TALKING STANDEE USING RASPBERRY PI

PASUPULETI SWARNALATHA, Assistant Professor, Dept.Of ECE, ADITYA COLLEGE OF
ENGINEERING & TECHNOLOGY.
Dr R.V.V.KRISHNA, Associate Professor,HOD, Dept.Of ECE, ADITYA COLLEGE OF
ENGINEERING & TECHNOLOGY.
N.SREE BHARATHI, Student, Dept.Of ECE, ADITYA COLLEGE OF ENGINEERING &
TECHNOLOGY.
P.UMAESWARI, Student, Dept.Of ECE, ADITYA COLLEGE OF ENGINEERING &
TECHNOLOGY.
G.ANUSHA, Student, Dept.Of ECE, ADITYA COLLEGE OF ENGINEERING &
TECHNOLOGY.
M.MOURYA TEJA, Student, Dept.Of ECE, ADITYA COLLEGE OF ENGINEERING &
TECHNOLOGY.

Abstract

The most innovative and creative marketing can be done through talking standee. In this paper, we designed a talking standee that can be used in educational Institutions. This is used to advertise about the department when the person stands in front of the standee. It will detect the person using the sensor provided to it and gives the details of the department, name of the head, total strength of staff and students. This system is designed using PIR Sensor and Raspberry Pi to make the system to speak about the department which is provided as the text file to the Raspberry Pi. In this we use passive infrared sensor (PIR sensor), one audio speaker and a SD card module. The PIR sensor is used to find the people who stand In front of the standee. When the PIR sensor detects the person, Raspberry Pi micro controller will play the audio and video which are stored in the SD card connected to the Raspberry pi.
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Keywords: Talking Standee, Raspberry Pi, PIR Sensor, SD card, Advertisement.

I Introduction

A brand-new, innovative standee for activities was introduced by Talking Standee. It is a reasonably priced digital format that works well in controlled environments like malls. This 6-foot-tall standee has a 5-inch touch screen that is touch-enabled and has audio capabilities. It can captivate audiences by displaying a range of material. Sensor-based interactivity, multiple screens, and simple installation are some of the features of TS ULTI. Aboard invented the display standee, which gives media owners and brands a price advantage. The business is still improving the technology to make it more interesting and experience-rich for brands. This product's benefit is that it was created with the best consideration for the user experience, brand usability and execution, and increased utilisation rate. These Talking Standee variants are first of their kind in many ways. Also, these are high on brand recollection along with multiple context usage. The Talking standee is used in many Marketing stalls, which is used to market the product when any person stands in front of the standee. This system is designed using PIR sensor and Raspberry Pi to make the system speak about the product which is already given as the text file or else makes it project video about the product. Now a days, there are a lot of talking systems but their working may cause some defects We rectified problems in the existing system and we proposed a new talking system in this project. It operates automatically. It has numerous applications. Speaking standees in brand promotions, in-store marketing, etc. are some of the most innovative and creative marketing techniques. We created a talking

standee that can be used in educational institutions in this article. The system will prompt you to write text about the product that should be calling out to the visitors on this Talking Standee, which has the Raspberry Pi as its central processing unit. Then we may create a system to present the video while also delivering the text as speech.

Existing System

Talking standee id used in aboard in shopping malls for advertise purpose. And to project their products and discounts. The vertical LED screens placed at prominent locations are used for promotions. These have store directory as well as schemes and loyalty programs info for customer for easy reference. Being an LED screen, it has the flexibility to run mini-advertisements for brands and products. A lot of stores have digital screens installed on the store front fagade and within prominent areas of their store highlighting the latest offerings of the store.Pacific logo installed on the mall facia is a multi-coloured one that remains black during the day time and turns white at night."

II Proposed System

The block diagram shown in the figure contains the following: PIR sensor is connected to Arduino Uno, it reads the data from sensor and sends information to Raspberry pi, Raspberry pi processes and send data to output devices such as monitor and speaker
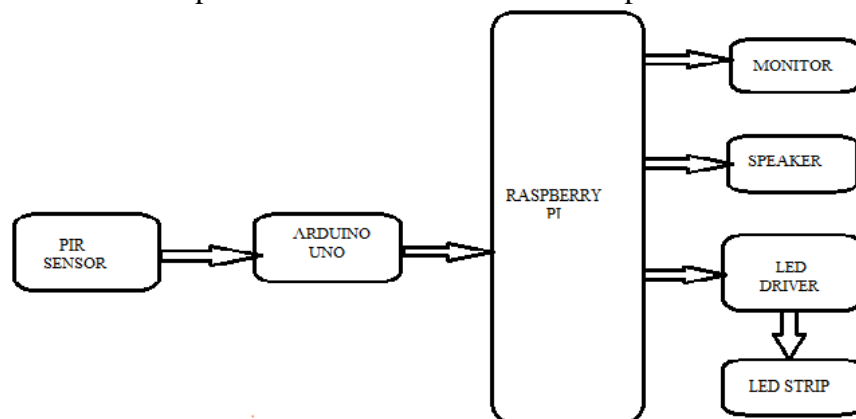

Figure 2: BLOCK DIAGRAM

TECHNICAL SPECIFICATIONS

- Arduino Uno
- Raspberry Pi
- PIR Sensor

2.1 Arduino Uno

Figure 3: Arduino Uno

The Arduino Uno is an ATmega328P-based microcontroller board. It has a 16 MHz quartz crystal, 6 analogue inputs, 14 digital input/output pins (of which 6 can be used as PWM outputs), a USB port, a power jack, an ICSP header, and a reset button. It comes with everything required to support the microcontroller; to use it, just plug in a USB cable, an AC-to-DC adapter, or a battery to power it. You can experiment with an Arduino Uno without being overly concerned that you'll make a mistake; in the worst case, you can replace the chip for a few dollars and start over.

2.2 Raspberry Pi

Figure 4: Raspberry pi

The Raspberry Pi is depicted in Figure 4. On March 14, 2018, the Raspberry Pi Foundation unveiled the Raspberry Pi 3 B. It is a more developed model of the 2016-released Raspberry Pi 3 B. Model B Raspberry Pi 3. We will examine the performance and features that the Raspberry Pi 3 has to offer. I'd like to introduce the Raspberry Pi as the most affordable and potent single board computer in the world. Numerous versions of the Raspberry Pi have been released since its 2012 introduction. This is the cheapest microprocessor available in the world, made specifically for makers and learners. Without having to worry about harm or expense, we can quickly learn how software and hardware interact.

2.3 PIR Sensor

Figure 5: PIR Sensor

One can see a PIR sensor in figure 5. The term PIR Sensor, which stands for passive infrared sensor, pertains to tasks that need the detection of human or particle movement within a specific range. It is sometimes referred to as an IR sensor or a PIR (motion) sensor. PIR Sensors have been widely adopted by the open-source hardware community for projects involving Arduino and Raspberry Pi because they combine significant functionality with cost-saving advantages. The accessibility of all these information has made it much easier for newcomers to learn about the PIR sensor.

WORKING MODEL

Figure 7: Working Model

Figure 7 shows the working model of the proposed system. we can see the output at LED Screen when the person is detected by PIR Sensor. This is a method talking standee that can be used in educational institutions, which is used to advertise about the department. Person is detected by the sensor provided to it and gives the details of the department, name of the head, total strength of staff and students.

III RESULTS AND DISCUSSIONS

The following figures 7 shows circuit connections. The main source of PIR Sensor IS connected to Arduino Uno and 5V power supply is used to read the data and sensors. This system is designed using Raspberry Pi to make the system to speak about the department which is provided as the text file to the Raspberry Pi. In this we use passive infrared sensor (PIR sensor), one audio speaker and a SD card module. The PIR sensor is used to find the people who stand in front of the standee. When the PIR sensor detects the person, Raspberry Pi micro controller will play the audio and video which are stored in the SD card connected to the Raspberry pi.

Figure 7: Circuit connections

IV CONCLUSION

The use of TALKING STANDEE USING RASPBERRY PI is to advertise about the department when the person stands in front of the standee. It is mainly advantageous at educational Institutes to know about the details of the department, name of the head, total strength of staff and students. Being an LED screen, it has the flexibility to run mini-

advertisements for events that held in the institutes. This system grabs the attention of the person and gives the useful information about the events held. The main advantages of the Talking Standee is Dual mode facilitates effective advertising through audio-visual appeal, which increases the recollection of the event. It is also Easy to setup compared to old methods. And get accurate output as per we expected.

V FUTURE SCOPE

In addition to the Talking standee, this proposed design can be extended with touchscreen. Where the person who is standing infornt of standee can select what ever information they need can be able to watch through the screen. And we also add QR code to watch all the details in ours mobile phones.

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