Smart Tasking And Automated Profile Navigation Android System

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Abstract—**In Smart Tasking and Automated Profile Navigation Android system, we documented about system architecture and its work flow. We realized the applications based on location based information. Location information gets used more and more often in people's daily life. The system can provide users many specialized services according to the users specific needs so the system can satisfy all the special requirements of users. Moreover, the system can be expanded the functionalities and provide them management ability. Once the application is installed and the input is set then the user can automatically get these applications executed. This system added exciting feature to the android users and reduces the simple overheads. In Internet telephony systems, communication services can be enhanced by the integration of other Internet services, such as email, which is further enhanced along with the scheduler.**

Keywords- keyword matching; Natural language processing(NLP); Stop word generation.

I. INTRODUCTION

Android is the first truly open and comprehensive software platform for mobile devices, it's a complete software to run a mobile phone but without the proprietary obstacles that have hindered mobile innovation. It is powered by Linux Kernel. This is the first open source platform which is robust and is expected to gain much popularity. The idea originated from Android-Mobile Application Development. The current system is developed on the basis of android platform. Android is an open source software platform and operating system for mobile devices. It is based on the Linux kernel. It was developed by Google team and allows writing managed code in the Java language.

The location service in a mobile ad-hoc network (MANET),where each node needs to maintain its location information by frequently updating its location information within its neighboring region, which is called neighborhood update(NU),and occasionally updating its location information to certain distributed location server in the network, which is called location server update(LSU).The tradeoff between the operation costs in location updates and the performance losses of the target application due to location inaccuracies(i.e., application costs)imposes a crucial question for nodes to decide the optimal strategy to update their location information, where the optimality is in the sense of minimizing the overall costs, there always exists a simple optimal threshold-based update rule for LSU operations and for NU operations, an optimal threshold-based update rule exists in a low-mobility scenario.[1][2]

To develop a system for android users for keeping track through several applications. The application uses some GPS terminology for location mapping and tracking the restricted zones, scheduling uses some of the time constraints based terminologies and ringtone changing is done on the basis of the day configuration terminology.

The primary objective of this project is to develop applications which makes users job easy. Profile swapper makes task of user easy so that manually he won't has to do it manually. This is applicable even if one forgets to make his profile on silent. The other objective to be achieved is modification of ringtone automatically. User also has the benefit of scheduling Tasks or the day to day jobs. And the tracker functions in mapping of locations and shows them in maps.

II. EXISTING SYSTEM

As part of our initial research we decided to investigate applications that offer the same or similar services for android and other platforms. The aim is to see how these applications work and to see how they can be improved. To date it is identified two Android Apps that offer the relatively similar service.

Pothole Agent:

An Android Application for Pothole Detection The application monitors for changes in acceleration. When such a change is recorded, the application calls the NLP and asks for the coordinates of the pothole. The application then adds the time, the geographic coordinates and the severity of the pothole to the event log. When the application is started the app calls Android's location listener which takes data from the phone's inbuilt Global Positioning System (GPS) or from Cell tower or Wi-Fi data. The GPS (one location) is the most accurate. GPS uses a network of 27 Earth Orbiting Satellites (24 active and 3 backups) developed by the US Military.

Then orbits are arranged so that at anytime, anywhere on Earth, there are at least four satellites "visible" in the sky. The

GPS receiver locates four or more of these satellites. It then calculates the distance between itself and each satellite and compares the distances to triangulate its own location.

However despite the accuracy, GPS has some limitations. It only works outdoors, has a high battery consumption rate and is slower to return the location.[4]

Restaurant Finder Application:

The prime objective of this application was to create a fully edged Android application this could locate a list of restaurants based on the location and type of the cuisine entered by the user. The user not only finds all the restaurants in the city, but also he can make a choice of the best restaurant based on the rating and cuisine he chooses to have. The user can also map the location of the restaurant on Google Maps rendered to the user on the phone and find the path from his current location or from any other location to the restaurant; the user has the facility to make a call directly to the restaurant and can also obtain the detailed review of the restaurant he chooses.[5]

Drawbacks of Existing System:

Due to the way it is implemented in Android, there is no suitable way for to get the GPS updates at a specific interval. Using the minimum time parameter of request LocationUpdates() causes the GPS to actually sleep for this time instead of notifying of a location change every minimum Time. Along with these issues it the existing system works only outdoors. It also had high battery consumption and is slower to return the solution.

III. PROPOSED SYSTEM

In the proposed system, it provides a stochastic framework to analyze the location update problem in MANETs. The location update problem at a node as a Markov Decision Process (MDP) is under a widely used Markovian mobility model. The MDP model is to identify some general and critical properties of the problem structure and the optimal solution that could be helpful in providing insights into practical protocol design. The purpose of this system would be capable of taking decision on profile setting to be changed depending on the zone/location in which the mobile would be operating. Occasionally update in ringtone profile is done automatically but user has the facility to add more dates along with ringtone to it. Further it would be enhanced with the location reminders. Along with the locations, the user can specify a relative profile for those locations. The output produced is either a text message alert to particular SIM number or the permission to update the profile. Further it would be enhanced with the location reminders.[1][2][3]

Following are the points to be implemented in the proposed system to be implemented:

- Implementation of task scheduler to give alert on particular location added in task list.

- Implementation of Ringtone Updater to update the desired ringtone on a configured day.

- Implementation of Profile swapper when user switches to restricted zones.

A. System Architecture

The current system is completely based on the android platform. So, while development in android phones applications one can have tremendous ideas to be implemented. Android smart phones provide some in-built features for the GPS tracker. This gives developer to involve more innovative ideas and a platform to built and implement them. Thus this system is divided into three modules which make us easy to sort out the tasks.

The Fig.1 shows the block diagram for the system and it categorizes its modules. The block diagram describes: The very first task of using this application i.e. stating of the app so, to do this user has to either start the app if it is installed in the respective phone or he/she has to download it.

To download these apps one has to go to the prescribed link and start downloading it. After it has been downloaded, undergoes the installation process of these apps. Then comes the choice of user to select the app and perform respective task.

The modules of the current system are listed as follows:

1. Smart Task Scheduler :

- Task scheduling uses some of the time constraints based terminologies which will give Shortest route from source to destination location.

2. Automated Profile Switching:

- The application uses some GPS terminology for location mapping and tracking the restricted zones.

- Mobile User Profile will be switched from Normal to Silent or Silent to Normal depends on address location settings of mobile application.

3. Ringtone Updater :

- The ringtone changing is done on the basis of the day configuration terminology.

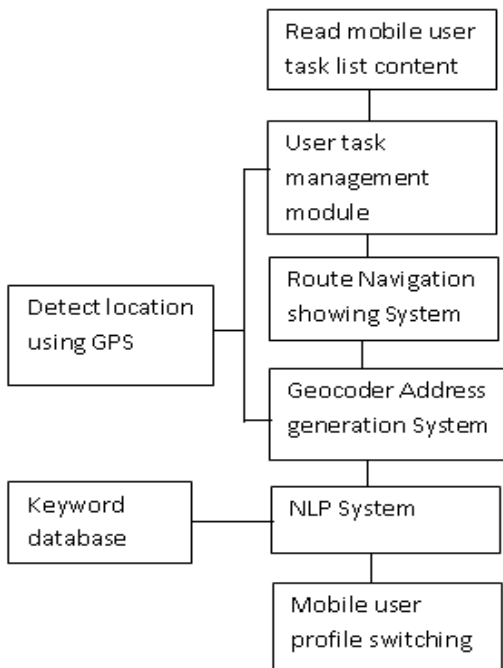*B.* System Architecture Block Diagram

Fig. 1 Architectural View of System

C. SYSTEM MODULES

Below is the brief illustration of the entire above modules one after the other:

- Smart Task Scheduler

The aim after implementing this module is scheduling of tasks, messages and mails after a while. One can add tasks message or mail and set time with place. The system will then route user and navigate route according to task list content and provide efficient management of user tasks. And send the alert message without interacting user at the provided time.
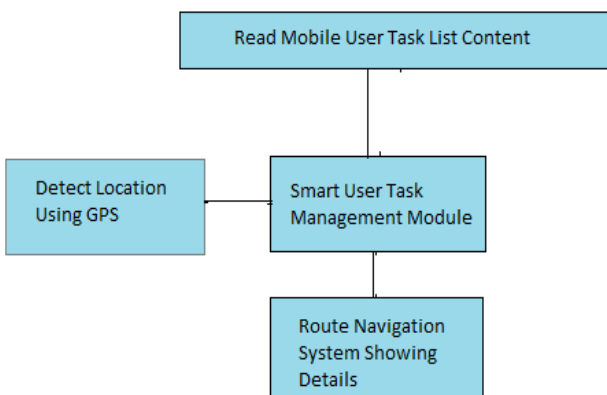

Fig. 2 Architectural View of Smart Task Scheduler

- Ringtone Updater

This is one of the most interesting modules to be used. It provides the facility of updating ringtone occasion wise. A user just has to set his desired ringtone for a particular date and is done and on the respective date his cell phones ringtone will be updated. This application is provides the Government holidays list with respective ringtones and if he wish to add more he just has to add event by selecting date from calendar and then select ringtone and set it. To select ringtone the user is already provided with some of the ringtones along with the app and if he wishes some other one then one has to select from data storage or has to download it from net.

E.g. User can have their ringtone as a patriotic song on the occasion of 15th of August and 26th January.

- Profile Swapper

This application is simply gaining the silent mode in cell phone after entering to restricted areas. The Restricted areas like schools, colleges and hospitals etc. One can also set time to so that scheduling is done to change profile while attending any meeting.

E.g. Teacher sets silent profile at its lecture time and his job is done. Now every day at his lecture time his phone goes to silent mode and thus the module works.
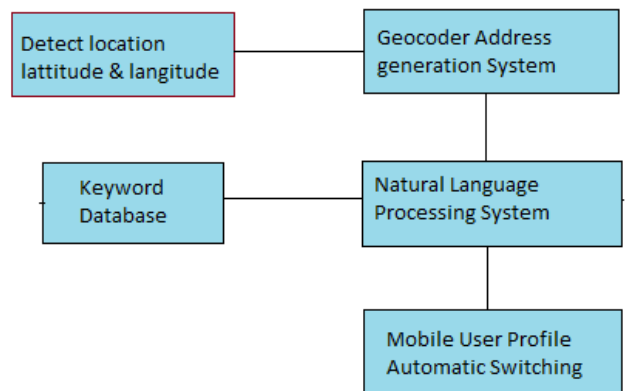

Fig. 3 Architectural View of Profile Swapper

IV.   EXPERIMENTAL RESULTS

After the implementation of source code for said application its running smoothly as service and providing lots of features for human interaction. Following are the screenshot taken after implementation. The following are some results generated after experimentation :

1. Fig 4 shows Systems main design form which gives us the link to go our applications.
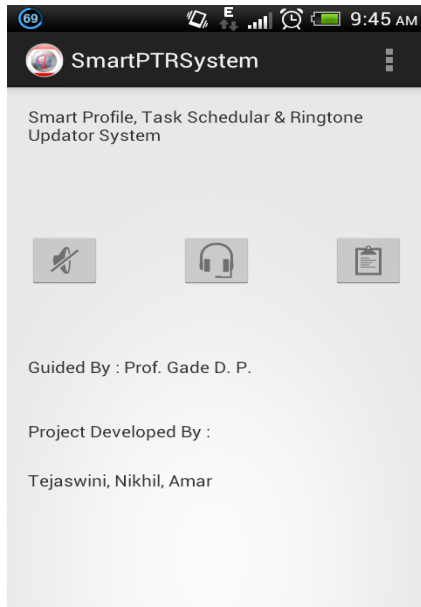
Fig. 4 Implementation Output of Module

2. Our 1st module i.e. the Ringtone updater, Fig 5 shows the form of the same. Here we added the select ringtone button for selecting the ringtone of users choice which he wanted to set far a particular date

For ex: if today's date is 15th Feb 2014 and user wanted to set the ringtone for 28th Feb 2014. The user will just click on set ringtone button .

The result occurred is the ringtone is set on 28th Feb 2014 and again reset on 1st March 2014
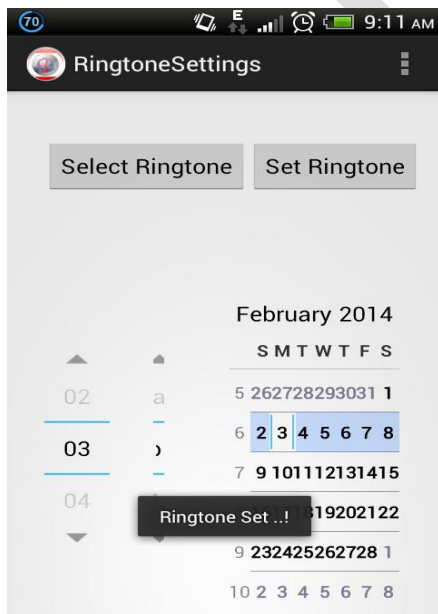

Fig. 5 Implementation Output of Module

3. Our 2nd module i.e. The Profile Navigator. Fig 6 shows the layout of the same. Here we added the two

main functionalities that the profile navigated with the help of longitude and latitude(for current location or specified location) and the keyword(like college ,hospital)

For ex: a) If we are at the location of our home address and select the current location and press the button "set current location as silent"

The result occurred is the application retrieves the longitude and latitude of current location and the profile gets navigated every time when user comes at that location.

b) If we entreat the location of the keyword like college, Hospital or anything else which user add at the enter keyword textbox .

The result occurred is the profile gets navigated at the location of the address which has any keyword from the keyword database and again get to normal profile when user leaves the address location.
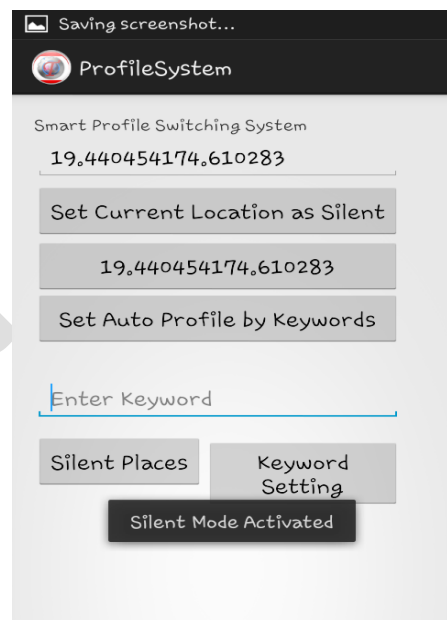

Fig 6. Implementation Output of Module

4. Our 3rd module i.e. the task scheduler ,fig 7 shows the layout of the same. here we have the source and destination where the user will put their own location and the task they wanted to do .the application will find or retrieve the route from source to destination

For ex. If we entered the source Nasik and destination Ahmednagar and stored the task with the locations like sangamner , loni, kolhar and etc.

The result occurred is when pressed the button "show smart route for task" will show the map with source and destination location marked with the task location .

The result is the user will get the notification of task on a every task locations stored on task list.
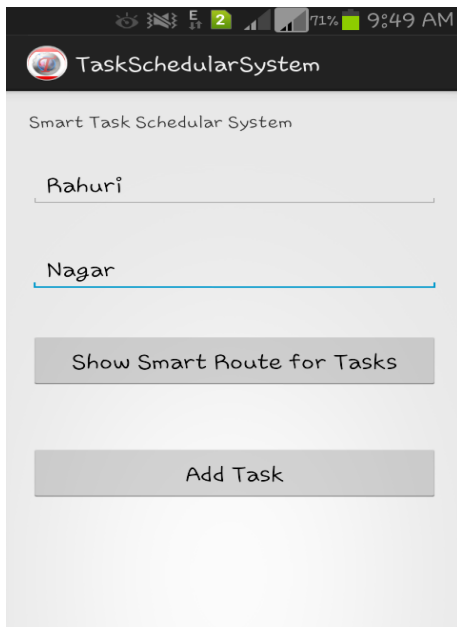
Fig. 7 Implementation Output of Module

This system is implemented to make users job easy in his/her day to day life. This developed system will route user and navigate route according to task list content and provide efficient management of user tasks Even this system will send the alert message without interacting user at the provided time. This implemented system is an application of gaining the silent mode in cell phone after entering to restricted areas like schools, colleges and hospitals etc. Even a user can also set time so that scheduling is done to change profile while attending any meeting.

V. CONCLUSION

In this system, we implemented system architecture and its work flow. In this system, we implemented the application based on location based information. We have implemented a real time Android based application using various algorithms and Google Maps. In this application the profile gets swapped with the help of profile navigator. second the user gets the notification at particular location which he stored for his/her task. and third ringtone gets updated after a particular date. In Future we can extend this with context based information and their preferences.

REFERENCES

[1] Zhenzhen Ye and Alhussein A. Abouzeid ,"Optimal Stochastic Location Updates in Mobile AdHoc Networks",IEEE Transactions On Mobile Computing, Vol.10, No.5, May 2012.

[2] M. Mauve, J. Widmer, and H. Hannes, "A Survey on Position- Based Routing in Mobile Ad Hoc Networks," Proc. IEEE Network, pp. 30-39, Nov. /Dec. 2011.

[3] Y.C. Tseng, S.L. Wu, W.H. Liao, and C.M. Chao, "Location Awareness in Ad Hoc Wireless Mobile Networks," Proc. IEEE Computer, pp. 46-52, June 2010.

[4] S.J. Barnes, "Location-Based Services: The State of the Art," e-Service J., vol. 2, no. 3, pp. 59-70, 2010.

[5] M. Natu and A.S. Sethi, "Adaptive Fault Localization in Mobile Ad Hoc Battle_eld Networks," Proc. IEEE Military Comm. Conf. (MILCOM ?05), pp. 814-820, Oct. 2009.

[6] Fuhao ZHANG*, Ageng QIU, Qingyuan LI,"Improve on Dijkstra shortest path algorithm for huge data",Chinese Academy of Surveying and Mapping, Beijing, China, 100039, Zhangfh@casm.ac.cn

[7] Yongtaek LIM,Hyunmyung KIM,"A Shortet path algorithm for real road network based on path overlap",Journal of the Eastern Asia Society for Transportation Studies, Vol. 6, pp. 1426 - 1438, 2005.

[8] Munesh Chandra,Vikrant Gupta,Santosh Kr. Paul,"A Statistical ap-proach for Automatic Text Summarization by Extraction",International Conference on Communication Systems and Network Technologies,2011.

[9] James B. Orlin,Kamesh Madduri,K. Subramani,M. Williamson,"A Faster Algorithm for the Single Source Shortest Path Problem with Few DistinctPositive Lengths",Massachusetts institute of technology,2009.

[10] Maricela Bravo,Azucena Montes,Alejandro Reyes,"Natural Language Pro-cessing Techniques for the Extraction of Semantic Information in Web Services",Seventh Mexican International Conference on Arti_cial Intelligence,2008.

[11] Hakan Ayral,Srma Yavuz,"An Automated Domain Speci_c Stop Word Generation Method for Natural Language Text Classi_cation",2011.

[12] Chris Biemann,"Chinese Whispers - an E_cient Graph Clustering Algorithm and its Application to Natural Language Processing Problems",biem@informatik.uni-leipzig.de,2008.

[13] RonanCollobert, JasonWeston, MichaelKarlen, KorayKavukcuoglu, PavelKuksa, "Natural Language Processing (Almost) from Scratch",Journal of Machine Learning Research 12,2011.

[14] Mr.V.Shashikiran,T.T Sampath Kumar,N.Sathish Kumar,V.Venkateswaran,S Balaji,"Dynamic Road Tra_c Management based on Krushkals Algorithm",IEEE-International Conference on Recent Trends in Information Technology, ICRTIT 2011.

[15] F.BENJAMIN ZHAN,CHARLES E. NOON,"Shortest Path Algorithms: An Evaluation using Real Road Networks",Department of Geography and Planning,San Marcos,Texas 78666,2009.

[16] Takeshi Matsumoto,David M.W.Powers,Geo_ Jarrad,"Application of Search Algorithms to Natural Language Processing",School of Informatics and Engineering,Flinders University of South Australia,2007.