Mobile Data Mining-Using Mobile Device Management System (MDM)

Mrs.N.KANCHANA
ASST PROFESSOR,SCHOOL OF IT AND SCIENCE,Dr.G.R.Damodaran college of science
Ms.N.ABINAYA
Mphil(Scholar),SCHOOL OF IT AND SCIENCE,Dr.G.R.Damodaran college of science,abimsc3@gmail.com

Abstract

Client software on mobile devices that can cause the remote control perform data mining task and show production results is significantly added the value for the wireless user and organizations that used to perform data analysis stored in the storage location for away from the sight were users work allowing them to generate knowledge regardless of their physical location. Here we present new data analysis method and new way to detect the people work location through mobile computing technologies. It becomes necessary to introduce a centralized mobile device management. MDM is a KDE software package working with activity system using mobile devices.

Key Words

Data Mining, Mobile Device Management, KDE Software Package.

1 Introduction

1.1 Mobile Data Mining In mobile data mining data analysis is a complex process that often needs remote resources (i.e., computers and people analysis, user, ect.). Recent data mining techniques are used to analyze disparate data sets. Here, the server parses, the data and stores it in a local or a distributed database, then sends the result to the data mobile task of a mobile device for description. Data obtained in the mobile. Contexts are going to mobile send to the remote server. Where they stored and data has been periodically accessed using the specific data mining algorithms and the result will be used for specific goal due to limited storage space and computing power of modern mobile devices it is not realistic to perform the entire data mining task on a small device but portable device can run some of the data mining applications.

1.2 Mobile Device Management

It Analysis the trends of mobile technologies uses shows the relevance of their application was in educational activities for data and application, MDM is a modernized user device with the concept of "BYOD (Bring Your Own Device)". MDM is the most promising approaches. In mobile services in education and allows you to use its own E. hammer device student for new form of training set.

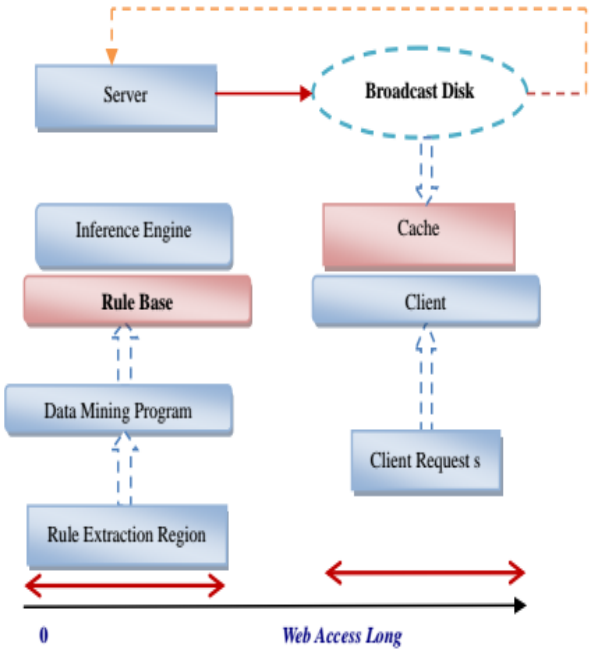

FIG 1: Working of location Based services using data mining

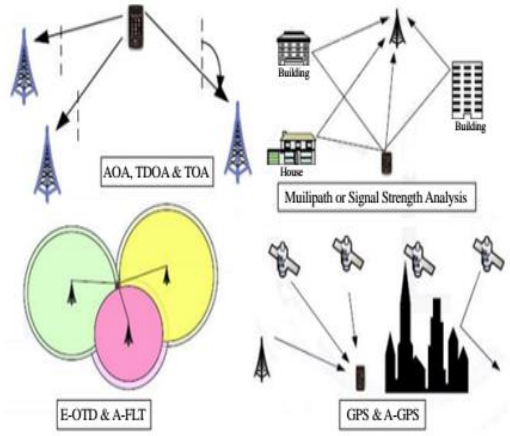

FIG 2: General scheme of the decision on the provision of services

1.3 Geo-Tagging Using The Built-In Means of Mobile Platform

The major procedure of OS for mobile devices offers built-in Geo location features. To determine the location of a mobile device is a special agent for the gaining of data from the mobile OS and transfer them to the server MDM. Usually data on mobile device is only possible if the programs agent on your mobile device is active or is automatically activated, periodically raises do not need running in the back ground. The three most common OS for platforms Apple ios, Google Android and Microsoft windows phone support the ability to run back ground software agents, drawn on your mobile device as a geo-location service client.

2. Geo-Reference a Mobile Device To a Single Access Point

This approach provides data analysis with wireless access point Wi-Fi networks and geo-mobile device to the access point to which it is connected. Most of the modern access points allow to:

- Know information about Wi-Fi connected devices using the built-in operating system.
- A server component running on a co-operate data network.
- This component on the schedule that establishes a connection to the access point and sends the information about the connected mobile.

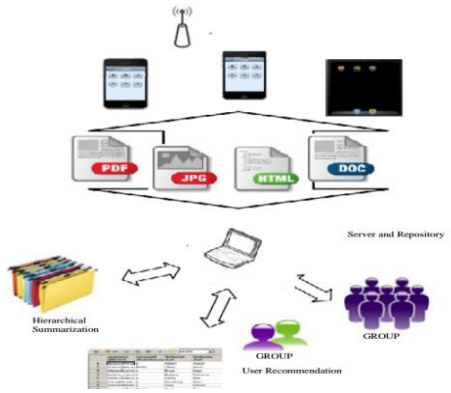

FIG 3 :Geo-location mobile device data with wireless controller.

Example:

Cisco proposes to use the mobile service engine in combination with the Cisco unified wireless Network. This allows you to get information about the connected mobile device within the wireless network deployed in premises on different floors of buildings to receive notification of a change in the position of a mobile device. For more accurate purpose for the location of the connected wireless device using information gathered from various elements of network infrastructure and algorithm of TDOA(Time Difference of Arrival)

3. Server Location:

The Identify Phase were of Wi-Fi mobile device module is used for the measurement of current-level signals from different access point and on the basics of comparison of data obtained with the Radio prints is determined by the place the position of the mobile device. Development a methods for building radio prints and calculation algorithm for radio positioning print is a difficult scientific challenge of all the mobile platform android only form provides external programmatic interfaces to the received signal level for available Wi-Fi network, so this method cannot be considered as universal solution. The most promising is the finger print matching algorithm for long term storage of calibration and calibration information as well as static maps, signal capacity implying a lack of change in the production environment this algorithm is not quite sufficient. In addition to approaches using existing Wi-Fi infrastructure there are also solution based on the installation of additional equipment, and special design to ensure accurate positioning of mobile devices.

4. Location Based Services

Provided by the leading university of the world, (e.g. Stanford unit) to select educational, institution, the following major categories of location based serviced.

- **Emergency services** applies in emergency situation when a person cannot or unable to determine his location.
- **Navigation services** meet the needs of users in determining the direction of the current location background information on routes, throughout the institution, taking into account the information on the various types of constrains, repairs, activities that delay the passage.
- **Information services** mobile yellow pages, messages about events near; the nearest class room facilities, Canteens, cafes information on conducting the next event-seminars gatherings.
- **Advertising Services** provide advertiser's access to a personalized target audience located in the current location: coming to mobile advertising sponsor university near the laboratories ready for sponsorship money services for tracking users.
- **Social Networking** with the ability to obtain information about the location of the users may be deployed around united in virtual groups and see on their mobile device positioning of the participants in these groups; Billing services of

dynamic Quote for services or content depending on users location.

5. Open Cell Technology To Build LBS Applications

When the mobile Phone is not equipped with a GPS equipment and network infrastructure does not support the positioning of the terminal or the manufacture of particular device does not provide an API to get the co-ordinates for the location of the device you can use shared technology open cell id, the idea is similar to open cell.id, cell.id, The subscriber are not evaluated your mobile operator, and returns from the public database through the internet from a mobile device. Open cell id is to create a complete db cell co-ordinates all mobile operators world-wide (www.opencellid.org). The project is a leading provider of location based services.

The downside of technology is low faithfulness open cell id positioning device, which can range from a few hundred meters to several kilo meters. This is due to the different density of the network different territories. Such precision can be critical for exact positioning, but in other cases it is enough. Recently, technology thanks to the popularity gained open cell id transparent integration with Google Map, open cell Id technology allows anyone to write and use mobile application for expansion of the db and get information about its location on the current cell.

6. Cell-ID with RSPB-UMTS

The RSPB-gives information on the loss of signal power transmitter (BS) you to define the distance to the phone on the reference signal power loss A-GPS (Assisted GPS), the method uses the global positioning system, with support from the network infrastructure. The mobile phone must be embedded GPS module, and "part of computing function is transferred to the MLC for lower power consumption and faster positioning. Coordinate calculation of proceeds as follows. GPS-signal is received on the mobile phone, then it is passed to the REF, which calculates the coordinates of the phone and sends them back. Base stations, receiving the signal, shall be equipped with radiotelephone in blocks to determine the location of the LMU. The positioning is initiated by the Subscriber, and subscriber data on transfers ends its seat.

The network makes it easier to search for satellites, indicating what to look for. "The accuracy of the calculations can be from 5 to 50 meters, while the normal GPS provides from 0.1 to 30". Moreover, in some networks (e.g., CDMA) base stations can be equipped with your GPS antennas and receivers. They can act as a Repeater signal from satellites, it understandably raised additional error, and positioning accuracy is reduced (from 5 to 400 meters). So, is the work of the service even where there is no direct visibility of satellites or signal is weak (spaces included). The current position is from 20 to 40seconds, on average, it is still 20 seconds, Shifting part of the functions of the network equipment allows you to reduce the size of the phone, maximize their working time-today they are virtually indistinguishable from conventional cellular phones. However, this model of the higher price range, because you want to not only change the tube, but a network infrastructure, The relative accuracy of different methods of positioning obviously, the best possible accuracy gives traditional GPS and A-GPS. From the above review, the only positioning technology based on knowledge of coatings (Cell-Id, etc.) do not require additions to the network infrastructure and improvements to the phone, To install the bundled software MLC. The implementation of technologies that are based on calculations of the time delays(E-OTD, TDOA, etc.,)

7.Conclusion

This paper presents new data analysis method and new ways to detect people work location via mobiles computing technology.

Approach to mobile software technologies makes easier the implementation of mobile application, detection of heterogeneous knowledge and common scenarios where data preprocessing may migrate across different locations.

- Automatic registration for the lessons and activities based on real locations.
- Automatic locking and unlocking mobile sensors in accordance with the education act (based on location, schedule).
- Wireless connectivity for educational purpose and research purposes to nearby measuring sensors.

The use of mobile devices for educational purposes has become reality. Many universities in the world have already started to implement systems that allow students to use mobile devices in the learning process. One of the most promising is the introduction of services offered to students based on their location.

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