

# A Review Paper on Sixth Sense Technology and its Application

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**Abstract**— Sixth Sense technology is Next generation wearable technology that gives user a virtual digital world of World Wide Web around him. The technology uses hand Gesture that enable him to connect with physical world. It's a Neck pendant device that uses two basic components: An image projector and a camera. This wearable technology works with hand recognition gesture technology and digitally process the image fed by camera and display relevant information. The sixth sense technology is natively derived from the basic five sense of human being that are mainly taste , touch , hearing ,vision .fragrance.

**Key words:** Sixth Sense Technology, WUW, Color Marker

## I. INTRODUCTION

In today fast moving world, everyone is dependent on technology in one way or the other. The utility is not restricted to technocrats but is utilize in health, finance, corporate institution etc. There is boom in technology advancement in last decade so as sixth sense technology has emerged as a vast field of research and to develop it more future advance. The evolution of computer to an pocket size device can viewed as the technology is changing so fast and getting better day by day. Sixth sense technology is the technology that create a Virtual reality around the human. Like human being five sense i.e. Vision, touch, smell, hearing and taste have evolved in centuries to synchronize with each other to make it easy for humans to take decision.



Fig. 1: Mr. Pranav Mistry, innovator of Sixth sense technology

This technology will give them a new sense that is DATA which will make human more advances and will give freedom to human bring to use computer anywhere in the world. This technology will cope up the difference between the digital world and the physical world.

## II. HISTORY

The innovation of sixth sense technology was a research work of Steve Mann, who is regarded as the brain behind this sixth sense technology .He also made the neck worn computers in the end of 1990's. The later research work was concluded by Pranav Mistry, a PhD. Scholar in MIT MEDIA LABS, who is currently Vice President at Samsung, USA. The Technology was term as Wear Your World (WUW).

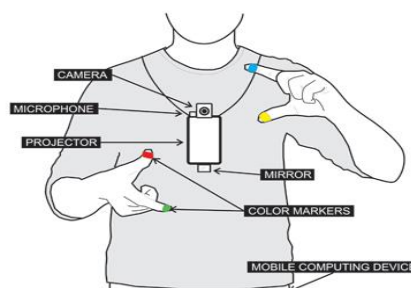


Fig. 2: Main component of sixth sense technology

### III. COMPONENT

The components used in sixth sense technology are as follow:

#### A. Camera:

Camera is the digital eye of the sixth sense technology therefore it is the main input device. Camera digitally capture the scene viewed by the user. The main function of the camera is recognizing user color mark hand gesture and capture the scene in the front of the user and take picture of the same.



Fig. 3: Camera

#### B. Projector:

It is basically the output of the sixth sense technology which display the information seeks by the user. Projector can display the relevant information on any wall or other surface.



Fig. 4: Projector

#### C. Mirror:

It is a surface mirror which reflects the projection coming out of the projector. Mirror is positioned just below the projector.

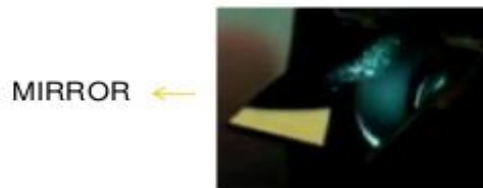


Fig. 5: Mirror

#### D. Color Marker:

Sixth sense technology makes use of four color markers: red, green, blue and yellow marker. The user can wear this color marker on their fingers which are recognized by the camera to track hand gestures.

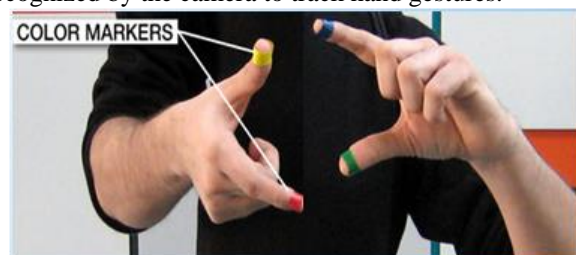


Fig. 5: Color marker

#### E. Mobile Computing device:

The Brain of the sixth sense technology is a mobile processing or computing device which is placed in the pocket of user. The device can be any smartphone or a small tablet. The Camera, projector and microphone are connected to the computing device wired or wireless connection. The device should be connected to the World Wide Web or internet enable.



Fig. 6: Smartphone

#### F. Microphone:

It is not the compulsory component in the sixth sense technology it is only required when paper is used as computing device. When the user wants to hard sheet of paper as an interactive device.

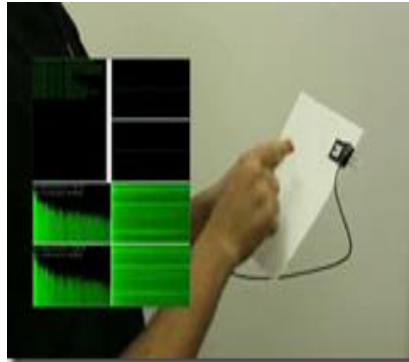


Fig. 7: Microphone

### IV. WORKING

In sixth sense technology the camera recognizes the hand gesture and movement of colored marker on the finger tip of user. Projector and camera are interfaced with the smartphone User hand gesture recognition is done by providing the coding in software known as “Computer Vision Technique”.

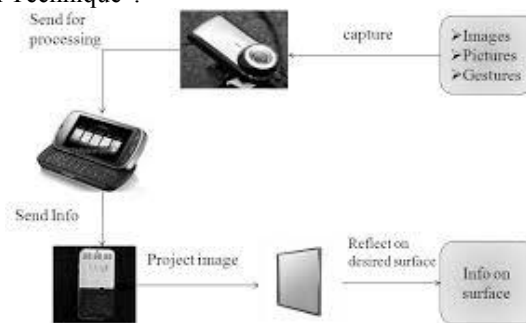


Fig. 8: Block diagram of working principle.

Each Hand Gesture recognized by the specific camera command which is given to the smartphone. These gesture act as the input to the smartphone and the data manipulated. The output is projected from projector through the mirror and information is reflected on the surface

### V. APPLICATION

- 1) Navigation: By using this technology we can easily get the route for our destination.
- 2) Calling: by using this technology we can call anyone from our phone without dialing the number.
- 3) Flight Updates: we can easily get updated with the flight status.
- 4) Clock: User has to make a circle on his hand and the clock with current time will appear on user's hand.
- 5) Motion Trigerd Capture: User can easily click the photos by creating the box by finger which acts as a frame.
- 6) Digital Newspaper: the device recognizes the stories related with the article published in newspaper and display on the newspaper pages.

### VI. CONCLUSION

Sixth sense is the technology of today's world has established to impeccably integrate information. Even future depends upon the Sixth Sense. It can fund an easy approach over machines and equipment in manufacturing. Hence, it can help in creating different applications for different creators and engineers upon how they envision, invent, what's their need and how they want. So, bearing in mind its prevalent applications the inventor has obvious reasons to make it open source so it can be

called as open source software. This technology can be an auxiliary to the 5th sense for differently abled people. This technology will bring a radical change in the field of Science and Technology.

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