Abstract

In this paper, we propose an application that is able to scroll the screen with the human face. The eyes are detected and tracked in real-time to use their actions for scrolling events. The basic strategy for detection is fast extraction of the face from the image in front of the screen with a Six-Segmented Rectangular (SSR) filter. In the SSR filter, Between-the-Eyes is selected as a face representative because of its characteristic is common to most people and is easily seen for a wide range of face orientation. After detecting the eyes, the eye movement is used to trigger the scrolling event based on our proposed algorithm. This has practical applications in document readers used on computers, laptops, tablets and smartphones.

References

- C. C. Chiang, W. K. Tai, M. T. Yang, Y. T. Huang and C. J. Huang, "A Novel
Smart Scrolling based on Eye Tracking


Index Terms

Computer Science   Image Processing

Keywords

Six-Segmented Rectangular filter   SSR filter   face detection   eye detecting   eye tracking   scrolling   human-computer interaction