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A Study on Design of Extra Sensory Perception

Harsh Mohile, Jignesh Patil, Mehul Valantra, Prof.Anushree Deshmukh

B.E, Dept. of I.T, Rajiv Gandhi Institute of Technology, Versova, Mumbai, India

B.E, Dept. of I.T, Rajiv Gandhi Institute of Technology, Versova, Mumbai, India

B.E, Dept. of I.T, Rajiv Gandhi Institute of Technology, Versova, Mumbai, India

Professor, Dept. of I.T, Rajiv Gandhi Institute of Technology, Versova, Mumbai, India

ABSTRACT:-The recent trends in technology have revolutionized the means of interaction between the digital world and real time applications. The primary focus of human computer interaction is to improve the intercommunication between user and computer by making computer more receptive to the user's needs. Mouse too has undergone a significant revolution right from its invention starting with mechanical mouse with two buttons and scroll to an optical mouse and finally to a cordless mouse and is still used as a pre-dominant means to interact with a computer.

To implement an invisible computer mouse that enables interaction with computer without attaching a hardware mouse. The methodology used is based on the Sixth Sense Technology where the user will be able to move the cursor by the movement of fingers. Our focus is to move the cursor on the screen as the user moves his/her finger.

Information is traditionally confined to paper or digitally to screen. In this paper, a wearable gesture interface, this attempts to information out into a tangible world. This interface connects the physical world around us with the Digital Information using a tiny projector and a camera, mounted on hat or coupled in a pendant like wearable device, it sees what the users see and visually augment surfaces or physical objects the user is interacting with . The mini projector which is connected to a camera and a cell phone- that acts as a computer which is connected to a cloud. The camera sense the objects around us .Wearable gesture interface projects information onto surfaces walls and physical objects around us , and let the user interact with the projected information through natural hand gestures ,arm movements or interaction with the objects itself.

KEYWORDS: Mouse Interaction, Touchless Event Handling, Camera Mode, Marker Mode, Marker Function, Gesture Function.

I. INTRODUCTION

'Extra Sensory Perception' is a wearable gestural interface that augments the physical world around us with digital Information and lets us use natural hand gestures to interact with that information. All of us are aware of the five basic senses - seeing, feeling, smelling, tasting and hearing. But there is also another sense called the sixth sense. It is basically a connection to something greater than what their physical senses are able to perceive. To a layman, it would be somethingsupernatural. Some might just consider it to be a superstition or something psychological. But the invention of sixth sense technology has completely shocked the world. Although it is not widely known as of now but the time is not far when this technology will change our perception of the world.

Pranav Mistry, 36 year old, of Indian origin is the mastermind behind the technology. The device sees what we see but it lets out information that we want to know while viewing the object. It can project information on any surface, be it a wall, table or any other object and uses hand / arm movements to help us interact with the projected information. The device brings us closer to reality and assists us in making right decisions by providing the relevant information, thereby; making the entire world a computer.

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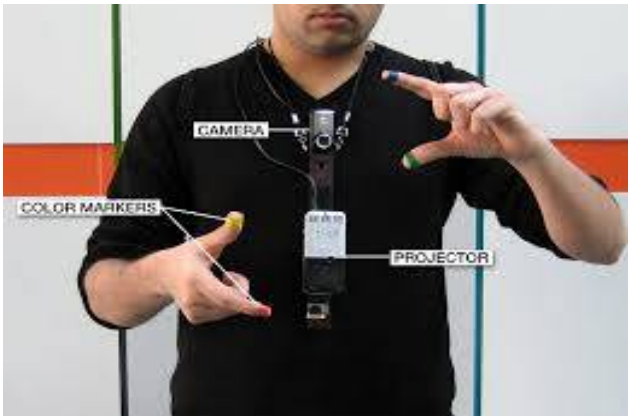
II. RELATED WORK

Sixth Sense Prototype Figure Earlier Device Maes' MIT group, which includes seven graduate students, were thinking about how a person could be more integrated into the world around them and access information without Sixth sense Technology having to do something like take out a phone.initially produced a wristband that would read an Radio Frequency Identification tag to know, for example, which book a user is holding in a store. They also had a ring that used infrared to communicate by beacon to supermarket smart shelves to give you information about products. As we grab a package of macaroni, the ring would glow red or green to tell us if the product was organic or free of peanut traces — whatever criteria we program into the system. They wanted to make information more useful to people in real time with minimal effort in a way that doesn't require any behaviour changes. The wristband was getting close, but we still had to take out our cell phone to look at the information.That's when they struck on the idea of accessing information from the internet and projecting it. So someone wearing the wristband could pick up a paperback in the bookstore and immediately call up reviews about the book, projecting them onto a surface in the store or doing a keyword search through the book by accessing digitized pages on Amazon or Google books. They started with a larger projector that was mounted on a helmet. But that proved cumbersome if someone was projecting data onto a wall then turned to speak to friend — the data would project on the friend's face.

When something, someone or someplace is encountered, we use our five natural senses and these are eyes, ears, nose, tongue, and body to recognize the information about it. The information that was recognized by these five senses helps us to make decisions and based on this, we take the right actions. But there is also some kind of information which cannot be naturally recognized by our five senses namely the data, information and knowledge that human beings has gather about everything and is all time available online. The information is keptin traditionally on to the paper or digitally on a screen. SixthSense technology is used to bridges this gap, which brings incorporeal, digital information out into the corporeal world, and permits us to communicate with this information via our natural hand gestures.

III. PROPOSED ALGORITHM

Sixth sense device analyses what user sees and visually augments the surfaces and physical objects user is interacting with. What the researchers have done is to combine a number of standard gadgets including a webcam, projector and computing device, to form a brand new interaction experience. The key here is that Sixth Sense recognizes the objects around us, displaying information automatically and letting us access it in any way we want, in the simplest way possible. The technology itself is nothing more than the combination of some stunning technologies but the idea of combining those technologies is really great. The technology is mainly based on hand gesture recognition, image capturing, processing and manipulation, etc



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It is the one which obey hand gestures of ours and gives us what we want to see and know. It is the combined technology of computer along with cell phone. It works when a person hang it on his neck and start projecting through the micro-projector attached to it. Our fingers works like the keyboard as well as the mouse.

I. FEATURES :-

The system after careful analysis has been identified to be presented with the following modules:

- Browsing
- Drawing
- Taking Pictures
- Viewing Maps

6.1 Block Diagram of Extra Sensory Perception

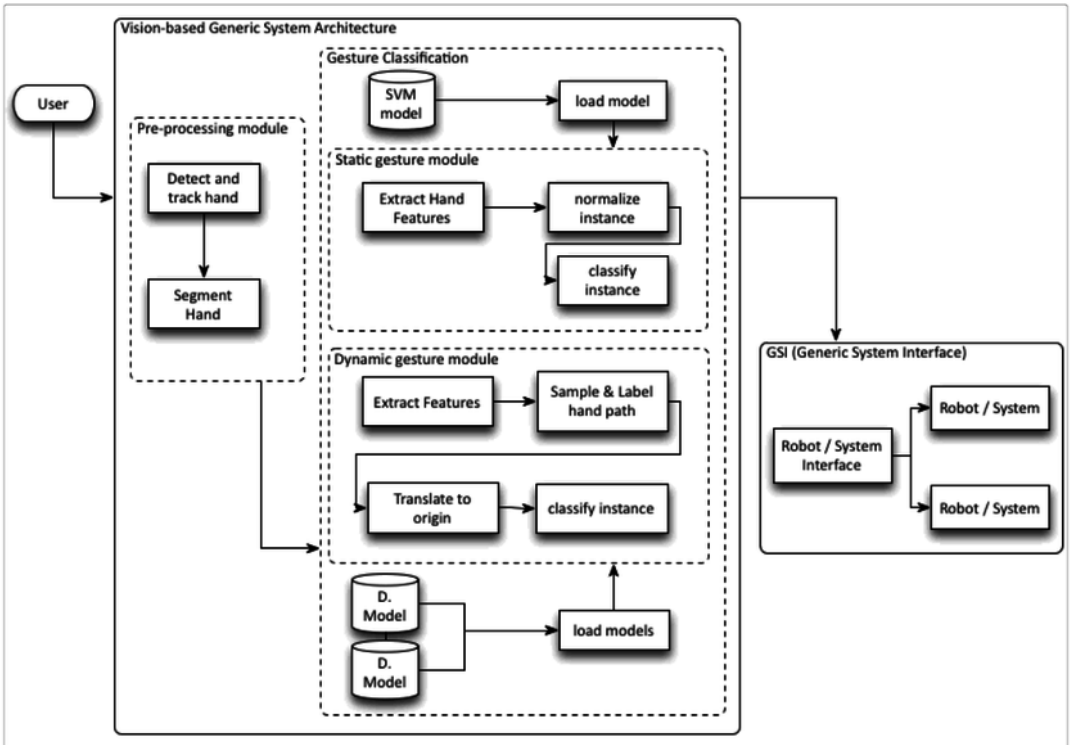

Fig. 6.1 Block diagram of ESP

A block diagram is diagram of a system in which the principal parts or functions are represented by blocks connected by lines that show the relationships of the blocks. They are heavily used in engineering in hardware design, electronic design, software design, and process flow diagram.

The main component of this circuit is the camerawhich is powered with the help of a projector panel which makes this an independent system. and intangible digital world. This sixth sense technology provides us with the freedom of interacting with the digital world with hand gestures.

IV. CONCLUSION

The device implements several applications that demonstrate the usefulness, flexibility of the system. Allowing humans to interact with this information through natural hand gestures. The potential of becoming the lattermost "transparent" user interface for accessing information

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