

Intelligent Human Interface Device

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Abstract

The following paper aims to present the design steps for a pointing device for the PC, which not only has the basic characteristics of a standard mouse, but also replicates the role of the numeric pad and all the functions of a normal remote control for multimedia applications. The device presented aims to give back laptop computers all the functionalities that have been eliminated due to size restrictions. The main user interface is displayed on a touch screen, the user having the ability to switch between two graphic interfaces: one on which the mouse buttons and numeric and arithmetic keys are present, and one for the remote control mode, where multimedia keys are displayed. On the PC side, a special application has been developed, which is capable of decoding the data packet transmitted by the mouse, and determines the operating system to replicate gestures on the PC.