Plug and Play in Windows™ 95
Fact Sheet

March 19954

Technology

Plug and Play is a framework architecture, or specification, developed collaboratively by leading PC hardware and software vendors. The Plug and Play technology is the centerpiece of an industry initiative to dramatically improve the ease of setup and use of personal computers and peripheral devices, such as printers..

Introduction

Today, changing the hardware configuration of a PC is a task that few consumers usrempt,and even trained technicians can find difficult, time-consuming and frustrating., resltmplexity of PC setup has resulted in g in loweromer satisfaction and increased support costs. Plug and Play can,alleviss these problems. , Products designed to meet the Plug and Play specification are easier to setup and u. Plug and Playenables users to add or change hardware and software components, with the computer automatically adapting to the new configuration. Required action by the user is minimized or eliminated.Ii.e. it improves integration of PC hardware and software for superior ease of use and lower cost.

Three Components of a Plug and Play System

The Plug and Play framework architecture, which is operating-system-independent, consists of three components:

- A Plug and Play operating system
- A Plug and Play BIOS (basic input/output system)
- Plug and Play hardware devices

Plug and Play BIOS and Hardware Device Specifications

A group of PC industry companies, in cooperation with the Plug and Play Association, have developed Plug and Play specifications that are now being sed by hundreds of PC hardware and software vendors. These specifications include those for Plug and Play BIOS, APM, ISA, SCSI, COM, and LPT.

Plug and Play in Windows 95 Features

Microsoft® Windows™ 95, the next version of the Microsoft Windows operating systemv3.1, ie first Pperating system compatible with Plug and Play. There are four key features of the Plug and Play component in Windows 95:

- **Devices can be attached to most buses and connectors.**
    Buses: ISA, VL, PCI, EISA and motherboard.
    Connectors: PCMCIA, SCSI, IDE, serial port, parallel port and monitor.

- **Device-driver installation, loading and unloading are automated.**

- **Dynamic or hot-configuration changes are possible.** For example, hot docking, hot plugging, and PCMCIA insertion.

- **Drivers and applications are notified of configuration events.** Smart software can react to system changes.

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Three Key Benefits

- **Ease of use.** During installation, the user does not have to worry about switches, jumpers, hardware conflicts, rebooting or dealing with drivers. For example, to turn a standard desktop computer system into a great multimedia system, all the user has to do is "plug" in a Plug and Play sound card,
CD-ROM drive and SCSI adapter, turn on the system, and "play" a video clip.

- **Great mobility.** For example, hot-docking stations that support Plug and Play enable the user to remove a portable system while it's running − so the user can bring the system to a meeting without having to close and reboot the computer. The system automatically senses its removal from the station, reconfigures itself to work with a new display and adjusts for the absence of a network card and large disk drive.

- **Cost-effectiveness.** As much as 50 percent of support calls to operating system and device manufacturers result from installation and configuration problems. By making these operations easier − and automatic − manufacturers can achieve lower support costs and pass these savings to the user. Easier installation and configuration during setup also benefit OEMs who offer Windows-based systems with preinstalled software; they too can pass cost savings to the user. Similarly, Plug and Play's Universal Driver simplifies device-driver development, which enables a developer to create a single driver that works across multiple bus types and eliminates the need to include bus-specific code in each of several drivers.
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Market Momentum

Acceptance of the Plug and Play architecture is widespread. Plug and Play components are real and have been demonstrated. In addition, the industry is making rapid progress in delivering additional Plug and Play specifications and products, including the following:

- Plug and Play specifications have been released for BIOS and APM, and for ISA, SCSI, LPT, and CO devices.

- /. To more than 100 Plug and Play devices are availablehave been demonstr

- Fully Plug and Play-capable systems, including all Plug and Play devices and a Plug and Play BIOS, are already available. These systems offer complete Plug and Play functionality when combined with the first Plug and Play operating system, Windows 95, scheduled to be delivered in August, half.

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