

Point To Point Communication Using RF under GSM

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ABSTRACT-

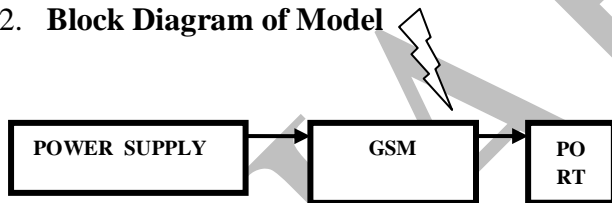
The device such as a laptop, and a Mobile phone, includes an antenna embedded which are provide communication between them using gsm module. The antenna will be substitute on a printed circuit board installed in the device. Multiple of radiating and receiving elements included by antenna for mitigating multiple effects and responding to directed antenna through rf link under the gsm mudule.

We can use wireless RF links under the GSM to connect laptop with Mobile phone through usb serial port to communicate between them. The coding to chat between personal computer and mobile phone or send a message through RF Link under GSM Module.

1. INTRODUCTION-

The gsm module which are connected to the USB serial port to communicate between the laptop and the mobile phone. Laptop are connected through the gsm module which are connected with usb serial port. The coding are defined for this module for the communication between them and then open the net beams to run the program. The net beams are offered to open the file and then gives the port and then connection process will be done. When the connection process is done the enter the mobile number where the message will be send. Then type the message and send to given mobile phone number. The will be send to that number.

2. Block Diagram of Model



2.1. block diagram

3. Components in our system

- GSM MODULE
- USB PORT
- LAPTOP
- MOBILE PHONE
- USB CABLE
- ADAPTOR
- CONNECTORS

4. Hardware System

The hardware design is based on an embedded system

Implementation using the SIM900A gsm module

The gsm module working is receiving the input and then to sampling the input and processing it by using usb port by and sending the same to the java programming as an message.

The java program uses those sampling and plot the graph on x-y axis by joining the sample points.

4.1. The GSM Module

A GSM Module SIM900A is used to collect and process message and then stores it in a serial ROM. This GSM Module had been used before at the laboratory and gave good results. The SIN900A is an rf based gsm module to install an antenna to receive the signal. It has architecture and can use signal. Its power consumption is about 25 maw (at 4 MHz). The sampling rate of the system is 1 KHz which means 1000 simples were acquired in a second and then processed in order to take signal. The signal is used to emulate the messages.

In this case, the Signal is processed to communicate between the two device such as laptop and mobile phone. Memory requirements are 1k of program memory for storing the system operation program for storing the different types of message.

4.2. USB Port

USB Port is such type of device which are connected to the adaptor. The adaptor are connected to the current to a system.

4.3. Laptop

The working of laptop is to open the application as net beams.

The laptop is the device by which the usb port is connected through the usb data cable to provide the communication between laptop and mobile phone.

4.4. Mobile Phone

A mobile phone is a phone that allows users to make calls and send text messages over long distances without wires. It is also said to be an electronic device in which communication takes place. This communication process is very useful. Without this process we cannot be communicate with each others.

4.5. Usb Cable

This is also said to be universal serial bus. It does work like connector. This usb cable is used to connect of two system. Usb cable used to connect two systems with the help of wire or cables.

4.6. Adaptor

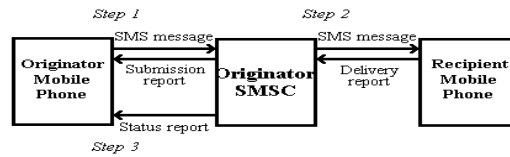
A device for connecting pieces of equipment that can be connected directly. An adaptor is a physical device that allowed one hardware or electronic interface. An adaptor is a device that converts attributes of one electrical device or system. A network adaptor provides the interface between a computer and a network connection.

4.7. Connectors

Connector is a process of connecting two system and also provide interfaces to that systems. There are hundred types of connectors. Connectors are basically used for connecting or joining purposes with the help of wire or cables.

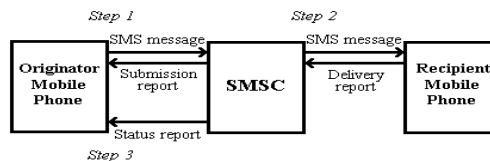
5. Circuit Diagram

5.1. Intra-Operator SMS Message



5.1. Circuit diagram

5.2. Inter-Operator SMS Message



5.2. Circuit diagram

6. Software System

The software is based on two parts design. One forgetting and processing signal which is implemented within the SIM900A. The other one is a Graphic Unit Interface easy to use by the patient. It is developed by using the Java language under Windows as operating system.

6.1. PC Software

The software consists of java code that will implement the logic of plotting the graph of the heart rate. An interface is generated that is user friendly and any one can use that interface for checking his/her heart beat graph.

7. Future scope and Conclusion:

In future to this system can either introduce as point to point communication between two device using gsm. Even can connect the system with the database of the sending and receiving messages for the future use. . Our proposed system is designed in such a way that it overcomes the defects of previously available systems. User friendliness is given much importance in our system which makes it more comfortable to use than any other existing systems. Also it is built with open source hardware which makes it cheaper. Many additional features can be implemented within this system as the message and working with that date for taking out some conclusions..

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