Custom Booting

BY RICK BYRLEY

Like most of you, I suspect, I have to live with the reality of supporting multiple operating systems on the various networks we have here at SofTouch Systems. This means I spend a lot of time rebooting. Additionally, I support laptop users who need multiple boot configurations to load the appropriate drivers and protocols when they are connected to the network. More importantly, I need the flexibility to skip loading drivers on these machines, thus saving myself a support call when error messages flash across the users' screen that a specified driver cannot be found. All of this is quite a challenge, but OS/2 provides the tools to pull off the hat trick.

THE OS/2 BOOT MANAGER

Although both Windows 95 and NT come with a boot manager, neither allows me to boot to my OS/2 partition. Therefore, I use the OS/2 boot manager to access my partitions. Note that the boot manager must be installed after Windows 95 or NT — the Microsoft operating systems will wipe out an existing OS/2 boot manager.

The OS/2 boot manager is installed using either the command line FDISK program while booted to floppies or by selecting the "Create partition" option from the Drives object pop-up menu. In either case select the "Install boot manager" option from the FDISK or FDISKPM Options menu. You will be prompted to select whether you want to install the boot manager at the start of free space or the end of free space. I put my boot manager at the end of free space to minimize conflicts with other boot managers (although this doesn't help with Windows 95 or NT) unless the drive has more than 1,023 cylinders. BIOS limitations prevent booting to any partition starting beyond cylinder 1,023. Once installed, set the partition as startable from the Options menu and exit the FDISK program, saving the changes. You will then need to reboot your machine. Note that installing boot manager requires repartitioning your disk if you do not have any free space on the drive. Be sure and back up your data!

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You can customize boot manager to select a specified volume as the default rather than the previously booted volume. From the FDISK or FDISKPM menu, select the 'Set Startup Values' option, and enter the name of the desired default volume in the 'Default' field of the 'Startup Values' dialog. While you're there, you can adjust the timeout value or disable the timeout altogether, and also select whether you want the boot manager to display only the partition name (normal mode) or the partition name, drive and format (advanced mode).

USING SETBOOT

OS/2 provides the command SETBOOT that allows you to change the boot manager options from a command line and bypass the boot manager menu at startup. The IBA parameter allows you to specify the name of the partition you want to boot. For example, if you have boot manager partitions named DOS and OS2, entering the command SETBOOT /IBA:DOS will shut down the system and reboot to the DOS partition. You bypass partition aliases and boot to a specific partition by using the /IBD switch. The command SETBOOT /IBD:C will reboot to the D: drive. The /Q switch will display the current boot manager values.

SETTING UP MULTIPLE CONFIGURATIONS

At times you do not necessarily want to boot to a different partition but merely a different configuration for OS/2. The obvious example is laptops that use different configurations depending on whether the machine is connected to the network. However, this technique can also be used to create a default "safe" configuration that will allow you to boot when your standard configuration gets clobbered. The archiving facility of Warp allows you to manage multiple configurations. Setting

Tip of the Month

Although the path that OS/2 searches for DLLs is set in the LIBPATH statement and cannot be altered after booting, you can set the environment variables BEGINLIBPATH and ENDLIBPATH to alter the path dynamically from an OS/2 session. Paths specified in the BEGINLIBPATH environmental variable will be searched first for processes started in that session, followed by paths specified in the LIBPATH and ENDLIBPATH variables.

up multiple configurations involves the following steps:

1. Create the CONFIG.SYS files. This can be accomplished with any text editor. Save the alternate configuration files to the OS2\BOOT directory on your boot drive with the filename CONFIG and a one-letter extension of your choice. This one-letter extension should be mnemonic because it will be used from the archiving menu to select that particular configuration. The default configuration should be named CONFIG.SYS and saved to the root directory of the boot drive. On network machines it is best to use the non-network configuration as the default. For example, to create two configurations with one supporting networking, save the non-network version as C:\CONFIG.SYS (assuming C: is the boot drive). Save the network version as C:\OS2\BOOT\CONFIG.N.

2. Configure the archive facility so that the archive screen is displayed at boot time with the available configurations. To do this, issue the command ATTRIB C:\OS2\BOOT\ALTF1MID.SCR -R to clear the read-only attribute. Then edit the file, using the format of the current entry as a model to add an entry for the alternate configuration. In the previous example, the modified ALTF1MID.SCR file would contain two entries and appear as follows after adding an entry for the CONFIG.N file:

```
X) Original archive from INSTALL
created 3-25-98  4:14:08PM
N) Network
```

The letter used must match the extension used for the alternate CONFIG file (in this case 'N'). Save the file and reset the read-only attribute by issuing the command ATTRIB C:\OS2\BOOT\ALTF1MID.SCR +R.

3. Open the Properties dialog for the Desktop and click on the Archive tab. Select 'Display Recovery Choices at each system startup' and close the dialog.

After completing these steps, whenever the machine is rebooted the blue Archive menu will appear allowing the user to select which configuration to use. In the previous example, pressing the 'N' key will cause the network configuration to load. Pressing the escape key or allowing the timer to lapse will load the non-network version. ts

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