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Advance Application of GPS Tracking

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ABSTRACT

In this paper, we have represented implementation of anpurpose of this project is to design and construct a hand-held wireless GPS tracking device that can be tracked from the Internet. The project consists of three parts. The first part is a mobile device with an embedded GPS and wireless Internet connection to transmit its current location. The second part is a web server that will receive the data, parse it, and store it for access over the Internet. The third component is the user interface that will allow others to visually see where the hand-held GPS device is and has been. To view its location, one could use any device that can connect to the Internet such as a desktop computer, laptop, PDA, or cell phone. The data available through a browser includes a scalable map of the surrounding area, latitude, longitude, speed, and altitude of the hand-held device. The system is intended to be a general purpose tracking device; however, the user interface will be tailored to the university shuttlesystem.

Keywords: Gps tracker, Gps navigation, Gps Android

INTRODUCTION

In this section we introduce base terminology and discuss a GPS tracking system GPS provides the user with a Precise location by utilizing radio frequencies. The GPS receiver translates the information from at least three GPS satellites to provide the user with a two-dimensional location of latitudinal and longitudinal position on earth. If a fourth satellite is available, then the receiver can provide the user with three-dimensional location information, which includes altitude in addition to latitude and longitude. Navigation enables a user to process his current location based on GPS data and travel to his desired location, also based on accurate GPS data. Any user with a working GPS receiver can navigate to a particular destination, whether traveling on foot, by automobile, by airplane or by ship. GPS navigation is even accurate underground.

A wide range of tracking systems has been developed so far tracking vehicles and displaying their position on a map, we can also use the system that has been developed to tracks the mobility of a human being.Now a day's tracking a person's mobility A wide range of tracking systems hasbeen developed so far tracking vehicles and displaying their position on a map, we can also use the system that has been developed to tracks the mobility of a human being. Now a day's tracking a person's mobility has become a crucial issue these days be it tracking a criminal came on payroll or a detective going to detect a case or any other utility. Unity3D is define as powerful cross-platform 3D engine and user friendly development environment. Easy enough for the beginner and powerfull enough for expert; Unity should interest anybody who wants to easily create 3D games and applications for mobile, desktop, the web, and consoles.Unity handles projects and assets in a generic way, there is no need to create multiple projects for multiple target platforms. This means that you could easily start development with the free version of Unity and target personal computers. Then, at a later date, you can switch targets to the Android platform with the click of a button. Perhaps, shortly after your game is launched, it takes the market by storm and there is a great call to bring it to other mobile platforms.

However, once your device is set up and recognized by the Android SDK, a single-button click will allow Unity to build your application, push it to a device, and start running it. There is nothing that has caused more headaches for some developers than trying to get an application on a device. Unity makes it.GPS provides the user with a precise location by utilizing radio frequencies. The GPS receiver translates the information from at least three GPS satellites to provide the user with a two-dimensional location of latitudinal and longitudinal position on earth. If a fourth satellite is available, then the receiver can

provide the user with three-dimensional location information, which includes altitude in addition to latitude and longitude. Navigation enables a user to process his current location based on GPS data and travel to his desired location, also based on accurate GPS data.

II. LITERATURESURVEY

Computer games and video games have become very popular in children and adolescents' life and play a prominent role in the culture of young people. Games can now be played everywhere in technology-rich environments equipped with laptops, smart phones, game consoles (mobile and stationary), set-top, boxes and other digital devices. From this phenomenon, it is believed that the intrinsic motivation that young people shows towards games can be combined with educational content and objectives into what Prensky calls "digital game based learning". Besides of an abundant appearance of games in young students life, game development technology has matured and became more advanced than before. Based on various existing game development software, the whole duty of game development process can be divided into several domains and roles such as game programmers, 3D model creators, game designers, musicians, animators, and play writers. Under this situation, some web resources and game engines can simplify the game development process. For instance, Microsoft's XNA game development kit provides the game loop function to draw and update the game contents, and it also provides convenient game development components to load the different format of graphics, audio, and videos. This makes it possible for students to modify existing games or develop their own new games with or without programming.

The students are required to modify or develop a game as a part of a course using a game development framework (GDF) to learn skills within computer science and SE, for example, [10]. And we label this third as game development-based learning (GDBL). And the GDFs denote the toolkits that can be used to develop or modify games, for example, game engine, game editors, or game (simulation) platforms, or even any integrated development environment (IDE), like Visual C++, Eclipse, J2ME, and Android SDK since all of them can be used to build games.

III. DATASET DESCRIPTION

Starts location service updates. Last location coordinates could be., Retrieved via Input.location.last Data. Service does not start to send location data immediately. Code should check Input.location.status for current service status. Desired Accuracy In Meters - desired service accuracy in meters. Using higher value like 500 usually does not require to turn GPS chip on and thus saves battery power. Values like 5-10 could be used for getting best accuracy. Default value is 10 meters.
Update Distance In Meters - the minimum distance (measured in meters) a device must move laterally before Input.location property is updated. Higher values like 500 imply less overhead.
Default is 10 meters. On Android using this method in your scripts will automatically add ACCESS_FINE_LOCATION permission to the android manifest. If you use low accuracy values like 500 or higher, you can select "Low Accuracy Location" in Player Settings to add ACCESS_CO ARSE_LOCATION permission instead. Despite a lot of technical specification on each engine, we focused on the findings of primary function such as 3D geometry data input/output as well as lighting and texture mapping. This consideration was taken mainly because those basic functions are the most significant functions that take advantage from the 3D rendering and animation software.
Although all of these engines exhibit the capability of producing dynamicvisualization in less of production time than 3D rendering and animation software, the main limitation of using these game engines as visualization tool is laid on its flexibility 3D geometries data must be converted when in use in game engine. Therefore, there is no feedback or interactive mechanism with 3D/CAD software, which architects used to produce design objects. Modifying game level for architecture visualization purpose is stimulating because it opens up the game engine for real time data rendering

IV.IMPLEMENTATION METHODOLOGY AND REQUIREMENTS

As such, the methodology of the test is governed by the Software Development methodology adopted.

Functional requirements:

for the system describe the functionality or services that should be provided by system functions in detail, its input and output expectation. There are already a lot of applications which use the geo-positioning. Garmin, one of the famous GPS manufacturer, proposes maps of almost every country in the world ready to be download into their panel of GPS devices. Different kind of applications for different kind of public: road maps and tracking, topologic maps for technical job like geologist (for instance), light's map for pilots, etc.Also it exists, for mountain activities like free ride, hacking, those automatic signaling systems which switch on as soon as the rider get caught by an avalanche for example. It transmits a radio signal to the closest relay and indicate the exact position of the victim. It helps for the search and often save lives. The portable Tom-tom GPS proposes a full

navigation system with vocal indication. The list of geo-positioning applications is huge and a simple search on the Internet gives hundred web sites talking. The list of geo-positioning applications is huge and a simple search on the Internet gives hundred web topics.

- Parse Locations
- This function will run on the device at every fixed interval of time to read the input from GPS receiver and get the location data.
- Input : NMEA String from the GPS receiver.
- Output: Location data and time stamp.
- Send Location
- This function runs on the device to send the location data and time stamp to the server. On receiving the time stamp from the server it knows that the location data has been logged

Non-Functional Requirements:

This section describes constraints on the system under development such as Usability, Portability etc. In our project following is considered:

- Web support

  The user can track the device using the web-browser

- Portability

  The system must be easily portable to a wide variety of platforms using various operating systems. Porting the software from one operating system to another should not require more than 5% of the code to be changed.

V. EXPERIMENTAL RESULTS

Global Positioning System to determine the precise location (Longitude & Latitude) of a vehicle, person, or other asset to which it is attached and to record the position of the asset at regular 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.

We Build a application With the help of Unity and Visual studio with the help of sdk android setup to build an Gps based Tracking application.

Fig1. Application Tracking

VI CONCLUSION

Based on the proposed system and design in Project-I part of this project in Semester-I, as per our base paper we proposed to A GPS also known as a Global Positioning System is a great technology that is used to track objects around the world. The technology was developed by the US military in an attempt to make success more seamless for the military – this technology is now being used all over the world and it is highly reliable that it is very clear that this technology will be of more importance in the near future. You might hear about the latest GPS tracking system making the buzz or who made or is using the technology most but the fact is, what matters most

All the individual modules were independently tested followed by the test of the entire system as a whole. Finally, we calculated the Cost and Size of the final software designed.

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