Message Detection for Face Paralytic Person

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Abstract **- The inability to move the muscles of the face on one or both sides is known as face paralysis, which may affect the ability of the patient to speak, blink, or communicate through natural facial expressions. The well-being of the patient could also be negatively affected. Embedded is the combination of both hardware and software and used as a means to detect facial paralysis. It is important in the development of standardized system for medical assessment, treatment, and monitoring; additionally, they are expected to provide user-friendly system for patient monitoring at home. In this work, for face paralytic persons message detection system is used. The people who are suffering from this disease can tell their problem through SMS. It provides the availability due to development of low-cost system and because of the low cost, many people will be able to afford this system and it will be easily available in the medical centers. Through switches, GSM Modem and Microcontroller and other components, there will be the successful completion of message detection for face paralytic persons.**

Index Terms **- facial paralysis, Embedded system, Message detection, Low-cost system.**

1.INTRODUCTION

"Message Detection for Face Paralytic Person" is an embedded project with GSM modem. Many people are affected to Paralytic diseases in daily life and they are not able to tell our view. So that we can say this (message detection for face paralytic person) project is helpful for the person who is suffering from this disease. Paralytic person can tell his problem through SMS. Embedded is the combination of both hardware and software. Hardware in this field is electronics hardware whereas the software is the programming of the microcontroller. So, our project is to safe life of human beings.

2.PLATFORM USED

Software Requirements:

- Batronix Prog Studio for programming of Microcontroller
- Orcad for Circuit Designing
- Pads for PCB designing

Hardware Requirements:

- Microcontroller 89c51/89s52
- Crystal Oscillator
- Resistors
- Diodes
- Capacitors
- Transformer
- Connectors
- GSM Modem
- LCD display
- Regulator
- Switches

3.CIRCUIT DIAGRAM AND COMPONENTS LIST

Item	Quantity	Reference	Part
1	2	C1, C3	C EL5 10M/63V
2	1	C2	C CER 104PF
3	2	C4, C5	C CER 39 PF
4	1	C6	C EL10 100CM/35V
5	4	D1, D2, D3, D4	1N4007
6	5	J1, J4, J5, J6, J7	RLMT 03 (M)
7	1	J2	LCD 16 (M)
8	1	J8	RLMT 06 (M)
9	1	RPAD1	SIPO9 4K7
10	2	R1, R4	R 1K
11	1	R3	R 47K
12	1	SW1	PB2PS
13	1	U1	LM7805
14	1	U2	89C51
15	1	Y1	XTAL 11.0592MHz

Table of components

The circuit diagram consists of all the components used in this SMS based system. Paralytic affected

person wants to say anything then according to his need, he presses the switch.

He presses first switch then first message which is "WATER REQUIRED" will be display on a particular mobile number. If he presses second switch then second message which is "WASHROOM NEEDED" will be display on a particular mobile number. If he presses third switch then third message which is "NOT FEELING WELL" will be display on a particular mobile number. When paralytic affected person presses anyone switch then GSM modem sends message on a particular mobile.

The person whose suffer from the face paralytic, this project is only made for them. If anyone presses the button, then MSG is sent to caretaker.

In this project we have used different hardware and software

Step down transformer- which is used to convert from high voltage AC to low voltage AC.

Bridge Rectifier-It is used to convert 9-15 V AC made by the transformer into DC, the converted DC will be in pulse rated form

Capacitor filter-It is used to remove the ripples. Ripples are the remaining part of AC in DC. It is an electrolytic capacitor of rating 1000M/35V.

The capacitor of 10M/65v used again for filtering to give pure dc. When the frequency is high ceramic capacitor is used.

Regulator-Now, our circuit needs 5V so, we have used LM7805 regulator to regulate the voltage to 5V.

The main part of the project is Microcontroller.

Microcontroller contains two main parts:

1. Crystal Oscillator- It determines the processing speed of controller to generate frequency of 12 MHZ crystal oscillator is used

2.Reset Section-It consists of a rc network consisting of 10M/35V capacitor and one resistance of 1k. This section is used to reset the controller.

GSM Modem- It helps to give the message to the caretaker. GSM Modem is the hardware device that uses GSM mobile telephone technology to provide a data link to a remote network.

So, there is a screen called Liquid crystal display. The display of LCD is 16*2. When we will on the screen for first time, on the display there will be message "waiting for MODEM". We have inserted a SIM in the GSM MODEM through which the message will be transmitted on particular mobile number, when we will press the switch. 8051 programming is done on Batronix Prog Studio for programming of microcontroller assembler. The number of that SIM which has been inserted in the GSM MODEM is inserted by the Batronix Prog Studio for programming of microcontroller Software. Now when the person who is suffering from this disease will press the switch the message will automatically send to that particular mobile number.

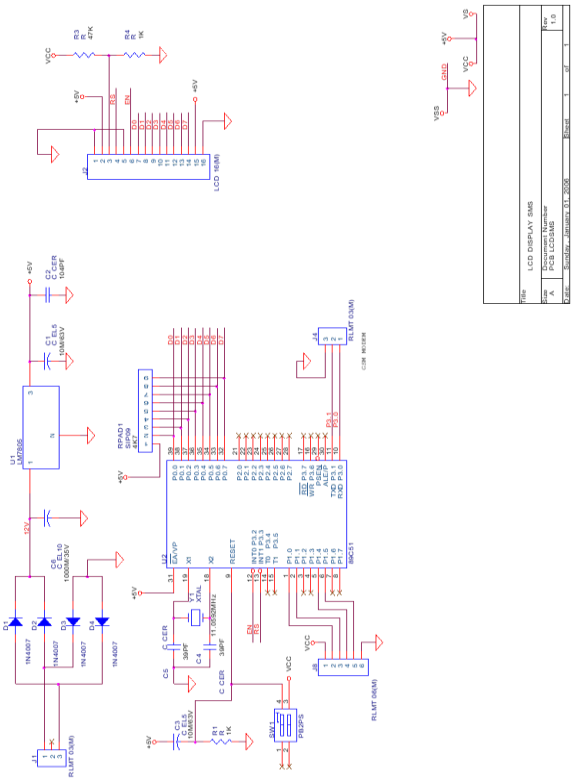

Figure.1

As we know here, PCB (Printed Circuit Board) is used to embed circuits for running of hardware. It's a layer coated with copper and allows proper soldering without any short circuit. For PCB designing Orcad software is used as it is a suite of products for PCB Design and analysis that includes a schematic editor, an analog/mixed-signal circuit simulator and a PCB board layout solution.

4.CONCLUSION

- The developing of this project has been a learning experience for all team members.
- It will be helpful for people who have face paralytic as it will be a low-cost system.

- The project has achieved its set target well in "Time" and "Budget".
- Based on cutting edge technology called Embedded development which is niche in the market today and its future is much bright.
- The product developed is ready for implementation and can bring financial benefits too by sale in the market.

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