Smart Service Technology for Hotel, Resort and Restaurant

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Abstract — A new design touch-screen based Menu ordering system developing for food order in hotels/resorts and restaurants with using Raspberry pi and HDMI display. In this system customer gives order using the touch-screen menu display which is provided on every table, through Wi-Fi radio communication the order directly sent to the cook and at billing counter, for receiving the customer’s order simple display or PC is used in kitchen section. If the cooks complete his order then message is sent to customer as well as billing counter. Then if customer complete his/her food then he/she clicks on “Billing” button for bill. Then the bill is directly sent to the customers touch-screen through Wi-Fi. It has advantages of high performance-cost ratio, low power, high reliability and friendly user interface.

Keywords — Design Hotel, Resort and Restaurants, Self Ordering, Wi-Fi Technology, Touch Screen, Display, Python, Raspberry-pi

I. INTRODUCTION

Electronics devices is using everywhere. The people are rapidly moving towards a smarter world, with implementation of smart cities, smart classroom and smart phones. At present, electronic and communication technology has been brought to a number of business models in order to make the operation more convenient and effective. In these modern days the number of restaurants/hotels/resorts are increasing. They also require very fast processing for serving food to the customers. With the increasing number of customers, it would require more man power. The main aim of system is to control traffic flow of order, create proper billing, reduce waiting time, reduce human mistake. Usually waiters is require to take order, making reservation, to serve meal. After finishing customers has to paid the bill at the counter. By using advance technology we can improve service quality. Using the touch-screen menu display customer give order and this order is directly send to cook and billing counter. If the cooks complete order this message is sent to customer as well as billing counter. Then if customer complete his/her food then he/she click on “Billing” button for bill and bill is directly sent to the customers touch-screen. So it save the time of customer for ordering and waiting for bill.

II. PROPOSED IDEA

The proposed project idea is about the advanced technology using Wi-Fi and touch-screen based menu interface/display technologies, the interface involves displaying the menu items on any output device. Since our proposed system consists of a portable device for menu display at every table, it should be always less expensive and easy to operate by anyone. There are various wireless technologies in the market in their category of communication ranges. The communication technology to be used should always be enough capable of providing the range of communication as per the application requirement and the frequency band should be enough to carry by the hardware implemented. The next concern about the communication technologies is to choose the less expensive technology which will also satisfy the frequency range. Apart from this all, one more concern is about the modulation technique using in the communication technology. The modulation technique will effects the service quality in data exchange. The bill will sends to the customer touch-screen and payment will be optional it can be cash or by card payment.

III. BLOCK DIAGRAM

I. User(table) Side: Using the 5 V power supply we gives 5 V to the all component. Using Raspberry-pi we can transmit the message from Touch Screen to the Wi-Fi and Wi-Fi to the Touch Screen.
2. **Kitchen Side Billing:** Using the 5 V power supply we give 5 V to all the component. Here the dataflow is between Wi-Fi and PC. The message is transferring from PC to Wi-Fi and Wi-Fi to PC.

3. **Billing Counter Side:** Using the 5 V power supply we give 5 V to all the component. Here the dataflow is between Wi-Fi and PC. The message is transferring from PC to Wi-Fi and Wi-Fi to PC.

### IV. PROCESS FLOW

![Process Flow Diagram]

### V. CONCLUSION

As in surveyed literature all the hotel/resort and restaurant management system there are certain problems to solve this problem we are making this project, we are providing an menu display in each and every table, which will use for ordering food in hotels industries.
Consider the previous literature survey our project is user-friendly for customers. Time-saving device, it also reduces the waiters. Providing features like games, music, video to entertain customers. Wi-Fi technology which gives better range and it can be applicable for more numbers of users.

REFERENCES


