SMART DEVICE USING WEARABLE GESTURE

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Abstract—In this paper, the main aim is to connect the physical world into digital world. This will work through the movements (gesture) of the hand. In the recent years, the researches faces some problems like bulkiness of the device. We are going to set the two components as single device. This will be reduces the bulkiness of the device. we are also going to develop this project by using our device as a fifth sense for a disabled persons. This technology makes use of a camera, smart phone, a projector, mirror, speaker and a color taps.

Keywords—physical world, digital world, bulkiness, disabled persons.

I. INTRODUCTION

Sixth sense is the newest innovation that helps to the technical areas. Basic senses are Sight, Hearing, Taste, Touch, Smell. This Technology will work as a Sixth Sense. The software and the program for sixth sense will be open source. In the existing system the camera and the projector were placed in the forehead. To over come this problem the researchers have placed both camera and projector in the neck and we have planned to combine both the devices into a single one. Sixth Sense Technology can make the entire world into like computers via hand gestures and it’s a science of tomorrow. It is a wearable device that can convert the physical world into digital world. This device can be controlled by our hands. The device consists of camera, projector, mirror, smart phone and color markers and they are easily controllable. This device are connected through Wi-Fi or Bluetooth. The software used in this paper is visual studio, we can also use the MATLAB for processing. This technology is mainly based on hand gestures recognition, image capturing, processing and manipulation, etc. We are going to set up the projector and a mirror into a single device. This will reduce the bulkiness of the project. It is portable and more interactive than Smartphone. This will support to multi-touch and multi-user interaction.

II. RELATED WORK

This device will make it simple and also make our world digital. No need of carrying another devices like computer or laptops. We have to wear this device in the neck worn. It is light and easy to carry and easy way to access any information. This inventor used to trying to make out a 3-d interface[1]

Sixth sense technology is simple method to convey by we can wear it in our neck. It is not to difficult to catch photography. Easy to catch by using our fingers. In real time, the machine get information directly. Hand gesture is easy to interface [2].

This technology will reduce our work of carrying our laptops or any other heavy devices. It is light and easy to carry. Easy to access any information. It is portable, less cost and open source technology. The data can be accessed from the machine in the real time.

Sixth sense is a open source and portable technology. This open source code for anyone. To operate this technology there is no need of any basic knowledge, anyone can use. Easy to built and also connect to real world. But the machine and device of computer adapt the human needs[3].

The main concept of this project to convert from physical to digital world. We ca make map by using any where. This device is portable. Easy to carry we can worn in our neck. Our relevant information is provided by the wearable computing device[4].

This device using MATLAB for gesture recognition. It is used for resizing of image, capturing movement of mouse pointer. It can get rid of colored in finger caps. We can also interact with real world.

To interact with digital information by using hand gestures. Easy to capture by using fingers, no need to carry any devices like laptops etc., This device become integral part of every one’s life. [5]
The sixth sense gadget is a pendant device act as an interface by digital to physical world. This device become integral part of every one’s life. It is very user friendly device and very attractive.[6]

In this device, we developed using webcam and color markers. This device is very cheap and is easy to carry from one place to another. The pocket project is the additional method to make easier[8].

The information that may help us to make smooth access. It can connect with internet with the real world itself. The gesture movement made the sixth sense technology[9].

III. PROPOSED SYSTEM

A lot of research has been made in the recent years about virtual reality. The Sixth Sense technology plays a huge role in this recent years, The color-marker is used to sense the image and sensed image then it sends to the smart phone, The Smart Phone was already pre-programmed then the image was sent to the projector. The Projector the color-maker, camera, smart phone And the projector are connected through the Bluetooth or Wi-Fi . Then the mirror is used to reflect the image on the surface, we are going to change the mobile-phone and the projector in a devices, this will reduce the bulkiness of the device, so the humans feels comfortable to carry the device. The sensor is going to sense [7] the obstacles in front of the blind peoples and it will recognize them through the voice, This is used as a fifth sense for the disabled persons. It can also reduce the weight of the device so it is easy to carry.

A. Color Markers:
The color makes will detects the image and it also track it.

B. Camera:
The camera will capture the images. The camera will detect the object immediately. The camera also acts as a digital converter. Then it sends the captured images to the smart phone.

C. Smart Phone:
The Smart phone is already pre-processed with the program. Then the image will be processed in the smart phone through the program then the image will sent to the projector.

D. Projector:
The project is used to interact and sharing the images the projector has a 3 hours battery life. Then the project images on the person, surface or a wall.

E. Mirror:
The mirror is used to effect the image send by the projector.

IV. RESULT AND DISCUSSION

We increase the clarity of the images by using webcam, which has high picture quality and resolution . In the year of 2011 the clarity of the image is 15% then in the year of 2012 the clarity is slightly increased to 16%, and again in the year of 2014 Prof. Mr. D. S. Patil made an research to reduce the weight and increase the picture quality at that time the clarity increases up to 19%(4) and at the year of 2016 it increases up to 23%,now we increased the clarity at the level
of 27% and this gives the high picture clarity when compared to recent years and we also reduce the size of the device so it reduces the weight and it’s to carry.

V. CONCLUSION AND FUTURE ENHANCEMENT

The Sixth Sense Technology brings a huge Impact on the Electronics and IT Industry. It gives the information via hand gestures and brings the whole world within your fingertips. It also helps us to make right decision in critical situations. This device identifies the object around us then it allows to access the image or information and then we can display that image wherever we want. The implementation of this technology will not only make things simple but also make our country digital.

In future we can hide the color markers into our hand. Sixth Sense with holographic visualizers brings the better world. Gesture tracking and 3D visualization. It will also improve the clarity of the image. The security level can be increased.

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