the separation between the anticipated area and the genuine area surpasses a specific limit ,which is progressively balanced by the speed of the objective .The investigation demonstrates that ,in LBD, the quantity of short messages required fundamentally decreased as contrasted and TBD and DBD. Likewise LBD accomplishes an-adequate area following exactness .At long last ,the utilization of a dynamic limit decreases the required number of short message transmissions contrasted and the settled edge.

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