Zigbee based wireless Voice to Text translator in Airlines/Hospital assistant system for blind/Illiterates.

The main aim of this project is to construct a user friendly voice to text translator system which finds its applications in Airlines, Hospitals etc..,. As the system is voice based it makes operating the system easy even for blind and illiterates. The language of translated text can be set as user requirement. But, mostly English is preferred as it has prominence of international language.

In this project we use a speech recognition system which recognizes the spoken command by the user and compares it with already existing database and also Zigbee wireless communication between two systems. Speech is the primary and most convenient means of communication between humans. Whether due to technological curiosity to build machines that mimic human's or desire to automate work with machine, research in speech recognition as a first step towards human-machine communication. Speech recognition is the process of recognizing the spoken word to take necessary actions accordingly.

ZigBee is a wireless technology developed as an open global standard to address the unique needs of low-cost, low-power, wireless sensor networks. Zigbee is the set of specs built around the IEEE 802.15.4 wireless protocol. As Zigbee is the upcoming technology in wireless field, we had tried to demonstrate its way of functionality and various aspects like kinds, advantages and disadvantages using a small application of controlling the any kind of electronic devices and machines. The Zigbee technology is broadly adopted for bulk and fast data transmission over a dedicated channel**.**

This project consists of Zigbee based system that transmits the wireless signals according to the voice input given by the user. At the receiver (airhostess) end the information will be displayed on GLCD in English language. Here when the user announces the voice command stored predefined by the user while boarding the plane,

then micro controller transmits that information through Zigbee based transmitter. The information received by the Zigbee receiver and fed to the controller at that system which process the information and displays the appropriate information relating to data received will be displayed on GLCD.

The features of the project are:

1. Very useful even for illiterates.
2. Voice based user input.
3. Faster and secure data transmission.
4. User friendly and easy to install.
5. Helpful in abroad to express user's needs.

This project provides us with the learning's on the following aspects:

1. Interfacing speech recognition module with Microcontroller.
2. GLCD Interfacing with Microcontroller.
3. Zigbee communication.
4. Embedded C programming.
5. PCB designing.

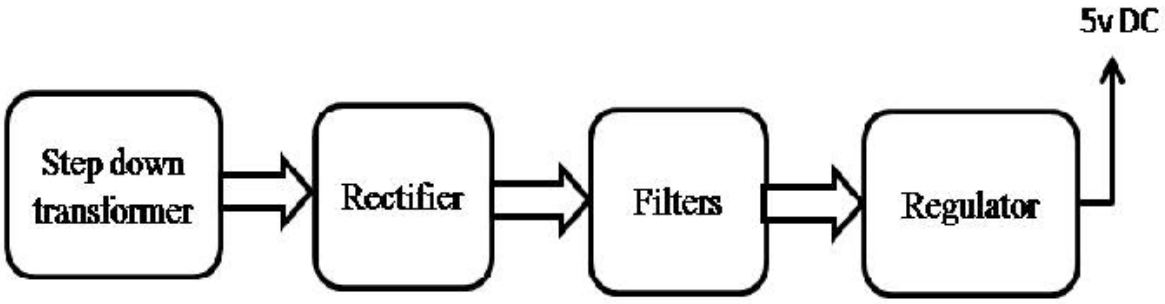
The major building blocks of this project are:

1. Regulated Power Supply.
2. Microcontrollers.
3. Speech recognition module.
4. GLCD with Driver.
5. Crystal Oscillator.
6. Zigbee modules.
7. LED Indicators.
8. Buzzer with driver.

Software's used:

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

Regulated power supply:



Block diagram:

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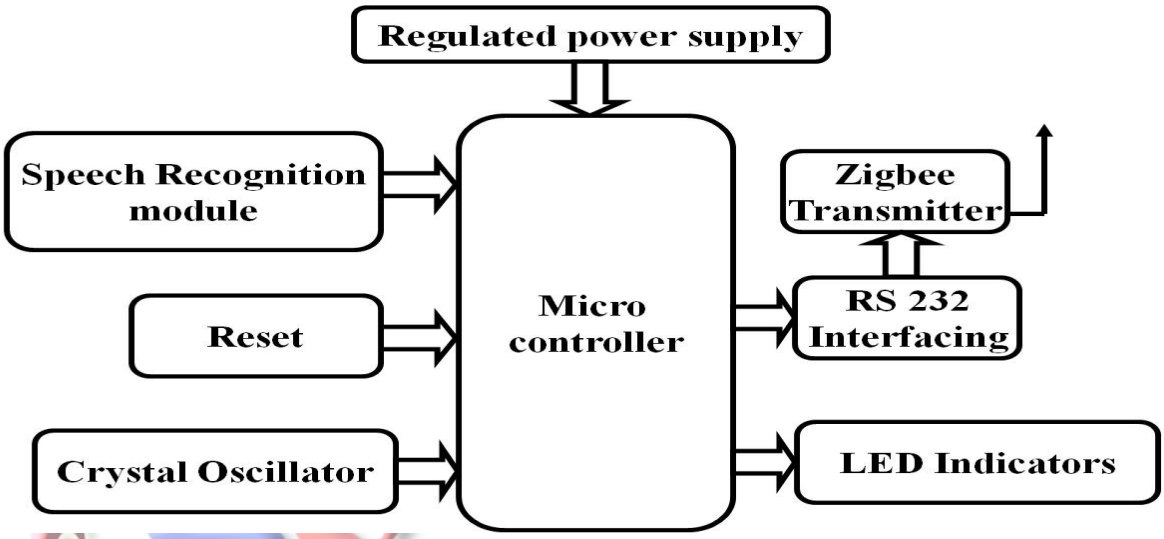
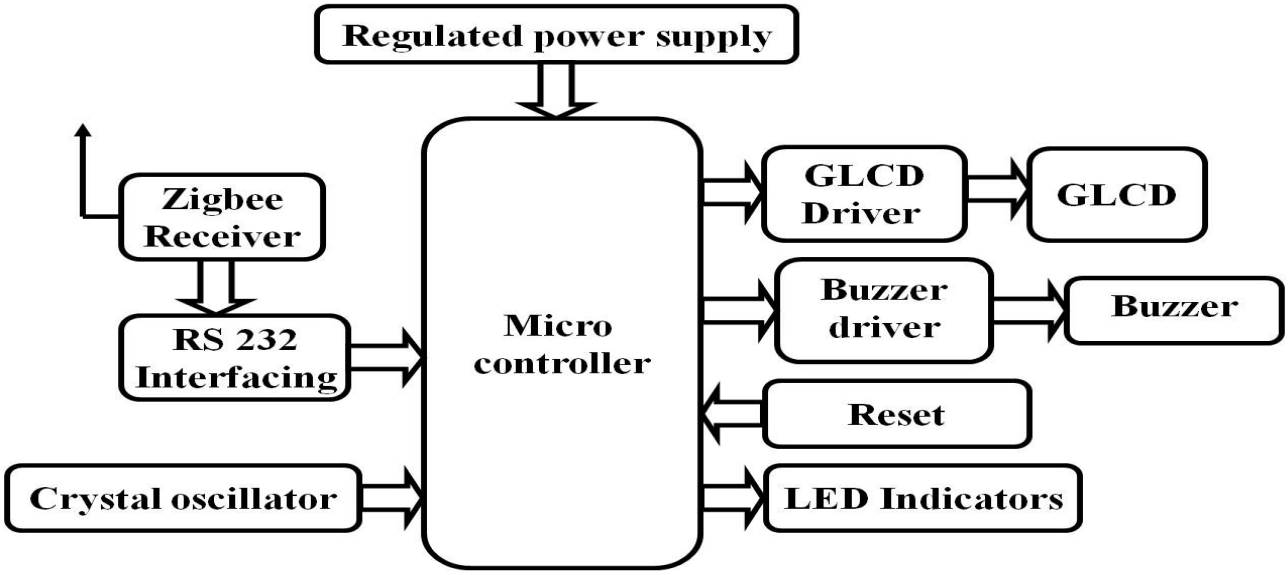
1. Transmitter



Zigbee based wireless Voice to Text translator in Airlines/Hospital assistant system for blind/Illiterates.
1. Receiver

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