A Review on Parental Application

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Abstract: Recently many cases of missing children between ages 14 and 17 years are reported. Parents always worry about the possibility of kidnapping of their children. In this system we propose an Android based solution to aid parents to track their children in real time. Nowadays, most mobile phones are equipped with location services capabilities allowing us to get the device’s geographic position in real time. The proposed solution takes the advantage of the location services provided by mobile phone since most of kids carry mobile phones. The mobile application use the GPS and SMS services found in Android mobile phones. It allows the parent to get their child’s location on a real time map. The system consists of two sides, child side and parent side. A parent’s device main duty is to send a request location SMS to the child’s device to get the location of the child. On the other hand, the child’s device main responsibility is to reply the GPS position to the parent’s device upon request.

1. Introduction

In today’s world, over 80 percent of the world population, including children around the age of eight or seven, owns smart phones. This is due to many reasons. One of them is the remarkable features and capabilities that new smart phones offer especially Android based smart phones. With that many features, the need for resourceful applications rises. In our opinion, GPS offers outstanding capabilities in locating position and this can be used to develop resourceful application that helps in locating missing or lost children. Studies conducted by Cyber Travel Tips showed that in Malaysia, missing children are basically classified into two categories. The first category is disappearance, which includes running away from home. The other category is abduction or kidnapping. Statistics reveal that since 2004, a total of 5,996 children under the age of 18 went missing from their homes. Fortunately, around 4092 children returned home or found by the police. However, the other 1,904 children are still missing. Those children are boys and girls with ages between 14 years and 17 years. Moreover, when parents want to go family trip, they always concern about their children’s safety. This worrying may affects negatively on the parent to enjoy their family trip. Even worst, parents can lose sight of their children and fear the possibly of kidnapping or worst for them. So there is need to implement the Children tracking system in real time using android mobile phones as it provide more functionality and resources.

Global Positioning System (GPS):

A GPS is a device, normally carried by a moving vehicle or person, that uses the Global Positioning System to determine and track its precise location, and hence that of its carrier, at intervals. The recorded location data can be stored within the tracking unit, or it may be transmitted to a central location data base, or Internet-connected computer, using a cellular (GPRS or SMS), radio, or satellite modem embedded in the unit. This allows the asset's location to be displayed against a map backdrop either in real time or when analyzing the track later, using GPS tracking software. Data tracking software is available for smartphones with GPS capability.

The paper is organized as follows. Section II is about related work which describes on different technologies used in object tracking system. Section II gives a problem statement of proposed system. Section III gives a brief system overview. Section IV presents the system architecture and describes about the modules in the proposed system. Section V concludes the paper.

Objectives:
1. Maintaining the time table of a child day wise/week wise.
2. Tracking the child as per the time table.
3. Capturing web browsing history from child mobile.
4. Keeping the track of children about what they do and finding their current location.

2. Literature Review

Literature survey is the most important step in software development process. The availability of “always-on” communications has tremendous implications for how people interact socially. In particular, sociologists are interested in the question
if such pervasive access increases or decreases face-to-face interactions. Unlike triangulation which seeks to precisely define position, the question of face-to-face interaction reduces to one of proximity, i.e., are the individuals within a certain distance? Moreover, the problem of proximity estimation is complicated by the fact that the measurement must be quite precise (1-1.5 m) and can cover a wide variety of environments. Existing approaches such as GPS and Wi-Fi triangulation are insufficient to meet the requirements of accuracy and flexibility. In contrast, Bluetooth, which is commonly available on most smartphones, provides a compelling alternative for proximity estimation. In this paper, we demonstrate through experimental studies the efficacy of Bluetooth for this exact purpose. We propose a proximity estimation model to determine the distance based on the RSSI values of Bluetooth and light sensor data in different environments. We present several real world scenarios and explore Bluetooth proximity estimation on Android with respect to accuracy and power consumption.

Another existing system define Intent Search Capturing User intention for one-click internet image search that explains a novel internet image search approach which only requires one click user feedback intention specific weight schema is proposed to combine visual features and to compute visual similarity adaptive to query images without additional human feedback textual and visual expansions are integrated to capture the User intention. Expanded user keywords are used to extend positive example images and also the enlarge image pool to include more relevant images. This framework makes it possible for industrial web scale image search by both text and visual content. The proposed new image reranking framework consists of multiple steps. Which can be improved separately or replaced by other techniques equivalently effective.

Recently many cases of missing children between ages 14 and 17 years are reported. Parents always worry about the possibility of kidnapping of their children. Al-Mazloum proposes an Android based solution to aid parents to track their children in real advantage of the fact that many of today’s children bring smartphones which is convenient for this kind of situation. In this work, GPS is combined with one of the basic service of a smart phone which is GSM, more specifically SMS, in one time

3. Problem Statement

Location services (GPS) & basic telephony services i.e. SMS these features we are using in this system for the communication between the parties involved i.e. parent & child. It is designed in simple way so that it will involve few elements &less user interaction so that it will result into a user friendly system & it will be easy for a parent to track the location of the child.

4. Proposed Work

We propose a parental application, called children tracking System. In this system we are going to implement the Children tracking system in real time using android mobile phones as it provide more functionality and resources. As we know that there are thousand of student which are taking education from urban city while at there native places their parents are completely unaware about the things that whether students are really not misbehaving any different thing that they shouldn't. In this system we are proposing the way to find all the activity and trace them which are done by their children. For getting complete access of their child the system will trace out the mobile and call history and sms history will automatically get forwarded to the parents email address. From this they able to get information that how much time student will spent on the mobile. Again from this if students are spending more times out side of the college campus then that will get trace and then system will undergoes the functioning like capturing images and send them back to the parents. All these things are happen automatic so that even child is not knowing that this things are trace out. Again our system will detect whether the student or user is in the specified college location or not at specified time.

modules:

Our proposed system is divided into following modules:

1. Registration / Login Parent and children

Figure 1. System Architecture
2. Parent Side (As a Server): Parent side Android device will act as a server, this will use SMS service for communicating with the child & maps to view the location of child on map. It requires telephony & internet service to be enabled on parent’s phone.

3. Child Side (As a client): Child side will act as a client to the system which is another android smartphone owned by the child to be located, this side use SMS for communicating with the parent & location service(GPS), to get location of the child in the form of co-ordinates. It requires telephony & internet service to be enabled on child’s phone.

4. Background Service: On child side application is mostly a service that runs in background of smart phone, a user i.e. parent will use the interface to send a location request SMS to child. The parent side employs one main function & that is to listen for the child’s reply for location request, & the child side employs two main functions i.e. periodically listens & gets location co-ordinates update from GPS & waiting for a location request from parent side.

Algorithm:
Following algorithm used in our proposed children tracking system:
1. IR-Square Tree Algorithm
   Information Retrieval Algorithm for Tracking Location.

2. Face Tracking and Detection
   2.1 S-PCA Algorithm :
   - used to predict and detect the face.
   2.1.1 Detection
   - face detection either in every frame or when the face comes into visible in the video.
   2.1.2 Tracking

Advantages:
1. To increase the safety of children.
2. To keep the track of the students like where they go, what they do?

5. Conclusion
We have presented Parental Application System for student tracking, a novel system which Predicting students performance and track student location is mostly useful for parents to help the educators and learners improving their learning and teaching process. This paper has reviewed previous studies on predicting students performance with various analytical methods. In our system we used IR Square Tree Algorithm and Face Tracking and Detection Algorithm in order to improve the performance of system.

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7. References