BUS ENROUTING SYSTEM

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Abstract

The project is mainly focused on the ENROUTING OF BUSES by using simply method called QR code announcement. The main theme of the Project is to get information about the bus in the less human effort. Nowadays everyday single person is using smart phone, by using this process it takes no time to get information about the bus. To achieve automatically display and announce of the bus timings. It is a part of intelligent transportation. This also helps in avoiding social gathering and can be maintain social distance due the threat of covid. It is about QR-code embedded displaying and announcing system is based on global satellite positioning system, to achieve automatically display and announce of bus timing when it leave from the station without the need for manual operation. It is part of intelligent transportation, at the same time the use of automatic station display reduce the workload of the human announcement this ensures that passengers feel comfort and also the announcer who announces several times repeatedly. Here we use barcode module to know at what time bus leave from station and micro controller to display and announce the bus leaving time accordingly on LCD

Keywords: ESP32 CAMERA module, Jumper wires, USB to SERIAL module, QR-Code, Speakers, CAM 0V 2640 camera, Power supply

1. INTRODUCTION

Our project plays a vital role which alerts the people who are waiting for the buses. In these days announcement in the bus stops are done manually by human voice. Sometimes the announcer will hesitate to announce the same announcement repeatedly and may give wrong info. So, we are here to reduce the problem of announcers in bus stop which is affordable and make things easier buses use GPS to trigger audio announcements but GPS triggers are not always reliable as busses move in GPS blind spots .if buses move into GPS blind spot just when it is about to receive the trigger then trigger is lost and announcement not made and most of the drivers don't actually care about the stops

in these days announcement in the bus stops is done with integrated voice with an automated bus location system or with the prerecorded voice so this makes some times to miss the announcement and in some cases people may feel pressure for announcing single announcement repeatedly so our project helps to overcome from this situation that is automatic announcement is done through scanning barcode if the bus stands in the stop with the help of barcode the leaving time of bus is shown on digital board and it can announce automatically through speakers.

2. RELATED WORK

Automatic announcement system in bus stands. The automatic announcement system for public buses or the public announcement system records the announcement in advance and makes automatic announcement according to the predetermined physical machines or computer programming. The system is installed in public buses in order to provide information to passengers. It is part of passenger information system (PIS)which constitutes a new standard for public buses. The system is relatively simple and cost savings, when compared to other current technologies. At present the announcement system employs a digital voice recorder which works with GPS and GPRS devices to locate the coordinates of buses and the system employs a digital voice recorder which works with GPS and GPRS devices to locate the coordinates of buses and the system is installed permanently on every bus. In Thailand few companies provide such installation services and charge high prices for the devices and installation fees. This research study, therefore, presents an automatic announcement system for public buses using a tablet with a GPS applied as voice recorder and automatic announcer though the development of barcode scanner of a system for automatic announcements of buses.

3. IMPLEMENTATION

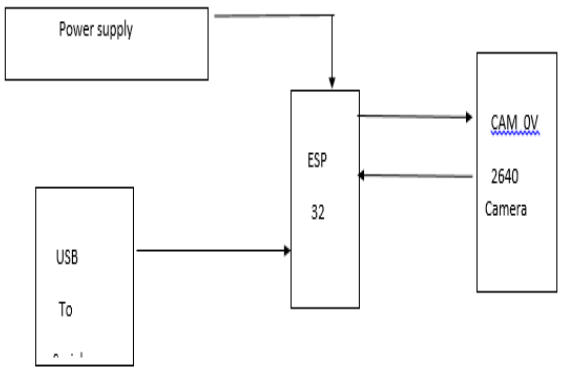
Buses use GPS to trigger audio announcements but GPS triggers are not always reliable as busses move in GPS blind-spots. If buses move into GPS blind-spot just when it is about to receive the trigger then trigger is lost and announcements not made and most of the drivers don't care about the stops in these days announcement in the bus stops is done with integrated voice with an automated bus location system or with the pre-recorded voice so this makes some times to miss the announcement and in some cases. People may feel pressure for announcing single announcement repetitively so our project helps to overcome from this situation that is automatic announcement is done through

scanning barcode if the bus stands in the stop with the help of barcode the leaving time of the bus is shown on digital board and it can announce automatically through speakersThis project eliminates the use of humans in the announcement part in bus travelling by use of our project in transportation system we can reduce human errors. WE have known about this project by identifying the daily life situation mainly this working model is useful for public sake for the best way of giving information of buses to the people.

4. EXPERIMENT RESULT

DIAGRAM

Conceptual Design



Block Diagram

ESP32 cam is used as an alternative for Arduino which handles all the code work in it. Here we are using a lower end version of the ESP32 cam CAM 0V 2640 is used as a module that handles the scanning part of the prototype. It is most preferable for ESP32-S.USB to SERIAL module is used to convert the the mineral port to the USB side which is used to connect to the laptop. Jumper Wires is used to connect voltage vss and ground pins in the module. Our project eliminates the use of humans in the announcement part in bus travelling by use of our project in transportation system we can reduce human errors and lag in announcement of the travelling bus. It can be very useful to gather the information about buses. QR-code is placed near the outer part front part of the bus so that the QR-code scanner placed in front of the bus halt place can scan the code and pass the information to the system which procures the visual code (PLATFOM-IO) that recognizes the code and announces the information through the speakers by where we can hear our output.

Connected Circuit Diagram

5. CONCLUSION:

The research study develops QR-code based bus enrooting system on public busses for convenience of passengers compared with the current technology the system is relatively simple and cost saving it efficiently saves manpower and time, everything works simultaneously. In this process there is no chance of human errors here everything works manually through systems. This kind of process can save more time and takes the way things there are in forward. By using more powerful software and tools we can make this as a more usable Business model by scanning multiple QR-codes at same time so this kind of technology can be use in most populated transportation areas.

6. REFERENCE

https://tigoe.github.io/display-examples/qrcodes

https://www.rtscan.net/arduino-qr-code

https://www.arduino.cc/reference/en/language/functions/communication/serial/