For more Project details visit:

http://www.projectsof8051.com/sms-based-electronic-notice-board-using-gsm-modem/

Code	Project Title
1665	GSM based Matrix LED -- Rolling display

Synopsis for

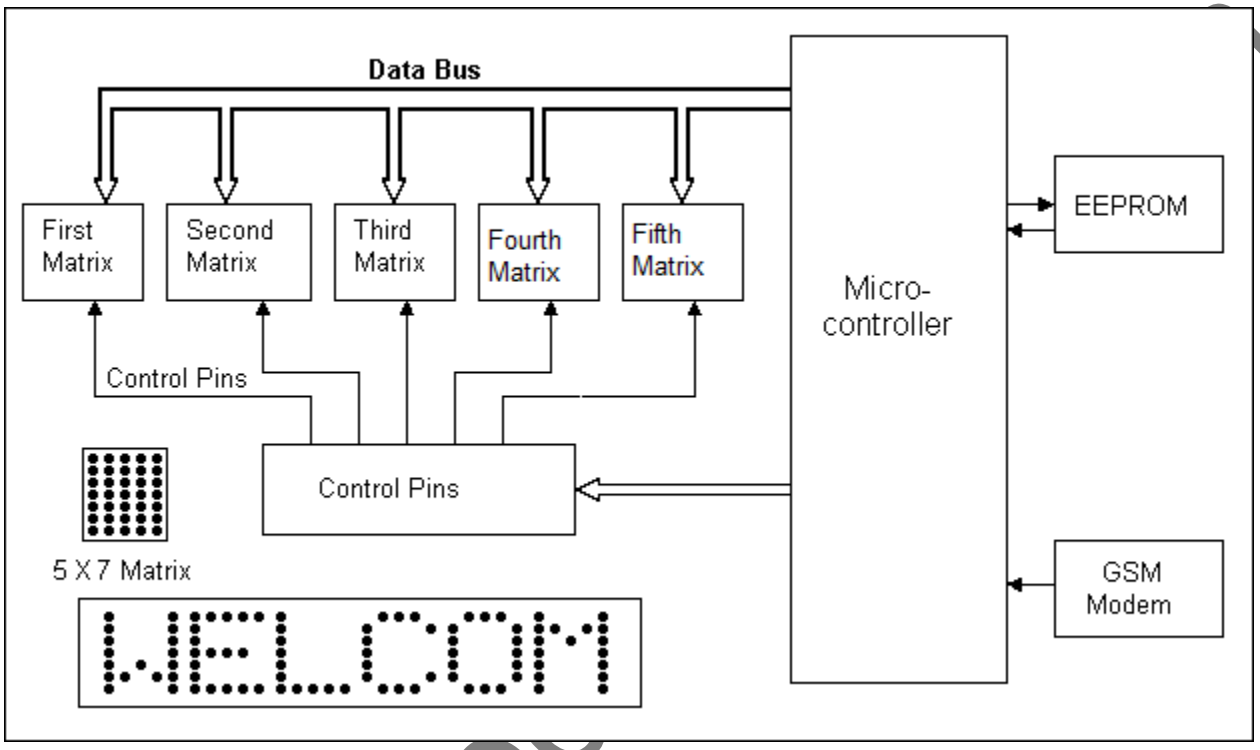
GSM based Matrix LED Rolling display

Introduction:

This project can be used for Advertising or for providing information at various places like shops, government offices, hospitals, railway stations. The Rolling display is prepared using 5 X 7 Matrix LEDs which means LEDs are arranged in a pattern consisting of 5 columns and 7 rows. A matrix of 5 X 7 LEDs contribute to a single character. Here we have used 5 characters which means 5 matrices. The actual physical dimension of single matrix is 60 mm by 60 mm, so dimensions of complete display is 360 mm by 60 mm. GSM interfacing is used for receiving data from mobile. The message received from mobile is displayed on the Rolling display.

GSM technology is used so that user can change the message from a remote location. User doesn't have to go near the rolling display to change the message.

Block Diagram:



Block Diagram Description:

It mainly consist of following blocks

1) 5 x 7 Matrix LEDs: We have to display characters in the messages, for this purpose we are going to use 5 X 7 matrix of LEDs. A single matrix consists of 5 columns and 7 rows. The actual physical dimension of single matrix is 60 mm by 60 mm.

2. Control Unit: This unit is used to select the matrices sequentially, control unit gets input from Microcontroller and then gives output to individual matrix. Only one matrix is selected at a time so as to display a character.

3. Microcontroller: This is the CPU (central processing unit) of our project. We are going to use a microcontroller which belongs to the 8051 family. The various functions of microcontroller are like

I. Reading input from Keypad and store it into EEPROM II. Sending data to Data bus so that it displays characters on the Matrix. III. Storing the data into EEPROM memory and display it later using Matrix. IV. Receiving data from the computer using serial port

4. EEPROM: We are going to use EEPROM memory, it is Electrically erasable programmable read only memory. It stores the data even if power supply is disconnected. This is used to store the characters which have to be displayed on the Matrix display.

5. GSM Interfacing: We are going to use SIM900 GSM modem GSM interfacing, the message to be displayed on Matrix LEDs will be received from GSM modem through GSM.

Application and Advantage:

1. Can be used at public transport places like bus stop, railway station, and airport. For displaying various important messages.

2. In hospitals, schools, colleges

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