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E-CIRCULAR SYSTEM

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Abstract— An E-CIRCULAR SYSETEM consisting of code number was designed, and we are transmitting the data through wireless medium and data is displayed on the LCD display in the corresponding classroom or lecturer hall or some other places. The transmitter side is the principal room, and he can send the messages whatever he wants to inform to this college staff or student using pc or mobile and the transmitted message is received through the GSM modem. Then the received message is displayed on the LCD screen and at the same time alarm will be heard.

IndexTerms—LCD display,Alarm, global system for mobile communication (GSM) and PIC.

I. INTRODUCTION

It is based on the use of new technologies to improve circular system on colleges. Our research is mainly focus to reduce manpower and time consumption. The distribution of message in the current system involves, that anyone can send message. So there may be a chance of receiving fake messages. It may create some problem on receiving fake messages. To avoid this critical situation only the principal's phone number is programmed to the hardware. This system takes only that phone number and it allows to display the message on the LCD display. If the message is send from other number it will not get displayed. The message to be displayed to various classes are send through GSM. At a time the message can be deliver to many classes where the message is displayed on the LCD screen. In other cases if the message is to be displayed only to particular class separate message is created and send through the class based on the code number given to classes. It is used in urgent situation when the information is to be forwarded. At a time maximum of 160 characters are send. Separate connections with different departments in order to call particular staff or the department staff if the meetings are arranged.

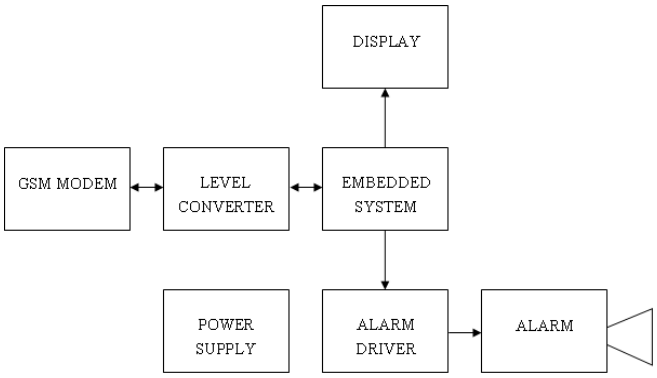
II. EXISTING SYSTEM

This section describes appropriaterelated works on the development of E-Circular system. There is nosecurity is allocatedin the existing system. By using this unsecured circular system fake messages and important circular have been sent.it does not allow any group messages to be sent through this technology. The messages cannot be sent to a particular class instead it flows through every system to which it is connected .it does not provide any authentication that the particular person is sending the message. The memory is low that it cannot able to send large information.

III. PROPOSED SYSTEM

The proposed system consists of two main units:

- Controller unit
- GSM unit.
- Alarm unit.



SOFTWARE TECHNIQUES:

MPLAB is software that is used to develop the source code of the PIC microcontroller. MPLAB is a Window based Integrated Development Environmental (IDE) for the Microchip Technology Incorporated PIC micro microcontroller families. It is allowed to write, debug and optimize the PIC micro applications' for firmware product design [13]. Besides that, this software includes a text editor, simulator, and project manager that makes programming becomes more schematic. MPLAB also support the MPLAB-ICE and PICMASTER ® emulators, PICSTART ® PLUS, and PROMATE ® II programmers. Thus shows that MPLAB is compatible for various kinds of microchip development system tools. The reason of choosing MPLAB is because it is widely used and the language is easy to understand.

Hardware requirement:

GSM(global system for mobile communication) is a specialized type of modem which accepts a SIM card, and operates over a subscription to a mobile operator, just like a mobile phone. From the mobile operator perspective, a GSM modem looks just like a mobile phone.

When a GSM modem is connected to a computer, this allows the computer to use the GSM modem to communicate over the mobile network. While these GSM modems are most frequently used to provide mobile internet connectivity, many of them can also be used for sending and receiving SMS and MMS messages. A GSM modem can be a dedicated modem device with a serial, USB or Bluetooth connection, or it can be a mobile phone that provides GSM modem capabilities.

For the purpose of this document, the term GSM modem is used as a generic term to refer to any modem that supports one or more of the protocols in the GSM..

Microcontroller is a single chip that contains the processor (CPU), non-volatile memory for the program (ROM or flash), volatile memory for input and output (RAM), a clock and an I/O control unit and time. It is designed for a small set of specific function to control a particular system. For example, microcontroller is used in wheelchair to controller the motion using remote control. The reason of using microcontroller is because the microcontroller has the ability to store and run unique programs make it extremely versatile.

An alarm device or system of alarm devices gives an audible, visual or other form of alarm signal about a problem or condition. Alarm devices are often outfitted with a siren .

A liquid-crystal display (LCD) is a flat panel display, electronic visual display, or video display that uses the light modulating properties of liquid crystals.Liquid crystals do not emit light directly.LCDs are available to display arbitrary images (as in a general-purpose computer display) or fixed images which can be displayed or hidden, such as preset words, digits, and 7-segment displays as in a digital clock.They use the same basic technology, except that arbitrary images are made up of a large number of small pixels,while other displays have larger elements.LCD display is used for displaying message.

The aim of this paper is to design a SMS driven automatic display system which can be replace the currently used programmable electronic display. To receive message display device which can programmed from an authorized mobile phone.The messages to be displayed on the LCD display send through a SMS from an authorized transmitter. Finally, this paper concludes by discussing some possible works for the future.

1.CONTROLLER UNIT:

The PIC16F877A CMOS FLASH-based 8-bit microcontroller is upward compatible with the PIC16C5x, PIC12Cxxx and PIC16C7x devices. It features 200 ns instruction execution, 256 bytes of EEPROM data memory, self-programming, an ICD, 2Comparators, 8 channels of 10-

bit Analog-to-Digital (A/D) converter, 2 capture/ compare/ PWM functions, a synchronous serial port that can be configured as either 3-wire SPI or 2-wire I2C bus, a USART, and a Parallel Slave Port.

1. GSM UNIT:

The proposed device uses GSM Modem and it can transmit and receive the messages from Mobile or Pc.sGSM Modem is used to send and receive the messages using wireless medium. It is used to Support wide range of frequencies (from 850 MHZ to 1900 MHZ for different classification of GSM networks)and also interfaced to system using USB cables. GSM input voltage varies from 5v to 30v.

2. AT COMMANDS

AT commands are instructions used to control a modem. AT is the abbreviation of ATtention. Every command line starts with "AT" or "at". That's why modem commands are called AT commands. Many o fthe commands that are used to control wired dial-up modems, such as ATD (Dial), ATA(Answer), ATH (Hook control) and ATO (Return to online data state), are also supported by GSM/GPRS modems an mobile phones. Besides this common AT command set, GSM/GPRS modems and mobile phones support an AT command set that is specific to the GSM technology, which includes SMS-related commands like AT+CMGS (Send SMS message), AT+CMSS (Send SMS message from storage), AT+CMGL (List SMS messages) and AT+CMGR (Read SMS).

3.ALARM UNIT:

Alarm is used to indicate message is received in GSM module. It most commonly consists of a number of switches or sensors connected to a control unit that determines if and which button was pushed or a preset time has lapsed, and usually illuminates a light on the appropriate button or control panel, and sounds a warning in the form of a continuous or intermittent buzzing or beeping sound. Initially this device was based on an electromechanical system which was identical to an electricbell without the metal gong (which makes the ringing noise). Often these units were anchored to a wall or ceiling and used the ceiling or wall as a sounding board. Another implementation with some AC-connected devices was to implement a circuit to make the AC current into a noise loud enough to drive a loudspeaker and hook this circuit up to a cheap 8-ohm speaker. Nowadays, it is more popular to use a ceramic-based piezoelectric sounder like a Son alert which makes a high-pitched tone. Usually these were hooked up to "driver" circuits which varied the pitch of the sound or pulsed the sound on and off.

RESULTS AND DISCUSSION

Using the proposed method, delivery of messages from main station to destination easily. The person who is sending message can send it to various class rooms and also to single class room. Messages are to be typed on a mobile or computer which could be displayed on a display unit through GSM modem. We are not using any written format this will reduce man power. Thus the information could reach the receiver quickly at right time. There is no delay in transmission of information.

IV. CONCLUSION

Now a days messages are to be displayed in a digital format. This project is used to mainly display the message in separate class rooms and even group of class rooms. Suppose the same message is to be displayed in the class rooms or department then we have to go there with a laptop and change the message by connecting it to the display board. We are designing a new display system which we can access remotely, thus utilizing GSM technology. For every message received, the system will check for the source number and if the source number is correct the controller will display the message.

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