DESIGN AND DEVELOPMENT OF TOUCH SCREEN MOBILE PHONE USING MODEM, GLCD, BUZZER AND TOUCH SCREEN BASED KEYPAD

The project aims at building a mobile phone with user friendly accessing and (with some) innovative features. Touch screens provide fast access to all types of digital media, with no text-bound interface getting in the way. Faster input means better service. Using a touch interface can effectively increase operator accuracy, reduce training time, and improve overall operational efficiencies, thus keeping costs down, a properly designed touch interface can improve each operator's accuracy.

Touch screens are practical in automation, which has become even simpler with touch screen technology. Owners familiar with the icon system appreciate touch screens that make automation systems user friendly. They not only provide user-friendly interface but also allows us for a faster access with different features. The life of the device can also be increased with the help of touch screens.

In this project we are making use of a GSM modem for communication purpose. We are going to construct the Graphical LCD with touch screen for user interface purpose. This graphical LCD displays the SMS and call related information. It also provides the facility to make and receive the calls using a numeric keypad.

The controlling device of the project is a Microcontroller to which input and output modules are interfaced. The Microcontroller is programmed using Embedded C language which provides effective environment for performing the task of the project. This project can be developed as a mobile phone with the help of touch screen based keypad, graphical LCD, buzzer. By this we can completely design our own mobile with our own features.

Features:

1. It can automatically send SMS messages based on the preset conditions.
2. It can receive SMS messages and send the reply automatically to predefined numbers.
3. Make and receive calls by using touch screen based keyboard.
4. It automatically manages the incoming phone calls. This feature helps in avoiding the unnecessary calls (like customer care etc.)

Advantages:

1. Touch screen based user-friendly interfacing.
2. Low power consumption.
3. Long life.
4. Fast touch response.

This project provides exposure to the fallowing technologies:

1. Touch screen sensor.
2. Graphical LCD.
3. Operation of GSM modem with the help of commands.
4. Interfacing of Touch screen to microcontroller.
5. Conversion of AC supply to DC supply.
6. Embedded C programming.
7. Design of PCB.

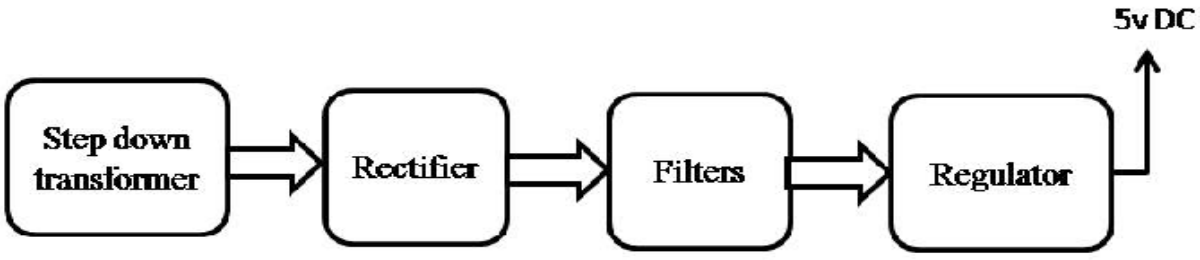
The major building blocks of this project are:

1. Regulated Power Supply.
2. Microcontroller.
3. GSM modem.
4. Crystal oscillator.
5. Touch Screen Sensor with driver.
6. Graphical LCD with driver.
7. Buzzer with driver.
8. LED indicators

Software's used:

1. PIC-C compiler for Embedded C programming.
2. PIC kit 2 programmer for dumping code into Micro controller.
3. Express SCH for Circuit design.
4. Proteus for hardware simulation.

Regulated Power Supply:



Block diagram:

Design and development of Touch screen mobile phone using Modem, GLCD, Buzzer and Touch screen based keypad