

Smart Vehicle Monitoring System Using IOT Module for Boulders Management System

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ABSTRACT: Brilliant Weighbridge Automation empowers naturally gauging, distinguishing proof, following and regulatory revealing activities of the transporter trucks (exhuming trucks, waste vehicles). The India client has joined the Four-Faith mechanical GPRS in modem F2114 in the weighbridge following observing framework, send the information to the server by TCP/UDP, give consistency information arranged by means of framework's 7/24 working procedure remain dependable and reliable as the main day it was established. The framework is an Arduino based vehicle following framework utilizing worldwide situating framework and worldwide framework for versatile correspondence modules.

KEYWORDS: Weighbridge Automation, Tracking, Identification, GPRS, GSM, GPS, Arduino.

I. INTRODUCTION

In the previous few decades, India has progressed at such an infinite rate that a lot of corporations have powerfully established themselves here. These corporations bring an enormous quantity of work force with them. transcription transportation to such an enormous mass may be a cumbersome task involving several intricacies. The event of satellite communication technology is simple to spot the vehicle locations. Vehicle pursuit systems have brought this technology to the daily lifetime of the common man. All the prevailing technology support pursuit the vehicle place and standing. The GPS/GSM based mostly System is one amongst the foremost vital systems, that integrate each GSM and GPS technologies. it's necessary because of the numerous of applications of each GSM and GPS systems and the wide usage of them by several folks throughout the planet [1]. This technique designed for users in land construction and transport business, provides time period data like location, speed and expected point in time of the user is moving vehicles in an exceedingly aphoristic and easy-to-read format. This technique might also helpful for communication method among the 2 points

Geofencing:

Some geofences are founded to observe activity in secure areas, permitting management to determine alerts once anyone enters or leaves a selected space. Businesses can even use geofencing to observe workers within the field, change time cards and keep track of company property.



Fig 1.1 Weigh Bridge

Working:

To make use of geofencing, associate administrator or developer should initial establish a virtual boundary around a such as location in GPS- or RFID-enabled software package. this may be as easy as a circle drawn one hundred feet around a location on Google Maps, as such as victimization genus App is once developing a mobile app. This virtual geofence can then trigger a response once a licensed device enters or exits that space, as such as by the administrator or developer [6].

A geofence is most ordinarily outlined inside the code of a mobile application, particularly since users must opt-in to location services for the geofence to figure. If you move to a concert venue, they may have an app you'll be able to transfer which will deliver info regarding the event. Or, a distributor would possibly draw a geofence around its shops to trigger mobile alerts for purchasers World Health Organization have downloaded the retailer's mobile app. In these cases, a geofence that's managed by the distributor is programmed into the app, and users will favor to decline location access for the app.

A geofence may also be founded by end-user's victimization geofencing capabilities in their mobile apps. These apps, like iOS Reminders, enable you to settle on associate address or location wherever you wish to trigger a selected alert or push notification. this is often known as associate "if this, then that" command, wherever associate app is programmed to trigger an action primarily based off another action. for instance, "If I'm 5 feet from my exterior door, activate my lights." otherwise you would possibly raise a reminder app to send you associate alert once you reach a selected location [6].

Geofencing isn't only for mobile apps – it's wont to management and track vehicles within the shipping trade, oxen in agriculture trade and – you'll see this subject pop in drone discussions. Some drone geofences can kindle a users' authorization – a method that ties the user's identity to their drone – so enforcement will keep track on pilotless drones [6].

II. RELATED WORK

The hardware and software system of the GPS and GSM network were developed. The projected GPS/GSM based mostly System has the 2 elements, initial may be a mobile unit and another is dominant station. The system processes, interfaces, connections, data transmission and reception of knowledge among the mobile unit and management stations are operating with success. These results are compatible with GPS technologies. A vehicle following system is AN device, put in in a very vehicle to modify the owner or a 3rd party to trace the vehicle's place. This paper projected to style a vehicle following system that works exploitation GPS and GSM technology. This style can unceasingly watch a moving Vehicle and report the standing of the Vehicle on demand. The remote watching system supported SMS and GSM was enforced. Supported the full style of the system, the hardware and software system designed. During this paper, the GSM network may be a medium for transmittal the remote signal. This includes 2 elements that are the watching centre and the remote monitoring station. The watching centres incorporates a pc and communication module of GSM. The software-monitoring centre and the remote watching station enforced by exploitation VB. The results of this demonstration show that the system will watch and management the remote communication between the watching centre and the remote monitoring station. during this paper, the projected following system supported cloud computing infrastructure. All the vehicles equipped with GPS antenna to find the place. To avoid the drunk and drive, the alcohol detector put in to watch the motive force standing. The projected technology considerably avoids the accident in highways.

III. PROPOSED METHOD

The Proposed method is using the combination of tracking, fetching information about the vehicle and smart weighbridge system. By using these three factors the user can easily monitoring the vehicle each and every second at anywhere. Gsm provides the stable internet connection through which all the details sent back to the user's back-end process. Then implementing suitable programing language to visualize these details in front-end.

IV. BLOCK DIAGRAM

Presented here is associate degree Arduino-based vehicle pursuit system exploitation world positioning system (GPS) and global system for mobile communication (GSM) modules. The system is often put in or hidden in your vehicle at an appropriate location. once putting in this circuit, you'll be able to simply track your taken vehicle employing a portable. Initially install Arduino on your device. Embody or add the user's mobile variety (on that you wish to receive the GPS location messages) within the ASCII text file (vehicle_ code. ion). Compile and transfer the code onto the Arduino board exploitation Arduino IDE. Once the code is burnt, create connections as shown within the circuit diagram. Insert a sound SIM card within the GSM module connected with the Arduino board.

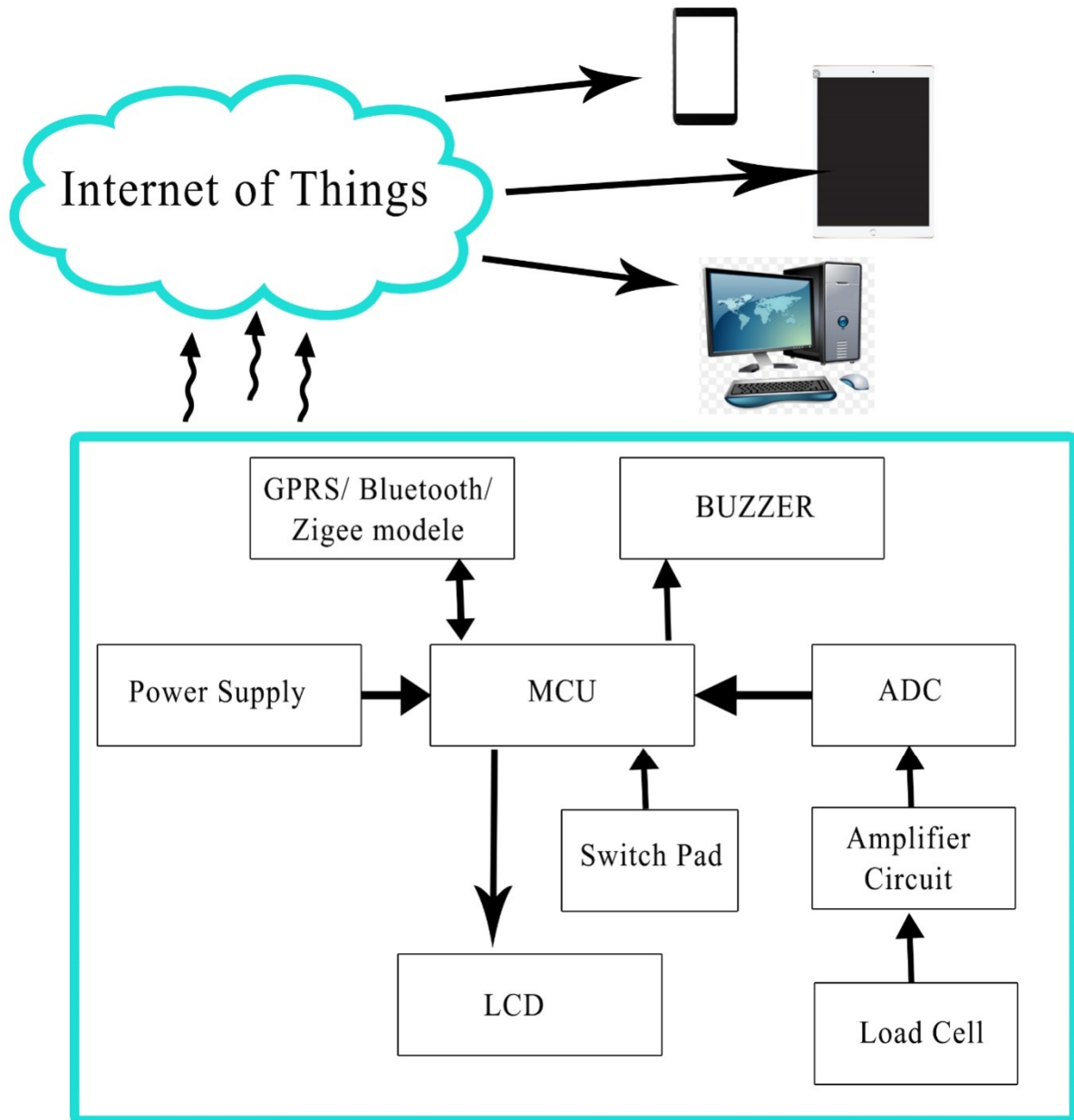


Fig 4.1 Block Diagram

Once you have done the installation then place the system (Arduino, LCD, GPS and GSM with SIM card) within the vehicle. currently it's time to trace the SIM card inserted within the GSM module. to trace the SIM card, send associate degree SMS to the mobile range of the SIM card by typewriting "Track Vehicle" from your (user) portable. when causing the message, watch for some seconds till you receive location detail of the SIM card within the type of latitude and meridian values on LCD1 in addition as in your portable. When obtaining the latitude and meridian position (in decimal format), convert the primary four digits of those values into degrees and minutes like 28°38' and 77°13'. Enter these values within the search box of Google Maps then click "Search" button to search out the precise location.

V. RESULT AND DISCUSSION

The system is often employed by individual vehicle house owners furthermore as organizations to find and track their vehicles. Organizations will perpetually use it to trace the standing of their product delivery by trucks. It additionally helps house owners to stay tab on their driver, preventing vehicle abuse and so leading to vital cost-savings. The system is often simply put in in any vehicle like cars, boats and motorbikes.

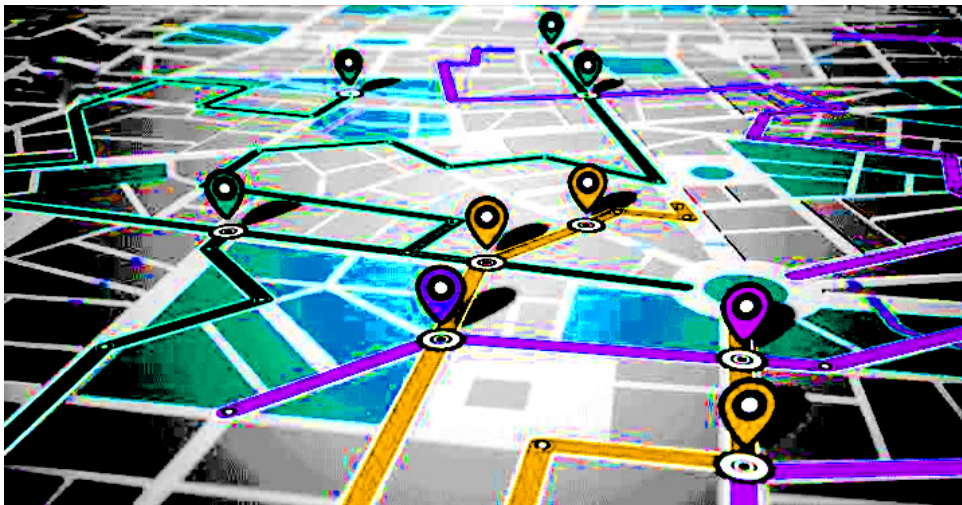


Fig 5.1 Location Tracking

VI. CONCLUSION AND FUTURE ENHANCEMENTS

1. In current scenario this proposed system will be more efficient than normal GPRS tracking system, it has been implemented in few projects.

Example: Kudankulam phase-II

2. In future it will implementing in many projects.



Fig 6.1 Boulders Management System

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