

Reminder Based on User's Location using Android Smart phones [RBUOID] (An android application)

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ABSTRACT

The main purpose of this paper is to describe the study location based reminder and its services. Today there are multiple tasks in day to day life each person has to remind this task one by one although location-based reminder applications have been widely prototyped, there are few results regarding their impact on people: how are they used, do they change people's behaviour and what features influence usefulness the most. Cell phones provide a compelling platform for the delivery of location-based reminders within a user's everyday natural context. This is an application that helps working people to coordinate their day-to-day activities with their demanding work schedules. For the everyday person conducting working activity on the go, there are often many tasks that need to be completed in a given day. Some of these tasks must be completed at a particular time, but others simply need to be completed when the user is at a particular location. So with the help of reminder user gets reminder of what to do when to do and at what location.

Keywords: User Reminder, Android, LBS, GPS & Google Maps, Offline reminder

I. INTRODUCTION

In everyday life, everyone has some task which needs to be completed for completion of a task, the person needs to remember the task and act accordingly in order to complete the task. But because of hectic schedule and all the hustle and bustle happening in one's life, there is high possibility that person may not remember the task. This is a common situation with us humans as we tend to forget things that are not important or of a lesser priority. The project Reminder Based on User Location can help the user of the application to keep track of the task. In later time, people use to prepare their to-do list on paper. It was quiet hectic since one needs to carry the paper, keep paper safe and there was a high possibility of paper getting lost. Due to all these reasons, noting down task on book or paper is definitely not a viable option. Then with advent and growth of technology, the to-do list as application on mobile and computer came into existence. It was quite a successful application and still in existence. But the simple to do list application lacks tracking and notification feature so there is high

possibility that user of the application may not remember to check out the to-do list.

The other question that arises is why we chose Android Platform and why Android is the most popular mobile operating system in the world. Android, the world's most popular mobile platform, powers hundreds of millions of mobile devices in more than 190 countries around the world. Global Partnerships and Large Installed Base, for developers, Android innovation lets you build powerful, differentiated applications that use the latest mobile technologies, Powerful Development Framework, Easily optimize a single binary for phones, tablets, and other devices, Open Marketplace for Distributing Your Apps. Google Play is the premier marketplace for selling and distributing Android apps. 1.5 billion downloads a month and growing. Get your apps in front of millions of users at Google's scale. You can have your pick of phone at any price point.

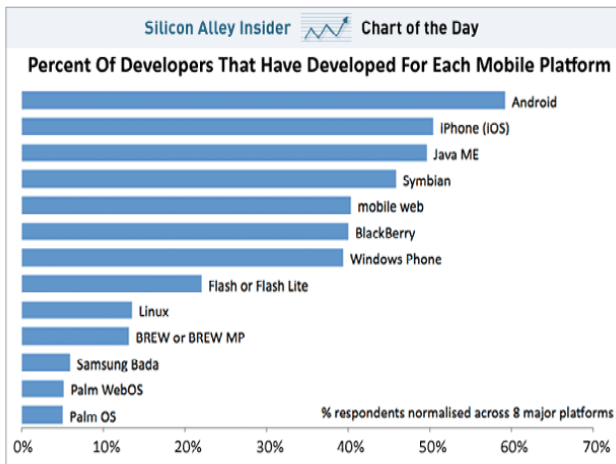


Figure 1. Chart of the day app developers mobile platform

II. METHODS AND MATERIAL

1. Location Based Reminders And Services

Earlier in the 'Introduction' section we briefly looked at location based reminder and their importance, now let us look in depth. A Location-Based Reminder (LBR) is a location based reminder application for smart phones running on android platform which not only has traditional features of a reminder application, but uses modern technologies such as location based services to make the application more context aware thereby making it more relevant to real life and more useful for potential users. Location based reminder uses location based services.

LBSs are information services accessible with mobile devices through the mobile network and utilizing the ability to make use of the location of the mobile device. These definitions describe LBS as an intersection of three technologies: Internet, GIS (geographic information system), Mobile devices (see Figure).

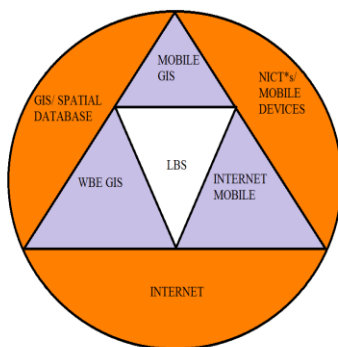


Figure 2. LBS as an intersection of technologies

2. GPS System Working

i. Mobile GPS Tracking

Tracking a mobile phone using GPS is pretty easy. There are numerous apps available for each type of smart phones. All you need to install them and start using it. Network Connection is not mandatory as long as the satellites are available. Most of the apps show you location of the mobile device when you have it with you.

But if you want to track your mobile phone when its not with you, then you need special Mobile GPS Tracking application that reports you the location details, movements, speed, direction etc. You can access this information from a computer or any other mobile device

ii. How GPS works

GPS works purely based on satellite message signals which are in the line of sight with the receiving object like your mobile phone. To pin point the location of the mobile device, a minimum of 4 line of sight satellites required. When you switch on the GPS feature on your mobile phone, the GPS receiver will try to locate the no of satellites that are available. When your mobile gets more than 4 satellites, it picks the best matching 4 satellites and tries to pin point the location.

The satellites that provide location information are free for all irrespective of the service/network provider. This GPS signals can be used not only by mobile devices but also any gadgets that can process the satellite message signals. GPS gadgets are fitted on cabs, buses, trucks, animals, bags, trains, flights everywhere.

iii. GPS with Maps

As GPS gives the location details of the mobile device in terms of longitudes & latitudes, it's possible for software apps to plot the map using this co-ordinate point. As the receiving object moves, it keeps on updating its current location thus making any apps to display the live movement of the cursor on the map. Popular and well known app is Google Map which

available on almost all the smart phones that has GPS feature

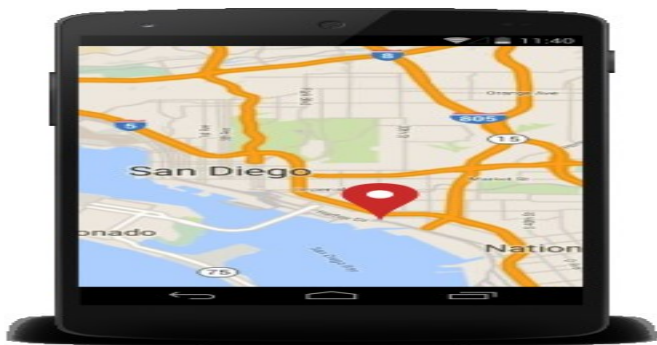


Figure 3. GPS System Working

Upcoming list where it display entire list of reminder set by user

c) **Completed reminder**

Completed reminder it give the notifications to the user that you are nearby to the location and display the work or task which is set in reminder

2. **Contact Reminder**

The contact reminders give advance features in this application where user want to contact the specific person on different location such as (contact boss for arrange the meeting) that is when user set the reminder on particular location then after receiving the notification on mobile screen along with call button & contact number of the person whom the user have call so on click the button it connected call to person (boss) directly without switching application

iv. **Mobile Tracking with A-GPS**

It's possible that some times, when you are inside a shopping mall, indoors, underground etc, you won't get satellites in line of sight. So the mobile phone apps will try to determine the location of your device by using A-GPS (assisted GPS). Techniques such as service / network operator's signals, wifi hot-spots will try to provide the location information

v. **Google Map in Android**

Android provides a number of objects to handle maps in LBS system like Map View which displays the map. To handle this Map Activity class is there. To annotate map it provides the overlays class. Even it provides canvas by which one can easily create and display multiple layers over the map. Moreover, sufficient provisions are there to zoom the map, localize the map by means of Map Controller.

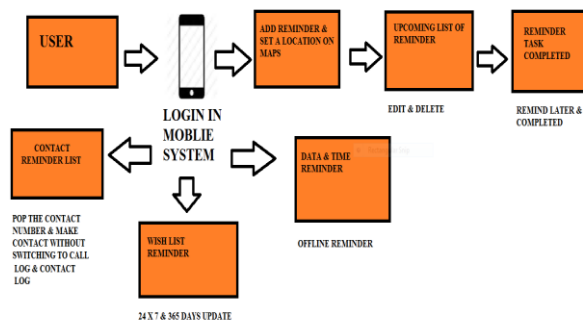


Figure 4. Proposed System Working

III. RESULTS AND DISCUSSION

PROPOSED FEATURES

1. **Location Reminder**

The location reminders have features following items or icons

a) **Add reminder**

Add reminder allow user to set the reminder task with the current location along with radius with data and time if user required

b) **Upcoming list**

3. **Wish list Reminder**

The wish list reminder is additional features to the location reminder which is basically used when user want buys some product from (market, mall, and small shop) it key features which have following icons such as

d) **Priority reminder**

Priority reminder in which it allow user to set it priority of product according to user such as shoes on R-mall have 50% discount. For example: The person he/she wanted to buy some product in particular area such as mall, any gift shop, or shopping street for a particular products such as wrist watch & dresses or t-shirt then the user he/she can set the priority according to their demand on need of product

e) Shopping reminder

Shopping reminder where it give features to user that while shopping user can set entire list of shopping day to day product such as (milk, egg, vegetables) after completing it will checkout product in the set list.

4. Data & Time Reminder (offline reminder)

The key feature in location reminder is data & time reminder which allow user to set reminder offline whenever user don't have internet connection at that time data & time is by default reminder where user can set data & time along with location so it reminder user gets reminder of what to do when to do and at what location. When the user is at particular location.

IV.CONCLUSION

In this research paper we have put forth the idea of a modern reminder application which makes it more useful to potential users. The application which is android based uses technologies such as GPS and internet connectivity to make reminders more contexts aware by adding the dimension of location to traditional time based reminders. We also enlisted the considerations to be taken care of while developing a location based application and described the proposed features.

V. REFERENCES

- [1]. W. F. Ableson, C. Collins, R. Sen, "Unlocking Android", Manning Publications 2008
- [2]. Chris Haseman, "Android Essentials", First press publication 2008
- [3]. B. Bootz, R. Douglas, N.Freed(2009). Reminder [Online]. Available: <https://impact.asu.edu>
- [4]. Sohn T., Li. K. Lee, G. Smith, L Scott J. Griswold, W. (2005) . Place - Its: Location - Based Reminders onMobile Phones ,Proc. Intl. Conf. on Ub.
- [5]. Sandeep Kumar, Location Based Services using Android (LBSOID) publication 2010 : Conference Paper • January 2010DOI: 10.1109/IMSAA.2009.5439442 • Source: IEEE Xplore