



Announcement System in Bus

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Abstract: *Transportation in relatively congested urban areas has been the focus of transit firms. But as social economies have expanded, housing has become more scarce, demanding more flexible transit services. An odometer is a device used to figure out how far a vehicle has travelled. The car's dashboard is often where the odometer is found. The long-distance mode permits longer-distance serial communication between parallel processors through two I2C-bus controllers. When the serial interface is enabled (ESO = 1), choosing this mode requires setting ESI to logic 1. The four unidirectional lines used to communicate the I2C-bus protocol in this mode are SDA OUT, SCL IN, SDA IN, and SCL IN (pins 2, 3, 4 and 5). The stop data, announcement audio, and advertisement elements for the bus route on Google Maps are all generated by this software. The generated information will be transmitted to the Announcer device through a Wi-Fi network with an internet connection. A diffuse reflective sensor is how an ultrasonic sensor typically operates. Compared to other sensor principles, it has better background suppression.*

Keywords: *Speaker; Odometer; Controller; Google Map; Ultrasonic Sensor;*

1. INTRODUCTION

Knowing where to go when a bus arrives at a station is a major issue for many passengers. The greatest solution to this issue is a bus location announcement system, which uses GPS technology to let us know where the bus is. In the lines that follow, a realistic explanation of such a GPS-based system is given. Those who lack literacy or are unfamiliar with cities will find this bus location announcement system to be of great assistance. This method can be used

in a variety of settings, including service organisations, public transit systems, private travel, and government travel agency.

transit providers have focused on offering transport service in relatively dense city areas. However, the recent development of social economy around the world has led to more sparse residences, which require transit services to be more flexible. In the suburban and rural areas near cities in North America and Europe, flexible transit services have experienced great growth and have received excellent feedback on offering a higher level of service. The survey on flexible transit customers in Texas, USA, by Higgins and Cherrington (2005) showed that the majority of respondents considered flexible transit to be more convenient than regular bus route. Due to their good performance, it is expected these new flexible transit services will expand to other countries in the near future to promote the attraction of public transportati

Odometer:

An odometer is a device used to figure out how far a vehicle has travelled. The car's dashboard is often where the odometer is found. The name "odometer" derives from the Greek meanings for path and measure. Either a mechanical or digital odometer can be used. Cogs are a common feature of mechanical odometers. On the mechanical odometer, each gear stands in for a numerical digit. The cogs are driven by a mechanism and a cable to rotate in unison with the wheels. The mechanical parts are hidden by a windowed shell, which merely shows the vehicle's current mileage. Digital odometers use a computer chip to track mileage as opposed to mechanical ones. The current mileage will be shown on digital display screens.



Figure 1- Odometer

Controller:

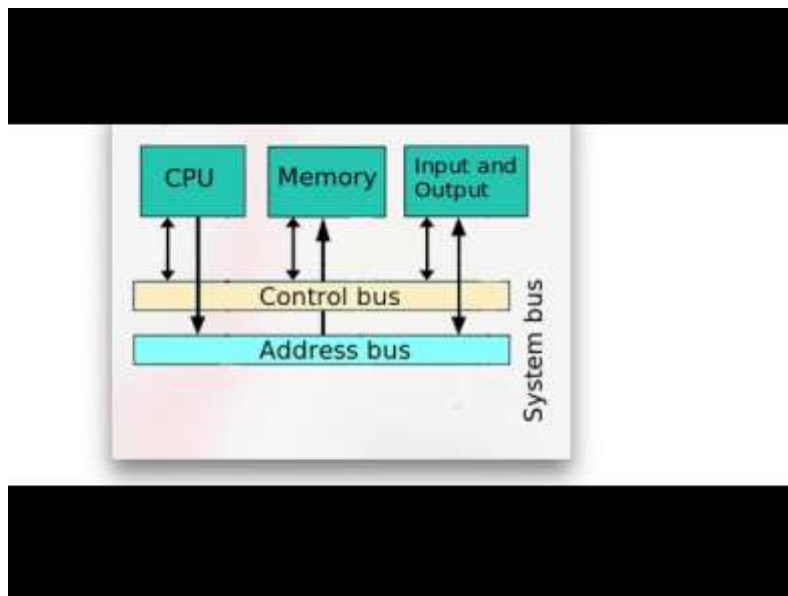


Figure 2- Controller

The long-distance mode permits longer-distance serial communication between parallel processors through two I2C-bus controllers. When the serial interface is enabled (ESO = 1), choosing this mode requires setting ES1 to logic 1. The four unidirectional lines used to communicate the I2C-bus protocol in this mode are SDA OUT, SCL IN, SDA IN, and SCL IN (pins 2, 3, 4 and 5). These communication lines ought to be connected to line drivers and receivers for long-distance applications (such as RS422). The long-distance transmission hardware is then specified by the chosen standard. Data transfer uses the same controls as in regular I2C-bus mode. To initialise shift register S0 in long-distance mode, data must be read from or written to ESO after ES1 must be set to logic 1. Because the interrupt output INT is disabled in this operating mode, data transmission and reception must be polled using the PIN bit.

Google Map:

The stop data, announcement audio, and advertisement elements for the bus route on Google Maps are all generated by this software. The generated information will be transmitted to the Announcer device through a Wi-Fi network with an internet connection. Utilizing the software, which is based on the Google map, is very easy. A regional language keyboard can be created for any language. A consumer application and web mapping platform provided by Google is called Google Maps. It provides route planning for travel by foot, car, bike, air (in beta), and public transportation as well as satellite imagery, aerial photography, street maps, 360-degree interactive panorama views of streets (Street View), and real-time traffic conditions.



Figure 3- Location map

More than 1 billion individuals worldwide utilised Google Maps each month as of 2020.

Ultrasonic Sensor:

A diffuse reflective sensor is how an ultrasonic sensor typically operates. Compared to other sensor principles, it has better background suppression. The switching output is set as soon as the item is inside the predefined switching distance while the device is in operation. At the switch, there is hysteresis. The operating mode is suitable for carrying out activities like counting the goods on a conveyor belt or presence verification. The ultrasonic sensor in window mode has more capabilities than the ultrasonic diffuse reflective sensor.

In this case, the switching output can only be established if the item is positioned inside a window that is bounded by two window bounds. For instance, this may be used to verify that the bottles in a bottle crate are the appropriate size. For bottles that are too tall or too short, sorting is done. Window mode and the diffuse reflection ultrasonic sensor can be chosen on all ultrasonic sensors with teach-in. Similar tasks are carried out by the diffuse reflection ultrasonic sensor and photoelectric sensors. Any reflector, even a metal sheet, will do. When the ultrasonic sensor is operating in window mode, the permanently fixed reflector is positioned so that it is inside the window. A signal is transmitted back once an object has been fully detected by the ultrasonic sensor.



Figure 4 – Ultrasonic Sensor

passengers by using the information provided by the passengers about their source and the destination. There are already lots of Demand Responsive Transit (DRT) systems which are better than Traditional Bus Systems but the Flexible Bus System makes this system an ease of use for the passengers by supplying more and more information at the Bus Stops and an efficient algorithm reduces the wait time of the passengers at the Bus Stops. FBS replaces the scheduled bus lines in a way that buses can dynamically change their routes according to passenger's demands. By informing the passengers about the accurate bus locations makes this system much more efficient and information rich as compared to Traditional Demand Responsive Transits. The Flexible Bus System can serve as a search engine for the tourists or one-time riders and guides them about the nearb

Stopping System:

In order to reduce waiting times and journey times for passengers, DRT systems make advantage of the source and destination information that users provide. The Flexible Bus System improves on the existing Demands Responsive Transit (DRT) systems that are currently better than Traditional Bus Systems by giving passengers more information at the bus stops and reducing their wait times there with a successful algorithm. FBS will take the place of the scheduled bus routes, allowing buses to change their routes as needed to accommodate passengers.

Speaker:



Figure 6- Speaker

Lamp:

A light-producing electrical device known as an electric light, lamp, or lightbulb. The most prevalent type of artificial illumination is this. Typically, lamps have a base composed of ceramic, metal, glass, or plastic that keeps the lamp in the light fixture's socket. A screw-thread base, two metal pins, two metal caps, or a bayonet cap are all possible options for the electrical connection to the socket. Incandescent lamps, which produce light by heating a filament to a white-hot temperature with an electric current, gas-discharge lamps, which produce light by passing an electric arc through a gas, like fluorescent lamps, and LED lamps, which produce light by an electron flow across a band gap, are the three main types of electric the illumination

in a semiconductor. When an electric current flows through a lamp, it produces light. Each lamp on this page has a thin wire filament, which when a current flows through it, heats up and lights brightly. The filament is often wrapped into a tiny coil and produced from a metal with a high melting point, like tungsten. In comparison to most electronic components, filament lamps have a shorter lifespan because ultimately the filament "blows" (melts) at a weak point.



Figure 7- Lamps

2. PROPOSED METHODOLOGY-

Block Diagram:

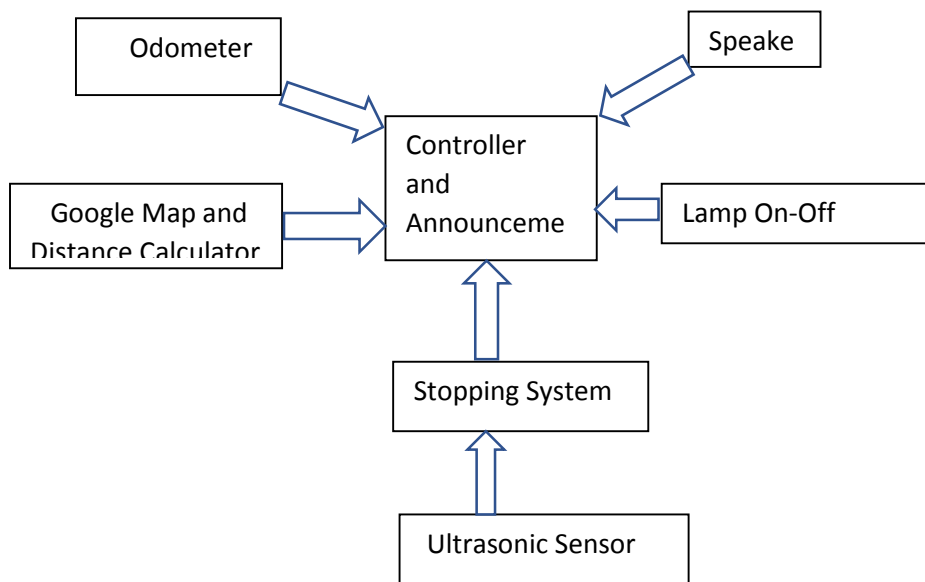


Figure 8- Block diagram of Methodology



3. CONCLUSION

In this paper we have researched on the announcement system in bus

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