

Addressing the Consequences of Converting to HPFS

BY MICHAEL NORTON

Last month, I attempted to convince you to convert to the HPFS file system; this month I'm going to try to help you live with that decision. One argument often heard against using HPFS (and OS/2, for that matter) is that there "aren't any utilities". This simply isn't true. This month, I will discuss some of the consequences of converting to HPFS and some methods and utilities to address those consequences.

In the first place, the decision to use HPFS will mean, for many, that the drive will need to be repartitioned. One of the primary reasons many users are using FAT in the first place is the comparative ease of installing OS/2 over existing DOS and Windows, in contrast to repartitioning and implementing HPFS. Installing HPFS at this juncture will be no less painful. The process involves backing up data, repartitioning the disk, and restoring the data and operating system, which, assuming there are no snags, will require several hours.

CREATING MULTIPLE PARTITIONS

Partitioning disks is a slippery slope. A friend of mine who does primarily development work uses a single volume and cannot understand why my drives virtually span the alphabet. I must confess, while I've repartitioned my drives — for the *n*th time — due to not allocating enough disk space, I've often wondered if he was right. However, there are valid reasons for creating multiple partitions. It makes file management from the command line somewhat easier. Additionally, it is required to install multiple operating systems. Most importantly, it allows a maintenance partition to be created.

A maintenance partition is perhaps the best investment of disk space an OS/2 user can make. Even the simplest of routine file system maintenance activities cannot be performed against an active OS/2 boot partition. CHKDSK may be run to determine file system errors, but performing file system repairs (CHKDSK /F) requires all files on the volume to be closed. Since OS/2 is constantly accessing system files, the system must be booted using the installation or utility diskettes. This is not only slow, it is also inflexible: PM utilities cannot be executed while booted from floppies. Moreover, memory is limited since there is (usually) no swapping,

which seems to be at least partially responsible for some of the problems being reported with CHKDSK and large volumes. Don't you think that 35MB is a small price to pay to avoid these problems with a separate maintenance OS/2 partition, which will allow you to boot from the hard drive in crisis situations or to perform routine file system maintenance?

There are a number of different methods available to create a maintenance partition and each has its devotees; indeed, creating an absolutely minimal version of the operating system has become almost an obsession for some OS/2 users. I prefer a simple, straightforward, minimal installation of OS/2 on a logical volume using Boot Manager to select the partition to boot. The maintenance partition may also be installed on a primary volume, but only if the production or "normal" boot partition is logical. Remember, primary partitions are invisible to other primary partitions, and a maintenance partition will not be of much use if it can't access the production partition. You must allocate at least 35MB to install OS/2; I haven't found that I need any more than 35MB for the maintenance partition.

Once the partition is defined, add it to the Boot Manager, set the partition as installable, and start the installation process. At the appropriate prompts, select the 'Advanced Installation' option and deselect unnecessary features such as games, viewers, the tutorial, and multimedia support. Other options and features may be selected and deselected depending on the utilities you plan to use. I do not install the search and scan feature, for instance, since I use the GammaTech Utilities command line 'WHERE' utility to locate files. Omitting unnecessary features should leave an OS/2 installation of 25MB to 30MB, with a little room left over for utilities and the swap file.

So there is another reason to endure the pain of repartitioning. Actually, in many circumstances, it is possible to avoid the pain altogether. There is a product which allows the dynamic reallocation of partitions: Partition Magic from Power Quest. Not only will Partition Magic allow you to resize partitions on the fly, it can actually convert a FAT partition to HPFS.

Of course, if you elect to keep a DOS bootable partition you will be stuck with one

FAT partition. One consequence of using HPFS is that you will no longer be able to access HPFS drives while booted to a DOS partition, since DOS cannot recognize HPFS partitions. This limitation can be overcome through the use of a shareware utility, AMOS, which can be downloaded from CompuServe (GO OS2USER, AMOS32.ZIP in library 4), FTP (hobbes.nmsu.edu), or BBSes (OS/2 shareware BBS [703/385-4325]; and Bare Metal BBS [405/842-3158]). AMOS allows you to mount HPFS volumes while booted to DOS.

DISK UTILITIES

For general disk utilities analogous to the Norton Utilities or PC Tools for DOS, there are the GammaTech Utilities for OS/2 and the Graham Utilities. Both allow you to perform disk defragmentation and provide utilities for recovering data which has been inadvertently deleted or lost due to corrupted partition information. As I noted last month, the design of HPFS provides enhanced recovery options unavailable in FAT; both the GammaTech Utilities and the Graham Utilities take advantage of those facilities.

Who says there aren't utilities for OS/2? Indeed, because of its relative sophistication compared to DOS, OS/2 has attracted many of the brightest developers, and, as a consequence, a rich assortment of utilities is available. More of these utilities are taking advantage of the capabilities provided by the HPFS file system.

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