

Touch Screen Menu and Table Status Indication in Hotels/Restaurants

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Abstract--- In this paper ,a new and innovative kind of Hotel system is shown . Which works on wireless communication. In this system the problem of misallocation of ordered food items is solved by using touch screen menu at table. Not only this but table status can be seen from waiting longue.

Keywords: touch screen, menu, table status

I. INTRODUCTION

In today's world every person is so busy in work that many times they don't find time to cook at home. So they opt for taking meal at outside in hotels/restaurants. But if all tables are busy then patron has to wait in waiting longue.

But to make Hotel/restaurants business successful a better service system is the key factor ease of functioning improves overall quality of service of hotel system and gives a good experience to customer. So customer likes to come in future also at hotel. The no. of customers increases day by day due to well managed hotels system. To achieve that kind of qualitative hotels/restaurants service, paper menu should be replaced by electronic menu.

II. EXISTING METHOD

Generally, when patrons go to hotel for enjoying meal and if all tables are busy then they have to wait in waiting longue. After some time when a table is free then after getting the table, they have to select food items from paper menu. To read paper menu is boring task when a patron is very tired due to work. After deciding food items, patron has to inform it to waiter and waiter notes down ordered food items in his notepad. When waiter goes to kitchen after taking order from table then again patron has to wait for long time when food item is being prepared in kitchen. This creates irritating situation for patrons. During that time waiter gets busy in taking order from other tables. As it is completely manual system, it is possible that when waiter takes food items from kitchen then due to many orders in pending, waiter misallocates food items to patrons. This kind of situation makes patron to feel that proper attention is not given to him/her and feel disappointed.

III. PROPOSED METHOD

This paper contains new kind of hotel/restaurant system in which all the problems arising in existing method will be eliminated. In this system there are main four sections."[1]"food serving area," [2]"kitchen area and "[3]"server room."[4]" waiting longue. When patron enters hotels/restaurants there will be one board which will show table status. So patron comes to know that whether table is free or not. Or if patron has no time to wait for his/ her preferred ac/ non ac area, then patron can choose type of area according to availability of table and this feature saves lot of time for patron.

After getting the table, patron sees electronic touch

screen menu and from that patron selects food items. After selection of food items, a list of selected food items is generated and when patron confirms the list of food items then that list is sent to kitchen display unit as well as server room. This creates record at server room. The list of ordered food items will be transmitted with table number. So this will bring transparency in system.

When kitchen staff will receive order then a feedback message is sent to that table display unit that after how much time food items will be served. So patron doesn't have to wait willingly and have idea about the time of being served. So in between that times, patron can does some other work on his/her laptop. This kind of bidirectional system improves quality of service.

When food is ready then it is served to patron. After completing the meal, a bill is generated at table unit and server room also. After the payment is done, patron pushes the button before leaving the table and respective light emitting diode turns on which is on board at the waiting longue. So next patron can enjoy taking meal at that table.

IV. TECHNICAL WORKING

In this section we show how that circuit is works. First at waiting longue turned on light emitting diode indicates free table .On the table, touch screen display is available from where we select food items and by using transceiver order is transmitted to the kitchen area as well as server room. In touch screen module we use 5 volt power supply and ATMGEA32 controller. Power supply simply consists transformer and rectifying diodes and AVR controller which is ATMGEA32 have 40 pin working on 8 MHz frequency. AVR controller working on software that has complex algorithms to render graphic primitives like line rectangles, circles, images and more. Touch screen have GLCD so, AVR connected with GLCD (128*64). GLCD is a 4-wire resister touch screen with a microcontroller. AVR controller within built analog to digital converter having two or more channels. All this AVR MIC and GLCD circuit is connected to RF transceiver. So, in transmitter side from where we selected food items is sending to the kitchen area as well as server room. Touch screen also displayed the time where that food items served to the patrons.

In kitchen area we use ATMGEA16 controller, 16*4 LCD, RF transceiver and a buzzer.LCD is 16*4 display devices. At kitchen area is also transceiver is used. By using it a feedback message is transmitted and received at table unit. This bi directionality is achieved by using transceiver. AVR MIC has 16 pin which is working on 5 volt supply and secondly receiver side where display the bill on computer, there we using USB to serial board, and RF module. In transmitter side, on different food items selected that message transmitted to parallel to reception side. So, for serially reception, we are using USB to serial board. So, we

received serially order items in receiver side. AVR microcontroller is perform multiple software to develop complete unit. We are using US asp programmer is used to load the program in ATMGEA32/16

V. FIGURE

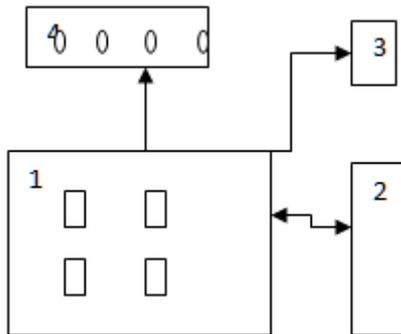


Fig. 1:

- 1) food serving area
- 2) kitchen area
- 3) server room
- 4) waiting longue



Fig. 2:

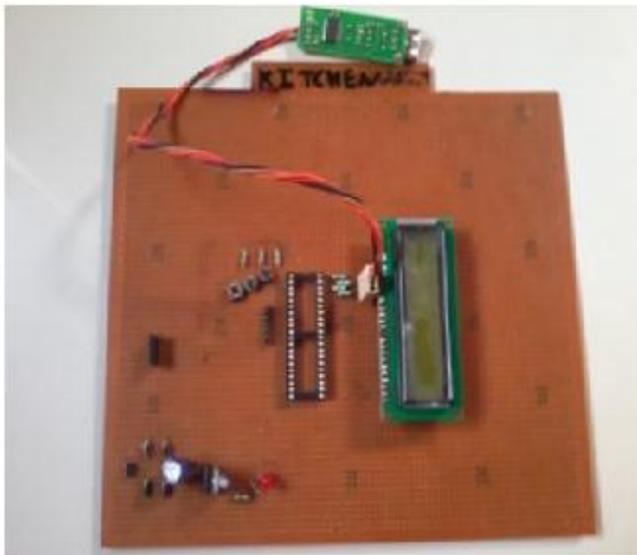


Fig. 3:

VI. CONCLUSION

In this paper, a hotel/restaurant system is shown in which ease of operation is achieved at great level. Due to electronic touch screen menu at table unit, ordering of food items is easier and whole system becomes user friendly. Due to feature of feedback message from kitchen area, patron gets information about time and this improves quality of operation and gives unique experience to patron. By applying this in hotels/restaurants, quality is improved and bring new era of food ordering system.

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REFERENCE

- [1] We have taken references from different websites.
- [2] www.freepatentsonline.org
- [3] www.avrelectronics.com