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DESIGN AND IMPLEMENTATION OF DIGITAL CHARGING SYSTEM FEATURING IOT ENABLED I N ESP8266 WIFI MODULATOR

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Abstract - *Here in this work efforts were made to exploit the potentials of a mobile app SJB which is specifically designed for the IoT based applications. This project proposes energy efficient automatic CHARGE OFF controller. Automatic charging system using ESP8266 wi-fi modulator its applicable for both mobile & laptops. , it utilizes the Wi-Fi local hotspot network as per the ssid and password credentials entered by the user in the firmware itself. Simply the concept is when the mobile/laptop charging is full automatically its power off also its gives indication through smart junction box to mobile app (SJB.apk) The carefully designed hardware and the real-time supervision of measured sensor outputs as well as the relay on/off status observed over the SJB App along with the real-time controlling of relays validated the work. This mobile app simple and easy. This app mostly used for night workers when they came delay to home their mobile battery is dry at that time they are plugging mobile ,after 2 hrs or 3 hrs charge is full even-though the current is disconnect and SJB send the indication to mobile.*

Key Words: **NodeMCU, WiFi, IoT, ESP8266, Relay switch, Sjp app etc.**

1. INTRODUCTION

This system is designed and implemented to assist and provide support in order to fulfill the needs of Automatic digital charging system. Automation gives us more comfort and increasing work efficiency. The world is moving firstly towards automation. People have less time to handle any work so automation is a simple way to handle any Mobile or laptop will work to our desire . We know that the world is moving fast and all systems are converted into automated. We also developed an ESP8266 based digital Charging automation system. *NodeMCU is connected to the Wi-Fi local hotspot network as per the ssid and password credentials entered by the user in the firmware itself.* ESP8266 also connected with the relay, which receives information from ESP and performs the operation . We control the system by mobile application through this WIFI module. This creates an environment for controlling digital charging system. Here we can control laptap, mobile phone,ipad,imac..etc

1.1 Objective

Here the objective of the work was to make an attempt to integrate two technologies having complementary characteristics relative to each other. One of these technologies is well known Internet of Things and other one is the NodeMCU. In this project, the charger are in ON state only when there is any activities of human or objects are occurred. when there is no activities the charger turned to OFF state automatically. During night time ESP8266 detect less than 100percentage of light intensity then charger will be automatically ON otherwise greater than 100percentage of light intensity then street light automatically OFF. An automatic system is designed using ESP8266 which will switch ON or OFF the charger at given time and also depending on the intensity of the ambient charger..

1.2 Problem definition

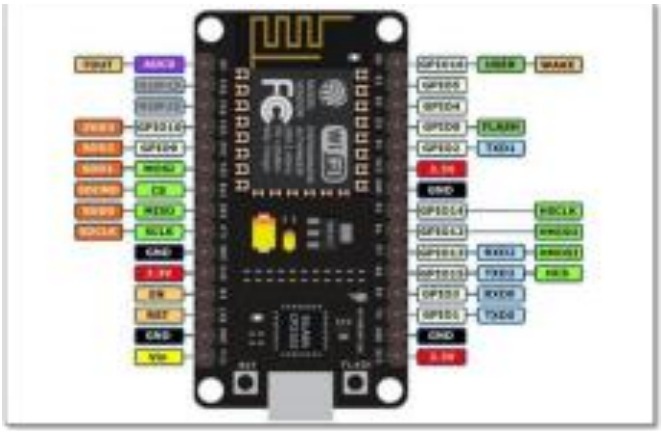
DynaTAC is a series of cellular telephones manufactured by 4 Motorola, Inc. from 1983 to 1994. The Motorola DynaTAC 8000X commercial portable cellular phone received approval from the U.S. FCC on September 21, 1983 They are old charger is no power full and no auto detection for owners, because old charger no off for 100% detection method so owner is not like that is resoan for our new idea in ASJP project. Without any doubts, automatic charger is a benefit for all of us today – it offers safety and comfort during the night time. However the charging networks put some serious problems in front of its owners, but also in front of the society in whole. In this article, we'll try to analyses these problems and suggest a solution for them

2. PROPOSED SYSTEM

Simply the concept is when the mobile/laptop charging is full automatically 11 its power off also its gives indication through smart junction box to mobile app (SJB.apk). This mobile app simple and easy. This app mostly used for night workers when they came delay to home their mobile battery is dry at that time they are plugging mobile ,after 2 hrs or 3 hrs charge is full even-though the current is disconnect and SJB send the indication to mobile. Only ON/OFF user manually activated. ASJB app detects the presence of an object in the street (vehicle/human).

Otherwise, the street lights will be switched OFF. There are two states odd and even ,

ESP8266 WIFI MODULE



The ESP8266 is way advanced compared to the ESP-12e. Among several features, the ESP8266 packs a CPU core, a faster Wi-Fi, more GPIOs (especially increased analog pins that we all desired), supports Bluetooth 4.2 and Bluetooth low energy. The board also comes with touch-sensitive pins, alongside a built-in Hall Effect and temperature sensors.

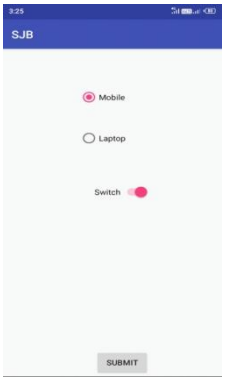


Fig1:SJB app

In even state the intensity of the charger will be on when the movement of the vehicles/human detects. Whenever the obstacle is detected on the street within the specified time charger will get automatically ON/OFF , according The real time information of the charger (ON/OFF Status)can be accessed from anytime, anywhere through internet. ASJB app detects the presence of an object in the street (vehicle/human).Otherwise, the streetlights will be switched OFF. There are two states odd and even, In odd state the charger will be kept ON through out the given limit or time.

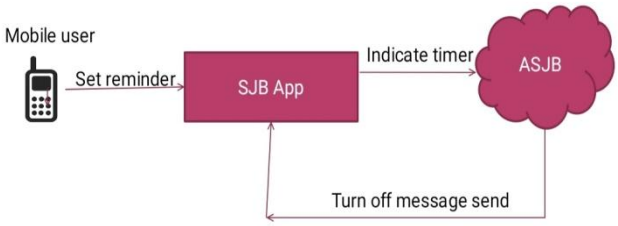


Chart1: System architecture

3. CONCLUSION

Thus the main objective of this proposed system with ASJB (Automatic smart junction box) plays a vital role in the process of charging system in both mobile/ laptop it helps to disconnect the current while fully charged . This may leads to low power consumption to save current. By using ARDUINO , the ESP8266 Wifi Modulator provides utility indication to user thus they can identify their mobile charge is ON/OFF. turns charge 100% .In Future days, this ASJB charging system will updates various features to enhance the users .

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