NOVATEUR PUBLICATIONS
INTERNATIONAL JOURNAL OF INNOVATIONS IN ENGINEERING RESEARCH AND TECHNOLOGY [IJIERT]
ISSN: 2394-3696
VOLUME 4, ISSUE 6, June-2017

SMART BUS TRANSPORT SYSTEM USING GSM AND GPS

GAIKWAD PARMESHWAR
Department of ECE, S.B.Patil College of Engg., Vangali, Maharashtra, India

RAUT ANAND
Department of ECE, S.B.Patil College of Engg., Vangali, Maharashtra, India

BAGAL TEJASHREE
Department of ECE, S.B.Patil College of Engg., Vangali, Maharashtra, India

PROF. MURADE R.T.
Department of ECE, S.B.Patil College of Engg., Vangali, Maharashtra, India

ABSTRACT
It is the major problem for everyone. In this present scenario, we are designing a GPS-GSM based system which identifies bus exactly at which location it has started recently. For this purpose here we are using GSM-GPS connected to the bus. The project implements solution for enhancing public transportation management services based on GPS and GSM .In this system the message is send to the passenger who are waiting for the that bus when the bus is leave previous station. In this system the passengers are counted automatically.

KEY WORDS: ARDUINO MEGA 2560, GPS, GSM, Smart Public Transport

INTRODUCTION
Smart bus transport system is developed for enhancing public transportation services base on integration of GPS and GSM .As Per the present scenario GPS and GSM system identifies bus exactly at which location The project implements solution for enhancing public transportation management services based on GPS and GSM. This system send the message to the passenger who are waiting for the that bus when the bus is leave previous station. In this system the passengers are automatically counted.

OBJECTIVE
The main goal of this project is to design and implement smart bus transport system using GSM and GPS. Regulating the transport services. In this paper, a transportation management system is developed for Enhancing public transportation services based on integration of GPS and GSM. GPS is used as a positioning Here arduino board plays an important role in designing a smart bus . GSM and GPS is important to send message to the passenger to give information about the bus location .

BLOCK DIAGRAM
The implementation of proposed system mainly involves GSM,GPS, IR SENSOR, using ARDUINO MEGA 2560 microcontroller based. The block diagram of the system is shown in Figure

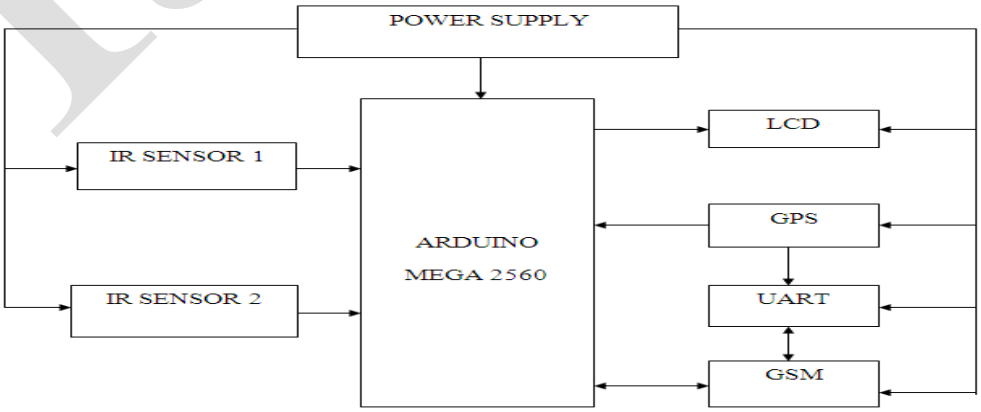

Fig -1: Block Diagram

ARDUINO

The Arduino Mega 2560 is a microcontroller board based on the ATmega2560 . It has 54 digital input/output pins (of which 14 can be used as PWM outputs), 16 analog inputs, 4 UARTs (hardware serial ports), a 16 MHz crystal oscillator, a USB connection, a power jack, an ICSP header, and a reset button. It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable or power it with a AC to- DC adapter or battery to get started. The Mega is compatible with most shields designed for the Arduino Duemilanove or Diecimila.

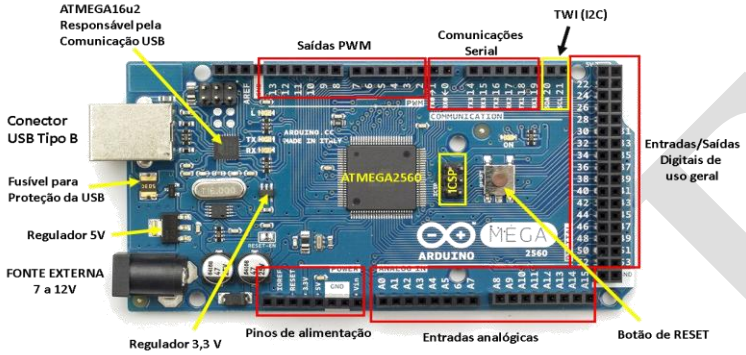

Fig 2: Arduino Board

2.2 GSM

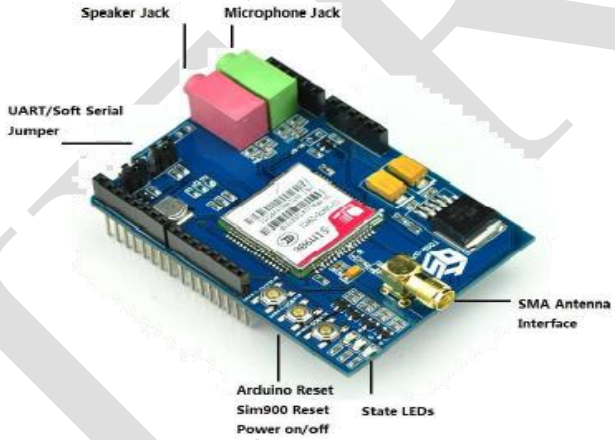

Fig 3: GSM

GPS

LS20030~3 series products are complete GPS smart antenna receivers, including an embedded antenna and GPS receiver circuits, designed for a broad spectrum of OEM system applications. The product is based on the proven technology found in LOCOSYS 66 channel GPS SMD type receivers MC-1513 that use MediaTek chip solution. It can provide you with superior sensitivity and performance even in urban canyon and dense foliage environment. Its far-reaching capability meets the sensitivity requirements of car navigation as well as other location-based applications

WORKING

The power supply3.3V to 5V to all the system .IR sensor 1 which is used to count incoming person in the bus & IR sensor 2 which count the outgoing person from the bus.The Arduino board count the difference between incoming & outgoing person in the bus & also Count the person in the bus & display the message on the LCD . The GPS Global position system used to track the current location & send the location to Arduino board.it stands GPS tracking is the surveillance of location through use of the Global Positioning System (GPS) to track the location of an entity or object remotely. The technology can pinpoint longitude, latitude, ground speed, and course direction of the target.The accuracy of GPS is 4 meters

ARCHITECTURAL MODEL

Fig -4: Architectural model

CONCLUSIONS

A low cost transportation management system based on integration of GPS and GSM data is design. The systems consist of various modules which are wirelessly linked with GSM modems. Cost effective SMS service of GSM network is used for the transfer of data between the modules. A new service, to facilitate the people who use public transport for travelling, is introduce inside the city. The service provides the user with current location information of desired buses based on which the user can adjust his schedule accordingly. The service therefore reduces the waiting time at the bus stop.

This system tracks the passengers on the basis of vehicle history and ticket number. Tracking is easy for the users of this system because they just need to enter the valid ticket number only.

REFERENCES

1) Arvind Kumar Saini ,Garima Sharma, Kamal Kishor Choure, "*BluBO: Bluetooth Controlled Robot" International Journal of Science and Research (IJSR) ISSN (Online): 2319-7064 Index Copernicus Value (2013): 6.14 | Impact Factor (2013): 4.438*

2) Aiman Ansari , Yakub Ansari, Saquib Gadkari, Aarti Gokul, "*Android App Based Robot" Aiman Ansari et al, / (IJCSIT) International Journal of Computer Science and Information Technologies, Vol. 6 (2) , 2015, 1598-1600*

3) Arpit Sharma, Reetesh Verma, Saurabh Gupta and Sukhdeep Kaur Bhatia, "*Android Phone Controlled Robot Using Bluetooth" International Journal of Electronic and Electrical Engineering. ISSN 0974-2174, Volume 7, Number 5 (2014), pp. 443-448*

4) Aniket R. Yeole, Sapana M. Bramhankar, Monali D. Wani, Mukesh P. Mahajan, "*Smart Phone Controlled Robot Using ATMEGA328 Microcontroller" International Journal of Innovative Research in Computer and Communication Engineering Vol. 3, Issue 1, January 2015'*