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THE NEXT VISION: THE SMART WAY TO SEE THE WORLD BASED ON SIXTH SENSE TECHNOLOGY

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Abstract

The intuition 'An extrasensory Perception' has turned into the new referred to as 'The Sixth Sense Technology' that has emerged in few years. We tend to perpetually build use of our five natural senses to understand the data around when eve we stumble upon an issue, an individual or an area. That info helps build judgments and embrace the applicable action to be taken. however arguably, the most helpful in for that may facilitate country take the proper call and judgments is not naturally cognizable info with the facilitate of our five senses, namely the information, info and know led get that humankind has amalgamated but, rather it's the 'Sixth Sense Technology.' This paper focuses on and makes us aware with the intuition technology that provides associate degree integration of the digital world with the real world; it helps perceive however the sixth sense device had weak the five natural senses; it conjointly pours light-weight over its various applications, its security connected problems and any implications.

Keywords:-*Gesture recognition, Computer Vision, Wearable interface, Hand Gesture Interface.*

1. Introduction

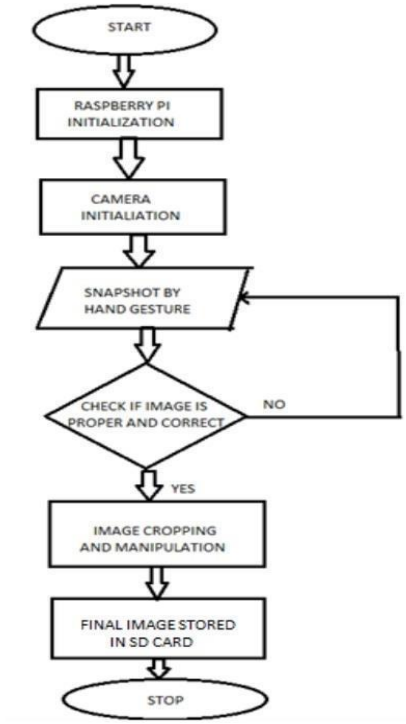
The Next Vision; the Smart Way to See the World Based on sixth sense Technology is a wearable gestural interface technology that augments the physical world around with digital information and let's use natural hand gestures to move with that information. Though the reducing size of computing devices permits to carry computers in our pockets, keeping incessantly connected with the digital world. There exist no intermediate link between our digital devices and our interactions with the physical world. Information is confined historically on paper or digitally on a screen. Sixth Sense Device binds this gap conveyance intangible, digital information out into the tangible world, and permitting to interact with this information via natural hand gestures. 'Sixth Sense' frees information from its confines by seamless integration with reality, and so creating the entire world with your laptop. Sixth Sense permits folks to use net with no screen or a keyboard, it really acts itself as a laptop which is connected to cloud. It's turned any surface into slightly screen. By employing a camera and a little projector mounted in an exceeding pendent like wearable device, 'Sixth

Sense' sees what you see and visually mends on any surface or objects we tend tour interacting with. It displays information onto surfaces, walls and physical objects around us, and let us interact with the projected information through natural hand gestures, arm movements, or our interaction with the object itself. The software system program processes the video stream information captured by the camera and tracks the locations of the colored markers (that we wore on our fingers) victimization make easy laptop vision techniques. This paper helps to save data of however the sixth sense device had vanquished the five natural senses. This paper makes cognizant however the sixth sense technology provides associate degree integration of the digital world with the important world. This paper focuses over varied applications light-weight over varied security connected problems and further implications. The theory behind Sixth Sense Technology is that the Sixth Sense Device tries to confirm not solely what somebody is interacting with however conjointly how he or she is interacting with it.

2. History

Pranav Mistry, of Indian origin, a Ph.D. student in Fluid Interfaces cluster at the university Media work was the mastermind behind the intuition technology. Pranav was impressed by the flicks like "Robocop" and "Minority Report" that impressed him to make his view of a world not dominated by the computers, human robots and digital information rather build a technology with Human gestures that is transportable enough to carry and to build the world more interactive and advancement a lot of easier. Sixth Sense can enable to move with the world like ne'er before. We tend any information any place among few moments which took on a brand-new level with none screen or element. On greater part of the device is its ability to scan objects or folks and project out in for elating to what you're probing for. The intuition technology was developed at media labs in university and termed as Wear Your World (WUW.)

3 Algorithm



4. Working

The Pi camera captures the movement of moving colored markers on the user's finger tips once they move their hands. Pi Camera and projector both are connected to the raspberry pi in user's pocket. Recognition is created victimization Computer Vision Technique. The software system program processes this video stream information and interprets the movements into gestures. Every gesture is completely different from each other and is allotted some commands. These gestures act as input to application that is projected by the projector.

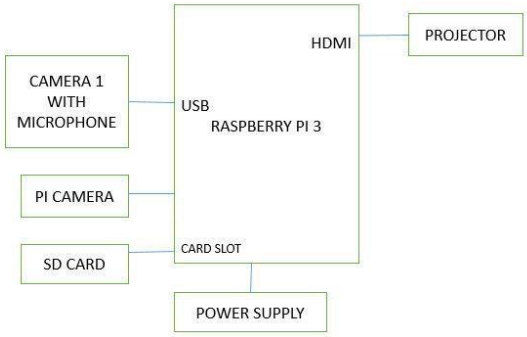


Fig 1: System Block Diagram

The image is captured by pi camera in the input stage, sent to the raspberry pi board for processing, and then its output is produced and stored in a particular location in the Micro SD card. The mirror reflects the image shaped by the projector to front. The projector comes visual images on a surface. This surface will be wall, table or perhaps your hand. This technology is especially supported hand gesture recognition, image capturing, process associate degreed manipulation

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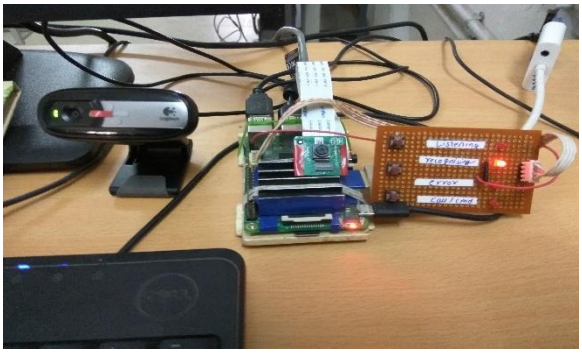

Fig 2: Working module

5. Application

1. Speech recognition:

We have implemented a digital assistant that performances task through commands. The assistant can perform task like call a map, zooming feature, play music search about certain things etc.

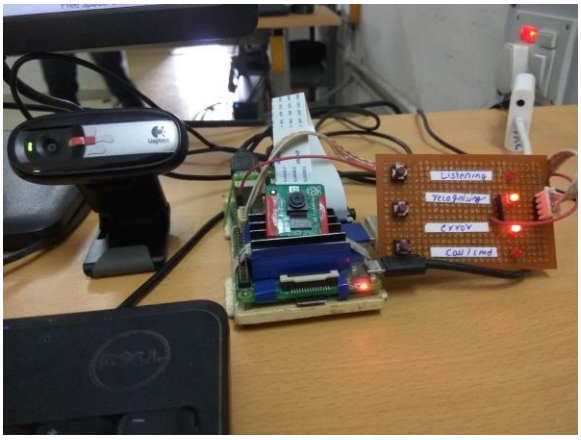

Fig3: speech recognition

2. Capturing Photos:

The burden of carrying a camera and keeping it safe and sound on a visit will currently be avoided by using our technology. We make a rectangular gesture shown in fig. 4 to capture photos.

Fig 4: Color Markers

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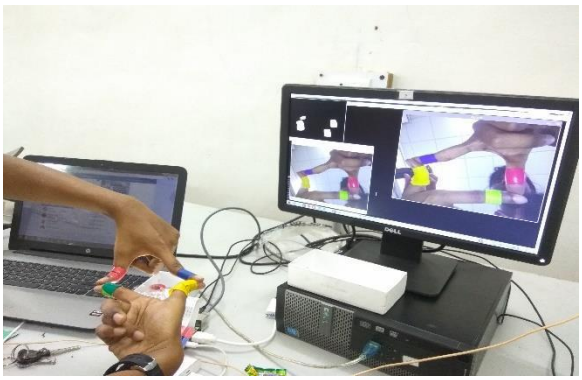

Fig 5: Capture Pictures using rectangular Gesture

3. Call up a map

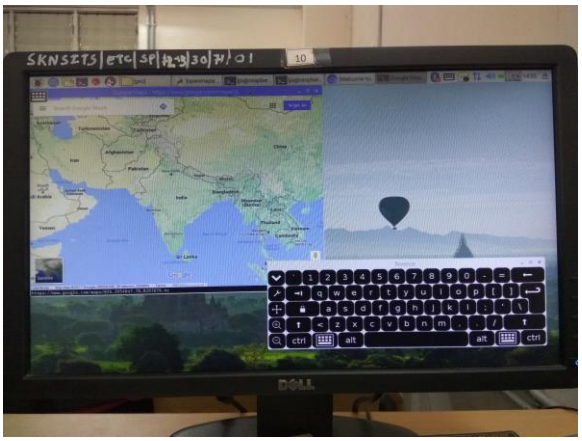

Fig 6: call up map

4. Zooming feature:

The user can zoom in or zoom out by using hand movements.

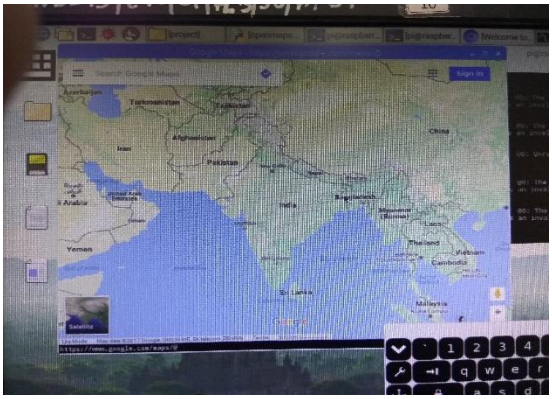

Fig 7: map without zoom

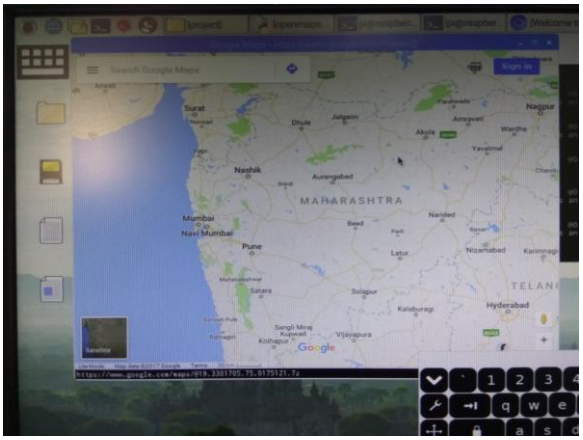

Fig8: map with zooming

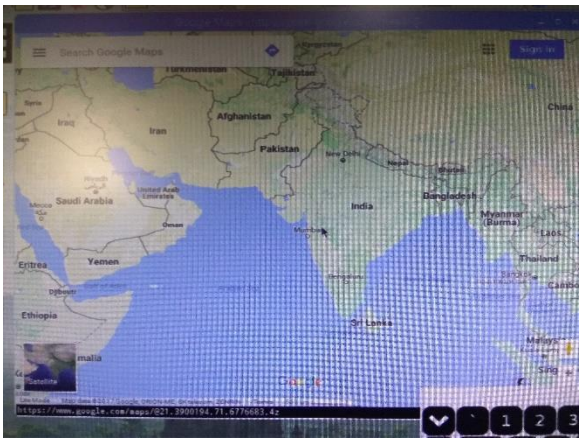

Fig9: map with zoom out

4. Play music:

Using our personal digital assistant we speak a command "play music" to start playing music.

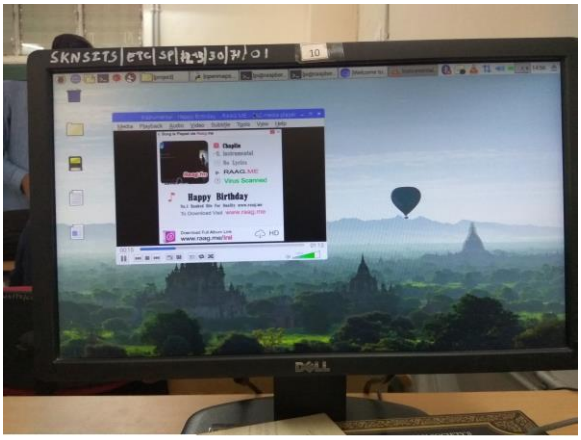

Fig10: play music

6. Future Enhancements

Our device is totally different from the computers as it allows one to figure and browse on any surface that we will realize around. The foremost issue is to beat all the safety threats mentioned in previous section; as many new technologies came and died attributable to security problems and threats. To get obviate color markers and integrate camera and projector within the mobile computing device itself. Implementing this technology in varied areas like gamming, education system etc. Fourthly, there will be a 3D gesture pursuit as in MS Kinect device. During the era of smart phones, wherever sensible phone as offered at cheaper costs with a lot of options Pranav ought to attempt to scale back its actual value from $350. Lastly, and additionally the most essential which might be profit for the society also to create sixth sense work as fifth sense for disabled individuals.

7. Conclusion

The insight is developed to seamlessly integrate data into universe. The future could rely on the insight. It will contribute a simple management over machineries and equipment's in trade. Hence, it will facilitate in enrooting numerous applications for various developers and engineers upon however they imagine, innovate, what's there would like and the way they need. So, considering its widespread applications the inventor has set to form it open supply thus it may be known as open supply software. This technology may be a replacement of the fifth sense for otherwise abled people. This technology can bring a forceful amendment within the field of Science and technology.

8. Referances

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