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Advanced Ordering Systems for Restaurants

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Abstract- day to day life of an individual is widely effected by development in versatile administration and remote innovation in this developing era. To meet up the growing advancement in today's era, some early endeavours are utilized. There has been an enhancement in every perspective of technology but a slack in sustenance requesting system. Thus it is a creative measure to showcase a restaurant's menu in a touchscreen based system. The arrangement of menu card is easily understandable by a touch screen, IR sensors and a basic route method utilizing(PC).

***Keywords*: Bluetooth, GLCD, IR Interface.**

I. INTRODUCTION

This paper proposes the utilization of robotic systems in cafeterias providing capable domain with assistance of GLCD and touchscreen sensor. It does not employ server for taking orders from the table. A display system near the work area cardinally organizes the menu and a touch screen helps in arranging the menu. A huge array of computerized media can be accessed quickly with the use of touch screens and there is no burden of content limiting interface. The predominant administration results from faster information. The better accuracy of administration, increased operational effectiveness and better estimation of preparation time can be available with touch interface. The hands-on accessibility of computerization is offered by touch screens and innovation of touch screen has led to lesser number of difficulties in computerization.

II. LITERATURE REVIEW

The work by Jingjing Wang [1] designed a system for ordering food wirelessly. The data input is realized in-depth by technical operation of 4*4 system of matrix keyboard. Another researcher N.M.Z. Hashim et-al proposed Bluetooth(SOS) system for ordering the food smartly. Orders are placed by using a small keyboard and transmission is done by Bluetooth. Asan, N. Badariah [2] proposed a smart ordering system based on zigbee. It makes an order in a cafeteria by using a hand tool. Professor Sagar Soitkar proposed AVR based digital food ordering system that uses touch screen. An efficient, easy and low cost system for ordering food in a restaurant by a digital menu has been proposed in this paper. Bhanu Siramshetti extended the zigbee[3] based service by taking a step forward. Kiran Kumar reddy et-el combined android phone and developed an application containing details of food items of a particular application and employed Bluetooth technology for that. A tablet/ smart phone was an input unit and a PC was an output section. The data base was stored by using a cloud-based server and it was a secure and inexpensive way.

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III. PROPOSED SYSTEM

The technique proposed here desires to develop an economically efficient framework which is capable of working in small scale restaurants[4] and does not require immense reserve measures in developed framework [5].

IV. PICAT89C52 MICROCONTROLLER

A separate transport for guideline and information that permits synchronous access of information memory and program is provided by PIC microcontroller. PIC is a native RISC bolstered microcontroller which is manufactured in CMOS. The union of RISC and CMOS brings out the small branch count and it utilizes lesser power. The biggest advantage of using CMOS is that it is insusceptible to noise as compared to other strategies.

Fig. 1. PICAT89C52

It is a high performance RISC CPU, having performance speeds of 20 MHz dc clock input and 200 ns of instruction cycle. It has implied, direct and relative addressing modes and is employed with oscillator start up timer and power up timer. It has programmable code protection and power preserving sleep mode. It uses high speed and low power CMOS EEPROM/EPROM technology.

V. RECEIVER AND TRANSMITTER

A. Block diagram of a transmitter

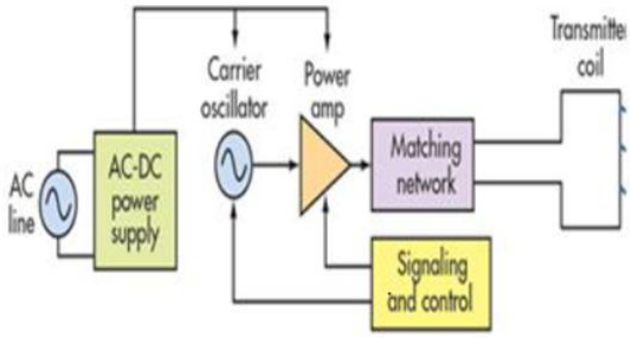

Fig. 2. Transmitter's Block Diagram

The AC-DC power supply is fed with alternating voltage as an input and output is fed as an input to power amplifier and carrier oscillator. The signal as an input to a carrier oscillator is provided by signalling and control system which also controls the level of a power amplifier. The matching network is fed with power amplifier's output and the passing of signals from a transmitting coil to receiving coil is done.

B. Block diagram of a receiver

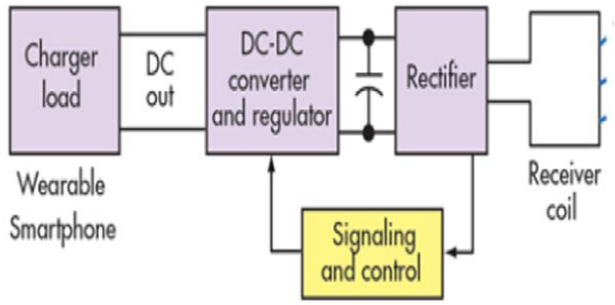

Fig.3. Receiver's block diagram

The signals from a transmitting coil are received by a receiving coil and are fed to a rectifier which converts alternating current to a direct current and then the output of a rectifier is fed to a capacitor and signalling and control system. The capacitor charges and stores the electric field and is discharged afterwards. The output generated by a capacitor and signalling and control system is fed to a regulator and DC-DC converter which is responsible for voltage regulation and giving DC output to a wearable mobile phone.

C. AT89C52 Microcontroller

The AT89C52 is a four port and have total 32 input/output lines out of which 8 I/O lines are equipped in every port. The DATA is worn out by these ports and the state of a sensor or a switch is interpret by these ports. Most of the ports are dual function having two different functions.

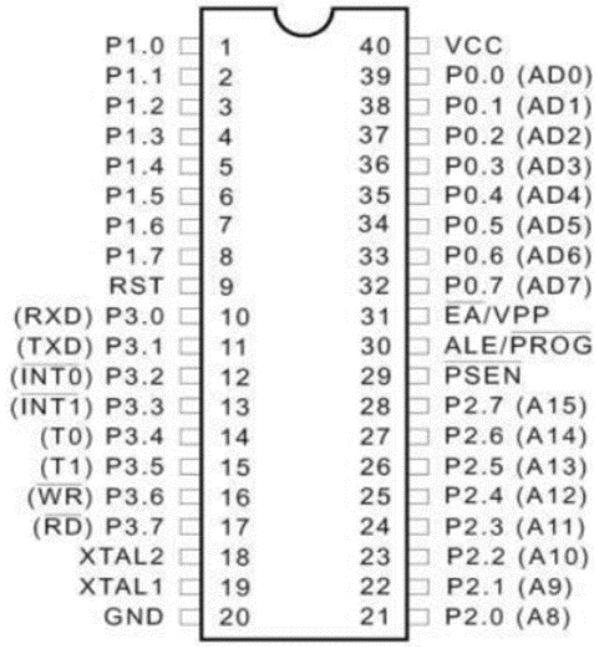

Fig. 4. AT89C52 Microcontroller

VI. BLUETOOTH AND TOUCH SCREEN

Bluetooth uses UHF radio waves in ISIM band ranging in between 2.4 to 2.485 GHz and is responsible for trading information in nearby areas from mobile phones and builds an individual zone system (PANs). The telecom seller company Ericsson invented Bluetooth in 1994 and initially it was considered another option to remote RS-232 information links. The "Bluetooth Special Interest Group (SIG)" has overseen Bluetooth, having more than 30,000 parts in the areas of figuring, system administration, and transmission and shopper electronics. The progress of detail is supervised by a Bluetooth SIG which is responsible for ensuring the trademarks and dealing with the capability programs. For advertising one's Bluetooth device, a maker is advised to be able to meet norms of Bluetooth SIG. The innovation is applied with authorized system of licences. A touch-sensitive PC or a resistive touch screen is made up of two versatile sheets which is isolated by any air opening and secured by a resistive material.

VII. RESULT

(a)

(b)

Fig. 5. Touch Screen

VIII. CONCLUSION

In this paper, we designed an intelligent restaurant self-service ordering information system based on ZigBee wireless technology, this system can improve the management level of traditional catering enterprises, can reduce the cost of catering enterprises in financial accounting. It also can improve human resource utilization, and dramatically speed up the serving speed, speed up the checkout speed. This system can real-time receive, store, analyze, display and analysis datas for each user. It is flexibility and portability which have very broad application
prospects.

REFERENCES

1. S. Guiling and S. Qingqing, "Design of the restaurant self-service ordering system based on ZigBee technology," in *2010 6th International Conference on Wireless Communications, Networking and Mobile Computing, WiCOM 2010*, 2010.
2. A. N. Badariah, N. N. Azreena, and S. Zulkifli, "Zigbee-Based Smart Ordering System (S.O.S)," *Int. J. Comput. Trends Technol.*, 2014.
3. K. Hasnan, A. Ahmed, Badrul-Aisham, and Q. Bakhsh, "Optimization of RFID network planning using Zigbee and WSN," in *AIP Conference Proceedings*, 2015.
4. G. Prema, "Smart Menu Ordering System in Restaurant," *Int. J. Electron. Commun. Enginerring*, 2017.
5. R. R, S. N. Rao, S. Noronha, U. J. Shetty, W. S. Mathias, and D. B. A. H V, "Automatic Order Management System for Restaurants," *IJIREEICE*, 2017.