

Controlling and accessing vehicle functions by mobile from remote place by sending GPS Co-ordinates to the Web server

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Abstract:→This paper represents how the co-ordinates from the Google map stored into database . It stored into the central web server . This co-ordinates then transfer to client program for searching the locations of particular location for electronic device . Client can access the data from internet and use into program by using API . Development of software for a particular device for putting into the vehicle has been develop. In the inbuilt circuit assigning sim card and transferring the signal to the network. Supplying a single text of co-ordinates of locations using google map in terms of latitudes and longitudes. The information in terms of string separated by comma can be extracted and stored into the database of web server . Different mobile number with locations can be stored into the database simultaneously into the server of different clients . The concept of 3 Tier Client /Server architecture is used. The sim card can access information of GPRS system with the network provider of card . Setting of electronic device signal for receiving and sending message done. Different operations can be performed on the device as it can be attached with other electronic circuit of vehicle. Windows Mobile application developed for client slide. User can take different decision of vehicle from mobile by sending sms to the device . Device receives the operation and send to the electronic circuit of vehicle for certain operations. From remote place using mobile you can get the information of your vehicle and also you can control vehicle it by providing password to the electronic circuit for authorization and authentication. The concept of vehicle security and location of vehicle can be identified. The functions of vehicle can be accessed and control like speed , brakes and lights etc as per the software application interface with electronic circuit of vehicle.

Index term → GPS, Vehicle Security, Mobile Network, Web Server, Smartphones

I Introduction : Global System for Mobile, a combination which allow to track, stop, locate, or follow any given vehicle within a cellular network. The Global Positioning System (GPS) is a space-based satellite navigation system that provides location and time information in all weather, anywhere on or near the Earth, where there is an unobstructed line of sight to four or more GPS satellites. GPS satellites circle the earth twice a day in a very precise orbit and transmit signal information to earth. GPS receivers take this information and use triangulation to calculate the user's exact location. Essentially, the GPS receiver compares the time a signal was transmitted by a satellite with the time it was received. The time difference tells the GPS receiver how far away the satellite is. Now, with distance measurements from a few more satellites, the receiver can determine the user's position and

display it on the unit's electronic map. The 24 satellites that make up the GPS space segment are orbiting the earth about 12,000 miles above us. They are constantly moving, making two complete orbits in less than 24 hours. These satellites are travelling at speeds of roughly 7,000 miles an hour. Appliances can be controlled by using a mobile device to send messages to a remote computer that is interfaced with the appliance to be controlled. Short Message Service, or SMS, texts are interpreted by a software program on the computer. This allows anyone with a computer to remotely control appliances from an office, home or other remote location right from the mobile device. The latitude longitude coordinate system uses angular measurements to describe a position on the surface of the earth. Recently, the availability of inexpensive Global Positioning System receivers has made position information available to

many more people than ever before. Most GPS receivers are set to use lat/lon coordinates as their default factory setting. Thus, most new GPS users start out using lat/lon coordinates. Smart phones can do so much these days, especially through the use of applications. Many manufacturers, such as Telus and AT&T, are even developing their own apps to help you get started and make the most of your smart phone. It is technology which enables the user to remotely locate and track the movements, status and behaviour of cars, vans or heavy goods lorries.

II Objective

- To track valuable assets for insurance or other monitoring purposes, can now plot the real-time asset location on a map and closely monitor movement and operating status
- To quickly locate a field engineer and dispatch the closest one to meet a new customer request or provide site arrival information
- To resolve customer disputes related to arrival time, service duration and service location.
- The exact location of a vehicle, pinpointed on a map, remote staff that are lost can be better helped
- Reducing the average speed of your vehicles. As an example, if you get your vehicles to slow down and stay within the speed limits, this relates directly into fuel consumption, maintenance and accidents that could save up to 10-15% on your monthly fuel bill.
- To compare a typical start-stop report to the time sheets. Verification of the accuracy of time sheets can be a key area for improvement.
- Actively monitor the time per stop or call
- Use the reporting a system can help to eliminate moonlighting, driving after hours and unwanted stops during the workday.

The main objective is to get the information of the vehicle and controlling its operations with the mobile form the remote place . The complete information of the person and vehicle can be accessed from the web site with GUI based software by integrating with google maps API for fetching co-ordinates and developing mobile based software which interface with electronic circuit of the vehicle.

III Design & Explanation

This is typically achieved through a combination of a GPS Tracking device and a method of returning the vehicle location data to the user. The GPS tracking data is then transformed into useful information, through the use of an electronic digital mapping display and management reporting tools contained in a PC software application or made available via a website. The vehicle location is typically captured using a GPS receiver in the tracking device. The tracking device is most often hardware installed in the vehicle; connected to the ignition switch, battery and antennae. The tracking hardware for a solution uses GPS to pinpoint its location and then updates are transmitted, by GPRS at a regular timed interval, to the service providers computer servers. The vehicle location data is made available for viewing, via a website, accessed over the internet, where it can be viewed live or historically using digital maps and reports. It is configured to transmit location and input data at a set update rate or when an event triggers the unit to transmit data. Live VEHICLE TRACKING generally refers to systems which update regularly at 1 minute, 2 minute or 5 minute intervals, whilst the ignition status is on.

Online Dynamic web application developed for accessing the information for the particular vehicle by finding its GPS Co-ordinates in terms of latitude and longitude. Transferring this information into the web server of windows 2003 in terms of text . Extracting column fields by comma from the text and stored into the server. By supplying information into the GUI based develop application on the PC. The user can access information by providing user and password . Authorization and Authentication of user can be done and password can be sent into the mobile or email address. Data can be stored centrally . Using Web Server which hosts on real IP and having domain name which connects 24 hr with the internet. Real IP is provided by the ISP , by using gateway and putting DNS entry of our domain name , our web server can be accessed from the world with help of Internet. Developing Windows based mobile application for the smart phone by using this same database server . By installing client setup into the mobile we can access all the information directly into the mobile from remote place with the help of internet. An appliance does not have an interface to

the main computer parallel port, one can build an electronic circuit or simply use a general transistor and operate it in a switch-mode operation. The program code should be written to take advantage of the system timer that allows it to continuously monitor received messages from the mobile phone. When a remote computer is not available or not practical to use, there are microcontroller modules that can be used to control devices by use of the SMS service. The 8051-based microcontrollers together with Software can be used to achieve this type of communication. The program that fetches the information from the vehicle and send to the server in terms of sms . so different operations can be performed on it.

User can access this system on two ways. 1. By accessing the online dynamic web application which is stored into the Web Server which hosts on real IP and domain name. 2. By using Windev Mobile Application version 15 software, we can make the client server application on windows platform mobile with windows version 6.0. Setup can be installed on the mobile and same database of Windows server can be accessed into mobile application. With the help of internet it connects the server and can access the coordinates in terms of data from database. Client application can be run on different mobiles so any user can access it with valid user and password

IV Result

It support push e-mail, 2 way voice, push news, multi-media, surf the internet, and real time tracking solution. See vehicles are right now on a map. Find out other vehicle who's nearby and meet up. Share vehicle with other. Friend and employer stay in touch with you by sharing our location with whomever you choose. Control location of vehicle and others by seeing what level of detail.Share, set, or hide location of vehicle at any time as per policy changes. Controlling and accessing information of vehicles through SMS. Mobile can access the information from remote place of any vehicle with access rights. With the help of internet GUI based applications of particular vehicle can be access by accessing central database server.

V Solution

Developing entire Web Application on ASP.NET with authentication and authorization . Using concept

of 3 tier client / Server Architecture for accessing the information from the central database on desktop application & web application. Mobile application for smart phone developed using Windev Software 15. Whenever there is a signal output, the computer parallel port will send approximately five volts to the device, which can then be used to either to shut it "OFF" or turn it "ON." When coding the control software, ensure that it is able to search through the SMS text and pick out the control words needed to take action. If no control words are found in the message, it can be set to "DELETE" to avoid continuous searching and prepare the program to receive a new message from any mobile device. Vehicle Locator Unit (VLU), a small radio transceiver is installed in the vehicle. This unit remains inactive until it is reported that the vehicle is stolen or until the vehicle needs to be located. When this happens a signal is sent out to activate the VLU, this in turn sends out signals to local receivers which, depending on the type of VLU, will estimate from a few miles to a few hundred feet, the location of the vehicle. Vehicle location is shown on a computerized map which means relevant people (the police etc) can be directed to the position. With the aid of a mobile tracking device, often fitted to Police cars, the exact location can be pinpoint even if the vehicles hidden in a garage.

VI Conclusion

System bundled with GPS navigation, GPS tracking, mobile computer, and multimedia functionality.GPS receivers are extremely accurate, due to their parallel multi-channel design. Parallel channel receivers are quick to lock onto satellites when first turned on and they maintain strong locks, even in dense foliage or urban settings with tall buildings. Certain atmospheric factors and other sources of error can affect the accuracy of GPS receivers. When managing a fleet of vehicles, knowing the real-time location of all drivers allows management to meet customer needs more efficiently. Whether it's delivery, service or other multi-vehicle enterprises, drivers now only need a mobile phone with telephony or Internet connection to be inexpensively tracked by and dispatched efficiently. The unit is configured to automatically transmit it's location at a set time interval, e.g. every 2-5 minutes. The unit is activated when the ignition is switched on/off. It is primarily used in connection with vehicle or driver security solutions. Controlling of vehicles and accessing

information can be done by developing software programs for Web and Mobile applications. Phone function, by GPRS/GSM answered calls can be hand-free or by headphones, dial by soft keyboard or by voice-activated. Can send and receive SMS message. The power is at your fingertips: you can STOP the engine remotely by entering your personal code thus preventing robbery.

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