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Localized Alerts using GPS Navigation

Assistant Professor D. R. Patil[1]

Swapnil Kale[2], Prasanna Waghmare[3], Sanket Ghule[4], Kakasaheb Suryavanshi[5]

U.G. Students, Department of Computer Engineering, JSCOE, Pune, Maharashtra, INDIA

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Abstract - *This paper presents an Android Application to help its users to navigate and reach the desired location within very less time. It also provides user login facility for efficient navigation with High Quality animations that will make users feel awesome. The navigator helps us to continuously be in touch with the pals. We can share the location details that we visit on Social Media like Facebook, Twitter etc. There is also the facility of QR/Barcode scanning that will redirect us to particular background webpage that contains some information. Its key feature is Offline navigation, that is useful even when we don't have internet connection. It will provide a spectacular user interface for a prominent navigation*

***Key Words*: GPS,QR CODE , BAR CODE,NAVIGATION, PROFILE.**

1. INTRODUCTION

Global Positioning System (GPS) navigation is a popular assistant during a trip. By using a GPS navigation system, the travelers can easily and quickly arrive to the destination in an unfamiliar area. This paper proposes a GPS navigation system on the Android platform, called Android Mobile Navigation System AMNS not only provides users the GPS navigation function, but also supports Quick Response (QR) code for decoding and friend positioning. The Autonomous position detection and tracking system enhances the accuracy of locating friends and family members' positions by using GPS and standard web technology. This system includes a mobile client, a repository, a web client and a map service. This location information can be sent to the server and the same information can be managed and viewed using the web client by other users. The theme of the software that we have been developing is a combination of **Mobile Solutions** and **Leveraging Geo data and Maps** to organize the world's information and to make it universally accessible and useful to a wider and better extent..

Our proposed idea is a mobile application that allows the user to download and install street maps of a particular city, state or country depending on his current needs from a site. We designed a set of multiple applications like Place Marking, Shortest Path Strategy. These applications work with co-ordination with Google Maps in live environment to keep track of the Places and points of interest as per user for future use. A Location Based Service provides information that is accessible in the mobile devices through the mobile network and it also provides information about the contemporary geographical position of the mobile device. The motivation for every location based information system is: "To assist with the exact information, at right place in real time with personalized setup and location sensitiveness". We must ensure that a person when visiting places need not carry the travel guides with him. All the information must be available in his mobile device and also in user customized format. The smart location tracker is deployed in the Android Operating system.

2. LITERATURE REVIEW

2.1 *EXISTING SYSTEM*

1. Google Maps:

The already existing application, Google Maps has many features that help us to navigate roads, malls, petrol pumps etc. It also has a speech recognition feature.

Limitations of existing system:

a. Need to be connected to the internet 24 hours
b. No offline feature
c. Loss of data packets during navigation.

2. Trip Advisor:

It assists us to find details of nearby hotels, Resorts, Holiday packages etc.

It also includes interactive travel forums.

Limitations of existing system:

When it comes to local restaurants, historical places, it becomes inefficient.

2.2PRIME OBJECTIVES

1. The objective of this project is to design android application which is useful for people and Control using internet that is suitable for real life implementation.

2. The project implementation also aims to have control on the data transfer rate.

3. The objective is to combine the different applications together like QR code/Barcode scanner, location sharing and navigation

2.3. SYSTEM DESCRIPTION

Mobile Client consists of Five Module i.e. Registration, GPS, Notification, Data Sharing and Offline the functioning of the module is as shown in the following diagram.

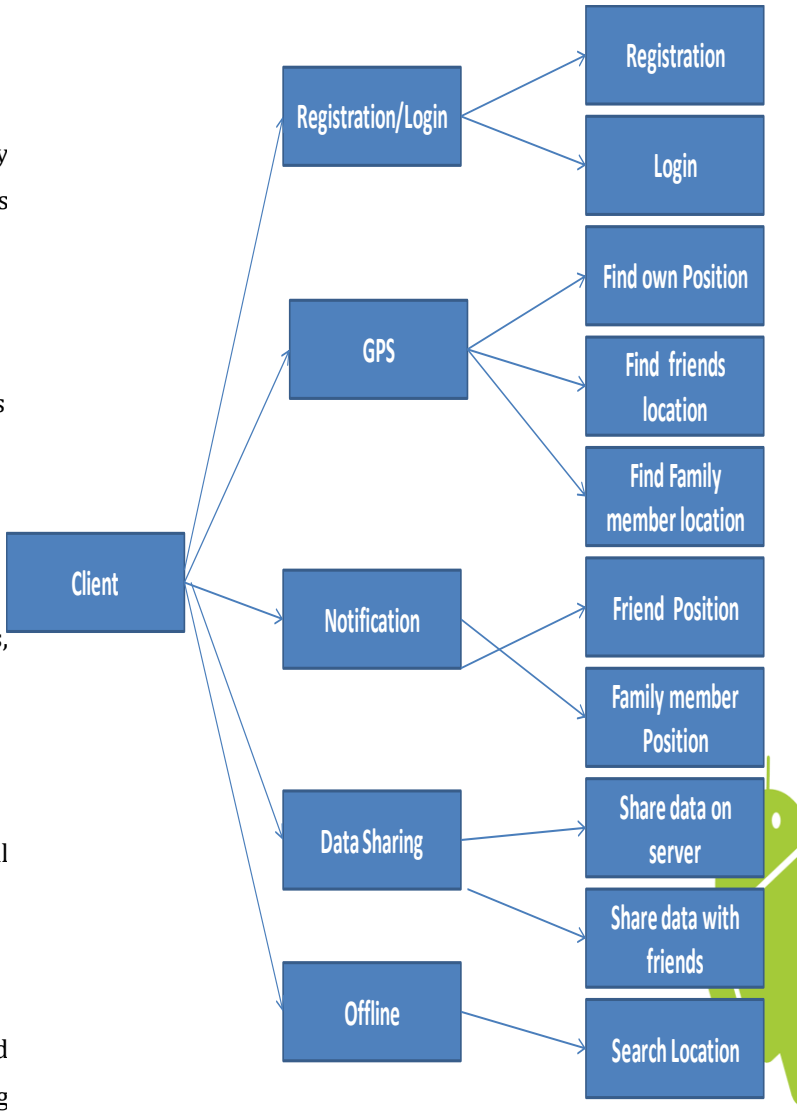

Fig: System Description

Registration/Login: It is used for the registration of a new user in order to login to the system. It has location information of the users along with notifications.

GPS Module: This module is meant for getting user's location details and also of others like friends and family members. The position tracker tracks the location coordinates using trackPosition(). Position tracker can be set to a particular friend using setPosition().

Notification Module: This module is useful for getting the notification of friends when they get around to us. When they come around, vibration or notification light will glow.

Data Sharing Module: In this module we share the data like images of the map or share own location with friends. The user desired files can be uploaded via imageUpload(). And the image file can be saved using saveImage().

Offline Module: This module is meant for navigation without internet for location saved in phone memory. And this module is highly flexible for its users in order to navigate in places with poor network courage.

3. PROPOSED METHODOLOGY

3.1 SYSTEM ARCHITECTURE

The application starts its execution by generating a secure connection between the GPS server and Android device over the internet. For setting up this connection, an authentication procedure takes place between the two.

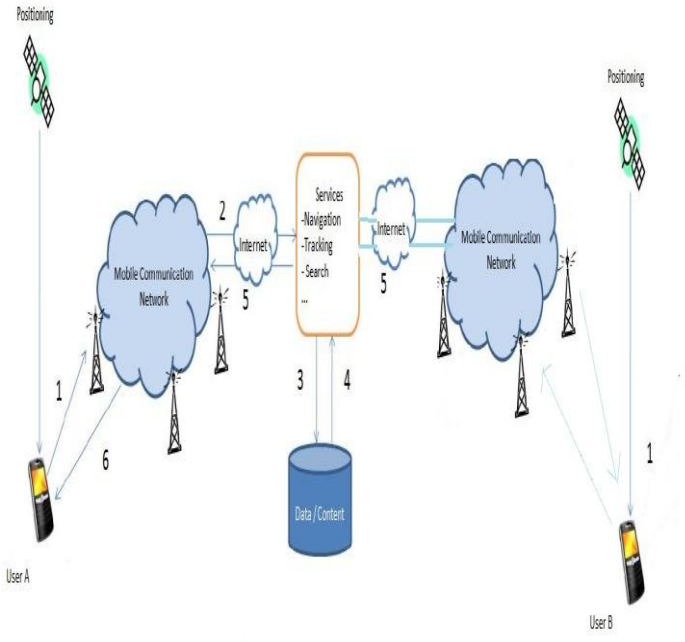

Fig : System Architecture

When the user opens the localized alerts app in mobile he/she have to enter user name and password for keep the track of our friends and family members and this is also helpful for security propose.

PROPOSED SYSTEM FEATURES :

1. Offline Navigation with smart tracking.
2. QR \ Barcode scanner.
3. Low development cost.
4. User-friendly handling.
5. No maintenance required practically.
6. Available for low-end devices with minimum system architecture.

4. CONCLUSION AND FUTURE WORK

The proposed system uses GPS in order to enhance the accuracy in position detection. This position and location of people can be shared online. It will reduce the data consumption by offline navigation. Work's on lower configuration devices. The location sharing is done at an optimal rate which ensures that the system does not get overloaded. The advantage of this system is that you can search exact location without internet connection.

The main function of this android application using GPS navigation is to provide guidance to the people who are newer in the city and while traveling As the proposed system includes application smart distance that provides the shortest way to reach the destination so that the important time of person get saved.

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