

Location Based Interactive Advertisement using GPS Location system

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Abstract- Location based services recommends several benefits to the mobile user to repossess information about their current region. Location based advertisement system which would shove the advertisements to the customers accessible near to that location. It will impart details about the commercial products and services. The GPS based position is obtained through the mobile phone and advertisements near to that location are sensed according to the GPS data from web server. It will provide details about different categories and consequent service contributors. These services and business display products and its attractive offers and in same way the customer can ask for tenders from the service providers to get finest value for better product to and also get the superior services from the service providers.

Keywords- Global positioning system, Location based services, Location based advertisements.

I. INTRODUCTION

The ubiquity of wireless communication and trend towards component miniaturize it lead to a maturation of digital phones from sheer telephony devices to effectual mobile platform. It presents the basis for host to build other applications. The mobile world is developing briskly as mobile communication system moves from second generation to third generation technology. The initiative of using the mobile handsets and phones is to provide the valuable services apart from the basic communication that had been started in the early 1990s when internet was added in voice telephony [1].

Mobile phone is a gadget on which it is feasible to request the location of nearby places and user are provided with the necessary alerts that we reach the place.

Location based service (LBS) is a part of mobile telecommunication with multimedia services. It allow people to find out their location like where they are, where they can determine their products and services that is needed and it will provide details that how they can reach their destination or some places. Location based services is a full of information and entertainment services accessible with mobile network and utilizing the geographical position of mobile device [2]. Now a day's smart phones and tablets are more popular with android. It is such a operating system with low power device run on battery and full of hardware like global positioning services (GPS) receivers, cameras, sensors, Wi-Fi and 3G connectivity.

A LBS services can be used in variety of fields like health, work, identify the location of a person, object or discover the nearest banking cash machine [2].As advancement of location

based service escort to popular service known as location based advertisement..Location based advertising is done through the use of mobile cell phones which impart services to their clients with location and information about their commodities and services.

- Location based services afford many services to their mobile clients with tailored services according to their current location. Location based services are classified into 3 categories [3]. Public safety or emergency services
The location of user can be indomitable by the mobile haulier hence it finds its use during emergency services and it help to locate a mobile clients during emergency / health risk.
- Consumer service
Navigation system- The mobile users make use of Google Maps to know the desired location.
Marketing/Advertising services- Many companies market their products or items based on location of user. Location based search- User can request for information about their surrounding information like shopping malls, restaurant, hospital etc.
- Enterprise services
Location based services facilitate in navy and helps in tracking route and delivery optimization. Finally it is more useful for small scale and medium businesses.

LOCATION BASED SERVICES COMPONENTS

Mobile devices are apparatus used by users to access the location based services to send their requirement as request to retrieve the corresponding result. A precise application is generally developed for a specific location based services. Communication network refers to a mobile network which remit user requested requirement as a service to the service provider and requested details are sent back to user in a form of response. Service providers maintain different kinds of LBS services and are responsible for processing the user request. Service providers do not store all the data requested by user instead of that content providers will collect and store data like geographic location, location based information and other related data [4]. Figure 1 shows the process of location based services. (Step 1) user sends a request by using application running on mobile device. (Step 2) The requested service with location information is acquire from the positioning component is sent server by mobile communication network. The service server requests with

geographic database with required location information (Step 3, 4).

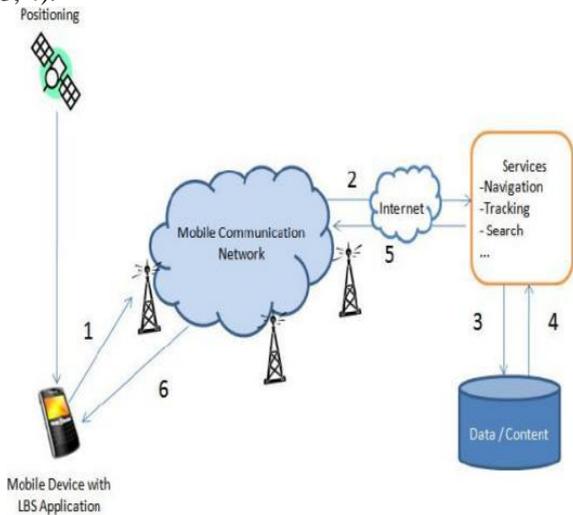


Figure 1 LBS components and service process

Each and every location based services contain various components including maps and Geographic Information System (GIS), Location collection services and application specific components. Figure 2 describes the LBS components.

A. LBS Application

This represents a precise application like “find my location”. It consists of Smartphone component which has sensors and server component that includes application specific data.

B. LBS Middleware

This hush-up access to core LBS feature (Location Tracking, GIS provider, Location collection services) to equip a reliable interface for LBS application.

C. Location Tracking

This module stores the location information and it is the fundamental component in LBS as it contains data and allow user to predict the location this component has certain functionality:

1. Keep trace of user location.
2. Acquaint other component when a particular user has moved or when they moved in and out of area the specific location based notification being sent to user.
3. Determine which user is within the specific location they are provided with the geo-casting features.

GIS Provider

Geographic Information System provides geospatial functionality with map information, map visualization and Google maps with its API can be considered as GIS provider.

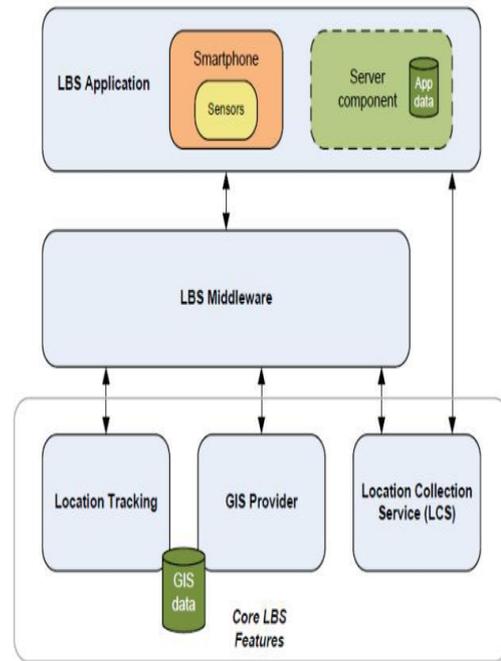


Figure 2 Components of LBS

Location collection information

This module performs the location collection services to get latitude and longitude information of a specific user. This component can be accessed through LBS middleware or directly via GPS receiver in smart phone. LBS services facilitate implementation through the following classes:

1. Location Manager
2. Location Provider
3. Geo-coding
4. Google-Map

II. LITERATURE SURVEY

The cellular phone industry has been growing at a phenomenal pace in India. The rise in connectivity has given a substantial boost to the growth potential of the economy with enhanced efficiency as people and information can be accessed at the touch of a button [2].

Earlier to know the location user need to provide with the zip code of a particular location. Later with the Global Positioning System in place, which finds the location of the user, there is tremendous scope for expansion of services and location-based requirement of the consumer. LBA refers to marketer-controlled information specially tailored for the place where users access an advertising medium. The consumers to be exposed to advertising on the communication devices they carry with them, primarily in the form of mobile phones. LBA can also be viewed as part of a larger form of innovative communication technology called *location-based services* (LBS)[3]. LBS includes emergency notification, assistance services, location/directions to places of interest, traffic information, community services, and payment services. Peer-to-peer services are also being introduced that can enable such things as "geo-tags," comments attached to specific geographic locations. Other technologies enabling LBA involve the use of Bluetooth or RFID attached to such things as store fronts, vending

machines, and poster boards to broadcast to people with properly enabled devices who pass near them.

III PROPOSED SYSTEM

The location based services impart location based commerce promotion to be more interactive from customer side as well as business side. It is used to ripen a location based advertisement system which would push advertisement to customer near to their locality. It will provide details about commercial product and other business by sensing the location information. The location information is obtained through GPS were it is fitted in mobile phones and advertisement near to that location are sensed according to the GPS data from web server. Web server stores the details about different categories of business and analogous services providers. They exhibit their products and attractive offers of certain products and in same way the customer can ask his requirement in a form of tender based on user requirement the corresponding service providers and businessmen come out with a best offer and services.

IV SYSTEM DESIGN

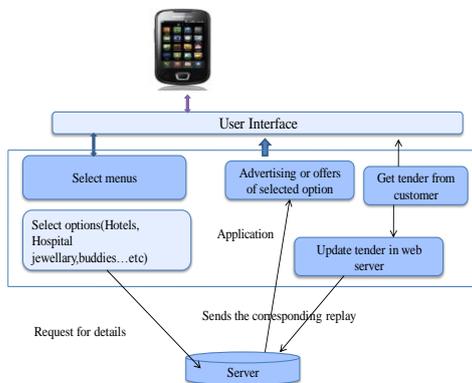
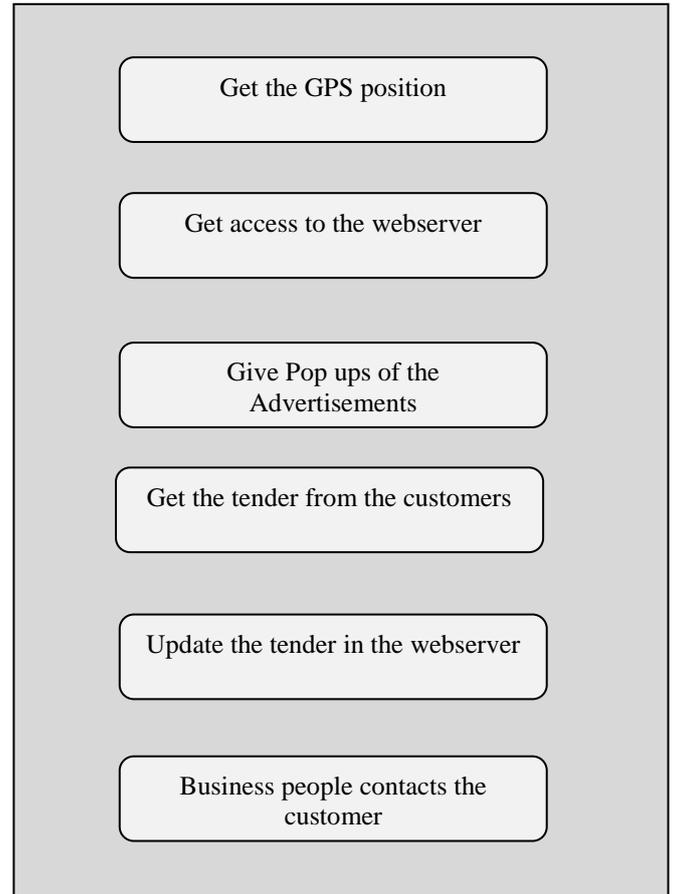


Figure 3 System Design

The proposed system work is carried out in the following steps:

- The user has option to know details of nearest places, shopping places from current location those are near or comes within a specific range as per current location.
- Data base server evaluates user request as a query by retrieve the current location information.
- Location information updates continuously as user changes the location.
- Once the query has been sent every time the result of it reevaluated as user changes location and sent to mobile user.
- User can get details of different products and related offers and its location address.

- User has a choice that he can send his huge requirement as tender to service provider and can get best price.



V SOFTWARE REQUIREMENTS

- **Android OS**
Android is a software stack for mobile devices such as smart phones and tablet PCs. It was developed by the Open Handset Alliance. The Android SDK (Software Development Kit) provides the tools and APIs necessary for developing applications on the Android platform using the Java programming language.
- **DDMS (Dalvik Debug Monitor Server)**
The ability of receiving locations is the fundamental requirement for all location-based applications. Android allows its emulator to receive a location (including longitude and latitude) from the DDMS (Dalvik Debug Monitor Server).
- **SQLite**
SQLite is an open source embeddable relational database management system, which is embedded within an application process without the overhead associated with a

client-server configuration. Embedded databases are lightweight because they require little memory during run time and are written in compact code.

- HTTP
- GPS
- Web Services JSON

VI CONCLUSION

Location based services is effective on a large scale, mapping under the geographical information system (GIS).The most important factor is developing the growth of LBS is widely available of GPS enabled handsets. As improvisation of location based services it leads the origin of location based advertising system. User receives the shopping offer implication from the services provider with the assist of their current location and in same way user can request their requirement as a tender to the businessmen and service provider to get the best offer for a better product.

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