

Two devices can't share an interrupt on the IBM PC. Check the interrupt settings on your peripherals to ensure that this constraint is obeyed, and that your network card's port address is different from that of any other peripheral's. Port 300 hexadecimal, which IBM once documented as the port for prototyping boards, is the most common site of I/O address conflicts.

If possible, avoid using IRQ2 for a network card. This interrupt is more complex to service than the others, and some software doesn't handle it properly. If you have to use IRQ2 and you're using NetWare you can install the file VPICDA.386 (available from Novell with the Windows-compatible shells) to ensure correct operation in 386 enhanced mode.

Rule 7: Think twice before accessing the same file from two DOS sessions in standard or enhanced mode.

Any DOS program can ask the system to open a file for its own exclusive use, preventing all other programs from accessing the file. All properly designed networks respect these requests; therefore, if you open a file on the server from one workstation, another program on another workstation will not be able to access that file.

Unfortunately, each system sees Windows as a single application—even though it may actually run several applications. Therefore, if you open two instances of a database program in two separate DOS windows, both can access the same network file at the same time. The result can be seriously corrupted or lost data. I have lost databases that I created using ThinkTank by accidentally running two copies of the program on the same file from different windows.

I hope that Microsoft will address this problem in future versions of Windows. But in the interim, it's wise to keep track of the files and databases that each DOS window uses

and to make sure that there's no overlap.

Rule 8: If you get stuck, consider going on-line for help.

CompuServe, BIX, GENie, and all the other major on-line services have forums that cover LANs and Windows. You can join in on the different conferences and post your problems; odds are you'll re-

ceive an answer within a few hours.

Worth the Effort

I've exchanged E-mail with dozens of Windows and LAN users, and their opinion is pretty much unanimous: Microsoft needs to make Windows less awkward to install on a network. The good news,

however, was the consensus that Windows did perform well once the initial hurdle of installing it successfully was overcome. So take heart and roll up your sleeves: Windows and LANs may not yet be the perfect couple, but if you're willing to play matchmaker, it is well worth the time and effort. ■

BEYOND DOS: WINDOWS AND OS/2

A Smaller, Faster OS/2

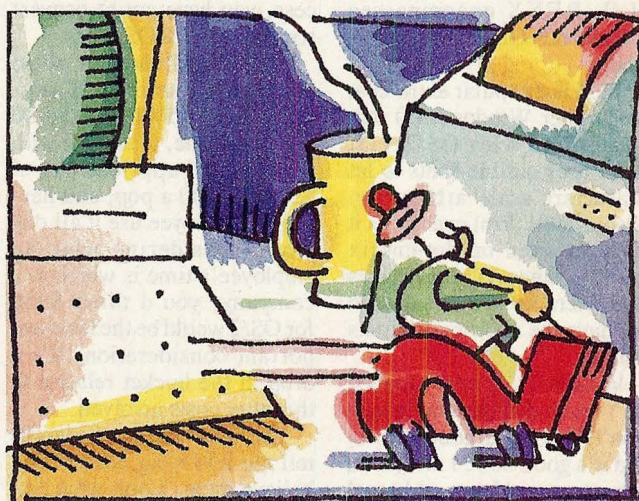
Douglas A. Hamilton

I walked into IBM's Boston office on the day of the OS/2 1.3 announcement feeling like a kid coming downstairs to see what Santa had left for Christmas. I sell software for OS/2, and if you don't have OS/2, you don't have any use for my software. That's a hard way to make a buck, because most of you don't have OS/2.

So I wondered, would this be OS/2's big break? Would printing finally work? Would mere mortals be able to install it? Would IBM finally launch the sort of marketing extravaganza that Microsoft used with such success for Windows 3.0? Just as there had been a \$50 Windows 3.0 upgrade, would there now be a \$50 OS/2 upgrade? To drive home just how reasonable the hardware requirements were, would they show it running on a lowly PS/1? Could this "Ultra Slim-Fast" version of OS/2 that Microsoft had fought so hard to keep off the market be the Windows killer?

The answers, sadly, were mixed. Technically, OS/2 1.3

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OS/2 1.3 is a technical success but a marketing flop

is everything promised. Given the lackluster marketing effort, though, not many people are likely to discover that.

Delivers the Goods

I have been using version 1.3 every day, all day long, for a month now, and everything does work. It's fast and reliable. And because of the inherently superior kernel facilities, it's fundamentally more capable than Windows—and much more appealing to program. It's a fun system to use, and I have no hesitation in recommending it.

The most important im-

provement in version 1.3 is the ability to print. Since many of us use computers to help deforest the planet, an operating system that can't print is obviously at a disadvantage. No more. OS/2 1.3 prints properly. Even the print queues work. Watching jobs go into a queue (and then actually come out on the printer and look like they were supposed to) was almost magical. After three years of frustration, I guess I'd unconsciously given up.

Everything is much tidier now. Your root directory no longer looks like an atom bomb went off after you finish

with the installation. Welcome enhancements include the REXX script language (formerly included only with the Extended Edition), a much wider choice of text fonts, and Adobe Type Manager (ATM). Version 1.3 runs in as little as 2 megabytes of RAM, although with memory now selling for \$45 per megabyte, that may not be so important anymore.

REXX is an interpreted language that has been enormously popular in the IBM mainframe world and is now IBM's official Systems Application Architecture procedure language. Looking a little like PL/I, REXX encompasses and extends OS/2's batch language.

ATM is a popular extra-cost item under Windows 3.0 that comes free with OS/2 1.3. ATM uses outline fonts to let characters scale arbitrarily. Also, it will print exactly as it displays, even on dot-matrix printers, since ATM rasterizes characters for printers that do not have the appropriate fonts built in.

Version 1.3's performance isn't much different from version 1.2's. It was good before, and it's good now. I measured some text window and kernel functions, and I found few changes in speed. I did notice a difference in some large Presentation Manager (PM) applications like Lotus 1-2-3/G, where the start-up times improved by a few seconds.

For a long time, OS/2 has been a big victor in terms of productivity for developers. Coupling these latest refinements with a decent selection of word processing, spreadsheet, desktop publishing, and other core applications, OS/2 is now ready for ordinary end users.

The Marketing Fiasco

IBM's marketing is not any more aggressive than before. At the Boston office, there was just one machine tucked off in the corner running version 1.3. The marketing representative standing next to it was

unsure just what sort of hardware was inside. Upgrades from OS/2 1.1 or 1.2 were announced as free, but no one knew how you were supposed to get one. A month after the announcement, IBM was still trying to decide whether you needed a dealer's signature or just the title page from your old version to get the upgrade.

Unbelievably, there's absolutely no upgrade path from DOS. At this time, there are only a few hundred thousand OS/2 users—and 50 million DOS users. You don't have to be a genius to realize that if you want to make OS/2 a success, you have got to convert some of those DOS users.

You hear all the time about companies spending anywhere from \$5000 to \$15,000 for a machine, loading it with all sorts of applications at \$300 to \$500 a pop, and having an employee use it all day long. Considering what an employee's time is worth to a company, you'd think \$350 for OS/2 would be the least important consideration. It's a drop in the bucket relative to the other costs involved.

Yet, over and over, people tell me it is a big deal. And I believe them. Look what Microsoft's \$50 upgrade program did for Windows 3.0. Is there anyone who didn't buy a copy? Where's IBM's promotional effort? Last summer, Microsoft spent at roughly the rate the Republicans or Democrats would to elect a president. IBM has run a few ads for OS/2, I admit, but you'd have to think hard to remember if you've seen one.

A Face Only a Mother Could Love

Compared to Windows 3.0, OS/2 still presents a face only a mother could love. Where are the free games like Solitaire or the pretty bit maps for the desktop? Where's the simple paint program or the (however dim-witted) free word processor? The only applications IBM and Microsoft have ever seen fit to include with

OS/2, the File Manager and Borland's SideKick, are both so tediously slow I rarely run into anyone who can stand to use them. About the only good thing that can be said is that SideKick is no longer included and that File Manager is a little less tedious in version 1.3.

Compare also how you choose your colors in the PM versus Windows control panels. PM still uses a silly arrangement of three sliders for color, shade, and amount, which have nothing to do with the decimal RGB values displayed. Nor can you just type in the values you want.

With the Windows control panel, you can choose from a set of predefined colors or create your own by typing in the values as either RGB or HLS (hue-luminance-saturation) or by mousing around on a two-dimensional rainbow palette. To choose what you want to set colors for, you simply click on it. No silly menus where you have to guess what an "Action Bar Outline" is. When you're done, the color settings are saved as ASCII text in the initialization files, so you can see what the heck is in there.

Anyone comparing Windows and OS/2 right out of the box is going to prefer Windows. The technical superiority of OS/2, however convinced we might be that it's there, is simply not apparent at a first look.

Sell What You've Got

Just for good measure, in case anyone might be thinking, "Ah, it's finally time to move to OS/2," what do you suppose IBM demonstrates to potential customers? Is it version 1.3? Of course not. At the version 1.3 announcement, the demonstration for the whole audience was of OS/2 2.0.

Nothing like pointing out to people that there's really no point in bothering at all with version 1.3 since the "real" OS/2 is going to be out so soon. Adding insult to injury, nothing that they demonstrated

that day couldn't have been done on version 1.3 or even 1.2 or 1.1.

Is version 2.0 coming out so soon? As I write this in mid-January, well past IBM's self-imposed end-of-1990 deadline for the first shipments of it, most of the betting seems to be that version 2.0 may be many months away from reality and that it still lacks the touted binary compatibility layer for running unmodified Windows 3.0 applications.

I've even heard that Microsoft is quietly advising some of its "strategic partners" not to bother at all with version 2.0 development, claiming they don't think IBM will have it ready until the end of this year, only a few months before Microsoft rolls out OS/2 NT (New Technology), the portable RISC version of OS/2.

For all its alleged marketing prowess, IBM may have forgotten that first rule: Sell what you've got, not what you haven't. What's sad about this is that OS/2 1.3 really is a fine product.

Modern Realities

OS/2 1.3 is, in many ways, the system we were promised back in the summer of 1987. It's solid and fast. The hardware requirements are neither excessive nor particularly expensive. Everything works, and virtually every item on the DOS user's "wish list"—true multitasking, a fast file system, a better scripting language, and virtual memory—is included.

But it's no longer 1987, and there's a lot more competition. Windows looks prettier and comes with more toys to acclimate new users. It's cheaper and far less risky to develop for Windows since the tools are much less expensive and the market is so much larger. Make no mistake, OS/2 1.3 is very good. I use it, and I love it. But IBM is going to have to wake up soon and begin the marketing, promotional, and developer support efforts that are needed to make it fly. ■