E-LICENSE SYSTEM WITH RTO CONTROLE ROOM MANAGEMENT SYSTEM

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ABSTRACT: *Driving license system is the system which is very difficult task for the government to monitor and control over. In this project, all the citizens' images will be scanned and recorded. Whenever a citizen breaks the traffic rules, the police scan his thumb image and check through the system for his record. Again, the exact location of the traffic police can be located with the help of GPS connected to the RTO control unit in the control room. The biometric based driving monitoring system is very efficient and very convenient to monitor.*

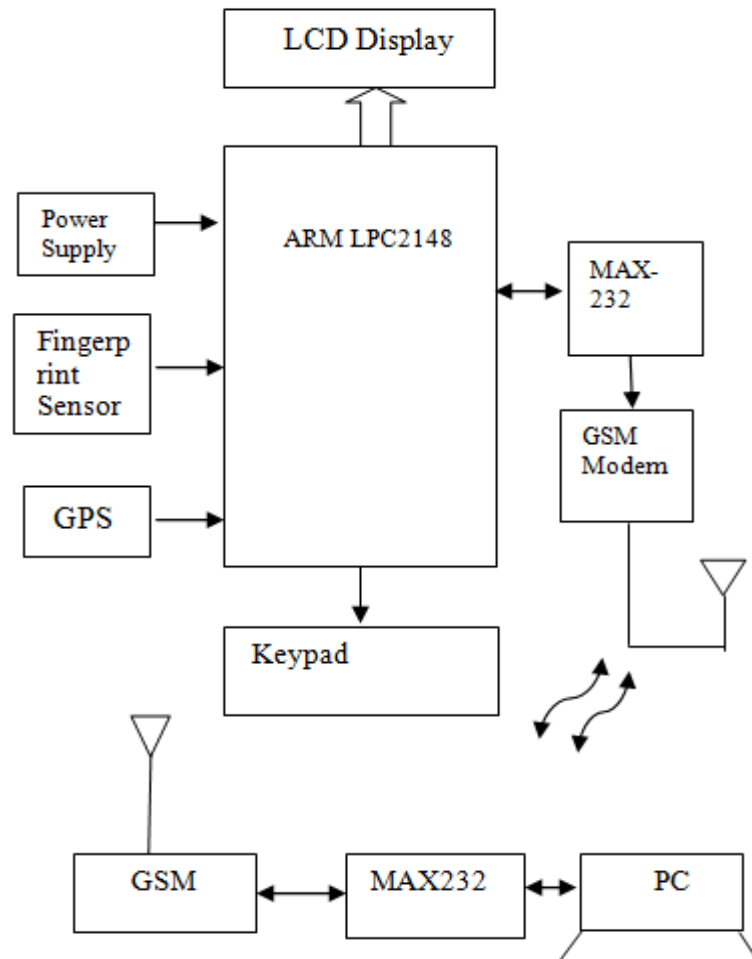*Keywords: ARM, GPS System, Keypad, GSM modem, Fingerprint module.*

INTRODUCTION

In the current system the identification of the driving license is done through the machine which detects the information stored in the microchip fixed in to the physical driving license. Our project system the communication is done through the GSM modules through sending and receiving SMS. The system consist fingerprints acquisition module, processing, wireless transmission, fingerprint matching, and verification process. From some past years the issues of fake identities has increased. So to solve this problem we have proposed the smart wireless license verification which is the low cost and highly efficient than the current system.

DRAWBACKS IN EXISTING SYSTEM

1. Completed process for getting the license.

2. It is very time consuming.

3. The physical paper or card is used which is easily duplicable.

4. Every time the license paper/smart card need to carry

5. More corruption chances.

6. Problem of physical license/Smart card damaged or lost.

BLOCK DAIGRAM

BLOCK DIAGRAM DISCRIPTION

In the block diagram of our system the heart of the system is the controller which is the main unit. It will monitor and control all the processes provided by peripherals. If the police want to check someone's driving license then he will take the thumb impression of the victim and then this sent to in terms of the codes to the traffic control room monitoring system through the SMS using GSM module interfaced to the system. The real time location of the police man will be sent to the control room using the GPS module interfaced. There are two sections in this project. First transmitting and other one is receiving.

TRANSMITTING SECTION

In transmitting section take the fingerprint of the driver. Then the output of fingerprint module will be given to the ARM. GSM is connected to arm using RS232. Then through GSM the data is in the form of hexadecimal is transmitted to the base station. Keypad is interfaced with ARM. Keypad is programmed in such a way that every key is given certain function. Key 1 is pressed then it takes fingerprints.

Key 2 for drunk and drive likewise various function are given. The receiver will check for the similar data in database. If it matches the data stored then it will send back the message that license

is "VALID". If the fingerprints do not match then it sends back the message as "NOT VALID" to the transmitter. E-LICENSE Again the location of the RTO will be send to the RTO server.

RECEIVING SECTION

At the recipient side of the framework key part is RTO server in which the whole database of all the substantial permit holders alongside unique finger impression put away. All the charge message of the unique mark information will be gotten by the GSM at the accepting server side. This string will be contrast and information put away at the database. What's more, for the legitimate unique mark the details are sent to the RTO unit.

In this System, ARM LPC2148 is used because it has two inbuilt input output ports which are required in this system. Also LPC2148 operates on 3.3v, so power consumption is also less. The GSM module is used in this system which is advanced technique than Bluetooth and ZIGBEE. Fingerprints module R305 is used because it is easily interfaced with the ARM LPC2148 and easily available.

It speaks to a system which incorporates fingerprints module alongside GSM module. At whatever point activity police needs to check permit of somebody he/she will take impressions of thumb which sends the demand as far as message to RTO office. At that point subtle elements of individual will be given by RTO office to activity police with the goal that he can check for legitimate driver. Unique finger impression module and GSM are interfaced utilizing ARM. ARM will likewise be interfaced with keypad and LCD display.

HARDWARE DESIGN
1. ARM LPC2148

The LPC2148 microcontroller is based on a 32-bit ARM7TDMI-CPU with real-time emulation and embedded trace support that combine microcontroller with embedded high speed flash memory of 512 kB. A 128-bit wide memory interface and unique accelerator architecture enable 32-bit code execution at the maximum clock rate. LPC2148 is ideal for applications where miniaturization is a key requirement, such as access control and point-of-sale. Serial communications interfaces ranging from a USB 2.0 Full-speed device, multiple UARTs, SPI, SSP to I2C-bus and on-chip SRAM 32 kB, make these devices very well suited for communication gateways and protocol converters, soft modems, voice recognition and low-end imaging, providing both large buffer size and high processing power. Various 32-bit timers, single or dual 10-bit ADC(s), 10-bit DAC, PWM channels and 45 fast GPIO lines with up to nine edge or level sensitive external interrupt pins make the semi controllers suitable for industrial control and medical systems

2. FINGERPRINT SENSOR R305

This is a fingerprint sensor module with TTL UART interface for direct connection to ARM or to PC through MAX232 / USB-Serial adapter The user can store the fingerprint data in the module and can configure it in 1:1 or 1: N mode for identifying the person. The FP module can directly interface with ARM. A level converter (like MAX232) is required for interfacing with PC serial Port
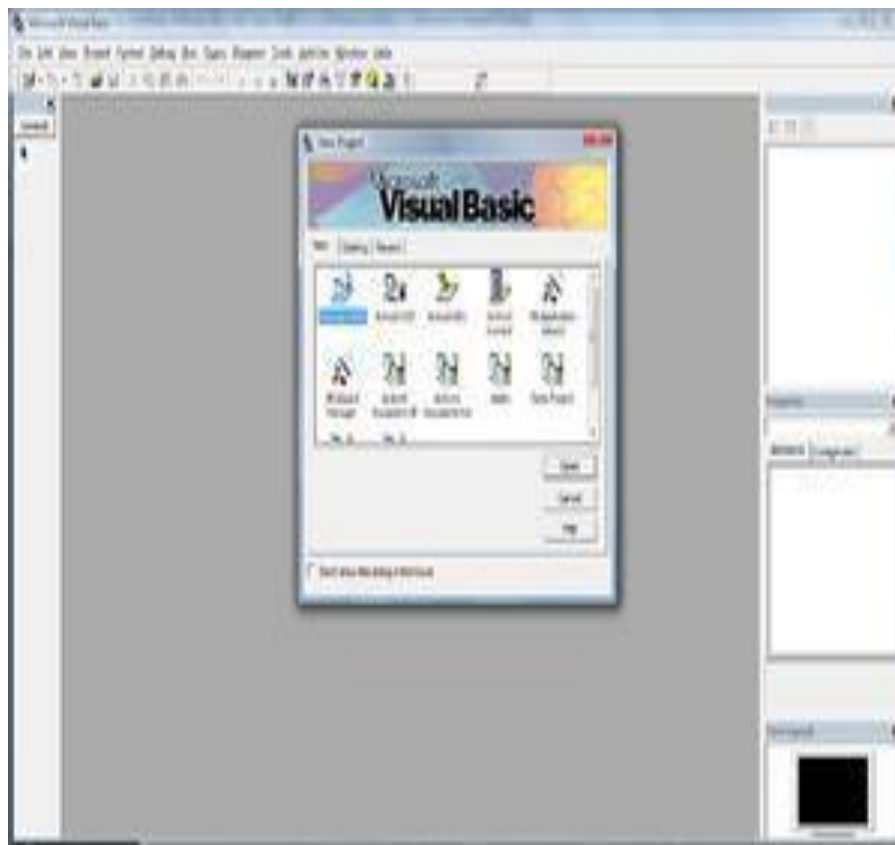
3. GPS

This plan adjusts the present driving GPS innovation. The recipient has a Serial Communication facility which is utilized to interface with the outside gadget like PC or ARM controller. The receiving antenna of the GPS beneficiary gets the signs, exchange the information to ARM controller's serial communication pins for further processing and location identification. The prepared information can be exchanged to the GSM through serial communication and to the owner

4. GSM

Messages sent by the user are received by the GSM module. Micro controller will play important role in sending and receiving commands to GPS. Micro Controller extracts the location name and send the same to the GSM via serial communication. Micro controller will find location and send details to GSM Mobile using serial communication system.

SOFTWARE DESIGN Visual Basic

Visual basic is a third-generation event-driven programming language. The companies will create a server with the help of visual basic software and SMS access for its database.
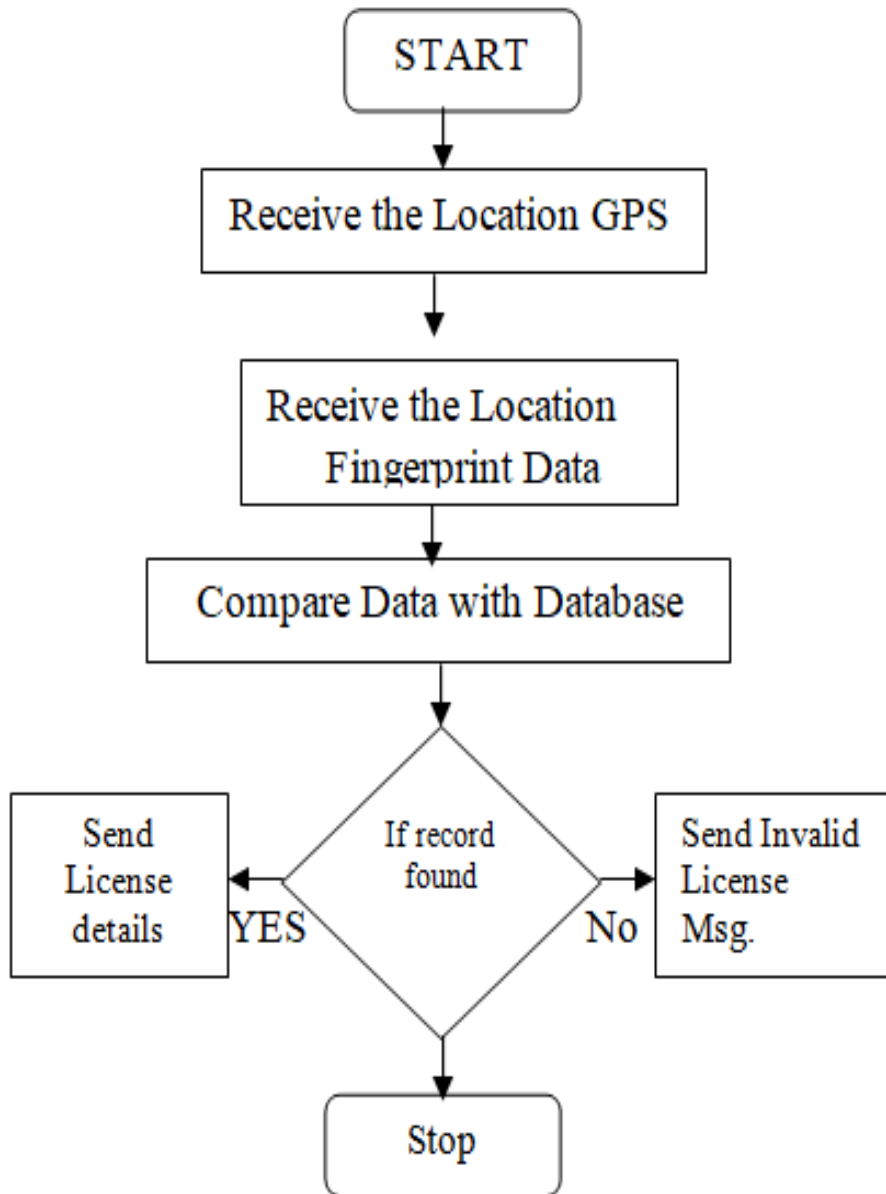
FLOWCHART
RTO SERVER SIDE

Fig. Flowchart1.
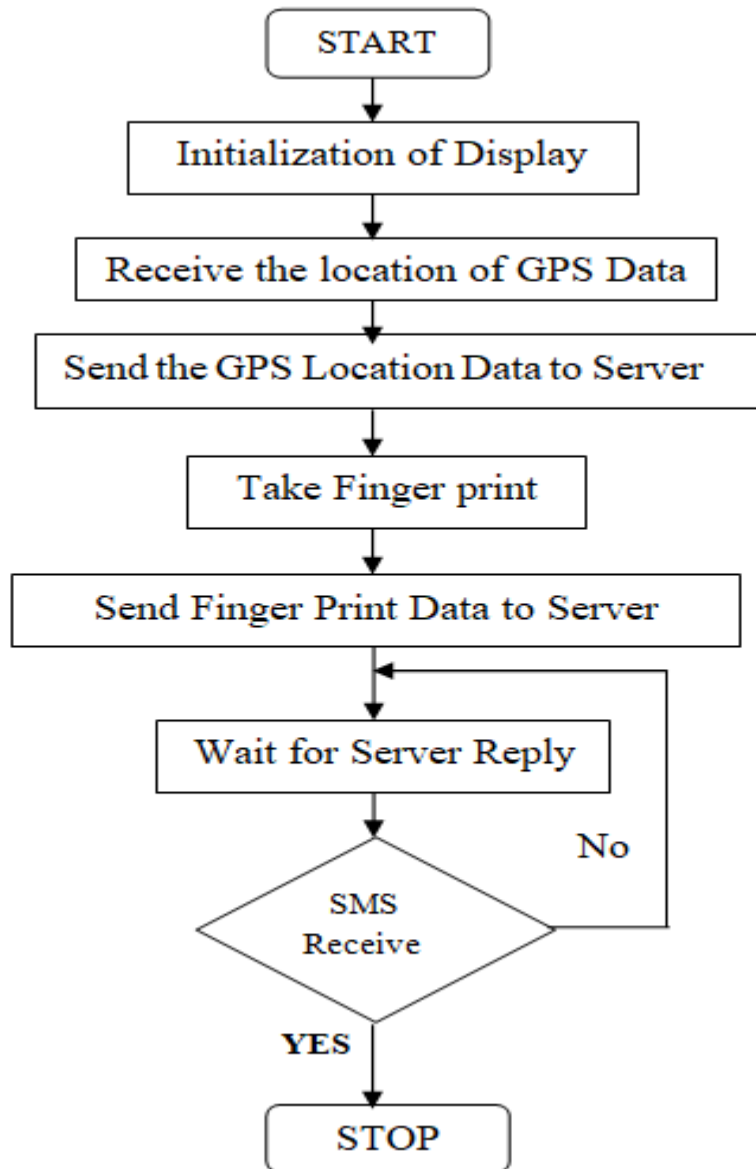
RTO UNIT TRANSMITTER SIDE

Fig. Flowchart 2.

RESULT

The RTO control room will create a server with the help of visual basic software and SMS access for its database. Using Fingerprint Module, device takes users fingerprints and sends to the server. These fingerprints scan to the server and send the signal to the device and device shows "Valid" or "Invalid". The Location of the device is shown in Google Maps. The results snapshot are shown in below.

CONCLUSION

E-License system will be the best invention which will definitely helps in maintaining the centralized national database and again as the finger will act as a license it's not required to carry the license. Its also helps in reducing the corruption.

ACKNOWLEDEMENT

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