

Multipurpose smart bag

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ABSTRACT

The smart bag is an application specific design that can be useful for almost everyone in society. Arduino ATmega16, the brain of the proposed system can control all the distinguishable features. Solar panel attached on the front part of the bag will charge not only the electronic appliances like mobile phones, power bank and MP3 device. RFID automation will be used to solve the problem of the forgetting fullness to pack the required items. Arduino Board and a GPS Module that one may track the bag and a front end or Mobile application, is created in order to monitor. In this bag within a small platform, all the facilities are implemented together efficiently.

Keyword:- RFID module, GSM, GPS, Solar Panel, Battery, LCD.

1. INTRODUCTION

Today's world has become much faster and smarter. In such world things, and objects need to be fast and smart, a bag is a common tool in the form of non-rigid container. Bag security is a delicate issue. Normal bags do not have any smart features. There are so many disadvantages of old bags, like if anyone forgets the bag, then he can't find it easily. To overcome this problem, we make a Multi-purpose smart bag. Smart bag build-in electronic for one or more purposes, for example USB charging ports as well as the ability to transmit its location via app and cellular. The need for a smart bag that relay an advance GPS tracking system is important to safeguard the bag in traveling. The system provides information regarding bag location. There is a need for an application which will make the tedious packing process more convenient and this is possible using RFID technology. Tag contains the unique identification of items. The information about all the items packed inside the bag is stored in the

NodeMCU. The microcontroller board is based on ESP12. We can connect with a USB cable or connect with ac to the dc connector. Solar panels which will continuously produce power through day light while we travel. The inside structure consists of a battery for usage like charging mobile phones or tabs anywhere.

2. LITERATURE SURVEY

[1]Mrs.Rasika Naik publish smart bag.smart bag is a very innovative idea with many interesting features like a solar panel, panic button, RF-ID module, Bluetooth module and GPS. The bag is used, for charging various device and also remember things on a daily schedule of a school kids for the day. The biggest drawback of this project is Bluetooth. Bluetooth has less range. [2]Shweta M and team suggest a system that can be useful for forgetful people to some extent to overcome problem of remembering things to be carried along. The main feature of this bag is security to human through an emergency button on the bag. Weakness of this bag is panic button because panic can be pressed incorrectly by anybody's hand. [3] Sabin J Olickal and team they have use concept of ultrasound sensors, GPS, GSM, PIC for the following features human detection is done by using ultrasound sensors the bag can be activated by sms and also location can be identified using a GPS. Drawback of this bag is ultrasound sensors it is very harmful to human body, and it is not waterproof. [4]Ankush Sutar has given more focus on privacy and security using fingerprint sensor,GPS,GSM and ultrasound sensor technology. They focused more on just one feature [5]Srinidhi gindi and his team have used many features like rfid, microcontroller, solar panel, bazzar, button system.

They can focus most on human security users using hijacked, raped, and press the button in a panic state after an emergency. It has been very much appreciated, but anyone can press this button when it is difficult to find whether the button has been pressed by the owner or by some other hand.[6] Rakhi Varma and team make a bag in which they used Raspberry pie, arduino, GSM, GPS, electromagnetic sensors, and the team made a bag using it, taking a long time to download and install the software and are unable to do any complex multitasking. Uhas also used remote sensor which gets significantly expensive remote sensing requires a special kind of training to analyze the images.[7]P.G.Gayathri and team make a bag in which they used RFID, Microcontroller, GSM, GPS, digital lock, ARP 9600,Max 232. Digital lock runs from the battery or works with the help of power. Digital lock has code . It will be easy for young people to remember code but it is difficult for the elderly to.

3. PROPOSED SYSTEM

The smart bag will be activated by connecting the Wi-Fi of the mobile as soon as connection establish with device display screen activated. Once the display screen activate in that screen list of object is displayed. One of the important feature of smart bag is in forgetfulness. In certain case if any one of object is missing then it can show the missing object on the screen. The entered object by the user can be stored in the cloud database. Due to IOT mechanism it will be very helpful for the users to easily see the list of the object in the web portal.

The second important feature of the bag is used to track current location of the bag by using GPS module. If the bag and current user are out of the given range, GPS send the longitude and latitude of the bag. With the help of the GSM module this location link which includes the latitude and longitude of the current location of the bag, will be sent as a SMS on user's registered mobile.

The third important feature is charging of a bag through solar panel. This bag does not need electric charging as charging will be provided through battery. This battery would get charged automatically anywhere, anytime. The user can charge this inbuilt battery while travelling also as solar panel has been assembled over the bag, this saves time of a user as he need not wait until battery charged fully.

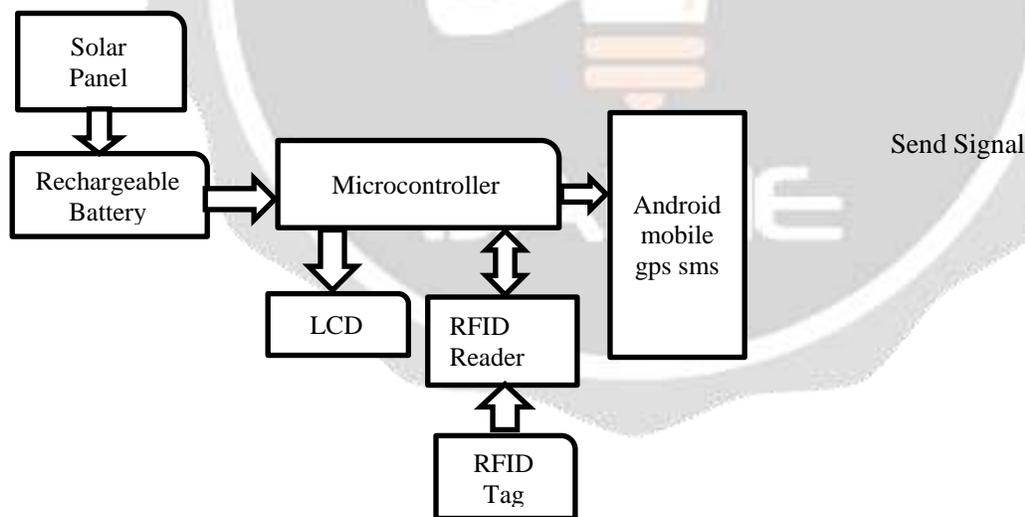


Fig 1: Block Diagram of Multipurpose Smart bag.

4. CONCLUSION

New things and new technology are being invented as the technology grows day by day. People of any age group can use this user friendly smart bag according to their requirement. It is also usable for people's forgetfulness. In case of a loss of a bag, user need not to worry because this bag has been assembled with location tracking feature. User can carry it easily while travelling and day today life. This smart bag saves electricity and time.

5. REFERENCES

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