

Gestural Interface for Image Browsing

In order to solve the problem of interacting intuitively and naturally with large displays we propose a digital system that allows the use of hand gestures to interact with a two dimensional graphical user interface. The system tracks the movement of two points represented by two fingers of the same hand or one of each and interprets it as one of many predefined gestures. These gestures then act as input for a Picture Browser. Essential browsing commands such as scrolling, scaling and rotation will be available with specific gestures for each. The picture browser allows the display of pictures stored in a USB flash memory device. The device itself will have three major components: a user interface to display images on a monitor, a gesture recognition system that identifies gestures in the video input and a data reader for Flash memory. To facilitate video processing and noise filtering, the user will wear a glove with colored fingertips. Useful extensions to this system that we will consider include a painting utility for drawing arbitrary pictures and a 3D object manipulation interface using gestural input.