RFID AND GSM BASED INTELLIGENT COURIER MAILBOX SYSTEM

As the time moves the life style of the persons has completely changed and there is no time for the people for micro management of every issue personally. So, this is the right time to provide some space to the technology into our lives for monitoring the issues which requires our personal presence for the things to happen. One among those issues which require our personal presence is receiving the courier which is sent back if we are not present at the time the courier boy comes to our house. This may lead to the delay in receiving the data and in some scenarios it may also lead to tough situations. So our project aims in providing a very reliable and very user friendly solution to overcome this kind of problem.

As we know the advancements in the Radio Frequency and GSM technologies and making use of those existing technologies we can design a device which is capable of identifying the arrival of courier and forward the same to the receiver and also send an acknowledgement to the courier office so that they do not require the signature of the particular person for whom the courier is meant for. The basic idea of the system is to employ an RFID tag to the courier and send the identity number to the receivers mobile. The receiver of the courier will have a letter box which has an RF reader and a dedicated GSM modem in it. As soon as the courier boy drops the letter in to it the RF reader reads the identity number of the tag and informs the same to a micro controller and compares it with the identity number send by the courier office and if both are one and the same then it sends message to the receiver and also to the courier office about the arrival of the courier.

To design the entire system we require a microcontroller which acts as a medium of communication between the RF reader and the GSM modem. The major advantage of this system is the presence of the GSM modem enables the device to communicate with the receiver no matter where ever he was present on the globe.

www.mycollegeproject.com   Ph: +91 9490219339, 040-23731030
Ameerpet: A-8, 2nd floor, Eureka court, beside Image hospital, Ameerpet, HYDERABAD 73.
Santoshnagar: Opp: Magna Hypermarket, Santoshnagar X-Roads,HYDERABAD – 59.

Features:

1. GSM based wireless courier detection.

2. Low power consumption.

3. Automatic courier reception notification.

This project provides exposure to the fallowing technologies:

1. RFID tags.

2. GSM modem.

3. Interfacing GSM modem and microcontroller.

4. Embedded C programming for microcontroller.

5. Design of PCB.

6. RF reader.

The major building blocks of this project are:

1. Regulated power supply with voltage regulator.
2. RF reader.
3. RF tag.
4. Microcontroller.
5. GSM Modem.
6. LED Indicators.
7. Buzzer.
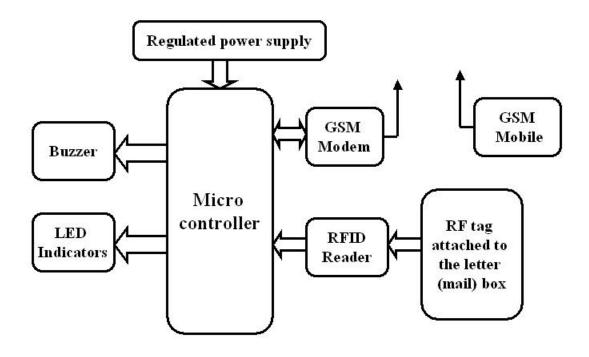
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Block diagram:

RFID and GSM based intelligent courier mailbox system

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