

LOCATIONS AROUND ME (ANDROID)

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ABSTRACT

The idea of using the mobile phones is to deliver the valuable services except the basic communication that had been started in the early 1980s when the Internet was added in the Voice Telephony. In this application first you need to add your task in the To-do List with the places (like Bank work, withdraw money from an ATM etc.) then this application searches nearby places defined by you and generate a voice message of your work as our reminder.

Your friends can add their To-do List in your list if you allow them and if they are added to your friend's list. With this application we can search our favourite places within our vicinity, along with complete place address and how far it is from where you are.

KEYWORDS: Restaurant Queries, Location Based Service (LBS), XML Format

INTRODUCTION

Location based service is the ability to locate a mobile phone user geographically and deliver the service to that user based on his location. Services are provided at improper time without considering the users views and changing the network. For example, mobile phones can now be used to carry not only voice but also data inconsistency like messages, images and video clips from anywhere at different time.

In Internet telephony systems, communication services can be enhanced by the integration of other Internet services, such as email, web, and network gaming, that also involves the location information handling. In Future we can extend this with context based information and their preferences. Restaurant queries, traditional restaurant queries only consider the distance, while we aim to change to provide better results by considering not only distance but also the environmental context (e.g., time, weather and current traffic condition etc.) and the restaurant context (the closing time, current waiting line etc.)

LOCATION BASED SERVICES

Locations are essential for people as to how they organize and relate their world. The appearance of the different technologies such as Internet, wireless network, Geographical information system (GIS) and Global Positioning system (GPS) have introduced the new type of technology called as Location based service (LBS). Location based service (LBS) is a mobile service that provide the user the real time information based on the user's location. Geographical Information System (GIS) is the heart of LBS that provides all the functionalities required in LBS.

First, user sends the location information to remote parties and such type of services is being used today for e.g. in mobile tracking applications. Second, to use location information to find out locations of point of interest for e.g. a user may automatically disable instant messaging when travelling. Third, when location changes it gives alerts to

communication actions for e.g. when a person's user agent gets a location notification indicating the person enters a room, the user agent automatically turns on the light of room [5].

STRUCTURE OF CLIENT MODULE

The main module handles the registration procedure for opening a user account. The builder module accesses the user module on the server side and also sets up the location information. The drawer module provides a web editor function, which is the interface for making content using the mobile phone operating buttons. Created web content is stored in the XML format. The query module provides form for content search.

The data module controls data access inside the mobile phone. This makes it possible to access the data and also to capture the location information using GPS. To avoid accessing the server every time the user makes and renews the content, and the new content is kept in the cache inside the mobile phone. When making content, the information first surveyed in the cache, and if the data is not stored there, the server is accessed. Accessing the data folder inside the mobile phone, obtaining location information and the HTTP transfer function are performed by the Java client program via the APIs provided by J2ME.

These types of information are solely managed by the data module, which bridges them to the main module, builder module, drawer module and query module. When the user requests the date to create the content, the request is received by the builder module, and handed to the data module. The data module first searches the RMS (Record Management System) provided by J2ME to see if stored in the cache. When no corresponding information is found, the data module obtains the necessary information from the web server by using HTTP transfer.

STRUCTURE OF THE SERVER

The proposed system consists of a series of procedures for translating and storing content on the server side. XML content sent from the client is distinguished by the subscriber ID, which is attached to the HTTP request header. It is then translated into XML and stored in the database to support WAP browsers.

Content information from the user is also stored in the search database. For the search method, we use two functions, keyword and search range measuring from the user's location. By showing the result that meets these two functions, then the web content can be selected.

MOTIVATION OF PROJECT

There are applications for remainder but does not include all the features required for particularly location provider. Today, there is no such remainder and location provider application available yet for android phones with such a friendly user interface. This project allows each and every android phone user to actively use so that they can remind their necessary things at correct location.

STRENGTHS AND WEAKNESS

Strengths

- **Usability:** It is expected that the user should be able to vote add to-do list. Administration page also should be user friendly. There must be step by step guide for both server and users. User should add the to-do list. Server will also provide quick location update for users.

- **Reliability:** The system should be reliable. It requires GPS connections and network connections. All location updation need to be informed to the user. The changes should be monitored.
- **Performance:** There might be many users accessing to the web server simultaneously. As a location provider and remainder tool performance should not be affected much and response time for submitted page should be less than a minute.
- **Safety:** Web server should be secured. Even the regular backups should be in place.
- **Security:** User's information is secured and the user's registration information is confidential.

Weakness

- **Device Dependency:** The application is only for an Android smart phone. So this application is device dependent.
- **Failure of Device:** Sometimes Android phone is prone to failure because of other applications used on phone, and then the e-voting application may require higher processing it.

SCOPE OF THE PROJECT

In Scope

AROUNDME application will be developed for all the user of the android smart phones. Objective of the application is to make a location updation process easier and time efficient.

The application will provide one too many form of messaging between users to user. The application will enables to user to create their own to-do list, add remainder and modify the list. The application will provide various features like add/remove/modify. The application will also provide right to add remainders to the friend's to-do list. Notifications will be sending via SMS or voice message to all the subscribed users.

Not in Scope

The application is not being developed for android phones, Nokia (Symbian) phones. Failure of device: Sometimes Android phone is prone to failure because of other applications used on phone, and then the e-voting application may require higher processing time.

GENERAL DESCRIPTION

User Personas and Characteristics

User: The user is a person who uses this system for location provider and remainder.

Product Perspective

The application is internet and android based and is developed for smart phones. Thus it can be access by all smart phone users. It provides secure access to all users. Application keeps track of the locations, user profile and remainders added and removed.

DATA REQUIREMENTS

The following is an overview of the data requirements.

- **Input:** To-do list provided by the user.
- **Data Hold:**
 - **User:** Name, To-do list.
 - **To-do List Details:** Reminders provider by user.

GENERAL CONSTARINTS, ASSUMPTIONS AND DEPENDENCIES

- **General Constraints:** Our system will only be working in Android operating system for mobile application.
- **Assumptions and Dependencies:** Internet connection is the most important consideration for this system. The system uses strong database so that all information can be stored.

SPECIFIC REQUIREMENTS

External Interface Requirements

- **User Interfaces:** Each part of the system needs to be user friendly as possible. The user subscribes into the system. The user must be the android smart phone user.
- **Description of Functional Requirements:** Some of the main functions of the system are subscription of users, Create to-do list of remainder and Update to-do list remainders etc.
- **Performance Requirements:** The system has 3ms speed which allows access to many students at a time. The system receives updated information after every access to the system by the candidates or students. Response time of the system does not exceed 4sec. If system crashes; it goes back to the last normal state when reloaded again. Performance is the main concern as the database is huge and fast retrieval is required. The response time for refreshment, retrieving and updating of information must be low.

Security Requirements

Users are allowed to add/modify/remove the remainders in their own to-do list in an application.

Future Enhancements

Application will be enhanced by making it cross-platform for all mobiles. Application will be extended to use for all users, organizations.

FEATURES OF THE APPLICATION

- **Add, Edit and Delete Alerts:** The application provides alerts for the locations that are provided by the user. The application allows the user to add new alerts and even edit and delete the existing alerts.
- **Set Weekly Reminders:** The user can choose to receive alerts on specific days of week. On the specified day, when user is in the user to his/her point of interest, the application sends a text message or voice message to

remind the user to complete his/her task. If weekly reminders are not set, the application alerts the user whenever he/she approaches the set address.

- **Maintaining List of Favourite Places:** The application helps users to maintain a list of his/her favourite places and edit or delete the existing places in the list.
- **Location Input Options:** Users can manually enter the address of a location or choose an existing address from the contact-list or favourite places list for setting the alerts.
- **Set Radius for Triggering the Alerts:** The application lets the user specify the central location of a region and a radius around it and alerts the user when he/she enters that region. The application displays a list of radius values ranging from 50m to 3000m.
- **Turn on/off Alerts:** Users can enable or disables the alerts as or when needed. Turning off the alerts when they are not requires saves battery life.

INTERPRETATIONS

While designing and developing an android application, there is always a question of whether to use database or shared preferences technology.

Shared preferences technology is chosen mainly because of the data to be saved by the application. Using this mechanism data retrieval is easier and quicker as compared to database as it is a light weight mechanism. The application avoids maintaining large number of keys in shared preferences file by adding all the alert entities to an array list and the entire array list in the shared preferences file using a single key.

APPLICATIONS LIMITATIONS

- GPRS must be on every time user visits.
- Mobile must have internet facility.
- Android device's version must be of 4.0 or above, below this version this application will not work.

CONCLUSIONS

This application is very useful over android based devices. It is also very useful for user as it reminds the user about his pending work to be complete it in time, attain the appointments, plan the schedule etc. It is user friendly and type of user can use it. Even the user's friend also can add his reminders into his to-do-list. It is a free application that helps you search places around you as per your remember list. This app is the mobile version for the remembering the things that you want to perform on a day, giving much convenience and accessibility to people. Using this application, you can search for places nearby your vicinity, complete with the location address, how far it is from you.

Thus we conclude that this application is very useful over android based devices. It is also very useful for user as it reminds the user about his pending work to be complete it in time, attain the appointments, plan schedule etc. The location based alert application makes life very easier and knowledgeable about various places.

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