Extending the Linux hotplug system

HOTPLUG HACKS

Hotplugging is invisible and automatic – if you want it to be. But a close look at the Linux

hotplug system reveals interesting opportunities for customization. **BY JOE CASAD**

Getting software to talk to hardware is a messy business in any operating system. Compounding the communication problem is the fact that the growth of the PC industry has led to a vast proliferation of hardware devices for nearly endless categories of uses. Unfortunately, most hardware vendors don't commit enough resources to supporting their Linux customers. The good news is that Linux and other Unix-like systems have a very logical and practical design that works well with hardware once you understand it.

Of course, the real goal is to make hardware support so easy and invisible that the user is never even troubled by it. As Linux enters the market for non-technical home users, this need for effortless configuration is even more crucial. Hotplugging has been a buzzword for several years now, and hotplugging in Linux is at last a reality. But because the point of hotplugging is to promote hands-off automatic configuration, some users may not realize that it is very possible to adapt, customize, and ex-

tend the Linux hotplug system. We'll show you some handy hotplug hacks in this month's cover story.

Our leadoff article takes a close look at extending the hotplug system. We'll examine some scripts that adapt the system for easier configuration. For instance, we'll show you how to customize network configuration, and we'll describe how to use a daemon to detect a bluetooth cell phone.

Our next article describes how you can use a tool like Ivman, a generic handler for Hardware Abstraction Layer events, to trigger custom responses to hotplug events. We'll present a practical backup solution for portables that first checks for the presence of the backup disk before launching the backup.

To round out our real-world look at devices in Linux, we'll bring you a full report on Udev, the device management system at the heart of the Linux hardware environment. We hope you enjoy this month's cover story on Hotplug Hacks. ■