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Project (Phase-II) Report
On
"Gesture Controlled Robot Using Sixth Sense Technology"

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ABSTRACT

Sixth sense is an approach to execute our ordinary and extraordinary efforts seemingly independent of the five senses. It is a wearable gestural interface, which provides freedom to interact with the digital world using hand gestures. The gestural interface device works on the principles of gestural recognition and image processing.

Gesture recognition is an approach that permits movement of hands and face expressions as input controls. With the availability of many such smart devices which captures our special moments every time, considering the need of taking it out from pocket every time, our main centre of interest is to keep hands free by capturing images using a webcam and store them by using recognition method in MATLAB which acts as a processing interface for this technology.

Sixth Sense Technology is also used for the human electronic interaction using natural hand gestures. The hand gestures can be used to control any micro controller based devices or robots at distant places using ZigBee or GSM Module. The "Sixth Sense Technology" is easy to implement with reduced implementation cost and it opens a wide area of research for the next generation and a greater development in almost all areas of current interest. Sense Technology and its advancements can control the autonomous robots or any microcontroller based devices on human will. Currently autonomous robots or any microcontroller based devices are designed for a single purpose, but with this technology robots and those devices can be made to achieve multidimensional purposes. Even the costlier sensors can be replaced with the low cost night vision cameras. It opens a way to control robots or any microcontroller based devices at any distance with natural hand gestures of human beings. It also has the provision of customizable virtual keyboard for giving more actions to distant devices. It is going to be a greater field of research that also paves a lot of attention in this current world of technology.

Keywords: Colour recognition, gesture recognition, image processing, robotics, MATLAB, Sixth Sense Technology.

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