International Journal of Scientific Research and Engineering Development-– Volume 5 Issue 3, May-June 2022

Available at www.ijsred.com

RESEARCH ARTICLE OPEN ACCESS

Ingenious Fusion System Using Wireless Power Transference

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Abstract:

We are living to move with a modern epic world and go fastest technology growing futuristic.
Now the lack of natural resources like petrol, diesel vehicleswhere create a lot of pollution so, we switch over to Eco friendly E-vehicles and they are pollution free zero emission carbon vehicle. EV's are a rapid growing technology for in this generation people and they are facing a lot of issues in their E-vehicles. The main issue is a charging defectivity, and single power source. So, charging infrastructure play a major role. Then the automation issue like a monitoring and control medium. Then the main issue in recent times is batteries are in blast due to the heat. Thus, in this paper, we have to introduced build in Solar Panel for the additional power source, and the automation of (EV's) are fully monitor and control through the private site (Cloud Platform). The special feature is live monitoring battery temperature and cool down kits where installed.

Keywords **—State of charge medium, Battery functionmanagement, Alternate power source, Alerting Mechanism, Monitoring and Control Section, Cloud Platform system.**

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I. INTRODUCTION

Today we here in a technologically developed and advancement world. New technologies where emerge each and every day to make our life easier.But we still now use on the classical and conventional wire system to charge our E-vehicles. So, we introduce the (WPT) Wireless Power Transmission is the efficient transmission of electric power from one point to another through vacuum or an atmosphere without the use of wire or any other substance. The main advantage of (WPT)Wireless Power Transfer were compact in size. Then the major issue is Monitoring and Control medium where the system is severe to access by user. We change the automation system with the help of some controller medium and create a web-based cloudplatform for Monitoring and Controlling purpose. Another advantage is we introduce with the dual power source with the help of Solar Panel.

II. PROPOSED SYSTEM

In the Existing system where using a microwave for a charging medium and they are used for single battery system, Engine motor and other accessories are also work with the same battery.Battery percentage,Car moving speed show only in car

display.Charging time duration is high.Wireless medium of charging system where monitor under a manual procedure. We overcome with the issues

Our proposed system where, first thing we fix with the split-up batteries for fast charging purpose. The main battery for Engine Motor and Steering Control. Then the Secondary battery for the other accessories like Wiper, Indicator, Head Light, Car A.C, Roof Door control. So, the batteries where charge with the (WPT) Wireless Power Transfer technique. If we give a power supply for 300kw they where take a long time but, our split-up batteries where take half of the time because it both of they charge together. And the (WPT) where the material of (Tx) and (Rx). Tx means Transmitter coil and the Rx means Receiver coil. The Transmitter side where fixed in the ground and they give a 230v power supply. Then the Receiver coil where fix in base face of car to connect with the batteries. The split up batteries where simultaneous to in take charge. The main feature of Solar Panel was installed in Roof Door they are interconnected with the secondary battery. When the battery where drain to alert system where switch the solar power backup source. The switch operation using relay and it the process where works with the auto control with the help controller.Now, the first block of (WPT) wireless power transfer is over move over the Second block is Controller block here we use the ESP32 microcontroller this special feature is dual supportmedium of Wi-Fi and Bluetooth. They are connected with the sensors, and other hardware kits. It has 20 digital input/output pins.It is the low cost, flexible, and easy to use programmable open-source Microcontroller board. The controller board were control the battery management system, and also function monitoring and control medium of web-based cloud platform.

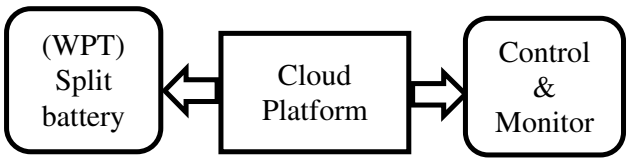

Fig.1

III. SYSTEM DESIGN

The system architecture consists of a Microcontroller Raspberry Pico and ESP32 board were used, sensors like Temperature sensor, Ultrasonic sensor, Air Pressure sensor.

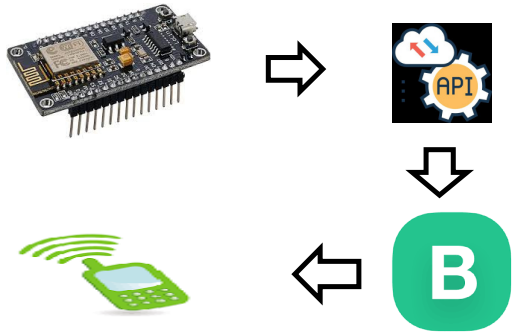

Fig.2

Here we have to choose the Microcontroller Raspberry Pico and ESP32 which is the main board of the whole system. In this Microcontroller where inbuilt with the dual combo of Bluetooth and Wi-Fi. So, the codes are written in the micro python language.

The next step is setup the web server. Here we choose the blynk server. Blynk is open-sourcejava-based server. To connect the server to our system API key is used. API is an application programming interface which gives the connection between the computers or computer programs.

Blynk HTTP Restful API allows read and write values of pins in blynk apps and hardware. With the help of the API key all of the sensor readings are stored in the blynk server

Fig.3

A. *E-Vehicle Monitoring and Control medium*

We use the ultrasonic sensor to check the alignment of charge position of Tx and Rx coil. It aligns with the right position they give an indication alarm. With the help of this parameters, we can control the battery and other accessories control medium all are control via mobile application. This concept will easy to access by the user and the interface are user friendly.

B. *Heat, Battery drain, Detection and control*

If the battery were heat with the excessive temperature, they are analysing the temperature sensor and they were control by using the micropython coding on the microcontroller it is very easy to switch on the cooler automatically to control the Heat and also emit the heat temperature so, we save the battery in without risk condition.

C. *Sensor readings*

To set up a sensor reading webpage first we have to create a new project in blynk server. The next step is select the Wi-Fi, Bluetooth and the final step is writing the sensors name and project name.

Fig.4

Fig.5

D. *Block diagram 1:*

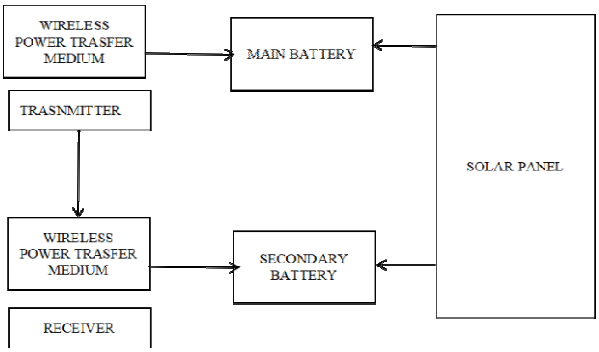

Fig.6

E. *Block diagram 2:*

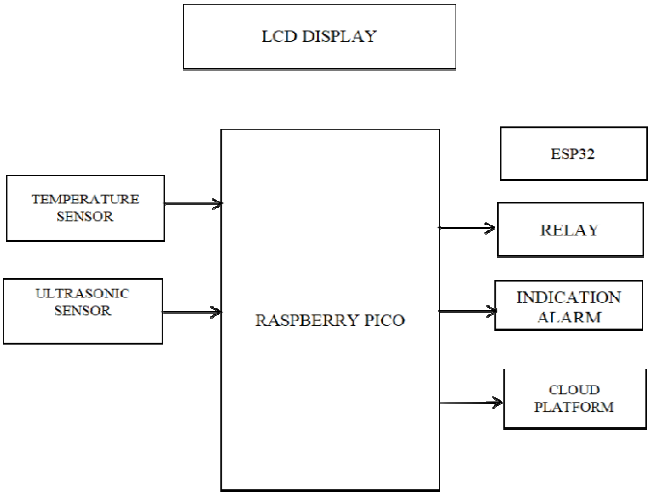

Fig.7

CONCLUSIONS

In this project we were conclude with the wireless power transference and smart monitor controlling system are combination and also innovate method to create a power source for battery. Demonstrates a completebattery management systemwhich monitors the critical parameters and perform anactivecellbalancingofabatterypackwheneverrequ

ired.TheisBMSsystemisintegratedwithmicrocontroller(MSP430)formonitoringandcontrolling unit.As we find the BMS is an electronic device that can weused in daily life. This can improve the efficiency, powerquality, power factor of the system. BMS can also be usedas monitoring and protection purpose as it increases theoutputvoltageofthebattery bankofthesystem.For the first time we include the heat emission control medium for battery in this project of E-vehicle.

ACKNOWLEDGMENT

Authors express thanks to the anonymous reviewers for their constructive comments and suggestions. Also, authors would like to thank head of the institution of KSK College of Engineering and Technology for providing the guidance support to carry out this research work.

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