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Review on Location based Services using Android Application

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Abstract: ***The importance of location based services is that "to assist with the exact information, at right place in real time with personalized setup and location sensitiveness Location-based services (lbs) use real-time geo-data from a mobile device or smart phone to provide information, entertainment or security. Some services allow consumers to "check in" at restaurants, coffee shops, stores, concerts, and other places or events. The paper mainly focus on the location based services that is provided through android application so that every individual make use of the services .The main advantages of the system is that easy to handle and reduces the manpower .***

Keywords: Location based services, android application, security, personalized setup

I. INTRODUCTION

The advancement in the personal navigation devices as well as mapping services for example Google Maps in both internet and mobile versions has made much part of society used to certain location-based ideas and their utilization. The decreasing prices of modern mobile devices are pushing Information Society to go mobile. All those facts created opportunity for development and adoption of Location-Based Services (LBS), which are utilizing mobile devices, wireless networks and positing technologies in order to bring unique and broad value to users. A location-based service (LBS) is a software-level service that uses location data to control features. A location-based service (LBS) is a software application for a IP-capable mobile device that requires knowledge about where the mobile device is located . LBS have recently attracted significant attention due to their potential to transform mobile communications and the potential for a range of highly personalized and context-aware services. The new applications of LBS are limited only by the technology and creativity of service developers and it is growing on monthly bases.

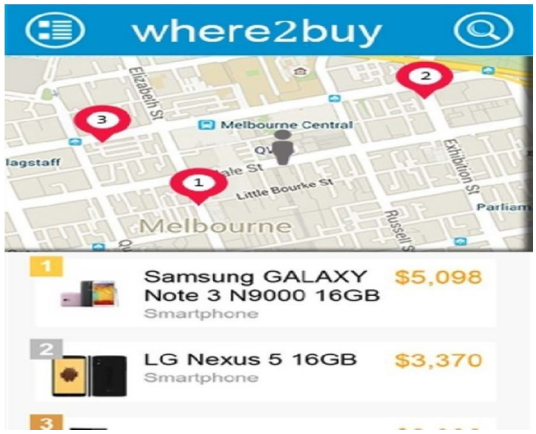
A. Applications of location based services

1) Marketing
2) Emergency
3) Information Services
4) Navigation
5) Location Based Social Media
6) Mobile Location-Based Gaming
7) Sports
8) Billing
9) Geotagging
10) Tracking
11) Augmented Reality

II. WHERE2BUY: A LOCATION-BASED SHOPPING APP

Due to the wide variety of products in the market and price difference between shops, consumers often need to spend many time to find out the most suitable products and shops before making any purchase. It is usual for a consumer to search a product based on its category and go to related kind of shop to buy a product, e.g. food in supermarket, a pencil from a stationary shop and etc .With the emergence and popularity of many shopping search engines (shopbots), we can actually provide a better matching between the consumer and seller .They have developed a shopbot app system (Where2Buy) on smart phone that can search and filter the nearby shops which sell the desired products. To simplify the input process, our system allows users to search by text or voice and fuzzy matching is supported to widen the scope of searching. Where2Buy system has three components, they are the smartphone app interface, the web-based administration tool, and the backend server module. Administrators (Server owners) can

manage the system through the web-based administration tool, including approving account registration, and managing the product catalog. Where2Buy frontend system are implemented on An-droid platform by using Adobe Phonegap. The voice recognition are achieved by Google Voice Search .The system search engine, which is a free and open source search engine running on Java environment. The navigation map on the user interface is built by applying the Google map API directly. The location marking and the navigation functions are all provided. The backend part of Where2Buy are implemented by PHP on a web server. Where to Buy helps to reduce our work and we can shop anytime anywhere. Hence it is an useful application.



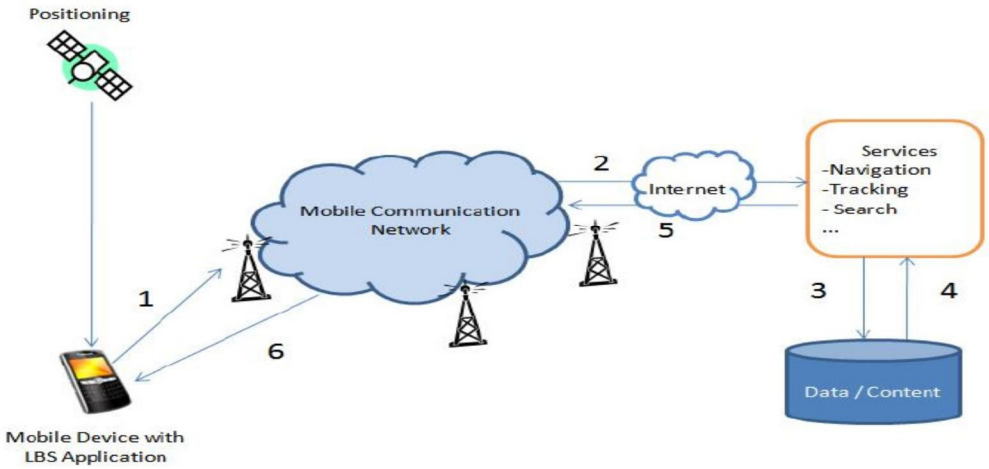
Fig(1) Where To Buy Shopping App

III. LOCATION BASED SERVICES USING ANDROID MOBILE OPERATING SYSTEM

Location based service (LBS) is emerging as a killer application in mobile data services .Users with location-aware wireless devices can query about their surroundings (e.g., finding the nearest restaurant or all shopping malls within 5 miles) at any place, anytime. A location-based service (LBS) is a mobile application that is dependent on the location of a mobile device, like mobile phone. LBS have two major actions, that is:

1) Obtaining the location of user
2) Utilizing this information to provide a service.

In order to make LBS services possible, some infrastructure elements are necessary, including mobile devices, applications, communication network, positioning component, and service servers .Mobile devices are tools used by users to access LBS services, to send requests and retrieve results. Such devices can be portable navigation devices (PNDs), Personal Data Assistants (PDAs), laptops, mobile phones, and so on. Application is the interface for users to access the LBS service. Communication network refers to the mobile network which transfers service request from user to service provider, and requested information back to the user. A positioning component is usually needed in a LBS application to determine the location of user's mobile device These data will be requested and processed by service servers and then returned to users.



Fig(2) Location based services process and components

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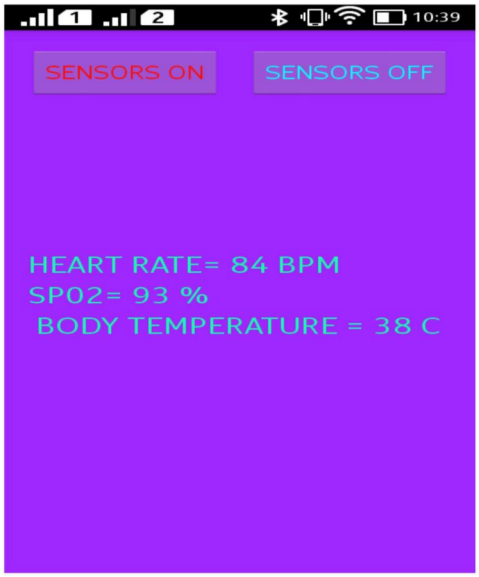
IV. ANDROID BASED HEALTH CARE MONITORING SYSTEM

Monitoring and recording of different physiological parameters of patients in the outside clinical environment is becoming increasingly. This system having mainly three modules, these are User Interface, information processing system and data base. The main task for this system is collecting the different application data from different sensor through Oscilloscope and processes them through a predefined diagnosis. This system composed of three parts, they are sensor part for collecting and analyzing the data from the human body. controller part processing the collected data and stored into the memory. An android phone receiving the controller stored data using Bluetooth module at a time upload the receiving data on to the web server for remote access for the purpose of medical support .

The body temperature can be calculated by putting sensor in contact with body. In the arrangement the body temperature sensor is used LM35.The LM35 is meticulousness integrated circuit temperature sensor, whose output voltage is linearly to the Celsius (centigrade) temperature. Pulse Oximetry is fast, non-invasive, easy to use and continuous method for measuring the oxygen saturation (Sp02)and Heart Rate. Oxygen Saturation means how much oxygen dissolved in blood ,based on detection of Hemoglobin and Deoxyhemoglobin. Heart Rate means number of the heart can contracts in a period of one minute Data is to be transmitted to remote location as per our main requirement. There are different communication technologies are used for data transmission these are Wi-Fi, Zigbee, GPRS ,GSM and Bluetooth. Because of Low cost and error correction mechanism in this project used B1uetooth .An android is open and comprehensive platform for mobile devices. For development the smart phone are being used with Android 4.4.4. In android app receiving Bluetooth data with help of Bluetooth Socket API and read the data with the help of read Stream. After connecting the required Bluetooth Module . The received data from the system is displayed on the application. At a time received data from android phone is upload on to android server then the doctor can easily access the patient's information.



Fig(3) Android application for health monitoring

V. MR. DOC: A DOCTOR APPOINTMENT APPLICATION SYSTEM

As the mobile communication technology is developing rapidly, therefore, one can use the mobile's applications to overcome the problems and inconvenience for the patients. An intelligent agent based appointment system has been proposed in which a scheduling system is provided for patients. Android application that is used to remind the patients of their dosage timings through Alarm Ringing system so that they can stay fit and healthy. Searching doctors and hospitals along with navigation details are also available in the app so they can get proper treatment on time. The front end design is simple and user-friendly. Once the application is started the patient will register himself and then he will be able to log in into the application. The patient can make an appointment by selecting the preferred doctor, date and time .The appointments are managed by the admin through a website The admin also registers a doctor. Admin is able to view doctors, view patient's records and view feedback also .The back end design includes a server which actsa centralized database. All the data of the registered doctors and patients and the data regarding the appointments are placed on the server. The user have to download the application and install it in their mobile devices. The patient

will have to register in the application on first use. After registration, the patient will receive a username and password. For sign up, the user has to fill the given fields that are username, email, password and confirm password and then the user clicks on the signup button to register itself and then all the information provided by the user is saved in the database located on the server. Different checks are also maintained while registering the user. If both the passwords are not matched then the user will be notify that the "passwords didn't matched" will appear .After logging in, the menu screen is displayed containing different option like hospitals, doctors, health schedules, about and sign out If the patient selects the hospitals option then he/she can view a list of hospitals. Then the patient selects the particular hospital and then he can view the hospital details . Patient can contact to the hospital by making a call by clicking on the hospital phone number .The patient can select any particular doctor and view his profile by clicking on the available doctors or by selecting the doctor's option from the menu screen. Patient can contact the doctor by making a call by clicking on the doctor's phone number or patient can also sends an email by clicking on the doctor's email .By clicking in the book appointment button, a calendar and different available time slots are displayed on the screen. The patient has to send a request for appointment by selecting a day or time. The central database gets updated accordingly. By clicking on the "get directions on map" button, the location of the hospital is displayed on the screen .By clicking on the health schedule option, the screen containing different health schedules of different age groups is displayed .The patient gets logged off by clicking on the sign out button on the menu screen .

Fig(4) Mr Doctor Appointment System

VI. CONCLUSION

Wireless location services have quietly moved forward in leaps and bounds over the past few years to the point where they're now ready to be implemented on a very large scale. Due to the advancements in this fields it has paved way for number of application in real time. which helps us to reduce our risks. Through the service we can easily get the information about different happenings and according to our need we can develop an application .This paper provides the review about the android application in location based services for various fields such as health care, hospitals, marketing etc.

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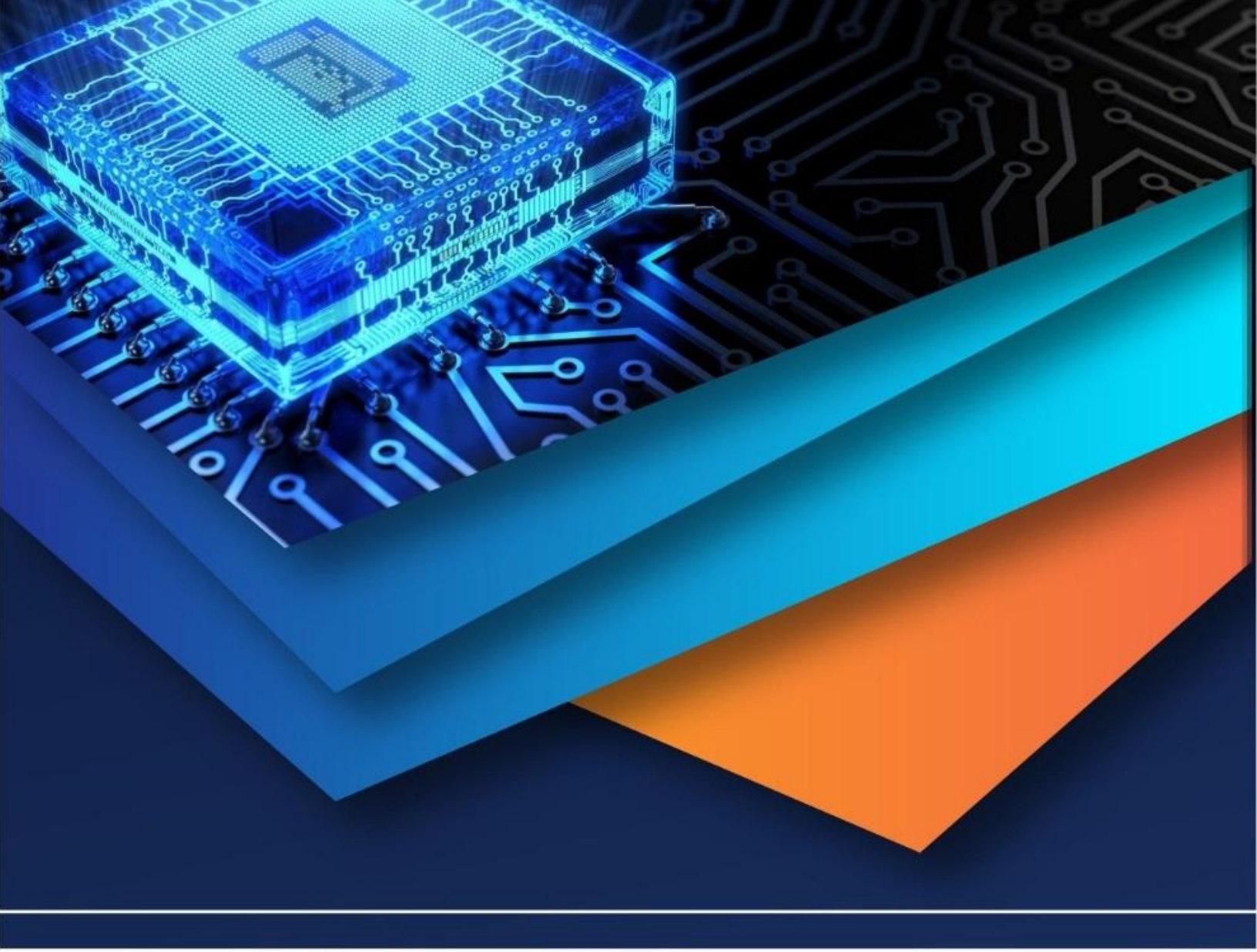

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