Abstract

Many modules have been developed to help the physical world interact with the digital world. Here we present a novel approach for Human Computer Interaction (HCI) where, we control cursor movement using a real-time camera and color pointers. Our method is to use a camera and computer vision technology, such as image segmentation, background subtraction and color tracking, to control mouse tasks(left clicking, right clicking, double-clicking and scrolling actions) and we show how it can perform everything as current mouse devices can. A color pointer has been used for the object recognition and tracking, so as to implement the module without anyphysical contact with the system. Click events of the mouse have been achieved by detecting the number of pointers on the images.

This method mainly focuses on the use of a Web Camera to develop a virtual human computer interaction device in a cost effective manner