Retraction

Retraction: Anti-Theft Fuel Level Detector with Vehicle Tracking (J. Phys.: Conf. Ser. 1916 012217)

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This article (and all articles in the proceedings volume relating to the same conference) has been retracted by IOP Publishing following an extensive investigation in line with the COPE guidelines. This investigation has uncovered evidence of systematic manipulation of the publication process and considerable citation manipulation.

IOP Publishing respectfully requests that readers consider all work within this volume potentially unreliable, as the volume has not been through a credible peer review process.

IOP Publishing regrets that our usual quality checks did not identify these issues before publication, and have since put additional measures in place to try to prevent these issues from reoccurring. IOP Publishing wishes to credit anonymous whistleblowers and the Problematic Paper Screener [1] for bringing some of the above issues to our attention, prompting us to investigate further.

[1] Cabanac G, Labbé C and Magazinov A 2021 arXiv:2107.06751v1

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Anti-Theft Fuel Level Detector with Vehicle Tracking

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Abstract. The appearance, deployment, as well as the evaluation of a computing device for the Fleet Management Solution including trucks that transport fuel are presented in this article. The key aim is to build a framework that can track the backlog instantaneously. The approach are imagined any road tankers that transport petrol transport End customers, such as service stations, get petrol in oil warehouses. However, as code, this technique is reliant on hardware. Shipment electronics, Diy on-board, Wireless communications, and Gp modules are all included. make up the hardware version 0.5. whereas LabView is used for data functions in PC code 0.5. This approach proposes the use of an Automatic Electronic System (AES) to replace manual fuel monitoring. This system tests fuel volume and sends the details to the owner's cell phone as well as the owner's device through the GSM network. It also offers a tool for identifying stealing or fraud incidents in the event of gasoline robbery or discharge. Furthermore, the device will monitor the activities every carrier transporting energy in order to determine the location of any incidents Which should have occurred. Thanks to inadequate and easy-to-acquire electronic elements, this approach allows for automated backlog tracking and tracking at a lower cost. GSM, GPS, AES, and ARDUNIO are some of the terminology used in this article.

1. Introduction

A System of Fuels have been often used maintain oversight, handle, as well as petrol tracking usage in any form of enterprise that requires transportation, such as rail, road, air, or water. Instead of manual observance, companies now face a big drawback in handling fuel transportation. This manual observance is an expensive method of devising and assessing the fuel bodily operation, and it may result in financial losses for the business [1].

There is no work or auditing process in place in most companies to ensure that the number of litres in the bill of sale corresponds in proportion to the overall quantity of fuel on board The vehicle's owner drives the car to the petrol station, loads the tank, and collects a report from the pump manager specifying the amount of litres of fuel pumped into the tank, the date, and the number. The driving force hands off this receipt to the individual in charge of the company, who keeps track of it and gives the total to the pump owner at the end of each month [2].

This situation is riddled with flaws: the driver has no idea if the quantity of gas injected is sufficient among the fuel matches the quantity declared on the receipt. Dishonest intelligence created by the pump station manager is another fault in the scheme. A complete case in point is the presence of...
company staff who conduct theft by assessing the amount of fuel inserted. Many firms should take into account all of the above-mentioned considerations, resulting in a requirement for an integrated automated device and not just tests the fuel consumed but also detects fuel fraud, saving the corporation a large amount of money [3]. Furthermore, this technique offers a cost-effective method for logging transportation in order to locate gasoline tankers, albeit as code data in the sake of petrol documents stored on end users’ workstations or cell phones. The experience includes a number of litres of petrol also at period of initialization and a series of fuel robberies as the tanker quantity varies hundreds of times before arriving at the destination. Carbon shipment or supply to sites is done in a range of ways, including licenced road tanks, critical ships, trains, and pipelines. This approach focuses solely on the control of road fuel tankers for the transportation of fuel [4]. The Method provides the most detailed approach on the market for deciding how much what percentage what amount of fuel is inserted, and therefore how much of the operation is wasted. This protects our properties by providing full fuel transparency, absolute reconciliation, and protection from fuel theft. The whole system provides a cost-effective, energy control system that is both expense and controlled specifically made-to-order for Asian businesses that see fuel theft as a significant drawback, but are unable in order to pay and for computers currently available on the market due to expensive existing solutions [5].

1.1 System to Monitor Fuel Use

Wifi Fare Monitoring is a comprehensive solution, asset recovery system it can be used to keep track of, maintain, and retrieve vehicles. We can better handle and log valuables if we track them, saving time and power. We will assess efficiency and put a price block on future pricing using GPS Fleet following data. This raises the firm’s price by increasing the amount of service offered, resulting in improved income and customer loyalty. The above automated Fleet Following Reports are easy-to-read graphs that help the United States of America identify operating problems and enhance fleet management [6].

1.2 Fuel Management System That Works Automatically (AFMS)

The Autonomous Fuel Monitoring System (AFMS) is made up of simple electronic components that are installed on main road tankers in order to monitor operation and volume as seen in Figure 1. When inserted into the tank, it tests the volume of fuel litres, so once the fuel is taken or spilled, it sends the estimated data for review and additional figures.

![Figure 1. Displays the Automated Fleet Management System (AFMS)](image-url)
“Wifi Fleet Following Is AN All-In-One Management Resolution That Allows You To Track, Manage, And Recover Assets,” according to Wikipedia. You'll be able to better handle and control your valuables if you track them, saving time and money [7].

Water movement knowledge is highly significant in certain water-related areas, according to M. Saraswati's "Development and construction of water level activity system." It is necessary to install an automated water activity system that will avoid the difficulties until they are manually activated [8].

2. Techniques

This device can include both hardware and software. The hardware half is used for litre sensing and connectivity, while the machine code half is used for information illustration. The prompt system is made up of three major modules: embedded system, GSM connectivity, and GPS tracking as seen in Figure 2. The primary module includes a backlog system. Any cargo train includes a control that represents the number of gallons and connects with the Mobile network [9].

![Figure 2. Block diagram of the general structure.](image)

Through the serial communication, the integrated circuit module collects data from the fuel stations, keeps track of it, and makes calls to the observance agents. Its GPS pursuing subsystem is used to track the location of oil ships in real time [10].

2.1 Module for Embedded Devices

The backlog interface and the Arduino Super 2560 process unit make up the embedded machine module. The space system HC-SR04 is used to monitor tanker volume. It operates by emitting assessing the time it would take for a flash in high altitude noise to return after damaging to gas face. For the purpose of operation and processing the space higher than the backlog, the interface is enforced with an Arduino controller [11].
2.2 Module of Communication

For causing and monitoring information wirelessly, this device is mainly dependent on the contact module. The data collected were sent out over the phone. A similar UDP-based connectivity theme can be found here. The Arduino GSM module is used to send AT commands to our device.

2.3 The Image's Usefulness

Plastic is used to make the instrument, which measures eighteen inches long, twelve inches broad, and twelve inches tall. It has holes in the upper portion of the instrumentality for ultrasonic sensors to track operation backlog. Figure 3 portrays instrumentality.

![Figure 3. Shows the activity of instrumentality.](image)

\[
((1296.08) \text{ height})/1000) \text{ litres} = \text{total volume}
\]

Keep in mind: Higher than measures these average the size of the instrumentality, while the peak is determined by an ultrasonic unit and raised by a constant, namely the total measurements of the instrumentality.

2.4 Programming Code for the Device

LABVIEW makes up half of the software. It's a National Instruments system-style forum and production environment for a recognisable artificial language. It carries details such as the vehicle's range plate, the tanker's overall volume, the range of fuel litres within the tanker, the range of missing fuel gallons, maximum ranges of petrol liquids carried in a month, average energy worth in a month, and complete loss in a month as seen in Figure 4.

LABVIEW operates for thousands a variety of equipment products and lets developers save time by offering easy solutions and a standardised programming interface for all hardware. This bodies of water demonstrates how to accept a message using GSM electronic equipment into a LABVIEW environment and then extract data from it.
Figure 4. Shows a flowchart of the message reception process. This data includes information on all separate fuel tankers, each with its own system for fuel monitoring. Once a message is sent, as well as the oil vehicle and the fuel inside it are In Visual studio, technologically portrayed. The number indicator depicts the amount in terms of petroleum injected from the tanker of petrol, while the map depicts the truck’s whereabouts. This is often illustrated below seen in Figure 5.

Figure 5. Aerial view

3. Assemble a questionnaire

Having put together a survey of a number of gasolene pumps and organisations, and we used these to address several questions, resulting in the findings we discovered. The response to the primary question is seen in Figure 6. half-dozen first lines, and so on. According to the survey results, the
majority of the elders would like to use this tool in their wise lives a to get precise information statistics. 

- measuring unit Are certain that quantity That many of the petrol bottles listed on the receipt were packed into another container ship?

- If you've ever seen a piston trying to defraud a customer by filling the pipeline with little gas than would be required?

- Could I like Associate in Nursing automatic device for your company that will keep track of the fuel that is shipped in an automated manner?

- Then I want an automated device that will determine and deliver any amount required on the rebate and the car plate, as well as the calculated fluids in the reservoir, to my mobile phone?

- Then I want an automated device that can deter fuel theft/fraud or discharge, as well as quantify as well as monitor the significance of of lost fuel in litres over the course of a month?

Figure 6. Shows a graph of the results of the survey.

4. Eventually 

Associate in Nursing addresses challenges the issues involved with fuel control systems and how to overcome these issues using an automated electronic device in this inquiry. The article addresses problems with both the hardware and software of a device that requires the operation of fuel litres via a backlog connector as well as inflicting they are calculations via GSM to the administrator's phone cell phone, but wirelessly on the portable machine.

According to the theoretical findings, ninety percent of people have trouble monitoring and measuring their fuel consumption by manual observation. As a result, there's a need for a device that can analyse and measure fuel consumption in an automated manner, thus minimising the problems that arise in fuel management. Despite the fact that there are certain devices unit of measurement available for such uses, they are expensive, so businesses should not factor them into their budgets when examining the fuel usage, and the importance of those processes as a whole. The proposed framework is built on
current technologies and low-cost electronic components, making it suitable for any company or trade that uses vehicles as a core resource. Mobility, as a crucial resource for a business, would have a positive effect on the company's bottom line. It is important to control the fuel consumed by the available resource. As of now, manual observance is used, which consists of organisations that have a monthly arrangement with Petrol/Diesel suppliers. Generally, manual observance costs the company more because the voucher is printed with the wrong number of fuel litres. In this situation, an integrated automated system is recommended, as it will allow for machine-controlled fuel monitoring and analysis.

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