Abstract

USB are getting more and more people's care because it's robust, convenient, small size and can be plug in hot state. We can find many productions with USB interface, such as moving hard disk, flash disk, digital camera, MP3, MP4, printers and so on, even some development tools such as DSP simulator and single chip simulator, ARM simulator are getting be supported with USB.

The development of USB device includes three parts, that is hardware design, firmware design and driver development. Commonly USB devices are service device. This means that the main transistor of data is USB host which is PC. The OS make it convenient for operators to control I/O devices, and OS supports a friendly platform for computer operators, especial since the Windows appears. At present Windows operation system has a very big part in OS market. Because the Windows operation system is convenient to use, more and more people select it. In order to mask the differences between all kinds of hardware the Microsoft uses the divers by which users can use universal API to control the hardware even they comes from different manufactories. As the computer peripheral equipments becomes more and more, and are used wildly, to master the technology of drivers development becomes more and more important and necessary. It is essential to know much low level knowledge about operation system and USB hardware, so it is more difficult compared to other soft technologies. This paper is based upon the technology and driver development of USB, and talks about the principle and architecture of of USB and Windows WDM. At the same time this paper introduces the USB driver elements and procedure of writing and compile. At last this article ends with the illuminations of the development of USB devices and drivers. All paper does a particular introduction about USB and has valuable application.

Keywords: USB HOST   USB DEVICE   WDM   INF   DRIVER