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Digital Ordering System for Hotel Management Using Virtual Reality

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ABSTRACT: The hotels are fast growing business in today's environment most of the people like to dine in the hotels due to the time they enjoy the dining the hotels are really comfort to all the business people in order to make the dining a more realistic and enjoying manner we bring you the most digitized way of the experience that you have ever got before our project brings you the realistic manner by using the virtual reality of ordering the dishes.

In order to reduce the time consumption we have used the virtual reality with camera where the menu are said to be installed in the device the device will be placed on the every customer's table and they have to choose the desired menu the menu will be sent to the kitchen using the Zigbee module which is placed at the customer side as well as in the kitchen side. Thus the desired order of the customer will be placed in the new way in the dining field.

KEYWORDS: Virtual reality. Hotel management, Hologram

I.INTRODUCTION

Virtual reality is a most advanced technique that is becoming more popular these days it gives the realistic experience that make us to feel like natural and it makes it real like feeling they combine with the physical environment to make the images more realistic manner they are called as the science fiction augmented reality they are made up of live camera feed and the headset device they also use tablet smart phone device as their current vr technology. virtual reality brings the concept of the artificial world around us virtual reality will bring the real environment in the front of our eyes. The virtual reality include transmission of vibrations and the other sensations using the controller we have in our hand thus the virtual reality makes the user more joyful and enjoyment to the users. The virtual reality will be used in the many fields as we known to us they are the assets of the modern environment they are used in the gaming environment.



Figure1: virtual reality

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II.SYSTEM OVERVIEW

In applications dealing with a virtual reality and the use of virtual reality device supported in experience of the customers is a common approach to make more successful.

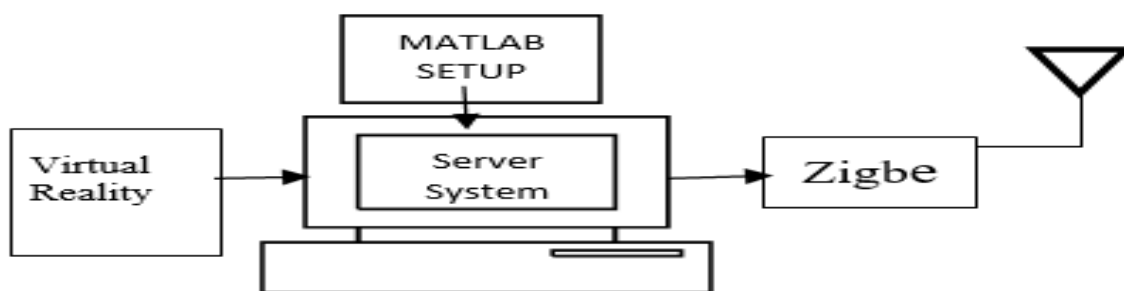


Figure 2 : Block diagram of transmitter

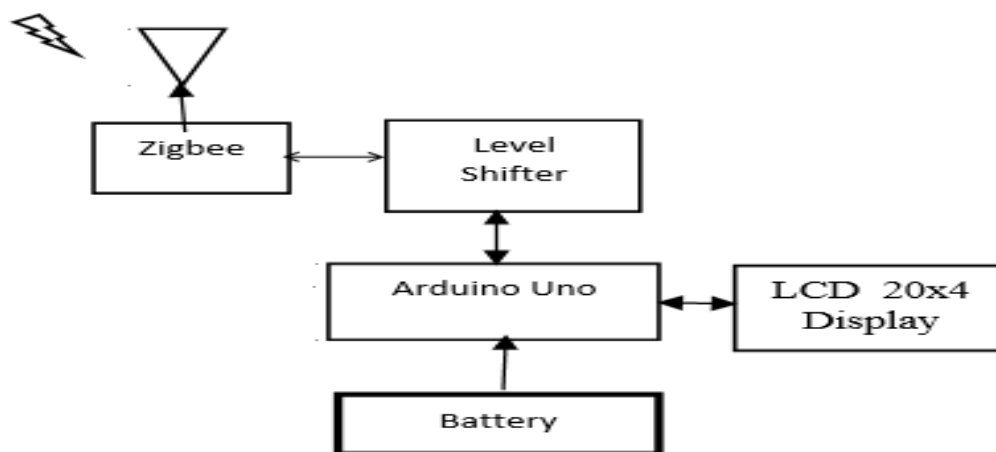


Figure 3. Block Diagram of receiver

This architecture is defined on the following operational assumptions,

- They are lot of time consumption
- Most realistic experience
- New way of dining
- Attract the customers .

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III.DIGITAL ORDERING IN THE HOTEL USING VIRTUAL REALITY

The main function of digital ordering in the hotel using virtual reality is the new way of ordering the systems these are most unique and wide range of operations which are being followed the innovation of these technology brings the change in the hotel the customers will get attracted towards these new ideas they like to have another range of the dining experience. These are very useful to the people so that they can minimize the ordering time during peak hours festival season.

A.VIRTUAL REALITY

It consists of lens, light source and a camera. The light falls on the lens and display the images placed on the lens .The camera capture the image and displays on the computer screen (server system)



Figure 4 : Virtual Reality

B.ZIGBEE MODULE

IEEE 802.15.4 standard. It Operates at 2.4GHz band&Transmits data at the range of 2km indoor and 400m outdoor Low cost and power consumption it is Highly robust network



Figure 5 : zigbee module

IV.HARWARE PRINCIPLE

Arduino

Arduino is a most powerful tool of kit which is used these days the Arduino has less power consumption most stability more power gain the Arduino we use is the Arduino uno it is ain built programming language.

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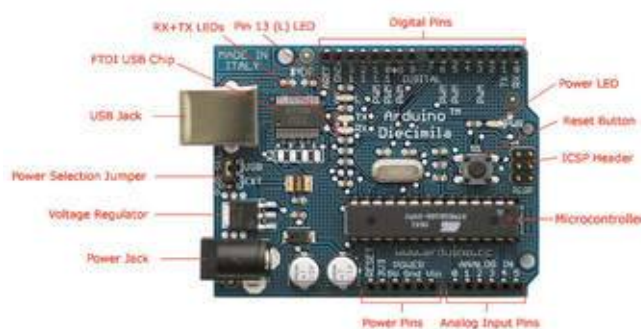
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Program Memory Organization

A 28-bit pin ic is capable of operating voltage of the 0-5v dc the board we use is ATMEGA 328 it is a 14 digital input & output pins it has 6 analog input & output pins it is a USART (UNIVERSAL SYNCHRONOUS /ASYNCHRONOUS RECIEVER TRANSMITTER)it is a 6 pwm pin asynchronous synchronous is a half duplex asynchronous is a full duplex way of communication



Photograph by SparkFun Electronics. Used under the Creative Commons Attribution Share-Alike 3.0 license.

Figure6.Pin diagram

LCD DISPLAY:

20x4 display is used Duty cycle (finishing the work at the planned time) is $1/16$. Placed at the kitchen side for displaying the ordered items. It can display 80 characters.

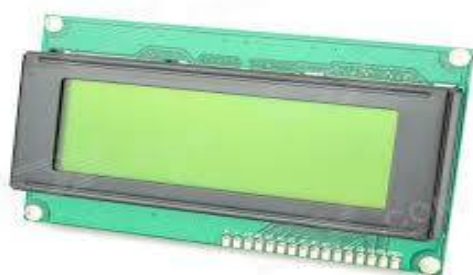


FIGURE 7. LCD DISPLAY

LEVEL SHIFTER :

Level shifter is a device which is used to shift the values from a lower level of the energy to the highest level of the energy thus the level shifter which is used to increase the bits of the values

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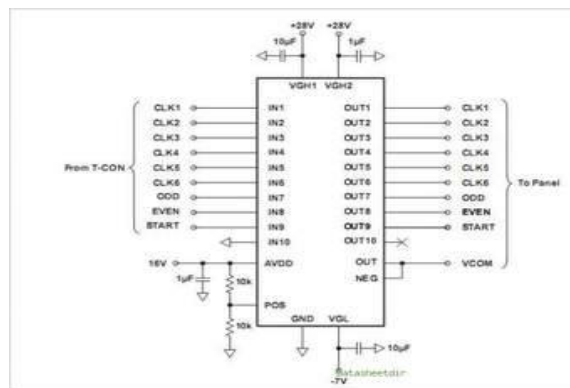


FIGURE 8: LEVEL SHIFTER PIN DIAGRAM

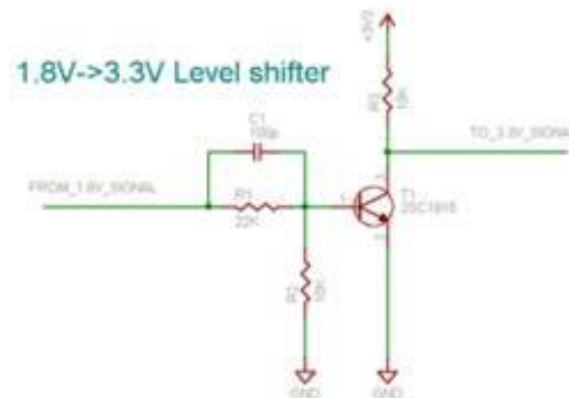


FIGURE 9: CIRCUIT DIAG OF LEVEL SHIFTER



FIGURE 10 :LEVEL SHIFTER

V. RESULT

The dishes clicked by the user in sent to a database which reaches the chef via zigbee module. Camera is used for capturing the images clicked by the customer. Laser light is used for generating the hologram in the table.



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VI. APPLICATION

They can be implemented in the Shopping mall, Educational institution and Super market.



Fig. 11: Restaurant

VII. CONCLUSION AND FUTURE WORK

The project provides a way to reduce the customer's time for waiting to order their desired menu. This system is user friendly and fast which brings a change in the ordering system of a desired menu and making the dining experience more effective for the customers.

The future work aims on the improving the quality of the image in HD manner lot of dishes can be added to the device and it can be displayed timing rate of the dishes can be added device size can be minimized billing can be made and the other works can be added we can implement book images in the library. Direction will be showed to restrooms via hologramic projection . Similar technologies can we used in libraries to show the number of books available.

REFERENCES

- [1] Sheifali Gupta, Ph.D, Shivam Gupta, Sourav Garg, Nitin Goyal, Sukbeer Singh, "Chef Alerting System using Wireless Zigbee Technology," International Journal of Applied Information Systems- ISSN : 2249-0868, Volume 6 – No. 7, January 2014.
- [2] Prof. A. K. Lodhi, Praveen Baburao Kamble, "Automatic Restaurant Order System using Zigbee," IOSR Journal of Electronics and Communication Engineering (IOSR-JECE), ISSN: 2278-2834, ISBN: 2278-8735, PP: 19-23.R.
- [3] Ferran Argelaguet, Ludovic Hoyet, Michael Trico, Anatole Lecuyer, "The Role of Interaction in Virtual Embodiment: Effects of the Virtual Hand Representation," IEEE Conference, 2016.
- [4] Takashi Homma, Katsuto Nakajima, "Virtual Touch Screen "VIRTOS" Implementing Virtual Touch Buttons and Sliders using a Projector and Camera," 9th International Conference on Computer Vision Theory and Applications, ISBN: 978-989-758-009-3.