

Special OS/2® *Warp* Edition

# Personal Systems

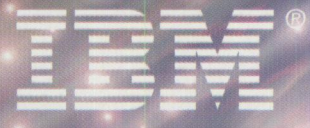
IBM's MAGAZINE FOR TECHNICAL COORDINATORS

JANUARY 1995



**WARP AND  
THE FUTURE  
OF OS/2**  
by Will Zachmann

**9 PC USERS  
REVIEW WARP**



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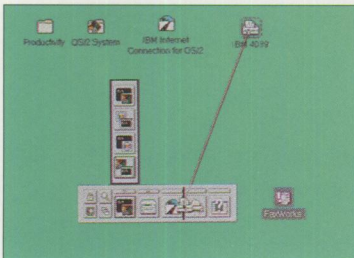


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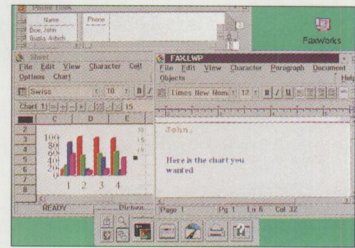
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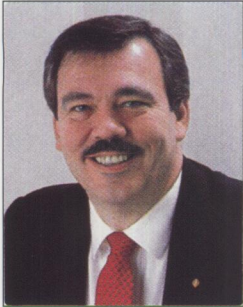
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## What's It All About...?



**H**ow should *Personal Systems* handle the announcement of OS/2 Warp for its readers? Publishing an article about OS/2 Warp and its new features is one way, and an excellent article will appear in the January/February issue of *Personal Systems*, kicking off 1995 in grand fashion. But OS/2 Warp is an extremely significant announcement, literally the beginning of a new era of personal computing. In fact, it's really the *first* 32-bit multitasking operating system for the *average* PC user.

OS/2 has been around for years, and there are millions of OS/2 users, but they are what we typically call "power users," expert PC users with powerful PCs. OS/2 Warp is the first release directed at the average user and the average PC.

The debut of such a significant product calls for a special response – this Special OS/2 Warp Edition is that response. Betty Hawkins, editor of *Personal Systems*, supported my efforts to publish a different sort of *Personal Systems* issue. In a departure from the normal magazine's content, this edition is less technical, more conversational. Having said that, it's still a conversation with people who have strong technical skills, people who understand the issues facing a wide range of users.

The centerpiece of this edition is the customer reviews of OS/2 Warp. I asked for volunteers to review OS/2 Warp and write about their experiences. The response was great, and the Reviews section is the result. I want to emphasize that I didn't select the reviewers nor have edited the reviews to make them favorable. I have not camouflaged their criticisms. I wanted you, the readers, to get honest appraisals about the product and what lies ahead when you install and use OS/2 Warp.

Well, the reviews are back and here for you to read. They are very positive, which supports my personal observation. OS/2 Warp is a fine product. Ready for Prime Time! It will be a difference maker. That's all I'm going to say on the subject. I don't have to say more; that's what this magazine is all about.

Please feel free to contact me with questions or comments. I will be happy to pass comments along to the authors. My Internet ID is [boffo@vnet.ibm.com](mailto:boffo@vnet.ibm.com).

Bob St. John  
Editor, Special OS/2 Warp Edition

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# OS/2: Past, Warp, and Future

*Will Zachmann is an internationally renowned expert on information technology and the industries built around it. He is President of Canopus Research and host of the Canopus Research Forum on CompuServe (GO CANOPUS), which provides research and analysis services that cover strategic aspects of the computer and communication industry, technology, markets, and management.*

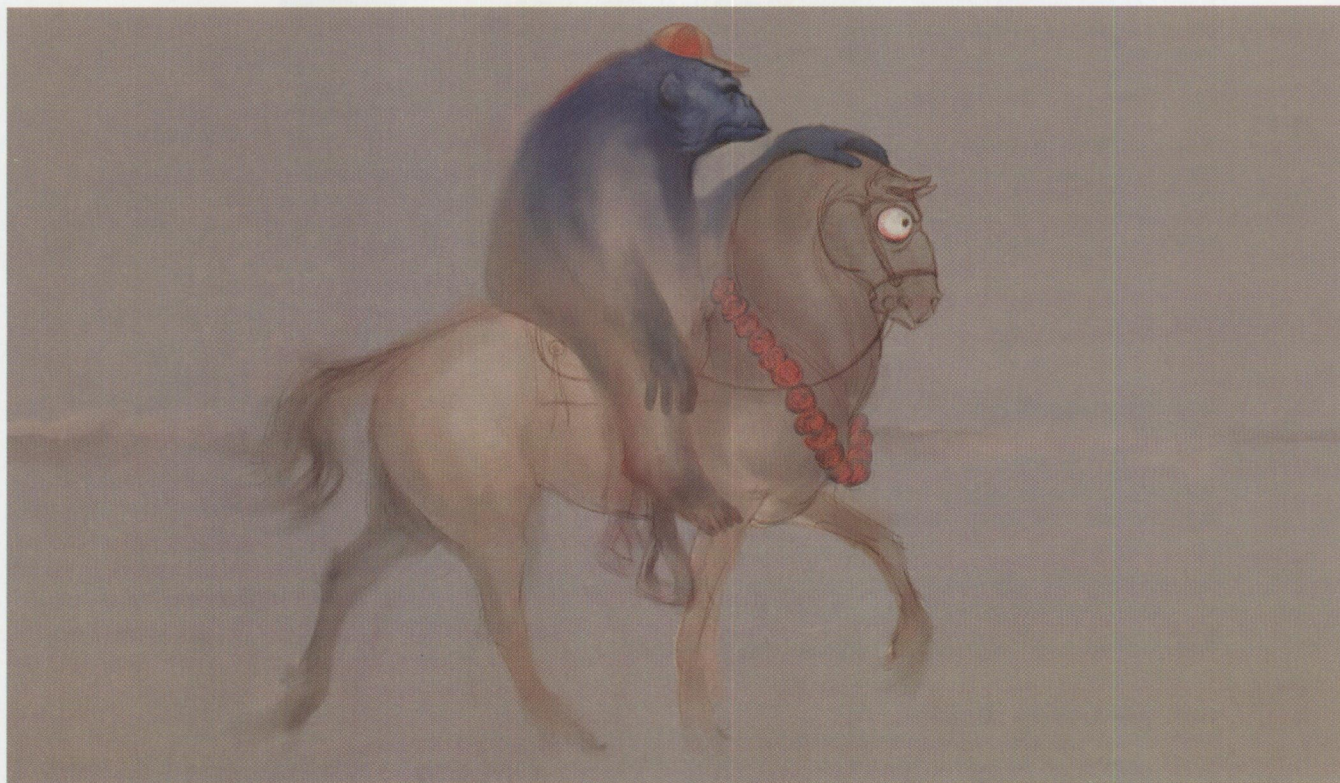
In order to understand OS/2's extraordinary prospects for the future, it is necessary to understand just how extraordinary OS/2's past has been. The basic facts are so well known, have been so familiar for so long, that it is easy to overlook just how amazingly unusual OS/2's course so far has been. To do so, however, is equally to fail to appreciate how good OS/2's chances are to not merely survive as a niche product but to succeed spectacularly in the latter half of the 1990s as the real successor to the DOS/Windows desktop standard of the first half of the decade.

To be sure, OS/2 remains the underdog according to the implicit odds makers of the "conventional wisdom." Microsoft's "Windows Everywhere," as championed most recently by the as yet undelivered promises of Chicago (a.k.a. Windows 95), is supposed to be the odds-on favorite. Of course, according to the conventional wisdom of four years ago, actively encouraged by Microsoft CEO Bill Gates and his friends, OS/2 was already deader than a doornail back then. The conventional wisdom, however, is often far more

conventional than it is wise, as sales of nearly a million copies of OS/2 since its prematurely reported "death" back in 1991 clearly show.

In fact, the evolution of the claims made by opponents of OS/2 over the past few years provides a very interesting metric of the steady progress OS/2 has made since Microsoft/IBM split during the winter of 1990/91. They first claimed, back in 1991 and early 1992, that OS/2 was dead. IBM refuted that by delivering OS/2 2.0. Then they claimed that OS/2, though not dead, was surely dying. IBM refuted that, in 1993, by delivering OS/2 2.1 and OS/2 for Windows and selling over 5 million copies of OS/2 by the spring of 1994.

They then changed their story once more, admitting that OS/2 wasn't dead or dying but claiming that despite some success in large businesses, OS/2 was doomed forever





to be a "niche" product that would never appeal to the mainstream computer user. IBM is already well on the way to refuting that claim with OS/2 Warp. Now they have changed their tune once more, admitting that OS/2 Warp has broad appeal, but claiming that it is only a temporary aberration soon to be "corrected" by Chicago/Windows 95.

They are wrong. There are three reasons why they are wrong. The first is the clear success OS/2 has already had despite serious handicaps that, until recently, have prevented greater success for it. The second is the very high probability that Microsoft's competitive alternatives to OS/2 will fall short of what has been promised, losing much more ground to OS/2 than the conventional wisdom assumes. The third is that OS/2, with the impediments of the past removed and continuous improvements in the future, is likely to provide a better operating system for what the majority of users really want and need to do in the future.

The truly amazing aspect of OS/2's recent past is that it has done so well despite enormous handicaps. By examining what those handicaps have been and what has been done to correct them, we can begin to see just how bright OS/2's future prospects really are. After all, a horse than can already pose a threat to competitors despite wearing a heavy Western saddle and carrying a 275-pound jockey will surely do even better when properly outfitted for the race!

In part, OS/2's success in the recent past has been limited by the product itself. OS/2 2.0 was still fairly limited in backward compatibility, required more system resources (especially memory) than most users actually had, was touchy to install and tune properly, had limited device support and its fair share of bugs and glitches. OS/2 2.1 improved upon that in all respects but still not enough for widespread use and acceptance. It is only with OS/2 Warp that the product finally became a viable contender for truly widespread acceptance.

All that, however, is really more a matter of OS/2 getting into top competitive form

after IBM took over complete responsibility as its "trainer," once Microsoft decided to abandon OS/2 in favor of its own "Windows everywhere" horse. OS/2's most serious prior handicaps weren't in the horse itself but in the "weight" the horse was carrying.

A large part of that was external. It was the negative view of OS/2 exemplified by the "conventional wisdom" discussed above, aggressively promoted by Microsoft and actively spread by trade, general business press, and a majority of "industry experts" with a notable tilt in the direction of the Microsoft campus in Redmond, WA. "OS/2 is dead" became a sort of mantra for Microsoft chairman and CEO Bill Gates and Microsoft's supporters. It was dutifully repeated over and over again by a press and by so-called "analysts" eager to herd together in the middle of what they uncritically assumed to be the camp of the assured winner.

The result is that since 1991, OS/2 has had to struggle against a generally unreceptive (if not downright hostile) attitude from the overwhelming majority of the press and analysts who had already made up their minds (or had them made up for them with a little help from Microsoft's very effective PR machine) that OS/2 simply didn't have a chance, no matter what. One could, in those early days, almost hear the sounds of minds snapping shut against OS/2 and OS/2's prospects.

Of course, it did not at all help that IBM's efforts to get OS/2's story told, via PR press relations, marketing, and advertising left a great deal to be desired during the period between 1991 until sometime around the middle of 1994. By contrast to Microsoft's efforts to promote Windows during that period, IBM's own efforts were ineptly amateurish by comparison. It was not until IBM chairman and CEO Lou Gerstner took charge that IBM finally began to show signs of real professionalism in its PR and advertising on behalf of OS/2.

OS/2's worst handicap was neither the generally hostile press and analysts goaded on by competitors nor IBM's initially lackluster efforts to overcome that. It was lack of clear commitment to OS/2 by IBM as a

whole. The worst offender was the IBM PC Company, but IBM's Power Personal Systems Division (PPSD) ran a close second.

If there is any single key to the success of Microsoft Windows, it has been Microsoft's ability to get system vendors to pre-load Windows on their systems. The overwhelming majority of the copies of Windows in use (over 90%) were not purchased independently by users but came preloaded on their systems when they bought them. Were it not for preload arrangements with system vendors, Windows shipments would have been only a fraction of what, in fact, they turned out to be. To win preload arrangements with system vendors is crucial if OS/2 wants to compete effectively with Microsoft's Windows everywhere strategy.

Nevertheless, until late 1994, the IBM PC Company continued to make Microsoft Windows its primary offering as preloaded software and provided no more than lukewarm support for OS/2. Until very recently, therefore, the IBM PC was, for all practical purposes, allied with Microsoft against OS/2! It was as if the Microsoft applications division had concentrated on developing software for OS/2 instead of for Windows! Not only were hundreds of thousands of potential OS/2 shipments lost directly, but IBM's ability to persuade other system vendors to preload OS/2 was severely undermined in the process.

Similarly, until last fall, PPSD's flirtations with Microsoft over Windows NT for PowerPC undermined IBM's microkernel based OS/2 for PowerPC and muddled IBM's message about the long range strategic importance of OS/2 for IBM as well. Like the IBM PC Company, PPSD was working at cross-purposes to IBM's corporate strategy for OS/2 and, in effect, functioning as a better friend and ally to Microsoft than to IBM!

The truly amazing thing is that OS/2 did as well as it had done despite all that. By the middle of 1994, despite the hostile consensus in the press and among analysts, despite significantly less than stellar PR and marketing, despite what amounted to downright Quislings inside IBM trafficking with the enemy, OS/2 still managed

to sell over six million copies and to establish itself as a major "underground" success. Just think of what it will be able to do once the whole IBM Corporation is solidly behind it and finally backing it up with truly professional marketing, advertising, and promotion!

Of course, OS/2 is getting more than a little help from the Microsoft Corporation, too. Windows NT 3.1, which originally was widely touted to be Microsoft's champion OS/2 killer, was nothing of the sort. It was simply too big and had too many limitations in backward compatibility. It fell far short of even the belatedly modest expectations of a million copies shipped during its first year proclaimed by Microsoft upon its release. Windows NT 3.5 has proven to be only a marginal improvement on that.

Windows 95 (a.k.a. "Chicago") is Microsoft's latest champion and OS/2 killer. Like so much operating system software from Richmond, WA, however, it increasingly looks like it will prove to run much better on an overhead projector than it does on any systems that any users actually have. Microsoft already appears to be trying to scale back expectations for Chicago, characteristically diverting attention to yet another round of promises for the future, this time related to the supposedly object-oriented successor to Windows NT 3.5 code-named "Cairo."

Meanwhile OS/2 keeps getting better and better. OS/2 Warp has set a new high water mark in functionality, performance, compatibility, easy installation, usability, and value provided in terms of the BonusPak applications. IBM is now fully committed to

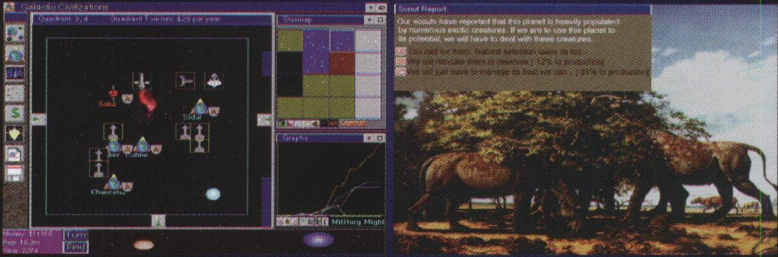
support OS/2 including preloads from the IBM PC Company, solid support of OS/2 for PowerPC from PPSD, and, for the first time, a truly professional public and press relations, advertising, and marketing effort.

The result, I think, is that "OS/2 is a niche product" will prove to be merely one more step in the gradual evolution of the so-called "conventional wisdom" from "OS/2 is dead!" to "OS/2 is a real winner!" To be sure, the struggle isn't yet over and neither side is yet assured of victory. Were I required today, however, to place my bets on who the ultimate winner will be, I would choose OS/2 over Windows Everywhere as the most likely winning horse for the late 1990s and beyond. I don't think I'd lose that bet.

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# PC Computing Done Right!

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I promised myself I wouldn't get excited, but I may not be able to keep that promise. It's not as much being excited about a product as it is seeing the job getting done right.

OS/2 will continue to evolve and improve, but the work done in the OS/2 Warp release demonstrates that IBM listened to what PC users wanted and engineered those things into the product: easier to install and use, better performance, better support for hardware the PC users enjoy using. That's from the product side. When you look at how OS/2 Warp is packaged and priced, it's clear IBM listened to customers on these issues as well.

I am very impressed with what people get for the price. Not just OS/2 Warp, but the BonusPak that comes with the product. It is awesome! It includes:

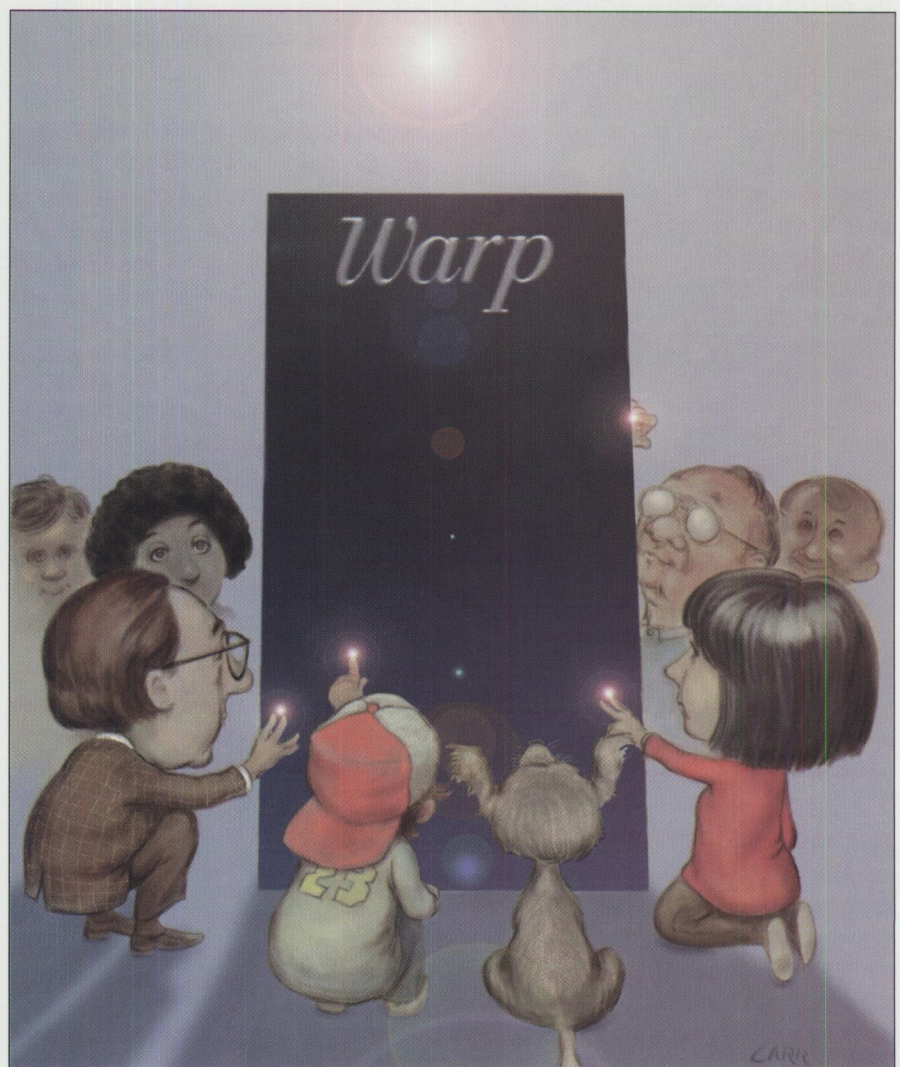
- Internet Access Kit—a prodigious package of software to make people productive using the “net.”
- IBM Works—a suite of applications with spreadsheet, word processing, database, and graphics.
- Person to Person—IBM's award-winning conferencing software.
- FaxWorks for OS/2—software to send and receive faxes directly on your PC.
- The Personal Information Manager—productivity applets.
- UltiMail Lite—an E-mail product that supports audio and video clips.
- HyperACCESS Lite for OS/2—modem communications software.
- CompuServe access software.

Impressed? And there is still more, but let's stop here and

take a good look at OS/2 Warp. After all, there are more reasons than just the BonusPak to take another look at OS/2.

## The New OS/2 Warp

OS/2 Warp is easy to install and to use and runs very well on machines with as little as 4 MB of memory. Users claim that performance screams in machines with larger configurations. It has better support for peripheral devices including sound and graphics cards, CD-ROMs, and printers. In fact, the product addresses the major concerns raised by PC users in the past. So let's begin at the beginning.



## Installation Program Enhancements

"We need an install that doesn't require you to be a member of Mensa." That's what Steve Woodward, the technical lead for OS/2 Warp, said—and the team delivered. OS/2 Warp has a "one button" installation process called *Easy Install*. If you select it, OS/2 Warp takes a "look-see" at the system and begins to install. It comes back and shows you the configuration it detected and asks for a confirmation or correction. The user hits "enter" again, and OS/2 Warp finishes the job.

The Advanced Install is still there for folks who want to customize their system. Advanced Install has some new features, like the ability to configure more than one printer on a printer port and "the boot blob," a nice feature that can help you determine the problem if the installation is difficult.

When OS/2 Warp is installed over an existing DOS system, Dual Boot automatically installs without requiring you to modify the DOS CONFIG.SYS file and to re-boot.

Multimedia is integrated into the system and installs automatically when the appropriate hardware is detected.

Enhanced hardware detection simplifies the installation of many system device drivers for displays, certain adapters, Small Computer System Interface (SCSI) devices, CD-ROMs, and Personal Computer Memory Card International Association (PCMCIA) cards.

More than 300 popular DOS applications have been added to the migration database, allowing OS/2 Warp to automatically configure their DOS settings. This can lead to improved performance as these DOS applications run simultaneously and seamlessly with other applications.

## The Tutorial

When your system is installed, you should explore the new tutorial. This is another feature that has been greatly praised by users and product testers. It does a great job of educating users. Even David Barnes, OS/2's self-proclaimed "#1 Fan," indicated that he learned a thing or two from the tutorial. It has been redesigned with new graphics and has a very useful index and graphical help facility. And yes, you learn by doing, and you can learn what you want to learn.

But the real news is how it is organized. Not only can you identify yourself as an "expert," but you can identify yourself as a DOS user, Windows user, or an OS/2 user. Your response changes the information you see as you use the features, taking advantage of your existing skills and knowledge. This can reduce the frustration of learning a new system. Definitely a nice touch.

## Usability Enhancements

The LaunchPad is often the first thing mentioned when people speak of OS/2 Warp. And why not? It's one of the things you see first when you see the improved Desktop. In a sense, it's a mini-Workplace Shell, allowing you to put the objects you use frequently on the Pad and access them with a single mouse click. The LaunchPad is a great Graphical User Interface (GUI). It's simple, accessible, and easy to customize.

The Workplace Shell has been fine tuned, too. New icons! Pretty ones to go along with the new colors and bitmaps. Plus new cursors, new color palettes, and animated icons!

The enhancements just don't stop. There are options like "Undo Arrange," "Open Parent," and folders that close automatically after you open an item in them. You can archive copies of your desktop as a back-up precaution. You can tell the system when it comes up that you want the desktop restored as it was when last used—as was the case with OS/2 2.0 or 2.1—or you can establish a standard desktop, which will be in place after each boot, so you don't have to put things away. This is key benefit for those of us who tend to leave a messy desktop. Just wait, you'll see...and you'll like it.

## Device Support

Supporting all the possible PC configurations is perhaps the biggest challenge for any product in the PC environment. Hardware, software, and peripheral devices like CD-ROMs, sound cards, modems, and printers seem to grow and change before our eyes. The complexity of this challenge continues to grow, but IBM has taken a very aggressive stance.

Recently IBM created the position of "advocate," an individual working on a development team who not only acts as a liaison between IBM and makers of

devices, such as graphics adapters and graphics accelerators, but who also encourages those vendors to support OS/2. In this role, the advocate works with the vendor and the OS/2 product developers to design the appropriate drivers. IBM's effort to recruit and support device driver development is aggressive and unique in the industry.

While this job is ongoing, the results are already evident. OS/2 Warp now includes 32-bit device drivers supporting the graphics accelerator chips of industry leaders such as Actix, Boca Research, Diamond, Genoa Systems, Number Nine, Orchid, and others. These graphic display device drivers are designed to provide accelerated graphics performance and advanced color resolution when operating in Presentation Manager and WIN-OS2 seamless and full-screen sessions.

In addition to the existing support for IBM XGA, XGA-2, 8514, and S3 86C801/805/928 chips, OS/2 Warp now adds support for:

- Cirrus Logic CL-GD5426, -5428, -5430, -5434
- S3 86C864 and 86C964
- Western Digital WD90C24, WD90C26, WD90C27, WD90C31, WD90C33, and WD90C34
- ATI Mach 32 and Mach 64
- Tseng ET4000/32, W32i, W32p
- Weitek Power9000, Power9100

In addition to the support for SCSI-based CD-ROMs, OS/2 Warp supports the new ATAPI-compliant CD-ROM drives, the industry initiative to standardize CD-ROM attachment to IDE controllers (AT Packet Interface Version 2.1). The new OS/2 drivers include support for models of Chinon, IBM, Mitsumi, NEC, Panasonic, Phillips (LMS), Sony, Texel, Toshiba, and others.

## Mobile Computer Support

Every computer user has dreams. I'm no different. Say that I'm using my ThinkPad 755C (now you know that I'm dreaming), and I have an ATA hard drive in the machine. I prepare some documents and put them in the queue to be faxed. Now I remove my ATA hard drive and plug in my modem card. WHOOOOOSH! My modem card launches FaxWorks for OS/2 (which came in my OS/2 Warp BonusPak) and

starts sending the faxes. All I did was insert the modem!

OS/2 Warp's Plug and Play for PCMCIA provides capability for devices such as the modem cards and ATA hard drives I mentioned, for flash memory cards, and for Token-Ring or other network adapters. This allows for "hot plugging," which means that cards can be installed or changed while the system is running. The system will recognize, configure, and initialize the card so that it can operate without reconfiguring and rebooting.

OS/2 Warp takes this a step further and allows you to customize your system so that an application can be launched when a card is inserted and recognized. You can also link several applications to a card to select the applications that you frequently use after inserting a specific card. Pinch me! (Not too hard, though.)

Other easy-to-use features such as the new cursor option will be popular with mobile products users. OS/2 Warp can make the cursor larger or reverse its color to enhance visibility on monochrome displays. It also has a new cursor that should be very popular with mobile users who have difficulty locating their cursor. It's called the Comet Cursor because it has a tail! I expect a lot of sightings to be reported this year.

## Performance Enhancements

So the PC user says to anyone who will listen: "There are three things that get my attention when I look at products: performance, performance, and performance." OK, I stole that one. Besides, there are other things. There's crash protection, reliability, ease of use, device support, and the like. But users seem to live or die with performance.

Many PC users are working with configurations on which OS/2 2.11 would have difficulty performing well. DOS can do very nicely in a 386, 16MHz machine 4 MB of RAM, while OS/2 2.11, trying to multitask several applications, may choke. Well, not anymore. OS/2 Warp was specifically engineered and designed to perform well in 4 MB machines. In more powerful machines, it screams. Users are delighted!

This was accomplished by extensively reprogramming OS/2. PM-WIN, the

desktop windows management system, has been rewritten in 32-bit code to make screen response significantly better. The Workplace Shell has been enhanced to open objects faster, populate folders faster, and load applications faster.

The system has been page-tuned to ensure that the most frequently used pages are in memory when needed, reducing the amount of swapping to the hard disk. There is an option in the WIN-OS2 Setup folder called Fast Load, which should be very popular with folks using OS/2 Warp to run Windows applications. It preloads and starts the Windows virtual machine so that Windows application programs load very quickly.

Some parts of OS/2 Warp are still 16-bit because the product has to maintain some backwards DOS compatibility. But much more of the product is now 32-bit. There is a new 32-bit print subsystem that rasterizes in the graphics engine instead of being dependent on display drivers. This can improve both the quality and performance of system printing.

It may not be as tangible as some of the other enhancements, but without question the most significant enhancement to OS/2 is the ability to do more with less and to better perform in machines that, in the past, did not achieve good performance when running multiple applications.

Achieving this performance, running 32-bit preemptive multitasking and multimedia for the price of OS/2 Warp has to be a better deal than buying a processor or memory upgrade. OS/2 Warp can make old iron young again. I warned you, I'm getting excited!

## Multimedia

OS/2 has been a strong platform for multimedia, but enhancements to the product and additions from the BonusPak make every OS/2 Warp user a multimedia user. It includes high-performance multimedia support designed to make it easy for you to transform your computer into televisions, store and view your favorite photos, and participate in live video teleconferences with friends and colleagues.

OS/2 Warp supports Eastman Kodak's Photo CD technology, allowing you to store and

view high-resolution color images and photographs developed on Kodak Photo CDs. The ability to view these images will make OS/2 Warp an attractive program for creating business presentations, newsletters and other documents, as well as for commercial multimedia programs for kiosks, sales, education, and training. On a more personal level, you can send photographs as part of e-mail to family and friends.

OS/2 Warp supports popular video overlay cards, including the WIN/TV card from Hauppauge Computer Works, Inc., which allows you to turn your computer into a television. With the preemptive multitasking power of OS/2 Warp, a fully scalable TV screen can run in the foreground or background while you work on other applications.

Motion Picture Experts Group (MPEG) support has been added to OS/2 Warp through Sigma Designs' ReelMagic MPEG multimedia playback adapter. The support allows multimedia developers to create OS/2 applications that offer full-motion, full-screen, full-color video, and CD-quality digital stereo sound from a single-speed CD-ROM. MPEG support in OS/2 Warp also allows you to view movies and television shows created in the emerging cross-platform VideoCD standard.

The Direct Interface Video Extensions (DIVE) Application Programming Interface (API) in OS/2 Warp gives applications direct access to the PC video hardware, enabling them to generate high-speed graphics needed for today's advanced multimedia software. The DIVE graphics interface allows powerful, high-speed games and digital video applications to use a single high-speed API for stretching, clipping, and color conversion.

It doesn't stop there: the built-in Autodesk Animator playback support in OS/2 Warp allows you to view video animation files developed using the Autodesk .FLI and .FLC animation file formats. These formats are recognized as the industry standard for animation on personal computers. Sound effects can be added to these files to enhance playback.

Play .FLC and .FLI files with the multimedia support or build your own. Paul Rogers of OS/2 Multimedia Development

suggests: "Try naming a .WAV file the same as the file name for your .FLC/.FLI file and put it in the same directory. OS/2 Warp multimedia will play the file while displaying the animation."

In the area of audio, OS/2 Warp has built-in software support for the industry standard Interactive Multimedia Association ADPCM and Microsoft ADPCM formats. These formats reduce the amount of disk space required to store audio content and make it easier to send and receive voice files over networks. Now audio files take up to 75 percent less disk space without needing additional hardware device support. IBM is also extending this capability to reduce the disk space that AVI files need to be stored and played back in OS/2 Warp.

New audio support has been added to OS/2 Warp including Compaq Business Audio, Toshiba Business Audio, Analog Devices Audio, Aztech Sound Galaxy Nova 16, ESS 688 AudioDrive, Media Vision Jazz16, Creative Labs AWE 32 drivers, and Crystal Semi-Conductor audio support for the IBM ThinkPad and other mobile computers. OS/2 Warp supports more than 80 percent of the audio devices on the PC market.

### ...In the BonusPak

Though not integrated into the product, the following multimedia features and products are available to OS/2 Warp users in the BonusPak. They are listed here instead of the section on the BonusPak, so the multimedia picture can be completely represented.

Ultimedia Video IN for OS/2, IBM's award-winning digital video technology, allows you to use a video recorder to capture your favorite videos and images from a camcorder or other devices and incorporate them in presentations using IBM's Ultimotion and Intel's Indeo formats.

Video IN for OS/2 Warp complements the integrated multimedia capabilities of OS/2, including its advanced synchronization and streaming capabilities and the ability to play and record Ultimotion and Indeo Audio Video Interleaved (AVI) clips. Video IN for OS/2 Warp will be particularly useful to the educational community, which can use the technology to help create a wide range of CD-ROM titles and multimedia applications that can be used as teaching tools.

The OS/2 Warp BonusPak also includes a multimedia viewer that allows you to browse images, audio files, animation, and video clips. Multimedia objects are shown with "thumbnails," or miniature pictures, as if they were slides on a photographer's light table. The multimedia viewer is an extension of OS/2's Workplace Shell and allows you to display or play an object by simply double-clicking on it. The multimedia viewer lets you view popular image formats such as GIF, TIFF, Targa, and PCX. Many of the formats are found on services such as CompuServe and Internet.

Related to the multimedia capabilities is video teleconferencing. The BonusPak includes Person to Person, IBM's real-time conferencing software. In the edition of the product included in the BonusPak, up to eight people can work together on a single document, sharing suggestions and writing or drawing comments on the document on their PCs using a "white board." However, adding video cameras and ActionMedia II adapters allows you to participate in live teleconferences over existing networks.

Although some IBM documents recommend 10 MB of RAM to support multimedia, many people who participated in the beta testing of the product reported good performance in as little as 6 MB. If you are just interested in audio, 4 MB should do nicely.

### The BonusPak Internet Access

As I said, the BonusPak is extremely impressive. The feature that is getting most attention is the Internet Access Kit (IAK), and it deserves all the attention it gets! "Comprehensive access" doesn't describe it. Everything you could want comes closer.

The Internet Access Kit includes TCP/IP communications software, Internet access utilities such as Gopher, FTP, Telnet, and IBM's UltiMail Lite for electronic mail capabilities. UltiMail Lite supports plain text, image (BMP, GIF), audio (WAV, MIDI, basic), video (AVI), and binary data, such as word processor, spreadsheet files, and executable programs.

Using the multimedia features of OS/2 Warp, like Video IN, and the appropriate hardware, you can send video and audio in your e-mail across the Internet. Quite

a way to let the kids say "hi" to Grandma on that computer you set up for her this year!

So, how do you get started? OS/2 Warp makes that easy as well. To "surf" the Internet, just click on the Internet folder. This initiates the one-time registration process and connects you to the IBM Global Network via Serial Line Internet Protocol (SLIPS). To help you get used to Internet, you get three hours of connect time at no charge (this is an introductory offer).

### WorldWide Web

Once you log on, you are greeted with a menu page that has icons representing the best of the "Net," including the popular WorldWide Web (WWW). The WWW is a vast electronic library of information. You can visit the Travel Center for vacation ideas or the Sports Center for news about the latest football polls.

### Home Page

There's an IBM Corporate Home Page (Lou Gerstner is the "official greeter"), which has all the latest IBM news and product specific information. To learn the latest about OS/2 and other desktop software products, there is the Personal Software Products Home Page. There are similar pages for other groupings in the "Products and Services" category.

There's a lot out there. It can be overwhelming. But you can download IBM's WebExplorer, a graphical "web" browser. Instead of using network addresses and commands, you can move through the Internet using a common graphical interface that integrates the functionality of popular services like Gopher, Telnet, and FTP. If you know your way around the net, you can skip the explorer and set up your own quick paths with icons. "Just point and click, Grandma, and you'll be watching little Ricky thank you for that Power Ranger."

### OS/2 NewsReader

The OS/2 NewsReader highlights news of Internet. By clicking on the NewsReader icon, you can get an organized, alphabetical list of Internet news groups. Explained by James Neiser, Director of IBM Networking Products Marketing: "Much like when individuals grab the newspaper sections that interest them most, the OS/2 NewsReader allows

users to select only the news they want to read and create their own newspaper. It's delivered to their desktop, electronically, every day."

The Internet Access Kit includes even more important components:

### Gopher Client

The Gopher Client provides a user-friendly graphical interface to Internet. This helps you locate and display, or even transfer, information to and from the Internet. Considering that the Internet already consists of more than 30,000,000 computers, Gopher's ability to help you navigate the net comfortably and confidently is important.

### TelnetPM

TelnetPM allows you to login to other computers on the Internet. Programs and information located on these other computers can be accessed as though they were on your own computer space (supports VT100 and VT220 emulation).

### PMANT

PMANT is an OS/2 Presentation Manager application that allows you to access information and programs located on Internet hosts that support 3270 sessions, such as VM or VMS, using TN3270 emulation.

### FTPPM

FTPPM is another OS/2 Presentation Manager application that allows you to easily share, store, and distribute data between your computer and other computers on the Internet. If you have authorized access to a given computer, you can manipulate files on that computer as if they were on your own.

As I said, comprehensive doesn't do it. This package is prodigious! And yes, there's more! Another well known staple of cyberspace is CompuServe.

### CompuServe Access

CompuServe Information Manager for OS/2 is a software product developed by CompuServe for OS/2 Warp users. The application is object-oriented and allows you to quickly and easily access, sort, and utilize the online information and services. As with Internet, there is a "sign-up" icon for first time users.

### IBM Works

IBM Works covers most needs of most computer users:

### Word Processor

A full function word processor that includes advanced features such as tables, merge printing, graphics objects, and the standard array of word processing features.

### Spreadsheet

Again, the words full function apply. Combine the features of Spreadsheet with the chart application and you can produce a compound document with text, numbers, and charts on a single page.

### Chart

Chart can produce a variety of chart types and allows for enhancement with text and drawing tools. Charts can be printed on their own or combined with other IBM Works documents.

### Database

A pretty powerful database offering for a "suite" product (the same can be true of all the products in this package). It's easy to use, can organize both text and graphical information, and will import and export files in a variety of formats. The database product was designed to work with the IBM Works Report Writer to produce customized reports.

### Report Writer

Besides producing reports from the IBM Works Database product, Report Writer can also work with dBASE compatible databases.

### PIM

Personal Information Manager (PIM) is a collection of productivity applications designed to help you manage your daily activities. These features include:

- Appointment book
- Monthly planner
- Calendar
- To-do list
- Phone book
- Contact list
- Notepad

These and some other nice features make this a functionally rich PIM.

### FaxWorks for OS/2

This deserves to be covered again, FaxWorks for OS/2 Warp! This is a 32-bit fax software program that sends and receives faxes of unlimited length (as long as storage is available). Nice features include

drag-and-drop viewing and printing, normal and fine resolution, portrait and landscape formats, and variable page length.

### HyperACCESS Lite

HyperACCESS Lite for OS/2 Warp is a modem communication program. It is also 32-bit and object-oriented, easy to set up and use.

Few things bring home the power of OS/2 Warp like the ability to send and receive faxes while other faxes are printing, the NewsReader is downloading your "newspaper," calculations are taking place in your spreadsheet, and you are editing your word processing document while .WAV files play in the background. All this on a machine with 4 MB of RAM. I'm getting excited again!

### Person to Person

So you're cooking on the Internet and some associates want to conference interactively with you on the net. Well, fortunately you have OS/2 Warp with the BonusPak, which means that you have IBM's Person to Person. Let's hope they do, too. Then, once the link is established on Internet, LANs, ISDN, or other modem connections, the data to be worked on is placed on a shared clipboard and can be modified in real time. All parties see the same data at the same time. Person to Person also includes the ability to have "keyboard-to-keyboard" dialogs and to send data, of course.

If you get a TV camera, camcorder, or some such device and IBM's ActionMedia card, you can "video conference." Everything needed to support video conferencing is included in OS/2 Warp and Person to Person.

### Ultimedia Viewer

I've already mentioned that OS/2 Warp's multimedia package brings audio and video into the mainstream of the operating system. Ultimedia Viewer is an object-oriented tool which enables you to organize, manage, and play multimedia image, audio, and video files. Miniature picture views (thumbnails) make it easy to identify, organize, and select multimedia data. Media browsers will display or play a file by double clicking on the "thumbnail" frame.

### Developer's Toolkit

Oh, of course! Developers have been fond of OS/2 for a while. OS/2's ability to multitask

and the crash protection, memory use, and so forth have long made it a favorite with this crowd.

Well, the Developer's Toolkit for OS/2 Warp will be made available as part of the Developer's Connection for OS/2 as a CD-ROM product. The Ultimeia Presentation Manager Toolkit/2 is integrated into this version of the IBM Developer's Toolkit.

The Developer's Toolkit for OS/2 Warp includes:

- Tools for building programs, including tools for System Object Model (SOM) programming.
- Headers and import libraries for defining and resolving OS/2 application programming interface (API) calls.
- API reference information.
- Sample programs to demonstrate the coding of APIs.
- Application debugging aids.
- On-line documentation.

The IBM Developer's Toolkit for OS/2 Warp can be ordered by calling 800-6DEVCON. While it is a CD-ROM product, the upgrade to the IBM Developers Toolkit for OS/2 Warp is available on 3.5 inch diskettes to existing toolkit owners by calling the same 800 number.

## Conclusion

The BonusPak alone is worth the price of admission. There has never been a product that offers users what OS/2 Warp offers. We won't see its likes again...until the next release of OS/2.

The OS/2 family has been winning awards for years because it is a marvelous technology. But OS/2 hasn't won the heart of the average PC user. OS/2 has many avid fans, but most users are interested in the solutions that quality applications provide. They want to open the box and be productive. They want value. They want the BonusPak.

For the first time, the PC user can go down to the store and pick up everything needed to get started in one box. The system is friendly to the new and casual users, meeting all their needs: easy install, tutorial, and handy applications. This same package has all the features that the "power user" has asked for with the "fit and finish" that both the power user and the casual user insist on and are entitled to get. Now they can get it, and I expect that they will.

# Two OS/2 Warp Products

**T**wo OS/2 Warp products are available: OS/2 Warp Version 3 and OS/2 Warp Version 3 with WIN-OS/2. The only difference between these two products is how you get support for running Windows applications.

With OS/2 Warp Version 3, you must have Windows installed on your computer to run Windows applications on the OS/2 Desktop. OS/2 Warp dynamically links into your Windows code, when needed, to run your Windows applications.

OS/2 Warp Version 3 with WIN-OS/2 does not require Windows to run Windows applications. This version comes with WIN-OS/2, which provides the support for Windows applications.

Both of these products can be installed in three different environments that can provide different capabilities.

- *No operating system previously installed:* If you install OS/2 Warp Version 3 on a computer that does not already have an operating system installed, you will be able to run both DOS and OS/2 applications on the OS/2 Desktop. If you install OS/2 Warp Version 3 with WIN-OS/2, you will be able to run DOS, OS/2, and Windows applications on the OS/2 Desktop.
- *DOS previously installed:* Either OS/2 Warp Version 3 or OS/2 Warp Version 3 with WIN-OS/2 can be installed on a computer that already has DOS 3.3 or higher installed. OS/2 Warp will automatically install the Dual Boot feature in this environment. This feature enables you to boot your computer to run either native DOS or OS/2.

If you install OS/2 Warp Version 3 in this environment, you can run both DOS and OS/2 applications on the OS/2 Desktop. If you install OS/2 Warp Version 3 with WIN-OS/2 in this environment, you can run DOS, OS/2, and Windows applications on the OS/2 Desktop.

- *DOS and Windows previously installed:* This is the environment for which OS/2 Warp Version 3 was really designed. By installing OS/2 Warp Version 3 on top of DOS and Windows, you will be able to run DOS, Windows, and OS/2 applications on the OS/2 Desktop. You will also be able to take advantage of the Dual Boot feature to run in a native DOS plus Windows environment.

OS/2 Warp Version 3 installs over Windows 3.1, Windows 3.11, Windows for Workgroups 3.1, and Windows for Workgroups 3.11.

OS/2 Warp Version 3 with WIN-OS/2 will also install in this environment, giving you the same capabilities described for OS/2 Warp Version 3.

Also scheduled to be available during the first quarter of 1995 is OS/2 Warp Version 3 LAN Client. This member of the OS/2 family is targeted at the LAN-connected user. OS/2 Warp Version 3 LAN Client will include OS/2 Warp Version 3 with WIN-OS/2, the OS/2 Warp BonusPak, plus LAN Server Requester, NetWare Requester, LAN Distance Remote, System Performance Monitor/2 (SPM/2), and many other features designed for the connected user.

*Excerpt from Edward Duhe's article on OS/2 Warp, which appears in the January/February issue of Personal Systems Magazine.*

### Editor's Note:

Thanks to Ed Anderson, IBM PSP Brand Manager for OS/2 Warp Multimedia, for his input of the multimedia components.



# The Warp Client, a Gift to the Network Administrator

**W**hile much has been said about how well OS/2 Warp fits in the home, the fact is that many users who want to upgrade to OS/2 Warp have something in common: their LAN connection. Enter the OS/2 Warp LAN Client product, which enters beta test...just about...now!

The OS/2 Warp Client will provide network administrators with a simplified solution for their LAN users. In addition to the operating system, the product includes transports and requesters. IBM will have already performed the integration testing, coordinated service, and streamlined the installation process.

Just imagine being able to supply the power and ease of OS/2 Warp to your LAN users without having to test how well the LAN requestors and other products work together and coordinate service for each product separately.

The OS/2 Warp Client includes OS/2 LAN Server Requester and NetWare Client for OS/2, simplifying the integration of OS/2 Warp with both OS/2 LAN Server and NetWare LANs. This, in conjunction with the TCP/IP capabilities, will enable many users across organizations to share resources.

Another important feature of the OS/2 Warp Client is the inclusion of LAN Distance Remote, a highly praised product that allows users who are traveling or telecommuting to connect to the LAN.

LAN administrators will find that administration of the LAN can be simplified with another part of OS/2 Warp Client: the System Performance Monitor/2. This product can help LANs run smoothly by helping LAN support personnel to monitor LAN resources.

Of course, there is one feature that network administrators

will like above all else. OS/2 Warp LAN Client offers a simple, easy-to-install, one-box client software solution for LAN users. And that one box contains the most advanced 32-bit, preemptive multitasking, multithreaded operating system available today, plus the companion BonusPak described in the "PC Computing Done Right!" article, page 9.

Note: OS/2 Warp LAN Client will be available with and without WIN-OS/2 support.



# Warp Installation

*Kim Cheung is the Technical Director for Touch Voice in South San Gabriel, CA. Touch Voice markets a PBX voice mail application that runs on OS/2. Kim is active in LA area PC user groups, keeping members informed about OS/2 and OS/2 LAN server, and he is the leader of the programmer's Special Interest Group of the Southern California OS/2 Users Group.*

**T**hese days I feel like a renegade. I like OS/2, but I belong to a PC user group where Windows has such a strong hold that a Microsoft representative camps out here.

I have never understood why these good people were so devoted to Windows. They live with its lockups and waits: waiting for the printer to stop stealing the computer, waiting for a disk to format, waiting most of the day when backing up tapes, waiting for BBS downloads to complete, and waiting for the computer to reboot every time that Windows or some Windows application hangs.

As a Windows user, I used to network several computers together so that I would have a free one to work on while the hour glass worked on another. This was the kind of multitasking I knew under Windows, sort of a forerunner of symmetrical multiprocessing (I'm kidding).

When OS/2 came along, I immediately understood what it could mean to my productivity. I have installed and worked with most releases of OS/2 from 1.1 to 1.3, 2.0, 2.1, and 2.11. I have made a point of trying OS/2 to do my work. Prior to 2.1, the

results were disastrous; I considered OS/2 2.0 the low point of my 20 years as a computer user.

At first, I assumed that my problems with OS/2 stemmed from not running it on "premium" hardware (although one of the machines was a Compaq 386 Deskpro, 16 MHz, 10 MB memory, a 300 MB disk with an original 1988 price tag of over \$8,000), but conversations with other PC users indicated that this was not the case.

PC users were staying away from OS/2. It wasn't because they didn't like the idea of multitasking. It wasn't because they didn't want the linear addressing space. It wasn't because they didn't want the applications they were running to have crash protection. They wanted all these things. The simple fact was that THEY COULDN'T GET THE THING INSTALLED!

I stopped counting how many times I reinstalled OS/2 2.0. I literally wore out my original installation disk and had to request a replacement from IBM. Before all you OS/2 die-hards reach for your holsters, look at my phone bills listing the calls to the support line between April 1992 and December 1992.

OS/2 fans were talking about needing a "killer application," so I told them, "Stop waiting, it's already here, the install program is killing OS/2." I and many others finally gave up on OS/2 2.0. Many of the others have still not returned.

When OS/2 2.1 came out, I was among the first to try it. I understand what

OS/2 represents. I believe that the value that OS/2 offers PC users makes it worth the risk. Therefore, in spite of my past painful experiences, I was willing to keep trying. This time things went a little better. The installation program hadn't changed much in OS/2 2.1, but because of the additional drivers and fixes, I was able to install it. I still considered it difficult to install, but was able to work around the problems because of my experiences installing OS/2 2.0. I was no fan of the 2.1 installation program, either.

Still, with OS/2 2.1, I was able to put OS/2 on my desktop for the first time. And since then, OS/2 2.1 is on my desktop and on all the machines in my company along with the updates included in OS/2 2.11.

I think that certain IBMers always maintained that people had difficulties installing OS/2 simply because of a "bad computer." In fact, some of these people are fond of saying "if you want to know if you have 'good' computer, try installing OS/2 on it." Well, this thinking might be OK if you consider OS/2 to be a niche product, but OS/2 Warp targets every 386 user.

If Windows has 40 millions users, much of the hardware they are using may qualify as "bad." If OS/2 Warp wants to be successful, it must install on machines made from spare parts purchased at the flea market. In short, it has to install and run on everything. On top of this challenge, it has to be "bullet proof"—so easy that any user can successfully install it, even those who ignore the documentation. That's the real world challenge that is waiting for OS/2 Warp.

I followed OS/2 Warp's development with great interest. I ran earlier copies of OS/2 Warp through the development process, so I know how significant a good OS/2 Warp product can be. What worries me is whether

people, ordinary people, will be able to install it. With that in mind, I accepted IBM's offer to evaluate and give a critique of the new OS/2 Warp installation procedure.

To give OS/2 Warp a good workout, I selected four machines to test the install. These machines are all connected with 10-baseT Ethernet cards and phone wires running LAN Server 3.0.

IBM has invested heavily in the new installation for OS/2 Warp, and it really shows! In addition to more "glitz" and entertainment value, you can now choose between "Easy" and "Advanced" installation. The Easy installation is very close to a one-button install. It auto-detects your hardware and makes several assumptions such as setting the installation to partition C:, not formatting the partition, and installing a dual boot environment when possible.

The Advanced installation is similar to previous versions of OS/2; it still detects the hardware as in the Easy install, but you are also prompted more often. For example, through the Selective Installation Panel, you can pare down your install for hard disks that have limited space available.

### Machine 1

This machine is a clone with an IBM 486SLC-66/2 motherboard, 8 MB RAM, 120 MB IDE drive, VGA, 1.44 fixed disk as A:, and 360 KB fixed disk as B:.

With the installation diskette in the A: drive, I powered on the machine. When I was prompted, I removed the installation diskette and inserted diskette 1. OS/2 asked if I wanted the Easy or Advanced install; I chose the Easy install. The installation proceeded through diskette 6 and then back to the installation diskette and to diskette 1. OS/2 then rebooted the machine after setting confirmation.

After the reboot, the system booted from its hard drive successfully into a PM environment. At this time, one of the major improvements became evident. The system was actually running not only PM but also on WPS, and the rest of the installation took place in the WPS environment.

Initially, when the System Configuration screen popped up, OS/2 Warp had correctly identified the hardware on my system and proceeded uneventfully through the rest of the installation. While doing the "diskette shuffle," I discovered what it really meant to install from the WPS: the install program is no longer singlethreaded and system modal—I can do other things while the system is installing.

Because you are still installing, the WPS is called a "Maintenance System" and is not complete; however, you can access the OS/2 System folder, which contains the command prompts to open an OS/2 Window. From the OS/2 window, you can clean up your install partition if you're running out of space, read documentation, or even start a game. Great feature, IBM! You can also get to the Information folder, which has many great INF files that you can view while installing.

After I inserted the install diskettes, the appropriate printer, and display driver diskettes, OS/2 Warp prompted me for my original Windows diskettes. One more reboot and I had Warp up and running! Easy!

### Machine 2

This machine is a very old 386SX-16 clone, 8 MB of Ram, 86 MB MFM drive (anyone remember these?) EGA, 1.44 MB fixed disk as A:, 1.2 MB fixed disk as B:. This system is a nasty old 386SX croaker with an EGA monitor so old that I can barely read it. Half of the 8 MB memory consists of 80ns SIMM modules and the other half is 80ns SIPPs. This machine would be the true test, since I had never been able to install OS/2 on it.

Much to my surprise, it worked! The whole installation went without a hitch and OS/2 Warp even provided proper EGA support. Although it worked on my EGA machine, I was not sure if it would work on all EGA machines (EGA is technically not supported). Still, up is up, no arguing with that.

### Machine 3

This machine is a Midwest Micro 486 DX-33 SoundBook, 12 MB memory, 540 MB, IDE drive, LCD VGA Screen, SoundBlaster 1, a compatible sound chip built into the motherboard, and 1.44 MB fixed disk as A:.

I should have used the Advanced installation to de-select certain functions. The disk was too small to contain all of OS/2 Warp and my swapper. Although you can specify the location of the swap file during install, it apparently does not affect the installation (dumb, right?!).

After installing, I also noticed that there was no sound because OS/2 Warp did not correctly identify my sound card. So I returned to Selective Install, but in order to find and change the sound card device driver, I had to reinsert diskettes 7 through 13. Upon rebooting, the sound worked fine.

I was a little annoyed with having to reinsert that many diskettes so the system could find the correct device driver. CD-ROM users will congratulate themselves for outflanking this diskette shuffle.

### Machine 4

This last one is my newest machine, a Micro Way Pentium 90, 16 MB of memory, 1 GB IDE drive, a Diamond VLB video card with 2 MB of memory, and a 1024x768x256 70 Hz IDEK monitor.

This system was the most troublesome. OS/2 Warp still doesn't include the proper driver to handle the Diamond VLB video card and mistook it for a Weitek 9000 controller (which does not work). In retrospect, I should have selected the VGA support for the installation and overruled the default video. And after the installation, I could have easily installed the video driver from the manufacturer.

I admit that the OS/2 development team has improved its installation program this time. There are still some issues to address, but given its rocky history, the improvements are quite obvious and welcome.

Is the new installation perfect? No, I wouldn't go that far. But many users who used to face problems when installing OS/2 will be pleasantly surprised. Once you get through the installation phase, it's onwards to computing wonderland—OS/2 Warp is that good! And the OS/2 development team has made it a whole lot easier for us to get there! Bravo!

# IBM Works for OS/2

*Harold Clitheroe, a support analyst for CP Rail Systems (CPRS) in Toronto, Ontario, has spent 20 years working with mainframe systems. Now he's part of the workstation support group, where he supports OS/2 users. An original member of TEAM OS/2, Harold recently received the Silver Ambassador award for his continued support and promotion of OS/2.*

IBM Works is a collection of application programs that together allow you to produce and integrate charts, spreadsheets, documents, database information, and reports. IBM Works is an OS/2 based integrated suite of applications for the small office and the home user. IBM Works consists of tightly integrated spreadsheet, charts, databases, reports, and word processor programs in a true WYSIWYG environment. Being an OS/2 application, it supports all the things we know and love about OS/2, including drag-and-drop, data sharing, true multitasking, and (if you're running HPFS) long file names.

I tested it on two systems: my own personal system, a 486 DX/2-50 with 8 MB of RAM running OS/2 2.11, and my work system, a 486 DX33 with 16 MB of RAM. Performance was quite acceptable on both, but the 16 MB system was nicer to use.

I would suggest a minimum of 8 MB to run Works. Installation was quite easy. IBM Works takes 8 MB of hard drive space once it's installed but requires 10 MB free to install. The extra 2 MB are taken up by temporary files, which are deleted after installation is complete. The install process is a good one. It installs on any partition and changes install paths

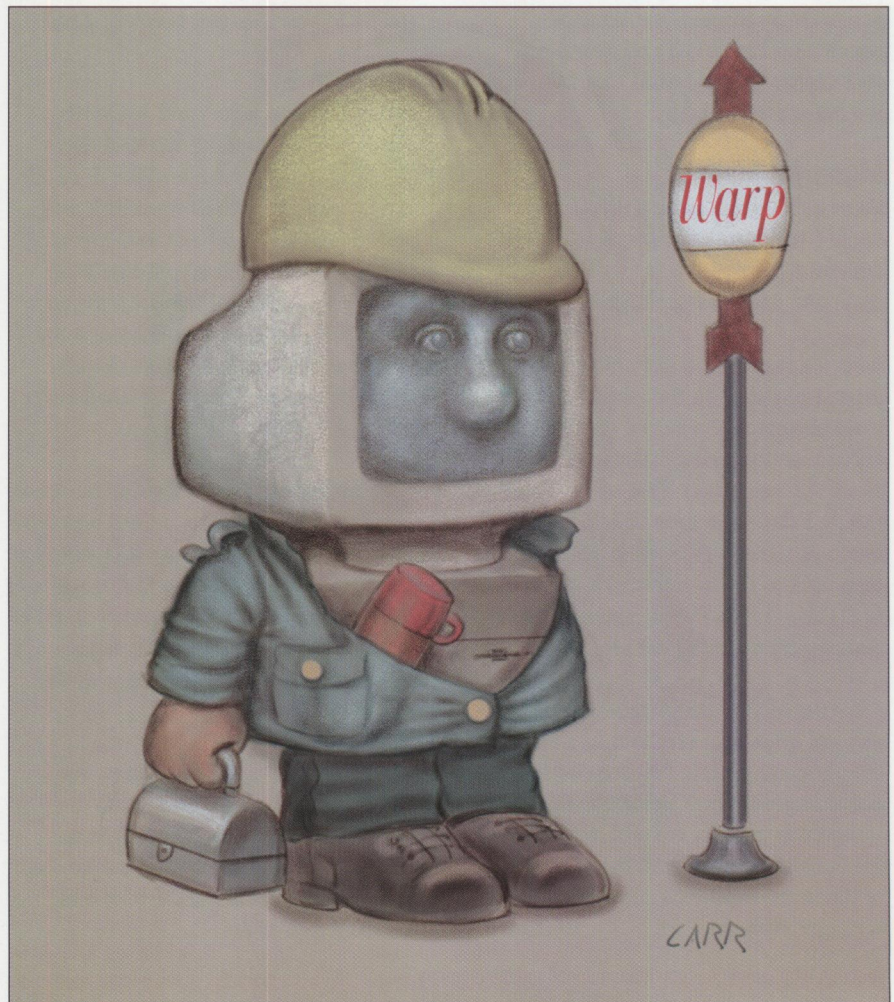
from the default with a single click, once you have selected your preferred drive. The install process also lets you choose between modifying CONFIG.SYS or creating a modified copy for your CONFIG.SYS if you're the sort who likes to "do-it-yourself." However, you must shut down and reboot before you can use IBM Works.

## The Word Processor

The backbone of IBM Works is the Word

Processor. It allows for easy control of text and style formatting, thanks to a ribbon bar of tool icons that control the features that IBM Works offers, including paragraph alignment and text styles. The Word Processor module includes two useful and powerful tools in the form of integrated tables and graphics tools. Creating and inserting graphics objects into a document is quick and easy. Most popular image formats are supported, including IBM Metafiles and Storyboard images.

Alternatively, simple graphics can be drawn using IBM Works' built-in drawing module. Tables are also easily incorporated into a document. Clicking on the "Tables" icon opens a dialog box where you can specify



the number of rows and columns. You can import data from the clipboard or from the spreadsheet application. You can also define tables in a "freehand" mode and customize a table to your needs.

In addition to graphics and tables, the Word Processor module has the usual features that make document composition easy. There is a fully customizable dictionary (although at this time it only supports U.S. English), a thesaurus, and options for word count and various levels of spell-checking.

Auto-hyphenation and user-definable headers and footers are supported. Total control over fonts is made easy by the "Character" menu, which not only allows you to select a font but also controls font styles like superscript and subscript.

The "Edit" control offers selections for cutting and pasting in addition to search and replace functions. The "Edit" control also allows you to insert a data field. Mail-merges are fully supported and especially easy when you use the IBM Works database as the source.

The Word Processor also allows for easy import/export of file formats. It supports all the most common file formats from other word processors, including RTF, Word for DOS and Windows, AmiPro, WordPerfect 5.x, and plain old ASCII text. With all this capability, IBM Works should easily handle the word processing needs of the average home/small business user.

Getting started is easy since templates for the most common tasks are included in the package: templates for a standard business letter, a statement of account, a business form letter, office memos, a daily planner, a job estimate sheet, fax cover sheets, and resume forms. Some of these are already pre-defined to link into the Database module, providing solid examples of how to incorporate data and text.

## The Data Filer

Speaking of incorporating data and text, let's move on to the next module, the Data Filer. This module handles all your database needs and has two modes of operation: form design and data/entry/query. Form design mode allows you to design a form or template for entering data. The data field types

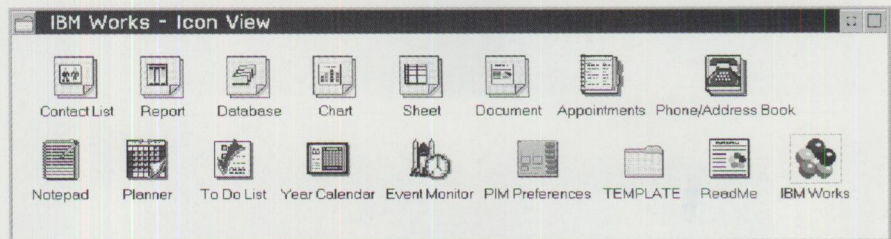


Figure 1. Icon View of the New IBM Works

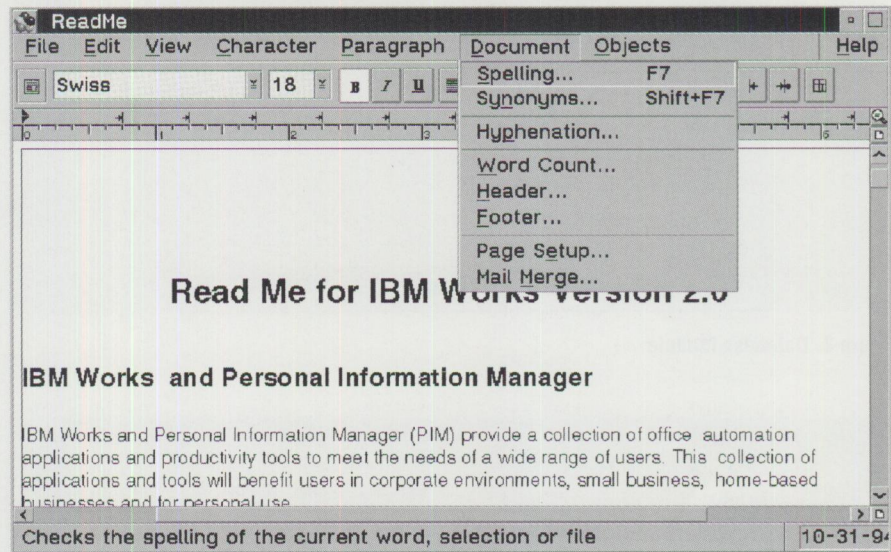


Figure 2. Word Processor

can include text, multiline text, numeric or date formats, pictures, or logicals.

Field width and names are also defined. You can specify verification and perform calculations automatically on data entered into a field. The largest field size that is supported is 32 KB. After you define your form, you can add, delete, or change fields even after data has been entered into the form.

This form-oriented approach to database design allows for easy and quick data entry and simplifies changing data. Moving through the database is quick and simple thanks to the toolbar, which contains first, last, previous, next, and goto icons. Indexes can be created using any field. Multiple indexes are also supported and are created using a dialog box that allows you to select the field(s) to index and the index sort options.

The design is also thoughtful in how it handles record deletion. Records that are marked for deletion are not immediately deleted, they are only removed from view. Only when the database is compacted are those records actually deleted. Until that

point, they may be viewed or restored with the "Display Delete" tool.

I find this feature most valuable especially when I work on large databases. IBM Works also includes a variety of templates for databases, including a business contact database and a household inventory database.

Record retrieval is simple because of the ability for conditional retrieval. Once in the retrieval functions, a dialog box allows you to select the fields you want to search on and a full range of conditional qualifiers, including logicals (true or false), greater or less than, equal to, contains, and starts with. Record retrieval is integrated with the next module: the Report Writer.

## The Report Writer

The Report Writer allows you to format reports of data selected from the IBM Works Database module. In addition to the previously mentioned data filtering capabilities, the Report Writer allows you to define headers and footers and to group fields and various summary options, including sum and average. Designing

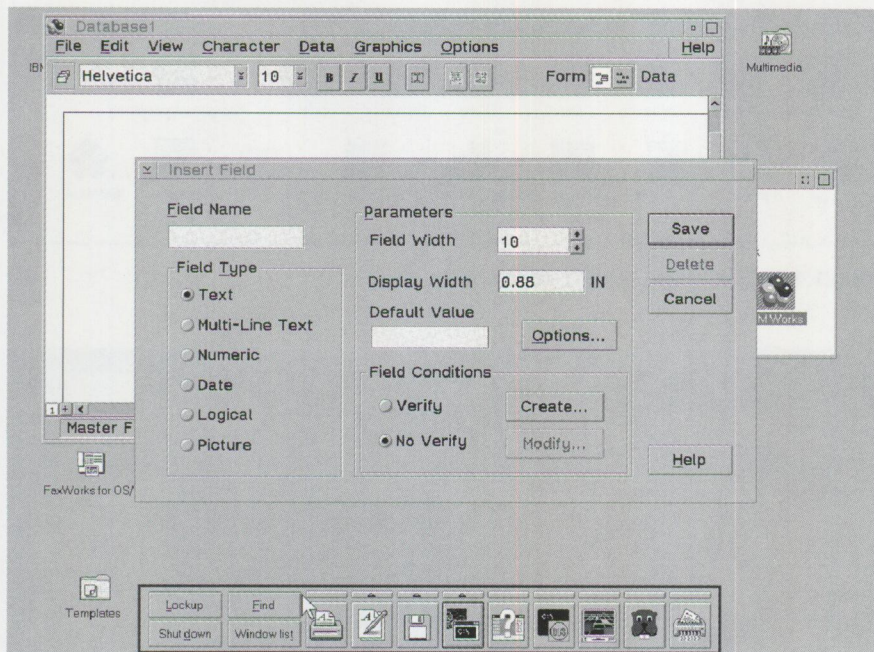


Figure 3. Database Module

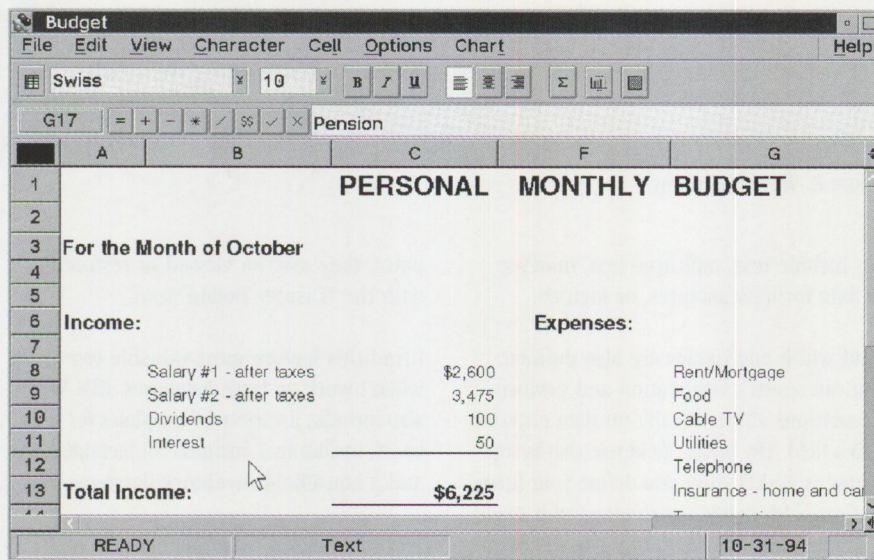


Figure 4. Spreadsheet

a report is easy, since field selection and all other options are handled by well-thought-out dialog boxes. These features, plus the ability to "paint" report fields, make reports totally customizable.

### The Spreadsheet

The Spreadsheet can handle a maximum of 768 columns and 1,024 rows. The Spreadsheet functions much like any other major spreadsheet package and includes all the standard options and utilities that you expect as part of a good spreadsheet. Custom cell formats are supported with custom date, time, and currency formats

built in. Also featured is a cell documentation feature that allows you to append notes to a cell. Double-clicking on a cell that has been annotated will display the notes.

Perhaps the best feature of the Spreadsheet is its ability to dynamically link into the Word Processor module. If you incorporate a spreadsheet or a chart into a document and have linked the two modules, changing the data in one will update the other. Functions are supported with built-in function calls for alpha, date, financial, logical table lookup, trigonometric, statistical, and time functions. Functions are calculations that are shortcuts for complex

formulas. In all, the Spreadsheet offers 53 different functions that simplify writing complex formulae that can be applied to spreadsheet data.

The Spreadsheet module can import data from Excel (.XLS) and Lotus (.WK1 and .WKS), making sharing of data a snap. Spreadsheet data can also be passed to the charting module, which gives you the ability to create charts. Chart data can be input manually as well.

### Charts

All of the standard business chart types are supported, including bar, line, area, scatter, and pie. Charts can be included in documents, and, if the chart was created from a spreadsheet, updating the spreadsheet will update the chart embedded in the document. There are options for customizing all the components of the chart, including axes, legends, fonts, and colors.

### Personal Information Manager (PIM)

As you can see, IBM Works is a capable suite of integrated applications that can easily handle the needs of the average user. It even has a built-in Personal Information Manager and a whole new suite of applets designed to work as an integrated PIM. The new applets include:

- An appointment book with the following features:
  - Access multiple views of your daily appointments (daily, weekly, business week, two weeks).
  - Schedule alarms and timed launches of applications.
  - Schedule general appointments (without times) and overlapping appointments.
  - Schedule one time or recurring appointments.
  - Display appointments in your to-do list.
  - Move or copy appointments using drag-and-drop.
  - Print appointments in weekly, daily tri-fold layout, monthly, five week formats.
  - Add, delete, and modify the holiday details and alarms.
  - Search for names or appointments.
  - Create appointments by dragging a contact name onto the appointment book.
- A monthly planner with the following features:
  - Display appointments in a grid format.
  - Color-code entries by type (alarm, to-do, appointment).

- Highlight holidays.
- Display work day.
- Create new appointments by dragging a contact name onto the planner.
- A calendar with the following features:
  - Display full-year calendar.
  - Highlight holidays.
  - Customize holiday database.
  - Reschedule appointments by dragging them from the appointment book to the calendar.
  - Scroll year to year.
- A to-do list with the following features:
  - Display a full month with the to-do list launcher.
  - Double-click on a day to display your to-do list for that day.
  - Scroll from month to month or year to year.
  - Highlight holidays on the to-do list launcher.
  - Print your to-dos in monthly, five week, or daily tri-folds formats
  - Create new to-do list items by dragging a contact onto the to-do list.
  - Assign a date deadline or priority.
  - Sort by type or priority.
  - Display 65 characters in description area.
  - Attach notes of 512 characters.
  - Search on type, priorities, description, or notes using full text search capability.
  - Link a desktop folder with a to-do list item by dragging the folder on the to-do entry.
- A notepad with the following features:
  - Add, append, and insert pages into the notepad.
  - Add chapter headings.
  - Hold text or graphic information in the notepad.
  - Drag text and graphic files onto the notepad pages.
  - Rearrange pages by dragging and dropping entries in the table of contents.
  - Search full text.
  - Print pages from the notepad.
- A phone/address book with the following features:
  - Access detail or icon view of contacts.
  - Customize icons.
  - Store up to eight phone numbers with labels (phone, fax, home phone).
  - Hold free form text on last page of notebook.
  - Create a new desktop folder for a contact.
  - Create new appointments by dragging a contact name on the appointment book or the planner.
  - Create new to-do list items by dragging a contact on the to-do list or the full year calendar.

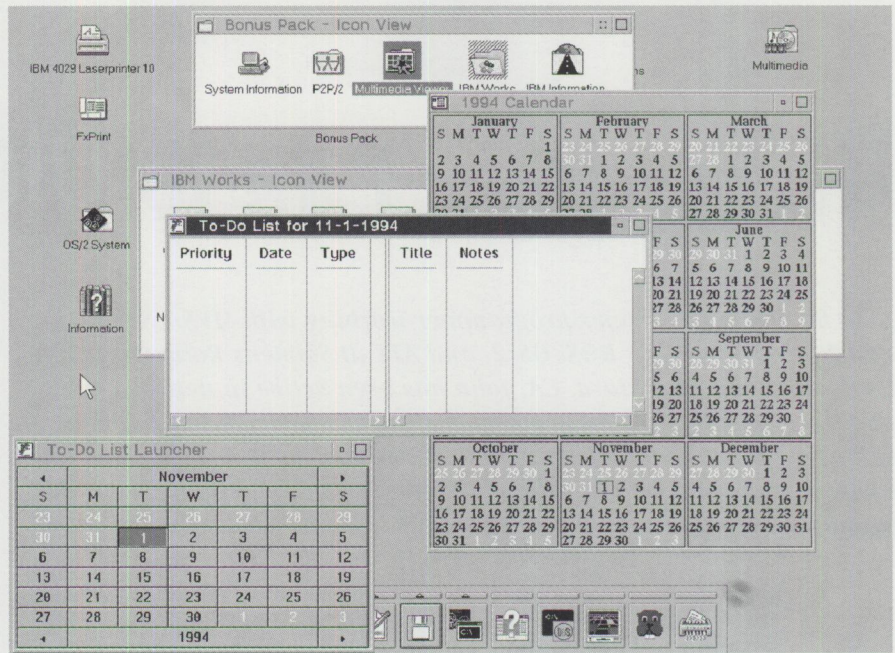


Figure 5. Calendar

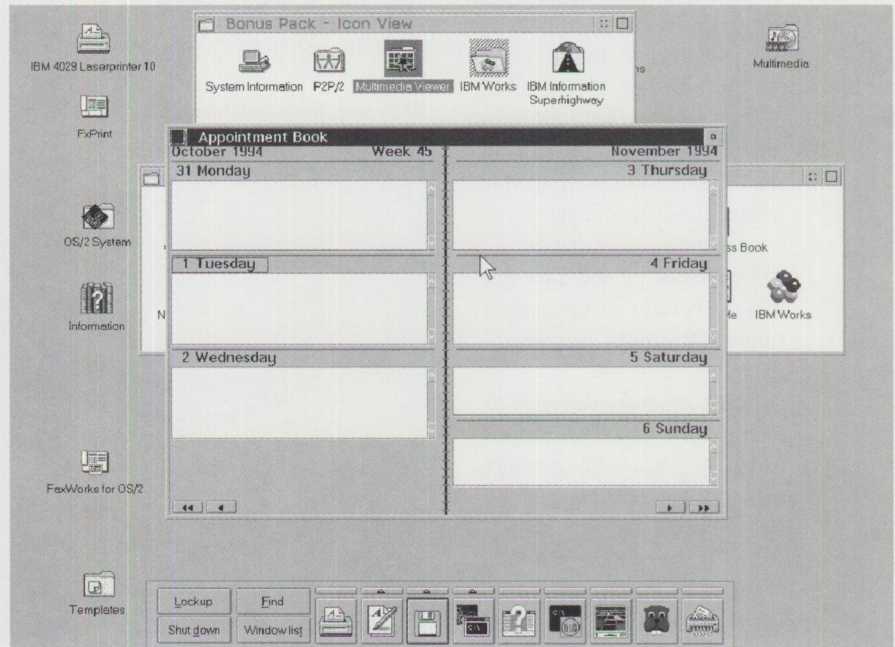


Figure 6. More PIM Stuff

- Search on all fields or selected fields.
- Sort by name or company.
- Place outgoing calls.
- Display all your logged calls (both incoming and outgoing) on the phone log.
- Filter calls by name, date range, and call status.
- Create contact lists
  - Contact lists are subsets of the phone book.
  - Changes made in the contact list are reflected in the phone book.
- Contact deleted from the contact list only deletes it from this subset not from the phone book.
- Create new appointments by dragging contacts to the appointment book or the planner.
- Create new to-do list items by dragging a contact on the to-do list or the full year calendar.

So there you have it...IBM Works with a powerful PIM is a mature OS/2 application. I think this is finally the OS/2 we've all been waiting for.

# Giving New Life to Old Iron

*John Bellomy is a systems programmer working with MVS/VSA, VM, and AS/400 as well as DOS, OS/2, and AIX at Siemens Rolm Communications, Inc., Santa Clara, CA. John has been active in networked and distributed workload processing since the early 1980s and is a "pioneer." He has supported several commercial environments including banking and finance, research and development, telecommunication products, and manufacturing systems.*

**W**e used OS/2 Warp because we were interested in how OS/2 Warp can help people in our organization who were working on desktop systems that are not considered "powerful" by today's standards. That is, 6 to 8 MB of memory, 16, 20, or 25 MHz, whose configurations are not sufficiently powerful to meet some of our business computing needs. Like many companies, we have many systems that are still depreciating and have limited use because of the application software in use today.

Over the summer, we began to hear good, even exciting, news about OS/2 Warp. The product, while still in beta, had received *Byte Magazine's* Best of Show award at Spring COMDEX. Part of the rationale for the award was the impact the product could have in the personal computing community.

## Running on 4 MB RAM

A 32-bit preemptive multitasking operating system that performed well in 4 MB RAM presented interesting options that were not available with the previous versions of OS/2. OS/2 Warp might provide additional life to our older systems, giving us more flexibility in the placement of the newer, more powerful machines to better meet the needs of our business.

Our company, like many others, is implementing a wide area network environment, and the distribution of Advanced Function Presentation (AFP) print required that we look into Print Services Facility (PSF/2). Using PSF/2 requires CM2, DB2/2, and OS/2 TCP/IP, which like PSF/2 are native OS/2 applications.

There was no requirement for any Windows-

based applications, and the disk space that we saved using OS/2 Warp made older systems with smaller disks usable. Many older systems could not use OS/2 2.1 because they were running with 6 to 8 MB of memory. We could load OS/2 2.1 on the systems, but with this set of applications, the performance was unacceptable.

## OS/2 Warp Beta 1

The first prototype system was based on the OS/2 Warp-1 beta code and installed without many problems. A problem with configuration of the Communications Manager was resolved by making a copy of the required configuration files on another OS/2 system.





The system was used to drive four advanced function printers using the I-Data 7913 box to attach these devices to our TCP/IP network. The BOOTP server resided on another OS/2 system for the 7913, which is accessed only during a power condition, although I believe the same machine could perform this task.

The stability of the print server system was very good for a beta release, exceeding what we expect from some "finished" products. There was only one hang during the testing, and it was related to a network problem—not the OS/2 product itself.

### OS/2 Warp Beta 2

When OS/2 Warp 2 became available, it was again used to provide higher performance and usability for a platform with limited resource. OS/2 Warp 2 showed a much improved installation process getting to be where it should have been a long

time ago. The new "WorkPlace Shell" recovery during boot is a big plus for reliability with mission critical systems.

The prototype platforms used for testing at this stage were an IBM PS/2 Model 70 and a PS/2 Model 55SX with a 120 MB hard drive. Connectivity to the network was via a 3COM Ethernet adapter, and the mainframe connectivity was via a 3172-003 LAN interface.

This second system has been tested to drive up to five attached AFP printers with no noticeable impact on the throughput. These AFP printers are printing low to medium graphic documents. As I write this article, there have been no failures of the OS/2 Warp version of OS/2. And it is nice to see a new life for old systems again.

Our company is in the process of a major project and rolling out printing solutions across the country. We are using OS/2

Version 2.11 on multiple large ValuePoint systems. Testing showed that if OS/2 Warp had been available, it would have permitted smaller configurations and cost savings.

As an alternative to upgrading the ValuePoints, OS/2 Warp may provide improved throughput with reduced resource requirements. I believe that LAN users will find that using products such as PSF/2 to drive AFP printers is even more attractive with OS/2 Warp. OS/2 Warp showed that it allows less expensive PCs to support the printer while providing more than acceptable performance.

Some other thoughts: PCs driving printers are not normally expected to handle other functions, but OS/2 Warp's preemptive multitasking calls this in question. There might be additional savings available. And if this is what OS/2 Warp can do to limited resource platforms, think about how it performs on larger, more powerful computers. I do.

## TRIVIA: Who are these obviously Warped people?

(See page 31 for answer)



# To Those Who.....M

Anthony Abbondanzio. Pat Abbott-Youngross. Brett Adams. Behcet Akalin. Sadat Akyrek. John Alcorn. Armando Aleman. Ralph Almour. Giacomo Amazon. Elyse Anchell. Ed Anderson. Cindy Andresen. Frank Address. Ayo Anise. Tony Arcuri. Bernie Arruza. Mike Ashe. Alan Auerbach. Margaret Averett. Doug Azzarito. Michael Babboni. Dan Baker. Alex Barenboim. Brad Baron. Ron Bassett. Victoria Bates. Bruce Beadle. Terri Beck. Kevin Beebe. Jane Bell. Harry Benas. David Bender. Dan Benedict. Paul Bennett. Scott Bennett. Eric Bentley. Oystein Berget. Russ Berkoff. Steve Berkowitz. Steve Bernstein. Debbi Best. Rakesh Bhakta. John Bilanych. Jeff Binford. Brian Black. Russ Blaisdell. Lisa Blalock. Holly Blank. Doug Bloch. John Bloomfield. Ned Bode. Bill Bodin. Lew Boehm. Rick Bollenbacher. Bianca Boone. Jim Bostick. Jack Boyce. Jeff Brazier. Michael Bresnahan. Glenn Brew. Barbara Britt. Scott Broussard. Lori Brown. Mike Brown. Vince Brunssen. Al Burke. Tom Burke. Leslie Byer. Ron Cadima. Ralph Canup. Sharon Cardiff. Roberta Carey. Jan Carne. Wally Casey. Joe Catucci. Joe Celi. Wayne Chan. Louis Cheatham. Ben Chen. Tsu-Wang Chen. Bob Chernow. Randy Cherry. Linda Chilton. Glenn Christensen. Ed Churchill. Marc Cohen. Lisa Coker. Carl Colbert. Kathleen Colina. Janis Coltin. William Coltin. Roc Conder. Amy Conner. Pam Conner. Deborah Cook. Mike Cooper. Monte Copeland. John Cornelius. Judi Courter. Robert Cox. Eleanor Coy. Kathie Coyle. Jason Crawford. Mike Cress. Todd Crowe. Rich Cucco. Joseph Cuomo. Matthew Curtis. Brian Czako. Anthony D'Egidio. Connie D'Egidio. Brent Davis. Patrick Davis. Sue Dimeo. Joe DeRusso. Deepa Desai. Sam Detweiler. Debra Deutsch. Darrin Di Simo. Cynthia Didio. Roger Didio. Bob Dilena. Lois Dimpfel. Chris Dinallo. Tammy Dinallo. Darren Dobkin. Daniel Dorrance. Bob Dostal. Daniel Dremann. Eric Drinkhouse. Don Dubisky. Rich DuLaney. Ed Dunn. Ronnie Eck. Jeremy Eden. Rick Efruss. Andy Ehrenzeller. Seth Estes. Mark Fantacone. Frank Fender. Engle. Val Enright. Mike Ensley. Steve Epstein. Ari Erev. Philip Elliott. Gary Elliott. Ray Elwood. Kurt Frank Ferrara. Louis Finelli. Amy Fliegelman-Olli. Rich Fogus. Ann Ford. Dallas Foster. Brad Fraley. Pablo Fumero. John Ganci. Dick Gano. Lisa Garcia. Brian Gaudet. Kevin Gehrlein. Karen Gelveles. Junaid Ghaffar. Rich Ghekiere. Saeid Ghobadi. Jim Giliberti. Dan Gisolfi. Stephanie Glass. Steve Glazer. Bill Glendenning. Fred Gnuechtcl. Bruce Gobioff. Bob Gonzalez. Charles Gotwald. John Graham. Jeff Grantz. Jon Grimm. Peter Haggart. Iggy Haider. Kathleen Hamill. Mark Hamzy. Steve Hancock. Scott Handy. John Hare. Debra Hargett. Sheila Harnett. Kip Harris. Michael Harris. Wally Harris. Nicky Hartless. Les Hauck. Mark Hersey. Gregory Hess. Gary Hill. Susan Hill. Joe Hlayaty. Jane Hoenig. Jeff Howard. John Howard. Dan Howell. Pam Howlett. Cam Hudson. Steve Hudson. Joseph Hunt. Khoa Huynh. Gene Ignatowski. Maria Ingold. Zia Iqbal. David Jaramillo. Liz Jean. Phill Jenkins. Maria Jenny. Rich Jerant. Early Jester. Liren Ji. Sandra Johnson. Jeffrey Jones. Mark Jones. Scott Jones. John Kaemmerer. Sesh Kamireddi. Robert Kamper. Mike Kaply. Dan Kehn. Keith Kelly. Lila Kenny. Ron Kenny. David Kerr. David Killian. Chuck King. Jack Kipp. Labros Kisouras. Roger Kleinschmidt. Oystein Kleven. Jackie Knowles. George Kochanowski. Mike Koval. Cyndi Kubich. Marie Kuhlman. David Kuiken. Salil Kulkarni. Anand Kumar. Pavel Kumets. Dick Kurtz. Greg Larsen. Fred Lathrop. Kelvin Lawrence. Nancy Lawson. Bill Lawton. Tatchi Lay. David Lee. Judy Lee.

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hway

# ARP

2  
ing DOS and Windows

# Warp Multimedia

*James R. Schmidt is a Technical Support Analyst for William M. Mercer Inc., an Employee Benefit Consulting Firm in Deerfield, IL. James founded and is director of the North Suburban Chicago OS/2 Users' Group, which is the largest and oldest OS/2 users' group in suburban Chicago. Mercer is a major sponsor of the group. James Schmidt also spends time "surfing" the Internet and other online services such as IBM's OS/2 BBS.*

that perhaps my Basic Sound Blaster was of late enough vintage that it would work as a Sound Blaster Pro. Therefore, I left the settings unchanged and proceeded. I also had to specify what printer was attached to my system. OS/2 Warp install correctly identified my Toshiba 3401 and myFuture Domain 16 bit SCSI adapter.

I was never a big user of Multimedia Presentation Manager/2 (MPPM/2) under OS/2 2.1 because I felt it was sluggish and loaded my system too heavily even when I wasn't doing Multimedia (MM) things. I had my reservations going into this project, and here are my experiences and observations. I'll stay as objective as possible.

All in all, I am impressed with OS/2 Warp's MM function and performance. I intend to leave MPPM/2 fully enabled on my low-end system. I have a 486-33 ISA machine with 8 MB of RAM, a Creative Labs Sound Blaster Basic, and a Toshiba 3401 external CD Player hung off a Future Domain 1650 SCSI-II adapter.

The first enhancement I noticed is that MPPM/2 is part of the mainstream install procedure and not a separate installation. This should make MPPM/2 more attractive to the typical user—the fewer pieces you need to install separately, the better.

## Installation

During the install, the process tries to determine what hardware is on your machine. Unfortunately, it guessed the wrong sound card, suggesting that I had a Sound Blaster Pro instead of a Basic Sound Blaster. I tried to rationalize

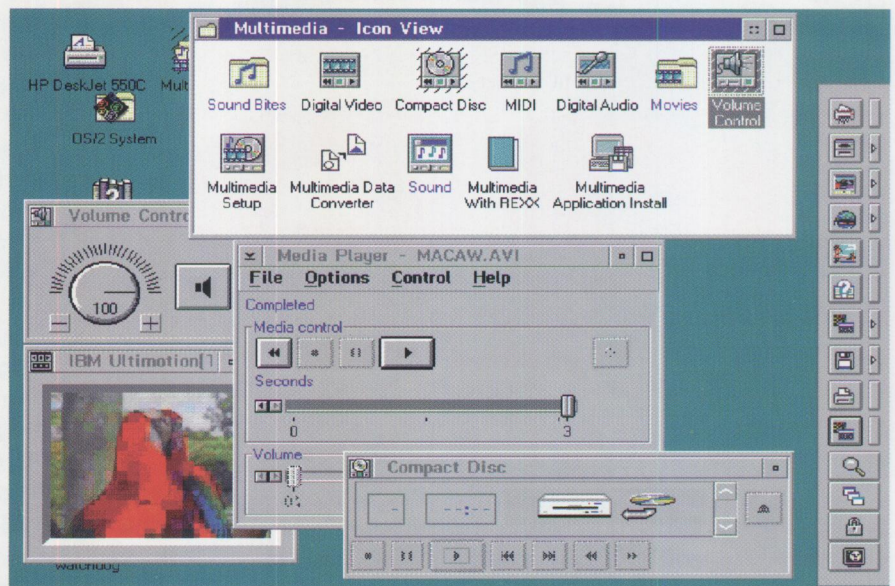


Figure 1. Desktop

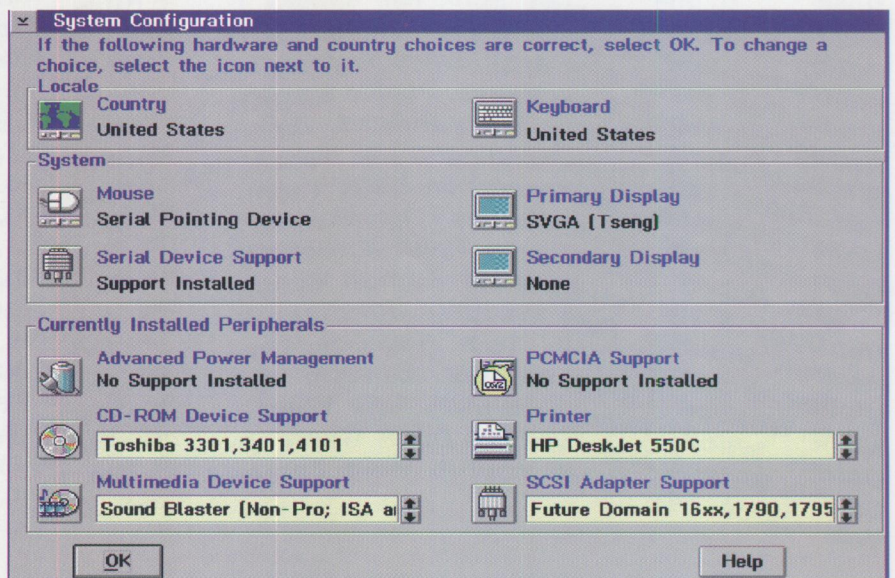


Figure 2. System Configuration

I do not have Windows 3.1; therefore, my OS/2 Warp system is without Windows. The balance of the install involved inserting the diskettes when prompted. When the system finally rebooted, I received a message that the Sound Blaster driver would not install. It seems my Basic Sound Blaster was the right one, but OS/2 Warp had misidentified my card. Not to worry, I just did a Selective Install and specified the proper hardware. Once OS/2 Warp is installed, you'll notice that the System Sounds are enabled by default. You get the "Charge" WAV sound when your Desktop opens and two Multimedia objects on your desktop: the Volume Control with its new icon and a Multimedia Folder without a new icon.

The sound object seems to have the same functionality with my Basic Sound Blaster as in OS/2 2.11 and Performance Beta I, namely, it only controls the volume of my CD players.

### Multimedia Folder

Opening the Multimedia Folder yields the standard complement of MMPM/2 objects that were present in previous OS/2 releases. Almost all the objects sport their new 3D icons. It's not until you start examining settings notebooks that you realize the additional functionality of OS/2 Warp: things like MPEG support. You can now play FLC and FLI files in addition to the traditional AVI files.

I downloaded the "Popeye" FLI off ftp-os2.cdrom.com and updated the Associations tab in the Digital Video Player Settings' Notebook to add AVI, FLI, and FLC files. I then double-clicked on popeye.fli, and voilà, like magic, I'm watching Popeye float around with his eyes bugging in and out. The popeye.zip comes with a DOS FLI file player; the difference between it and the MMPM/2 player is enormous. The DOS player occasionally pauses when I use the system heavily. The MMPM/2 Digital Video Player never misses a beat. It would be nice if the MMPM/2 play had an option to repeat the same file over and over. It would create nice demonstrations.

### Video Player

The Digital Video player has a subtle enhancement. With your mouse, you can resize the video window to any size you want. I am told that with the proper

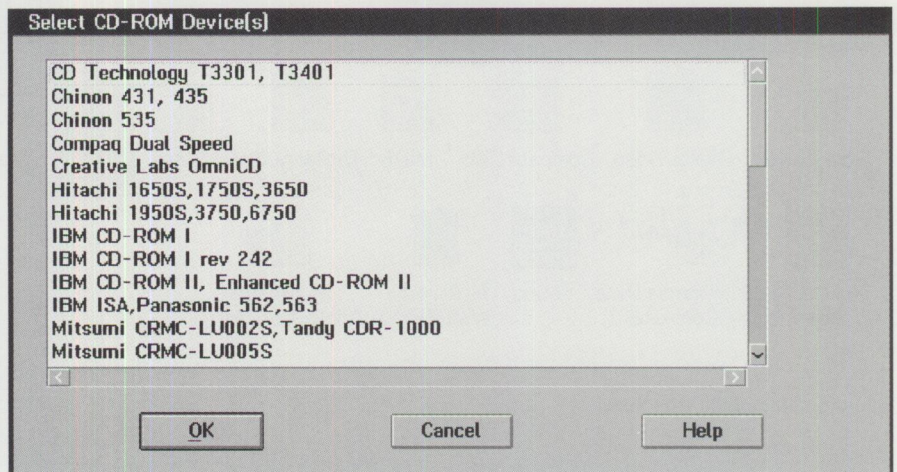


Figure 3. CD-ROM Devices

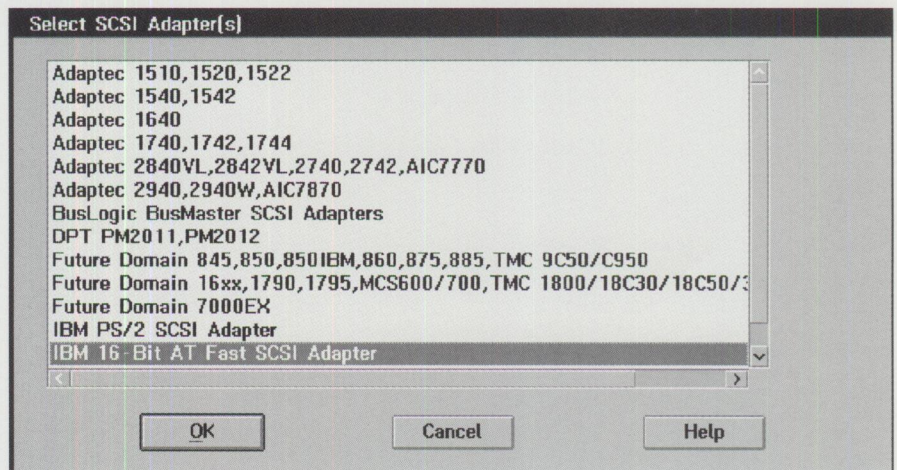


Figure 4. SCSI Adapters

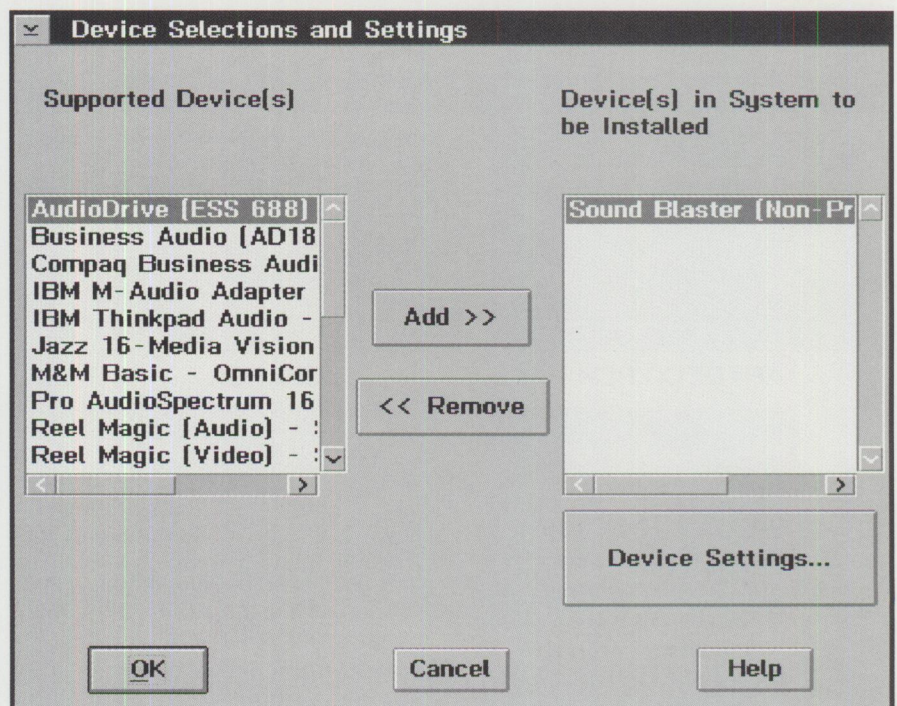


Figure 5. Device Selection and Settings

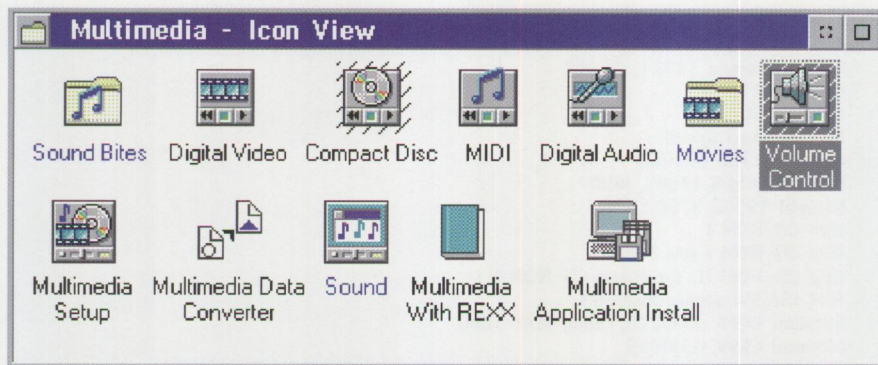


Figure 6. Multimedia Icon View

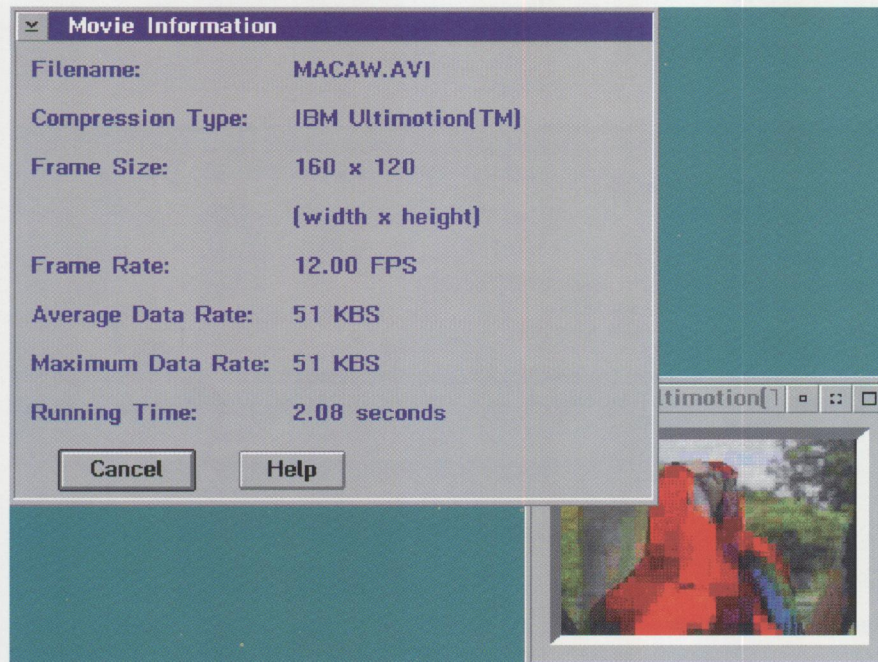


Figure 7. Movie Information

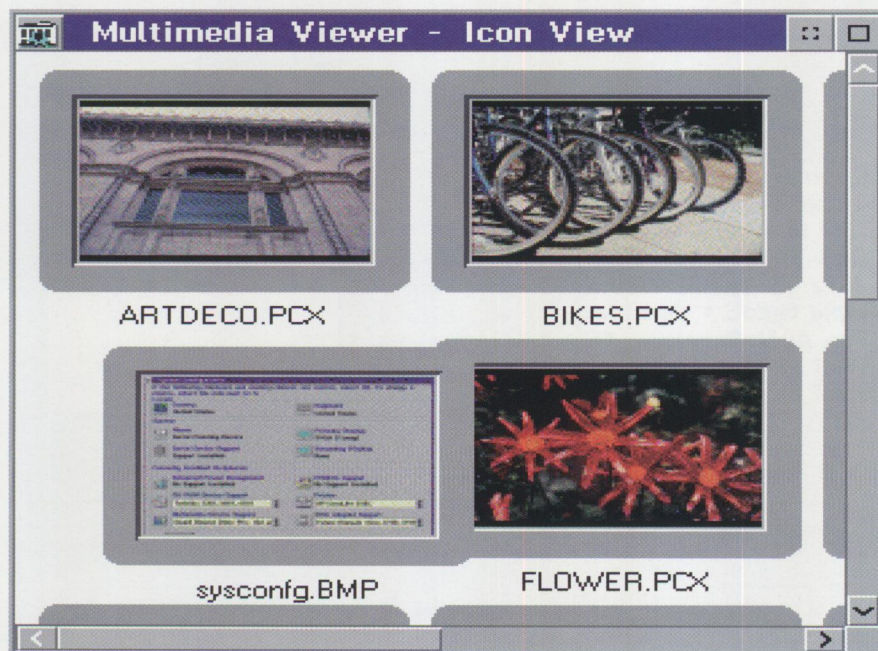


Figure 8. Multimedia Viewer

card you can watch TV on your desktop and use the Multimedia Setup object to change channels. I don't have the required hardware, so I can't confirm this.

The biggest difference I noticed on my low-end machine is the greatly increased responsiveness of the MMPM/2 system. System sounds occur almost instantly. The video player loads and plays Macaws much faster than before. As I indicated, I have an 8 MB machine, and I didn't notice any degradation when I activated MMPM/2. This was not the case with OS/2 2.11. I still have a difficult time playing "Harley" AVI file, but I suspect this may be caused by my Sound card.

### CD Player

The CD player controls my Toshiba and allows me to adjust the volume, change tracks, repeat selections, and lock out the tracks that I don't like. The CD player remembers each CD's settings so that I don't have to reprogram the player when I swap my favorite CDs. Other Multimedia items I've tried are TE/2 1.30 (an OS/2 Text Mode Communications Program that I highly recommend), ROIDS, and all things in the BonusPak installation program. All worked flawlessly under OS/2 Warp MMPM/2.

As I said, I'm impressed.

## Author's Note

The screen shots in the OS/2 Warp Multimedia article were produced with PM Camera that came on the OS/2 Developer's CD. Once loaded, PM Camera intercepts the PrintScreen key and draws crosshairs on the screen. You draw a frame around the area you want to capture and press PrintScreen again. PM Camera captures the image to a disk as a BMP or PostScript file or saves it to the Clipboard.

A nice product and highly recommended.

James Schmidt

# Warp, the Right Tool

*Stephen Bassler is a Systems Programmer (MVS and VM) for Allegheny Power System, an electric utility in Western Pennsylvania and surrounding area (W. VA and MD), and he acts as PC technical support for "a bunch of lovable mainframe dinosaur types." Stephen has a BS degree in Computer Science from Indiana University of Pennsylvania and has been using OS/2 since 1991. "Even though I work on the big iron, I've maintained a personal system mindset. I believe OS/2 is the future of the cooperative distributed computing environment."*

**H**ow do I begin to describe my reaction to OS/2 Warp? It's not quite like opening a Christmas present or a birthday gift. True, it's as exciting as unwrapping something new or maybe discovering something unexpected and fun—but it's more than that, more substantial.

I think it's closer to how you feel on graduation day when someone hands you a package "to use at work," and you realize that life is about to get serious. It's time to put away the toys and start to use the real thing. You rip off the paper and here is your first real set of drafting tools, your first real measuring tape, pen, and pencil set. You look at it, feel it, hold it in your hand and think, "This is it. This represents my first step into the real world. I'm going to work with this thing every day. It's going to affect the quality of the work I do, but that's OK because this is a professional piece of craftsmanship. It's built well, and it's built to last. It feels right."

It's been a while since I felt that way about a piece of software. I've seen too many hacks, too many "kludges," and too many well-intentioned but user-hostile programs

that try to be everything to everybody but end up being nothing to anybody, are tossed into the corner, and used only under duress. With OS/2 Warp, I feel I finally have a truly professional operating system running on my machine, one that I can trust to keep up with me. And I'm discovering that the real thing can be even more fun than the toys, because there's a deep satisfaction that accompanies the use of truly professional tools.

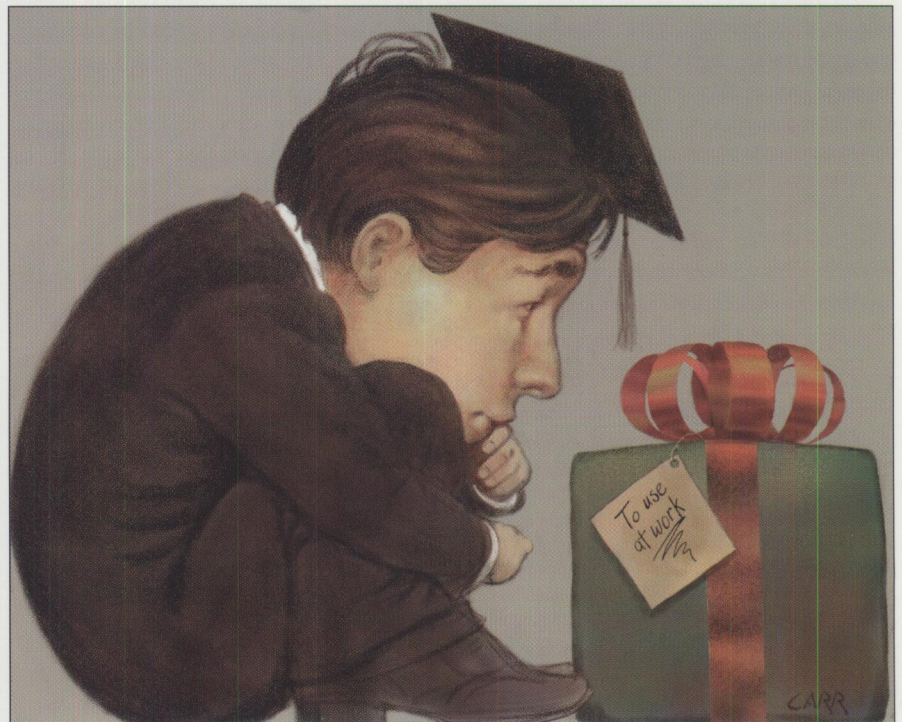
## First Impressions

So what's all the excitement about? First, the WorkPlace Shell Desktop is clean, clear, and vibrant. You can see what's available and you can get going with

a minimum of fuss and bother. Second, almost everything can be configured the way you like it, from the color of the desktop and arrangement of the icons to the memory management and device drivers you need for your obscure mission-critical application. Third, it works the way you do. You need to write a report, so you kick off a word processor. In the middle of writing the report, you need to retrieve some data from an online service, so you start that up. And while it's downloading, you format a floppy disk so you can give a copy of your work to your boss. All at the same time! The fact that this surprises us shows to what degree computers have, in the past, forced us to work the way they did. No longer.

## WorkPlace Shell

Let's look at these three areas in a little more detail. First, the WorkPlace Shell, the electronic desktop where you set up shop, has received a much-needed facelift. IBM now has good graphic designers who work on the icons and the sample



background pictures. For years, I have avoided the boring little bitmaps that come with the system, but now there are several exciting pictures, of which I am not ashamed—even in front of my kids.

The icons are bright and colorful and “3D-ish.” Many of the folders on the desktop and in various subfolders open to an opened-folder icon that helps you stay oriented. A folder on the OS/2 desktop acts just like the disk directory hierarchy under DOS, except that it holds program reference objects and devices such as printers and disk drives and displays them with an icon. Each icon on the desktop comes with its own personalized popup menu that you access by clicking the right mouse button. Options for opening the object, moving and copying it to other locations, and getting help are available in this popup menu.

There are a few changes from previous versions of OS/2. The Settings option has been moved from inside the Open option to the primary popup menu (a good idea because some high resolution monitors “shrink” the pixels and make it difficult to hit the arrow that opens the sub-option menus). There is now a “Pickup” option that allows you to move an object without holding the mouse button down.

Once you have opened a folder (including the desktop, which is basically just a folder on steroids) and you’ve done an “Arrange” of the icons, an “Unarrange” option appears on the popup menu to undo the last Arrange. This is handy if you or someone else has just unwittingly “arranged” the desktop for you. Also available on the popup menu of an open folder is the ability to open its parent folder and to backtrack toward the desktop.

## LaunchPad

Across the bottom of the desktop is a very useful object called the LaunchPad, a collection of icons and buttons that represents your most-used programs and folders. You can now find them quickly and open them with a single mouse-click. Each icon on the LaunchPad is also associated with a popup Drawer, where you can place similar or related objects that you use less frequently. For example, I have placed the OS/2 Extended Editor on the LaunchPad and the OS/2 System Editor, the Icon Editor, and a paint/draw program in the associated drawer. This frees up the space on my desktop, which would normally have been taken up by their program icons.

There are also four standard buttons on the LaunchPad: Shut down, Lockup, Window list, and Find, making these four functions a little easier to invoke. Note that the Find Function has been completely retooled. Obtaining a list of icons or executable programs is less painful, and the resulting list displays in a dynamically created “Results” folder, which can be saved permanently or thrown away.

## Colors

The second area to explore is that everything—well, almost everything—is customizable. There are all-new 16- and 256-color palettes (by the way, the desktop is now hardware palette aware, allowing bitmaps to display in their true colors), so you can splash your desktop with almost any color imaginable. There are 28 new and redesigned color scheme palettes with the ability to define desktop and folder background bitmaps as well as the colors and fonts of all the standard window areas: title bars, borders, scroll buttons, various text areas, etc. In addition, there is a font palette where you can set up font types and sizes for use anywhere in the system. All the palettes are drag-and-drop enabled, so you can pick up any color, scheme, or font and drop it on an area set up to receive it.

In practice, this is almost anywhere from the desktop itself to the various settings pages where you select fonts and colors to the preview pages where you specify icons and background bitmaps. If there’s a box with a sample of whatever you need to select, chances are you can just drag and drop your choice over that box, and the choice will take. Another nice change is that when you choose an object to drag and drop (by clicking and holding the right mouse button), the folder or window from which you selected that object no longer automatically rises to the top. It politely stays in the background and does not obscure the drop target.

## Icons

You can now do something the desktop needed for a long time: you can set a block of solid color behind the icon text to read the text instead of losing it in the background picture. Alternatively, you can make the icon text invisible. You can use normal icons (32x32 or 40x40—depending on your screen’s resolution), mini-icons (16x16 or 20x20), or none at all. You can choose different system pointers (white or black, large or small) and set them up with a “comet” tail

that stays behind as they move. You can specify the defaults for how a folder opens—with an “icon” view, a “tree” view of subfolders, or a “detailed” (text) view of all its contents—and whether or not the folder closes when you open one of its programs or subfolders. Folders’ contents can be sorted by name, object type, size, or date and time (not date OR time as before) of the objects’ creation, last access, or last write.

Earlier I mentioned that the LaunchPad was across the bottom of the desktop. Well, only if you want it there. You can orient the LaunchPad vertically or horizontally and place it wherever you like. I have mine vertically along the left-hand side so that the drawers open sideways to the right. You can drag and drop programs on the LaunchPad and its drawers and change their colors the same way.

I have an SVGA display adapter and monitor. VGA (640x480) always seemed too crude, and the monitor’s highest resolution (1024x768) had this annoying flicker (from color contrast, as I recently learned) and very small text, so 800x600 seemed like a good compromise. In the past, in order to set up the screen resolution, I had to run a program from an OS/2 window, select a resolution, feed install diskettes into the drive, and pray the process wouldn’t crash on me (which it did several times). With OS/2 Warp, the correct video driver, which knows exactly my video adapter’s capability, is selected during the install. I can choose a screen resolution from within the “System” object in the “System Setup” folder, and the next time I reboot, there it is. Clean and fast, and I’m even running 1024x768 now that I can fine-tune my system’s colors and font sizes.

## Desktop

The desktop, as I said earlier, is just a glorified folder. All the actions you can perform on a folder work equally well on the desktop itself. You can display your programs and folders in any format you like—as icons or mini-icons, text, or both; sorted or arranged in any order you specify; placed randomly around your screen; or flowed vertically or horizontally. When you minimize a running program or open a folder, you can reduce it to an icon on the screen or place it in a “Minimized Window Viewer” out of the way. I prefer to keep my screen as uncluttered as possible (unlike my real desktop, the top of which I have not seen in several



months), so I use the Minimized Window Viewer and restore objects by double-clicking on their entry in the Window List.

You can specify whether starting up a program or opening a folder for a second time will bring up the existing one or start a new one. You can add items to the desktop popup menu, run a program, or open a submenu of related programs. When you're done arranging your desktop the way you like it—icon placement, colors and background bitmaps, and running programs—you can open the desktop settings and save your configuration, guaranteeing that the next time you boot your system, everything is right where you left it, and you're ready to go.

## Behavior

The last area I want to discuss is rather personal. It involves your personal work habits. You can work with OS/2 Warp the way you work naturally, on several things at once, or at least, have several things ready to go at a moment's notice. OS/2 Warp's "preemptive multitasking" is just a fancy way of saying "the most important programs may get more time than other programs, but they can't hog the computer; they all run." DOS and Windows programs do not cooperate well because they were generally written to use the entire system. After all, nothing else will be running, will it?

## Multitasking

In the '80s, only the mainframes knew how to share the power of the processor between simultaneous programs, but OS/2 Warp has taken desktop computing

into the same type of environment. All programs are allocated "time slices" and priorities. A program is allowed to execute until it either gives up the processor voluntarily (all Windows programs should be designed to this less stringent "cooperative multitasking" standard) or it uses up its assigned time-slice, at which point control passes to the next waiting program, based on its priority and waiting-time. And get this, with OS/2 Warp, YOU decide the priority level of the DOS and Windows programs you run. You are in charge, as you should be.

Along the same lines, native OS/2 programs know how to request system resources (access to the hardware, memory, etc.), but DOS and Windows programs do not. Therefore, OS/2 emulation of the DOS and Windows environments has to translate any request or assumption into something acceptable to the OS/2 environment. When you set up a program reference icon for a DOS or Windows program, you can also tell it how to handle its memory configuration, what hardware (COM ports, soundcard, etc.) is available, how to use it (shared or exclusive), how to deal with the video subsystem, and dozens of other options. This makes DOS and Windows applications easier to run under OS/2 Warp than in their native operating environment; only under OS/2 Warp.

All of this results in an integrated and cooperative system. It is still possible for a poorly designed program to hog the system message queue, resulting in what looks like a hung system (actually, everything is still running, you just

can't communicate with any of it), but even this is addressed by the ability to enable or disable "type ahead" when a program is invoked.

Another much-anticipated enhancement is that OS/2 Warp will run in 4 MB of memory, not just barely, but well. I have 8 MB on my 33 MHz 486DX at home. This was generally, if not officially, the acknowledged minimum pre-OS/2 Warp configuration recommended for running OS/2 with acceptable performance. I can't give you direct numerical comparisons without ripping out much of the software and customization work I've done on OS/2 Warp, but let me say this: OS/2 Warp runs circles around any previous release of OS/2. It is snappy, responsive, and jumpin'!

This was accomplished, I understand, by several major design changes and also by removing the debugging and tracing code, which is usually a sign that a product is now stable. They're saying, in effect, that end users will probably never need to return debugging information to the developers. This is perhaps the best news of all.

Perhaps now you understand a bit better my excitement over the new OS/2 Warp. As good as it looks and performs, it is more than that. Yes, it is still a maturing product, but it has an edge that nothing else on the market today can touch. It represents a first step into the real world. It's going to affect the quality of the work I do, and that's good, because this is a professional piece of craftsmanship. It's built well, and it's built to last. It just feels right.

**ANSWER TO PAGE 23:** They are the presenters from the OS/2 Warp Virtual Update, which you can now attend by purchasing the video. This video was shot in Boca Raton with the OS/2 Warp development team and provides a strong, technical introduction to OS/2 Warp. Topics include:

- Introduction and Overview of OS/2 Warp, including installation.
- Support for DOS and Windows Applications, including comments about performance and tuning OS/2 Warp for your applications.
- Warp Device Support, including Plug-and-Play for PCMCIA. Resource Manager View (RMVIEW), and a glimpse of how RMVIEW will be implemented in future versions of OS/2 Warp.
- Introduction and Overview of OS/2 Warp Multimedia.
- Overview of the BonusPak, including demonstrations of:
  - Internet Access Kit
  - IBM Person to Person/2

This material is recorded on two VHS cassette tapes (over 2 hours and 40 minutes) and is available for \$129 by calling National Corporate Marketing at 800 678-8014.

Special Bonus Video: Created as a special companion for the Warp Virtual Update, this video runs over one hour and includes:

- Pen for OS/2: OS/2 Warp and Pen for OS/2 provide users of mobile systems with a powerful combination, especially for applications where using a keyboard is difficult or impractical. However, this video will show all PC users that Pen Computing is not just for special applications anymore.
- A look at how OS/2 is used around the world with David Barnes, OS/2's number one fan. David visits with OS/2 users in Alaska, Japan, Russia, and Europe and is shown mission critical applications running on PCs that demonstrate the power and stability of OS/2. But, as David learns, sometimes OS/2 is just waku waku.
- Some interesting interviews with some very, very Warped people.

# “Warping” the Home User

*Alan Arnett has 26 years of DP experience, primarily in MVS system programming and management. PCs have been his avid hobby for 13 years, and he has been using and supporting OS/2 at home and at work since the 2.0 beta. Alan works for Fina Oil and Chemical Company in Dallas, TX.*

I really like the look and feel of the successor to OS/2 for Windows. It not only looks better but it runs faster—at least it certainly seems “snappier.” Besides the changes in installation, changes that will grab you first are the new default color schemes and the colorful icons. It appears that the OS/2 developers were taking notes when David Barnes, noted IBM OS/2 aficionado, described the previous default OS/2 appearance as “dog ugly.” My experience with OS/2 Warp has found it to be a stable and compatible product.

## Review Parameters and System Configuration

My testing of OS/2 Warp was on a slow and small home PC. The configuration I used was the smaller of our two home systems, the one we use primarily as a game PC. The key components include:

- 386DX-25 with 8 MB of memory (some testing with 4 MB).
- 320 MB hard disk with Boot Manager and partitions of 230, 80, and 10 MB.
- Video adapter with Tseng ET4000 chipset and 1 MB of memory.
- Sound Blaster 16 SCSI-2 adapter (Adapter chip set).
- Sony CDU55S CD drive.
- HP DeskJet.
- US Robotics Courier V.32 bit.

I traded my no-name video adapter (Oak 67 chipset) when I had trouble with video corruption swapping between DOS full screen applications and the OS/2 desktop. Since there is no video corruption with the Tseng chipset and drivers, I'm not sure whether the adapter or the Oak drivers were faulty. Video adapters seem to be the most troublesome OS/2 hardware. In the future, I will buy only video adapters that already have native OS/2 support. Thankfully, since OS/2 has matured, the number of products with native OS/2 support has increased.

## Installation

The installation went rather smoothly. For installation from the CD, a special version of “disk 1” is supplied with most of the popular adapters and CD drivers.

The installation process now has two types: “easy” and “advanced.” The “easy” installation is simple with limited choices. The primary limit is that it installs to drive C. While I favor Boot Manager and the placement of DOS/Windows on drive C and OS/2 on drive D, most home users who want to add OS/2 Warp to their existing DOS or Windows systems will have a single drive C and will not want to partition their hard drive. These users will probably use the “easy” installation and will find Dual Boot extremely convenient.

The installation successfully detected the SCSI adapter, the CD-ROM, the video adapter and the Sound Blaster. I only had to tell



the installation which type of printer I had. The installation from the CD on the 386-25 took less than an hour. The installation from the diskettes took an hour and a half.

## General OS/2 Changes

The OS/2 developers have successfully rewritten parts of OS/2 to speed it up. For example, screen redraw is noticeably faster. In the benchmark that counts on this PC, Klondike draws the cards faster and does not lose mouse clicks. These were problems we had with OS/2 2.1 on this slower machine. New colorful icons and new color schemes for the desktop and windows make the system more appealing. The background color isn't the cyan that I prefer, but it is so close that I did not change it for several weeks.

The "settings" selection has been moved to the initial pop-up window, which is extremely handy. I certainly like having it in the initial pop-up window. During a recent OS/2 user group meeting, this change elicited the most applause during a demo of new features.

## LaunchPad

The LaunchPad adds a new dimension to OS/2. The user can place program and folder icons in the LaunchPad—the perfect place for frequently used icons—and start them with a single mouse click. The visible icons can be augmented by adding icons to "drawers," small buttons above each primary icon that expand to display more icons. You could conceivably configure your system so that everything that you use regularly is available within two mouse clicks.

One difficulty I had with the LaunchPad was how it handles the text associated with icons. The default displays icons without text under the icons, and I like how compact the LaunchPad is without the icon text. However, if you are using default icons for several applications, you need the text under the icons to recognize the applications. You can change this in your LaunchPad settings.

You can add things to the LaunchPad by dragging icons and dropping them between existing icons on the LaunchPad. Each icon on the main area of the LaunchPad also has a "drawer" associated with it where you can place additional icons. This gives you two ways of associating or grouping frequently used applications.

However, LaunchPad users must keep two things in mind. First, you can't move

things around on the new LaunchPad, and to relocate something, you must delete it and drag another copy to the "new" location. You can, however, have more than one copy of an application on the LaunchPad, if you can think of a reason to do that.

The other thing to keep in mind is that if you delete an object from the main area of the LaunchPad, that drawer is also gone. Any applications stored in that drawer are no longer accessible through the LaunchPad. You will probably modify the LaunchPad several times before you have it customized the way you want it.

## Information Folder

A lot more information has been added to the Information folder. The document most users will find useful is "Printing in OS/2." I have found that new OS/2 users are frequently confused about setting up printers due to the different characteristics of various printers and to the different ways printers are set up in OS/2 and Windows.

One item that I think is missing from the Information folder is information about setting up games. I have seen several regularly posted files that contain very useful information about various games. Since this type of information tends to be dated, it should include suggestions about where to obtain additional information on the latest games. This information should be available regularly through various online services that are popular with home PC users.

## Games

One of my family's favorite games is Mahjongg, which automatically installs with the new product. With multimedia, Mahjongg provides sounds for selecting the tiles and a variety of tile patterns.

Most of our games are DOS based. Dungeon Hack, Leisure Suit Larry, and other games worked. Another game we have, Mario is Missing, wouldn't run on OS/2 2.1 because this game uses an undocumented video mode. With OS/2 Warp and the supplied Tseng ET4000 drivers, Mario is Missing works fine. The problem that remains is that after switching to OS/2 when switching back to the game, I cannot move the mouse pointer around the entire screen.

## Drag and Drop

The new "drag-and-drop" strategy is also helpful. Previously, when you selected an object to drag to a new folder, the source

folder was brought to the top of the viewable windows and would sometimes cover the planned destination. Now, the source folder does not receive the focus on a "drag" operation.

## Tutorial

The Tutorial is all new, with a better looking startup screen and more user controls. It also has features that make it a powerful learning tool. If you are experienced with Windows, you can select a "Windows" button to see the relationship of the current topic to the Windows environment. An OS/2 button returns you to the OS/2-related text. The "Practice" button moves the Tutorial panel out of your way, leaves step-by-step instructions visible, and allows you to work directly on the desktop to practice each short lesson. An "Expert" button adds more technical information and tips to what was covered in the "OS/2 text." The Tutorial window is missing a minimize button, which would allow you to easily leave the Tutorial and return where you left.

As an exercise for a home user, I asked my wife to go through part of the Tutorial while I watched. She agreed, and I found this exercise interesting. Some things that were clear to me were not clear to her. She is a regular PC user with job experience using Deskview and both our OS/2 machines at the house. But she has never created folders or program objects or moved objects to different locations on the desktop, so most of the Tutorial was new for her.

The first screen gives her a choice to "learn how to use the mouse." Being familiar with "using" a mouse, my wife decided to skip this section. However, this was not a good idea for a user with limited experience using OS/2 or Windows. The mouse section contains information about the drag-and-drop concept and explains the convention of the "single click" and "double click" icons used in the later sections. These icons may not mean much to someone who skipped the mouse section.

The main body of the Tutorial has a very busy screen. Subject buttons are arranged down the left side of the screen, a graphic representation of the topic is in the center of the screen, step-by-step instructions are on the right of the screen, and a description of the topic is in the lower center of the screen. Located in the two lower corners are clusters of action buttons.

The title bar has the subject title and the current page number.

The page numbers in the title bar and the forward and back arrows in the lower left action area might be too subtle for many. After reading the first page of the "OS/2 Basics," my wife clicked on the next subject button. Having been through the tutorial earlier, I asked her why she did not go to the next page of the "OS/2 Basics" lesson and she responded that she did not realize there were pages. Maybe "Previous Page" and "Next Page" icons would be more helpful for newcomers than the left and right arrows. It might also help to put these movement icons above the subject selection buttons so they are more obvious.

We encountered a number of computer conventions that are common to experienced users but lack meaning to the new user. Things like a reference to using "Ctrl+mouse button 2" should be expanded or introduced earlier. When pressing or releasing keys or a mouse button requires a certain sequence, this should be clearly stated or introduced in an earlier lesson.

Overall, the Tutorial is a great improvement from the one in the previous OS/2 product. It has a lot of potential for introducing new users to the power of OS/2 Warp. The proper presentation for users with different experience is always hard to gauge. But the Tutorial needs some more allowance for the first-time user, either by expanding the "Using the Mouse" section or by adding it to the main tutorial.

### Four Megabyte Observations

OS/2 Warp runs on a 4 MB PC as advertised, but then so did OS/2 2.0. However, OS/2 Warp does it better. You will be able to run games and small applications such as word processing and small spreadsheets. You will get some regular disk activity as an application data swaps in and out, but it is in acceptable ranges. I expect that new users will put additional memory at the top of their Christmas list.

I spotted two differences between the 4 MB and 8 MB installations. With 4 MB, the installation did not allow me to select MPM/2 support or HPFS support. But in the 8 MB installation, both of these were automatically selected.

I only tested the Internet Access Kit and the IBM Works software in 8 MB. In 8 MB,

this software generates disk activity that might become intolerable in 4 MB.

### BonusPak

One addition to this version of OS/2 is the selection of software packages included in the BonusPak. Some of the BonusPak software packages included with OS/2 Warp CD-ROM are Internet Access Kit, CIM for OS/2, Person to Person/2, FaxWorks, Software Information Tool, IBM Works, and HyperACCESS Lite. I did not test the FaxWorks or Person to Person packages but tested the others.

### Internet Access Kit

The Internet Access Kit (IAK) is a jewel in the BonusPak. The IAK allows to connect so easily to the Internet that this feature alone may attract PC users. I knew very little about the Internet, and the IAK allowed me to easily explore its contents. For example, the NewsReader provides access to over 8000 topics. Whether using OS/2 Warp or Windows, Advantis or another provider, users should be aware that the Internet offers materials that might offend some people or be inappropriate for children. When children use the Internet at home, I suggest that parents supervise them as they would when children watch cable television.

The IAK has other applications that I have not tested, including mail, Gopher, ftp, Telnet applications, and the World Wide Web Explorer (WWW).

### CIM for OS/2

CIM for OS/2 is a graphical front end to CompuServe. It is the OS/2 Warp version of the CIM software for DOS and Windows. I have never used the Windows version of CIM, but I have used the DOS version. CIM for OS/2 Warp is definitely more graphical, providing icons and button bars for the functions of the text pull-down menus in the DOS version. CIM for OS/2 Warp functioned well, and as soon as I learn all the icons, it will be more usable than the DOS version.

### Software Information Tool

The Software Information Tool is a configuration reporting tool that analyzes the hardware on your system and displays the information you select. I remember seeing this software on PS/2s that had been pre-installed with OS/2 2.0. Users who are interested in the technical aspects of their hardware will find this software fun to use.

### IBM Works

IBM Works is a suite of software programs, including word processor, spreadsheet, and database capabilities. It also includes a collection of small applications such as to-do lists, reminder programs, phone lists, etc. Many of these functions apparently replace the OS/2 2.0 productivity applets, which are not included in OS/2 Warp.

### Word Processor and Spreadsheet

I tested the Word Processor and the Spreadsheet on 8 MB. I was impressed when the Word Processor correctly retrieved a five-page document in WordPerfect format. However, loading the program was very disk intensive and printing the five-page document took 25 minutes in default mode. I tried the draft mode and didn't see any difference in either print quality or speed. The spreadsheet program was able to load a large Lotus 1-2-3 version 1A spreadsheet with only two noticeable problems: the @ROUND function was not recognized and the "\d0" feature for repeating characters was not duplicated.

### HyperACCESS Lite

HyperACCESS Lite is a modem program for dialing communications services. It worked and has most basic features of a communications software package, but this package is only an entry level version of the full program. The product information section lists the advantages of upgrading to more functional versions of the software. A script language is not included; only six transfer protocols are included, but to their credit, the ones included are popular ones such as X-modem, Y-modem, Z-modem, and Kermit.

### Summary

I have to say I really like OS/2 Warp. Installation is easier and includes more support for popular hardware. The default appearance is much better than the previous versions of OS/2.

Many of the games and productivity programs that were included in previous releases are still present, and some have been replaced with the software from the BonusPak. With the possible exception of the Internet Access Kit, the BonusPak may not convince everyone to buy OS/2 Warp, but it might convince the concerned user who is considering OS/2 Warp and wants to start quickly without the cost of replacing the software he is already using. The BonusPak is a really smart move for OS/2 Warp.

# Surfing (Warping) the Internet

Scott Trosien currently works for a large retailing company as an OS/2 systems engineer. He consults part time in the Detroit, MI area and is pursuing his Bachelor of Science degree.

One of the hottest new features included with OS/2 Warp is the new IBM Internet Connection (IIC). The IIC, also known as the Internet Access Kit (IAK), allows every OS/2 Warp user who has a modem to access thousands of resources available on the Internet (a.k.a.: the Net) including FTP sites, Gopher servers, and the Usenet News groups. Also included are FTP, TELNET, Gopher, TN3 270 clients, and an Internet NewsReader client. The FTP, TELNET, and TN32 70 (PMANT) clients come in both text and PM varieties. Although these names and acronyms may seem foreign to you at this time, with the help of the Internet Connection they will soon become part of your vocabulary.

Installation of the IAK required approximately 15 minutes and 11 MB of disk space. Of the 11 MB of disk space, 4 MB was for the Ultimedia Mail Lite that allows you to easily use the Internet to send electronic mail to other users connected to the net.

The installation procedure was simple and painless. You only need to select the options to install from a short menu. Once the installation is complete, a shutdown and restart are required to get the necessary drivers running. Two basic options are available to you to connect to the Internet: the "On-Ramp Dialer" tool or the "Use other Internet provider tool."

## On-Ramp Dialer

This review covers only the "On-Ramp Dialer," since most new users do not already have an Internet provider. To connect for the first time to the IBM Internet provider (Advantis), you must first use the "Customer Service" icon to enter the information necessary to open an account. This information includes your mailing address and a credit card number to which to bill your charges.

There is an introductory period to try Advantis' service for free. Once you have entered your information, you need to select the type of modem you have from a pre-configured list, and the COM port to which your modem is attached. There is a default if your modem is not listed. 9600 baud is the minimum suggested rate in the IAK README. 2400 baud is painfully slow for most Internet tools. 14.4 bps connections are supported and higher speeds are likely to become

available. After entering your personal data and preferences, select the option that sends your registration to IBM. The system automatically starts the On-Ramp Dialer and connects you to Advantis. Once the registration information is sent, you will receive your account code, Internet ID, and a password to establish all future connections.

Remember to write down your ID and password and keep the information in a secure place. You may change the password, but you are encouraged to choose a password that cannot be easily guessed. At this point, you should hang up and start the On-Ramp Dialer to look at what you will see and do each time you connect to the Internet. After the dialer starts, you simply need to click on "DIAL" to connect to Advantis. You will be prompted for your account code, UserID, and Password. The Account code and UserID may already be entered, thus leaving you to enter the password.

## The Gopher

For new users, the Gopher client may be the easiest way to begin exploring the

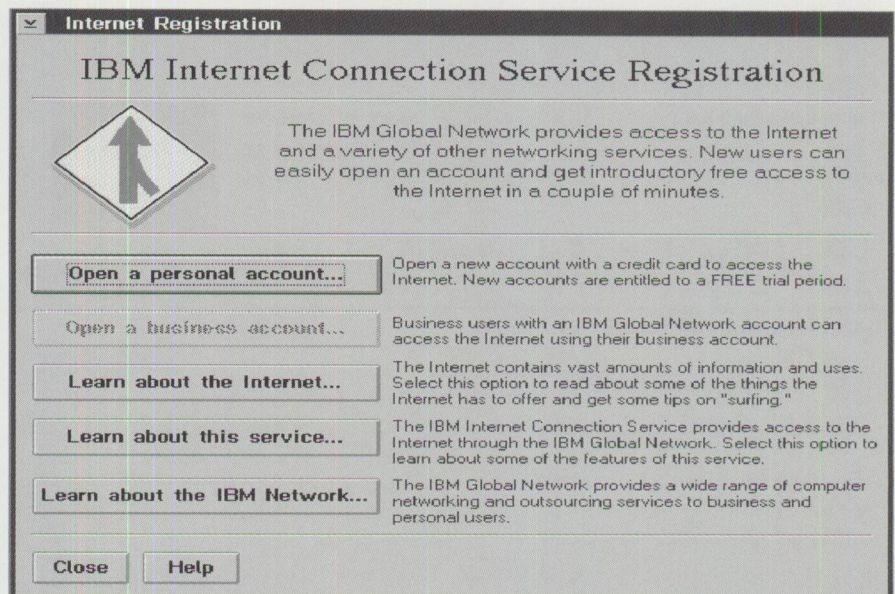


Figure 1. Registration

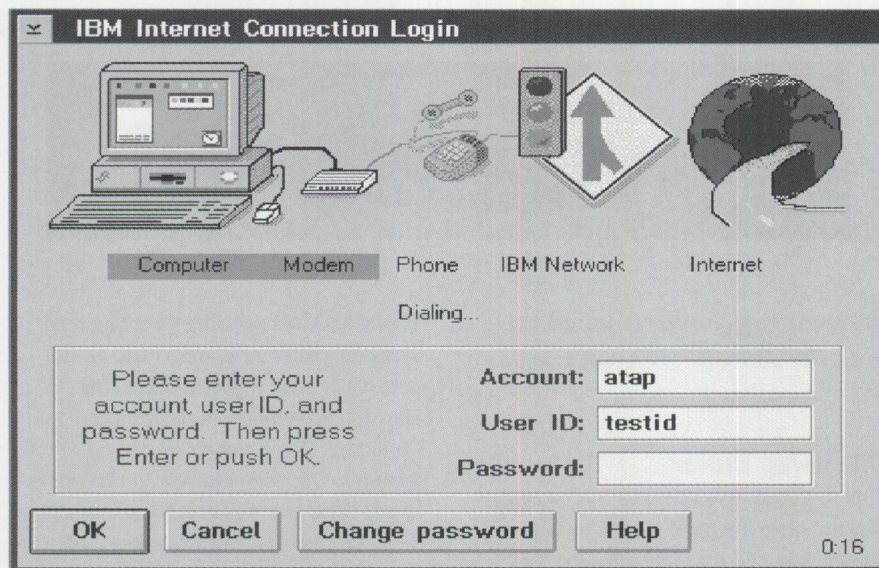


Figure 2. Login

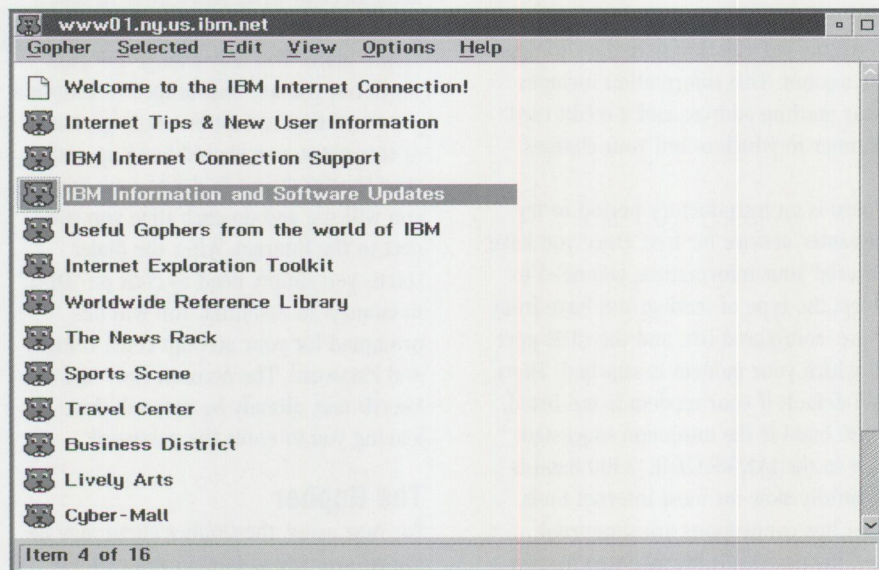


Figure 3. Gopher

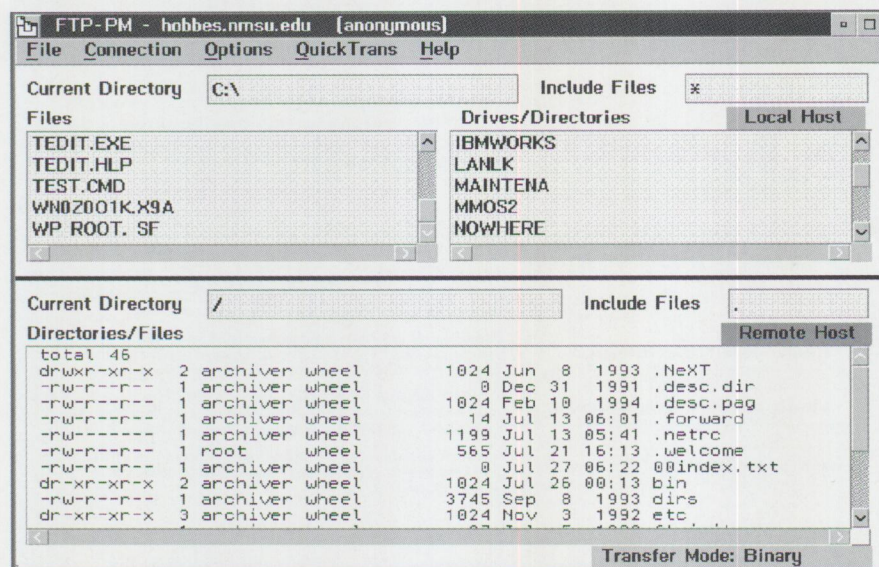


Figure 4. FTP TM

Internet. If you use the IBM Gopher client, the default starting point is the IBM Gopher Server which is a great point of contact for obtaining information on the Internet, IBM product announcements, helpful tips, and software updates.

## E-mail

The symbols at the top of the On-Ramp dialer display your status while connecting you to Advantis. Once the connection is established, you will receive a message to "Begin IP communication now." At this point, feel free to use any of the Internet tools to begin exploring the Internet.

E-mail is one of the most useful features of the Internet, especially for students of major colleges and employees of corporations, which have established connections to the Internet. E-mail is much quicker than the U.S. postal service and delivers information in moments rather than days.

## Ultimedia Mail Lite

Ultimedia Mail Lite takes E-mail a giant leap further than the text-only messages of most other electronic mail systems by allowing you to include graphic images, sound and motion video, and other types of binary data in the mail message.

## Third Party Tools

Third party tools are available to connect to the Internet. An Internet Relay Chat (IRC) client allows real-time discussion with other users on the net—not unlike how a CB radio would work. Another tool can retrieve the time and date from the National Institute of Standards and Technology (NIST) time server and accurately set the time and date on your PC. These and many other tools can be obtained from public BBS' as well as FTP sites on the Internet such as hobbes.nmsu.edu.

If you want to create your own tools, IBM offers a toolkit that allows programmers to create Internet tools using C/C++. In addition, the DLLs that allow REXX programmers to access the TCP/IP protocol stack are also available. One such DLL is TXSOCK.DLL, which is available as an IBM EWS (employee written software) tool.

The Internet tools, along with the other elements of the BonusPak included in OS/2 Warp, help make OS/2 Warp a highly successful product. You owe it to yourself to try OS/2 Warp, if for no other reason than the ability to easily surf the Internet in style.

# Who are These People and Why are They Saying...?

*Bradley Wardell is a software developer for Stardock Systems (SDS), Inc., in Kalamazoo, MI. Thousands of readers may have played with some of Bradley's handiwork as he developed and designed Galactic Civilizations, a game which is popular with OS/2 users. Bradley is also the Project Manager for SDS OS/2 Essentials, a set of utilities for OS/2 users.*

IBM sent me the gold version of OS/2 Warp early so that we could ensure that Galactic Civilizations and OS/2 Warp got along—which they do. I am frustrated with some of the press, which blasts OS/2 Warp. My experience with OS/2 Warp is so diametrically opposed to the negative press that I feel compelled to go on record.

## Installation

I received OS/2 Warp on a CD-ROM. I selected Easy Install and went out to lunch. I came back and selected various options such as my printer. OS/2 Warp had selected everything else correctly, my Sound Card, CD-ROM, Video card, and so forth.

I pressed <Enter> and played with the Operating System (OS) while it was installing. This feature should impress any reviewer who uses the OS while it is installing. It gives you a chance to clean up directories, read documentation, do some productive work, and even...to play games!

A few minutes later it came up at 640x480x256 (SVGA automatically installed). OS/2 Warp came up and ran without any problem. This is a first in my experience with previous versions of OS/2.

## First Impressions

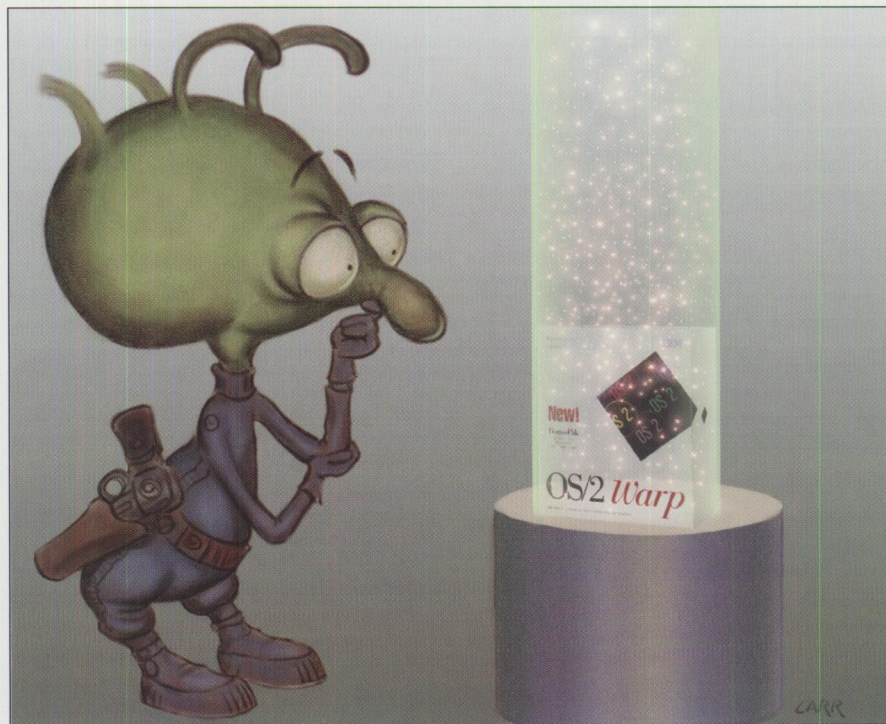
IBM changed its OS/2 logo. It is now more professional. For fun, I changed one of my folders to be the Chicago folder. I can change both parts of the animation, the open and closed states, so I have a Chicago folder that opens and closes—something which I expect Chicago (Windows95) will not do when it arrives.

I put my screen resolution to 1024x768x256 by selecting it from the folder options. I then turned on the Fastload option to load Windows in a Standard Mode (it defaults to Enhanced Mode) session to which my Windows apps

were already set. This is a feature that IBM needs to tell people about. The modes have to be the same for Fastload to be any good.

If I have a "gift," it is the ability to crash any OS. Whether it is Solaris, NT, OS/2, or Windows/DOS, I find a way to crash it. It doesn't mean that they are unstable. I found that Windows 3.1 was reasonably stable as long as you knew what you were doing. OS/2 Warp is without question the most stable operating system I have used.

In every beta or GA of OS/2, hangs in the message queue have been a major problem, the type of hang where the system is still going, but I cannot access the system with the mouse or the keyboard. I can sometimes use Ctrl+Esc to get control back. OS/2 Warp has not done this in over a week of use!



## Performance

The graphics are very zippy. GalCiv plays very, very fast. I learned not to be conservative with my swapper. If you start out at a mere 2 MB of RAM, remember that it tends to slowly increase. So I set mine to 8 MB, and it rarely grows larger.

The video speed is good, especially with S3. OS/2 Warp is at least as fast as my Mac, working with the drive objects and such. I have done some informal side-by-side comparisons of folder opening to see the speed. OS/2 2.x always opened folders too slowly to my taste.

Windows programs run very fast under the GA. In fact, they seem to run on par or faster than under OS/2 2.1 with WIN-OS/2 support, but I have not benchmarked them. My first impressions on Windows support were very good.

OS/2 Warp is clearly the best OS/2 yet, but it's more than that. I have played with the Chicago beta and OS/2 Warp blows it away. Of course, any OS that does not let me change "My Computer" won't get my vote for best OS!

## Application Migration

OS/2 Warp automatically migrated all my applications and put them in the correct folders. For example, it found GalCiv on my hard drive and put "Galactic Civilizations" in the game folder. Similarly, it found ROIDS, Mahjongg, DOOM, Epic Pinball, Simcity 2000, and others and put them in the games folder. It also found other applications and put them in their corresponding folders.

I applaud IBM for seriously taking time to migrate apps pretty well. Simcity 2000, for example, has all the command line parameters it needs to run.

IBM was too conservative with its default DOS settings for migrating programs in OS/2 2.1, but OS/2 Warp is the opposite. It gives the migrated games as much leeway as OS/2 will allow, and this can cause trouble. For example, I can readily get Simcity 2000 to screw up the video by minimizing it, doing something on the desktop, and then going back to it. If I change the settings from the migrated settings to more conservative ones, it doesn't have those problems.

I think IBM should have considered the stability with DOS games more important than their speed when they run them as

fast or faster than native DOS. On the bright side, OS/2 is truly becoming a better DOS than DOS. I could not get the new game "Colonization" to install from MS-DOS; it would lock up. However, it installed fine from OS/2 Warp's DOS prompt.

With OS/2 Warp, I have had no problems getting separate enhanced-mode sessions to work correctly. This is important because I use PhotoShop frequently, almost daily. I like to scan in the background with PhotoShop while PhotoMorph is doing its own thing in its session. All the while, I am using my favorite terminal, Crosstalk for Windows.

By the way, other than Quicken, these are the only windows apps I use (well, okay, I have PageMaker for resumes and such). There is a rather stupid myth that has been around for a while. It asserts that each Windows session used something like 2 MB of RAM. This has always been baseless. With a good memory viewer (like menu) you can easily find out that the overhead per session is quite minimal (less than 400 KB). There's really no penalty for running Windows programs in their own session other than it taking an extra couple seconds to load.

## The BonusPak

Now my favorite part. The BonusPak is just incredible. The word processor, spreadsheet, and graphing program are just absolutely great for a works package. They are also the fastest graphical user interface (GUI) applications of their kind I have ever used. What is it like to print from one of them? Great, no wait whatsoever. The thread starts immediately. They are SOM enabled. You can drag and drop between them easily. My only complaint is that you can't drag and drop external files (like a bitmap) into them like you can with AmiPro/2.

The BonusPak also includes Video IN, which is the tool used to make the Ultimotion video files in GalCiv, along with POV ray tracer for OS/2, which can be found on the Hobbes CD-ROM for OS/2. You can buy a card for less than \$200 that will let you watch TV on your computer. Of course, doing that will make you "king of the nerds" (Just a minute, Vicki is on TV right now? Please hold.)

The Internet networking is slick. My guess is that the *New York Times* reviewer had no idea what he was doing. I simply

clicked on the dialer, gave it my name, and more importantly my VISA card number, and off I went onto the Advantis Network, whose pricing seems to change with the weather. I should point out that I am not a guru at SLIP connections or anything. I've never even used SLIP until now. I was able to just fill out the blanks, and it did the rest for me. No manuals, no technical support.

The Internet software is undoubtedly the most impressive example of multithreading that I have yet seen. It is slick, well put together, and fast. I can read the newsgroups while I download a file from Hobbes and do a search with Gopher. It doesn't slow things down much because most of the work is on the network, not on your system.

The Web Browser is pretty easy to get. Simply click on the Upgrade software, and the Web Browser shows up. You click on it and download it. It will install by itself in the background while you are online, and you can use it upon the next boot up (at least, I think it required a boot up).

The WWW browser is also very slick, though I am pretty new to it. You can drag and drop to it graphics that show up. For example, I went to the COMDEX document, which had a cool COMDEX logo. Well, I can grab that neat picture and drop it onto my desktop. Just think, using your logo as "wallpaper" across the country.

## Conclusion

So there you have it. Contrary to *PC WEEK* and the *New York Times*, I have had an excellent experience with OS/2 Warp. I have not had to reboot my machine since I installed the Internet stuff several days ago. It is quite solid, and I do push my machines hard.

If someone feels my association with Stardock Systems and Galactic Civilizations creates a bias, I would say the opposite is true. I'm on the Internet where I can receive tons of nasty e-mail and be blamed if my statements are baseless. I would lose professional credibility, which would adversely affect me and the company I work for.

I wrote this as unbiased as possible. I hope it will counterbalance some of the very unfair media reporting.



# Warp for the Windows User

*Mark Rensmeyer is a programmer analyst with C-Systems Software Inc. of Carrollton, TX, specializing in computer systems for the outdoor power equipment retail, rental, and distribution industries. He now uses OS/2 in addition to MS-DOS and UNIX for application development. When away from computers, he is an avid cyclist and snow skier. He has a Master of Science Degree in Computer Science from the University of Texas at San Antonio.*

About a year ago, I noticed an ad in the paper from a local computer retail store for the "OS/2 For Windows" operating system. Being a Windows user and curious, I gladly spent \$50 for the opportunity to become proficient in a new operating system.

When I got home, it took several "false starts" to load and integrate it into my system, but this was to be expected. My PC is a "home grown," non-Intel, non-IBM 486, 8 MB clone model, built from scratch about five years ago and upgraded/traded/modified almost constantly since. I admit that I am never optimistic about loading ANY new software, let alone a new operating system! I was VERY intrigued by the DOS-OS/2 Dual Boot feature, which provided a much needed safety net.

Once it was installed, I played with OS/2 enough to appreciate its look and feel. I enjoyed not being constantly tied to an old and very limited operating system (MS-DOS) coupled with a separate but very innovative user interface (Windows 3.1) and only 640 KB of memory. I discovered, over several days, because of the (lack of) speed with

which Windows applications were initially brought up, that it just wasn't practical for daily use.

So I ran my system as before, booting MS-DOS, then bringing up the Windows 3.1 graphical user interface (GUI), and running my applications—most of which were Windows apps. Since that time, I have read several articles about changes made in the new revision of OS/2 Warp regarding, among other things, the speed with which Windows apps are brought up. Well, I was curious again, and got the OS/2 Warp CD-ROM.

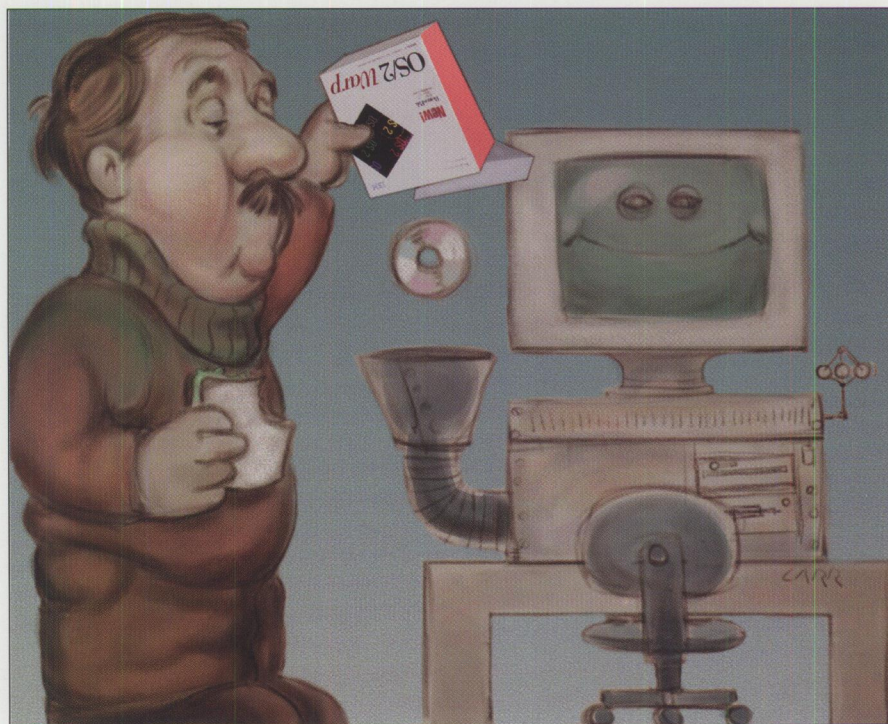
Here are my impressions since I loaded it, from the perspective of a Windows

user who thinks quite highly of Windows, at that.

## OS/2 Warp Installation

My previous experience with loading operating systems has conditioned me to gathering ALL my diskettes about me in addition to my application packages before starting. First, we load MS-DOS, then drivers for the tape, drivers for the video adapter, drivers for the mouse, drivers for the sound board, drivers for the CD-ROM, and drivers for the printer (hope I didn't leave anything out!). Next comes Windows, then applications and data. Hopefully, a week later, everything is back together and runs as before.

Here's my point: WITH OS/2 WARP, IT ALL RAN OUT OF THE BOX! The exceptions, of course, are the tape software and applications. But it all worked! And this is no ordinary PC I'm dealing with, either! Now I can't guarantee that EVERYTHING will run for EVERYBODY as it did for me, but I can say that



DOS and Windows can't even come close. It was all there on a single CD.

## Desktop

Once the new Presentation Manager was installed and up, I was impressed by many things. It LOOKS GREAT! Look at the Windows Program Manager, then look at the OS/2 PM and see if you don't agree. It has more of an X-windows look and feel than Windows. I haven't found a background color I like better than the rich blue-green that is the default. I know that's a "little thing," but little things add up.

The desktop is completely customizable. I remember waiting months for Windows 3.1, just so I could get colored group icons! With OS/2 Warp, instead of "groups" you have "folders," which are graphically shown open or closed when applications within them are open. Pretty neat!

Each application—whether it's a folder, an application, or the desktop itself—can be customized with a myriad of personal choices available from the "settings" of its pull-down menu. With OS/2 Warp, you can use any icons you wish or create your own. You can display them anywhere you wish, and you can mix and match group icons (folders) with application icons.

I was pleased to be able to move the Windows calculator applet to the desktop; I can't do this in Windows. It is rumored that you can do the same in Windows 95, but to me, it's still a rumor. With OS/2 Warp, I don't have to repeatedly open a group of applications that I run several times a day!

I must admit that with that flexibility, I initially thought about creating the OS/2 Warp desktop to resemble the Windows

desktop, because my family and I were more familiar with the Windows product. (Not a bad idea: trick them into using an operating system they don't even know is there!) I thought about it for about a day but realized that there was no point "dumbing down" OS/2 Warp. It doesn't take long to really appreciate OS/2 Warp and its advantages over DOS/Windows!

## Windows Apps

Of course, the first thing I tried after migrating my applications was to bring up a Windows app. In an article I read, the "tip" was to enable a feature called "fast load" to increase Windows performance. When enabled, this feature loads Windows drivers at boot time and creates a "Virtual DOS/Windows Machine." This way, any applications you want to run in Windows' "Standard Mode" already have the drivers loaded and are launched in the same time as in native DOS/Windows.

It works! It was great, and I am thrilled! To me, this is the single greatest difference between OS/2 Version 2.1 and OS/2 Warp. IBM has enabled users to make many choices about how their operating environment behaves. This is a very nice option.

Some Windows applications run only in Enhanced Mode. WordPerfect is one of these. This means that its own set of drivers is loaded at execution time. If for any reason the application (or Windows) crashes, only that process crashes. The rest of the system remains up and running! (This may be a good thing for WordPerfect...). I've noticed that other applications such as Excel 5.0, Access 2.0, and AmiPro 3.0 do not have to run in Enhanced Mode. Again, it's your choice.

## LaunchPad

The optional "LaunchPad" is customizable as well. So far I've been pleased with the ability to place it at different locations on the desktop and to customize the pushbuttons with other functions. It's very nice to be able to push one "button" and pop up a DOS window, an OS/2 window, or two or three windows. Mix and match. I added the button for the Dual Boot feature but discovered that I use it less and less. Once again, it's your choice.

I would be remiss not to mention what Windows provides and what OS/2 Warp doesn't: GPFs and UAEs, which Windows users will recognize. I am amazed at the stability of the OS/2 Warp code.

## Multitasking

For the first time, PC users actually have a full multitasking operating system with what is easily the most sophisticated GUI on the market! Forget the multitasking illusions of Windows and DOS. Full, reliable, application multitasking is supported in OS/2 Warp. Nothing close to this is available in DOS or Windows.

OS/2 Warp is clearly an operating environment for the '90s. It can run on very sophisticated PC platforms, with sophisticated graphical applications from thousands of providers, for very sophisticated users. Look back to when DOS was first created to get the idea of the advances made in hardware and software and of what is required to run these platforms effectively. Although DOS has been enhanced by the addition of Windows (and a very nice and needed enhancement it was), it is now ONLY a loosely integrated enhancement; it is not a fully integrated operating environment with the power of OS/2 Warp.

# It's a Killer!

By Joe Barr

**IAK <eye-a-kay> 1. It's A Killer 2. the Internet Access Kit: an integrated set of tools for surfing the Internet 3. The first serious shot fired by IBM in its assault on the desktop.**

**W**hen IBM announced OS/2 Warp, they demonstrated that they had been listening to complaints from OS/2 users. Nobody disputes that OS/2 is technically superior to Win 3.x, but a lack of applications and a troublesome installation process have hurt its acceptance in the marketplace. That may be about to change. IBM has not only improved the installation process by an order of magnitude, but OS/2 Warp now comes with a BonusPak of native applications that clearly demonstrate its multithreaded virtuosity.

The BonusPak includes IBM Works, CompuServe's Information Manager, HyperACCESS Lite, FaxWorks for OS/2, IBM's Person To Person conferencing package, a System Information utility, and a multimedia package that supports video, allowing you to watch the Cowboy game while you work on a spreadsheet or enjoy those Kodak CD versions of your vacation pictures.

Finally, the IAK: SLIP (PPP is coming) connectivity with a single button. It includes everything you need to get around the Internet in style and comfort: gopher, Telnet, FTP, dozens of net utilities like finger and ping.

But the *pièce de résistance*, *la crème de la crème*, perhaps the first "killer app" for OS/2, is the Web Explorer: a multimedia, multithreaded magic carpet with a first-class ride.

None of the BonusPak applications are throwaways, except possibly the CIS Information Manager. CompuServe gives it away for DOS, Windows, Macintosh, and now for OS/2. There is a reason for that: it helps keep the meter running by keeping folks online a little longer. I much prefer Golden CommPass for accessing CIS.

It's fast, it threads, and it lets me read offline while the meter is not clicking.

IBM Works contains the usual applications for such a bundle: spreadsheet, charting and graphs, a database, report writer, and a word processor. None of them are the equal of a top-of-the-line product, but you could easily spend \$1,000 buying top-of-the-line products in each of these areas.

The other applications, like those in IBM Works, are not only free—they are usable. Hilgraeve's HyperACCESS Lite is great for visiting the local BBSs on your cyber-tours.

FaxWorks for OS/2 gives you drag-and-drop capability so you can drag a document to either your printer icon or the fax machine icon and be done with it. The System Information utility lets you look under the hood at the processor, memory, and software components. More about these apps a little later—especially the Web Explorer. Let's talk about the weak spot in previous OS/2 releases: the installation process.

OS/2 Warp installs like a dream. IBM has made some real improvements in this area. That's good, because the install has long been seen as a hurdle set so high that most people haven't wanted to fool with it.

I opted for the advanced install, and it completed in less than forty minutes without a single miscue or hiccup. IBM's sniffers (programs that identify the various components in your PC) were sharp: they identified my Mitsubishi CD-Rom, my Tseng ET4000 video card, and my Pro Audio 16 sound card without any help from me. OK, it did pause long enough for me to verify that my Tseng chipset was the ET4000 instead of one of the newer

32-bit Tseng's, but it had already pegged it and was simply asking confirmation. After all the problems I had installing the OS/2 Warp II beta, this was a very welcome relief. No version of OS/2 I've ever used (and I've used them all since the 2.0 beta) has installed without a glitch. This one did.

It's still not a world-class install, though. To make it to that higher level, IBM needs to add canaries (software checks of hardware to ensure error-free installation and operation prior to the actual installation) and checkpoints: the ability to stop and restart the install process along the way. Having to start a nearly hour-long process all over again from step 1 after something goes wrong near the end is just silly.

Now back to the BonusPak apps—especially the Internet Access Kit. The Internet is "kewl," it's where everything is happening, like, real-time, right now, man! But it's something of a paradox—it is dweeb-like and archaic in its roots. Like "vi" is to a word-processor with a GUI, the Internet is to Prodigy. Like UNIX shell commands are to drop-down menus and dialogue boxes, the Internet is to America OnLine. Or it used to be that way before hypertext applications appeared to dress things up a bit.

Taking a cue from the rise of multimedia browsers like Mosaic and the huge groundswell of interest in the Internet in general (even politicians are talking about the information superhighway), IBM has developed a complete suite of all the old familiar Internet tools for its multitasking, multithreading challenger for the desktop, OS/2. It's a great combination, and the timing is perfect.

IBM media relations in Austin gave me a copy of the pre-release OS/2 Warp with the BonusPak, and Eden Matrix Online Service gave me a complimentary dynamic SLIP

account for a few days to try it out. Let me say right now that I'm sold on it. As soon as the checkbook allows, I'll be upgrading to a 28.8 modem for no other reason than the IAK.

IBM gives you a choice of using their network (Advantis) or any other Internet service provider you choose. If you use Advantis, all it takes (besides a modem and telephone line, of course) is a credit card and the click of a mouse button, and you're connected. If you go with another provider for Internet access, you will need to modify one of the sample REXX scripts that come with the package to customize it for that connection.

Once you're connected and the SLIP is running, you're ready to start surfing. IBM recommends you start with the gopher and feel your way around slowly. Nah! Go for it! Fire up the Web Explorer, sit back in your cyber-lounger, and cruise! If you're not already familiar with the World Wide Web (WWW) and hypertext browsers like Mosaic, let me see if I can explain it to you.

Imagine glossy, high-resolution, colored magazines scattered in interesting sites around the globe. Imagine that if you touched (clicked the mouse when your cursor is pointing at it) a word, phrase, or icon on a page of one of those magazines, a voice, or music, or video images flowed

from the page onto your screen and out your speakers. That's hypertext. That's WWW. Those are "Home Pages" at WWW sites around the globe.

OK, now that everyone knows what a Home Page is, select the IBM Home Page for your first stop and start your journey. From there you can visit Paris and the Louvre Museum, explore the catacombs, or take a tour of the city. Click and you're reading the latest issue of *Wired* magazine from their site in San Francisco. Click and you're at the Smithsonian in Washington DC. Want to go back to someplace you were previously? Easy, click on the map icon and then on the site you want. Wham! You're back. Find a place you like and want to visit again? Click another icon to add it to your list of favorites. It's all easy and intuitive to use.

I admit I sat with my mouth open the first few hours I went exploring. It's one thing to write or to talk about a global village; it's quite another to literally see it on your screen.

I do want to add that a 14.4 bps modem is the slowest I would want to use for multimedia browsing. Any slower than that and it would start to drag. Luckily, not only are prices dropping on the 28.8 bps modems, but the standard for that speed (V.34) has finally been agreed upon and is starting to become available.

IBM's announcement of the new release of OS/2 (Warp V3.0) on October 11 did not go unnoticed. Armed with a healthy budget for marketing and advertising, Big Blue is taking full advantage of the fact that Microsoft is a year late getting a 32-bit desktop operating system to market. When Chicago finally gets here, it is going to be facing some very stiff competition and perhaps a much larger installed base than anyone dreamed of just a year ago.

The desktop wars have now started in earnest, but so far only one of the combatants is armed. Microsoft has responded to the OS/2 Warp announcements. Brad Silverberg, a Microsoft VP, appears to be making a bid to replace Steve Ballmer as their official IBM-basher. He gave the *Wall Street Journal* reporters an unsolicited interview in order to whine that OS/2 Warp was copying all of Chicago's features. The fact that OS/2 Warp is available and here today while Chicago is still in the works didn't faze him one bit. I think we're going to be hearing a lot more of this "Wait for us, we're the leaders!" kind of talk from MS for the next several months.

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Box 12-221 Austin, TX 78750  
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Papa Joe's DweebSpeak Primer  
Joe Barr*

## TRIVIA: OK, second chance, who are these people? (See page 44 for answer)



# Let's See the Wizard!

By Bob St. John

*There was nothing down the Yellow Brick Road but trouble. The Wizard pointed out that they already had everything they were seeking. Dorothy needed to pay more attention to what was already around her in Kansas.*

**A**t a formative period in my life, I was told, "If you ask for advice, take it. Don't analyze or second guess it; just carry it out and see what happens." If you adopt this credo, as I did, it should have a significant impact on any future quest for advice:

- First, you will be very careful about the source of the advice.
- Second, you will only ask for advice when you need it.

I am sometimes puzzled by a phenomenon I have observed. An organization, let's call it My Mythical Company (MMC), is ready to make decisions about the direction, strategy, and migration of its computing environment. Decisions will be made that may have a real effect on the organization's profitability and perhaps even its competitiveness. These will be significant decisions, to say the least.

MMC is in serious need of advice. Where do they go for advice, and what do they

do with it? How do they judge its validity and quality? How committed are they to acting on the recommendations?

## Sources

Too often, organizations in MMC's position start rushing to sources such as trade press, newsletters, consultants, and others outside their organization, sources that are paid to give opinions. These groups are more inclined to give you the temperature of the water than tell you how to swim. What do they know about MMC or your organization?

At a conference last year, I talked to several people: "Many managers don't have strong technical skills or backgrounds. They are not comfortable with technical issues and



have trouble sorting through all the PC information that comes at them from all directions.

"What advice would you give to help them sort through the chaff and get to the wheat?"

Two of the people I asked were magazine publishers. The first publisher's advice was to buy his magazine. Imagine my surprise. Let's come back to this suggestion later.

I persisted and asked the other. She said, "They should talk to their in-house technical professionals. They are their in-house consultants." Her words were an epiphany for me.

## In-House Consultants

She pointed out that the in-house consultants are the only people who are familiar with the company's business, its priorities, and its objectives. They also know the existing computing environment, the skills and resources, the applications, the legacies, and the "why and how" things got that way—what is working well and what is superfluous. And here is what makes the real difference: the in-house consultants are committed to the success of their organization in a way that no newsletter, trade press, or consultant can be.

I also asked some in-house technical professionals who were attending the conference if management sought their opinions when making these decisions. I found that these technical professionals are often frustrated because of the strategy they have to implement, a strategy that will impact profitability because it is inferior, inefficient, unproductive, and ultimately costly. The strategy often lacks

technical accuracy because the technical professionals were not included in its creation. When their opinions are considered, they are frequently subordinate to outside sources. What's wrong with this picture?

## Priorities

Remember the response of the first publisher: "Read my magazine and you shall know all" (or words to that effect). Trade publications must keep big advertisers happy and build their circulation. In fact, a little notoriety and controversy might be to their liking.

Consulting organizations must market their opinions.

Both "institutions" are subject to ideas that may be in vogue at any time. It can be dangerous for them to be caught out of step with the *right idea*.

## Conclusion

While publications and consultants provide information, their own success doesn't depend on the success or failure of the organizations paying them for this information. This doesn't mean that these sources of information should be discounted, but users of the information should validate it with their own technical resources: in-house consultants who have the technical skill and whose first objective is the success of their organization.

These in-house experts are the people who are going to keep their organization up and running every day. In MMC, I want them involved in all aspects of the

business so that my computing environment supports my business' objectives. I certainly want them in charge of activities that directly impact their responsibilities.

MMC's in-house professionals are a key resource, an authority. I want them to be aware of every aspect of my business so that my computing environment can support every area of my business. I invest heavily in this resource.

Some organizations are inclined to cut the education budget for their in-house support personnel. A caution: this is an important resource. Keeping these skills current and updated is important. Saving money here can be very expensive.

These in-house consultants participate in the success of MMC. We also read publications, listen to the consultants, and buy the newsletters. But we carefully evaluate what they say and compare it to what we know about our own business.

So we still go to see the Wizard. As Dorothy and her friends found out, wizards can be nice and can offer excellent insight. But in MMC, the Wizard is a member of the team. Not a guru on a mountaintop, but a resource that is part of the overall equation.

If I'm allowed to mix metaphors, the idea that a prophet is never recognized in his own native land points to naiveté, closed minds, and short-sightedness. Still, it's a popular expression, so there must be some truth to it. How close to home does this strike in your organization?

**ANSWER TO PAGE 42:** They are the presenters from an IBM LAN Server 4 Virtual Update, which you can now attend by purchasing the videos. The IBM LAN Server 4 product has broken new ground by providing more power, performance, and ease of use than any other Network Operating System (NOS). The topics of these videos will help LAN administrators evaluate the product and update their skills. The topics include:

- IBM LAN Server Hints and Tips, focusing on LAN management and performance issues, including discussion of the LAN Server Tuning Assistant included with LAN Server 4.
- LAN Server 4 Graphical User Interface, an introduction to the new GUI front end to LAN Server and overview of the new functions and how they are implemented.
- LAN Server Migration Tool, a simple and easy to use migration utility that helps LAN administrators migrate users from NetWare to LAN Server. This utility makes it so easy that it is worth getting LAN Server just to have this smooth migration experience.

- LAN Intensive Care Utilities (ICU), a LAN Server application developed by Lieberman Associates. Phil Lieberman discusses the LAN ICU with Pete Greulich, IBM LAN Server Brand Manager, and explains how this package of utilities can assist LAN administrators so they can get home at a reasonable hour.

This material is recorded on two VHS cassettes (over 2 hours and 50 minutes) and can be purchased for \$129 by calling National Corporate Marketing at 800 678-8014.

**Special Bonus Video:** Over an hour of information about the LAN Server product, including market positioning, features of LAN Server 4 and how they match the requirements of large, medium, and small LAN users. The video also includes discussions about IBM certification programs for products that work with LAN Server and skills certification of technical professionals who work in the LAN environment.

# May You Live in Interesting Times

By Bob St. John

*"May you live in interesting times," author unknown. I didn't make it up, but it's certainly an apt description of today's rapidly changing world of technology. PC users may be feeling they are on the receiving end of this verbal jab, because these are interesting times—challenging and downright fascinating.*

The next two years are on track to have more significant changes in technology than the previous ten. And I mean major changes: new hardware, new operating systems, new applications, and new networking software. If you believe the trade press, nothing will remain standing. They say that to the PC users of 1996 and 1997, today's computing environment will look like Easter Island!

I don't believe the changes will be quite that drastic. I've listened to stories from the elder IBMers about the technology changes in every IBM product line. They say each time IBM introduced a new product or technology, they were advised to step back to avoid being trampled by the rush of upgrade-crazed customers. Sometimes that was the case—most times we could have stood our ground!

## New Technology?

Today, hardware vendors are telling us that we need to move now to upgrade our hardware to the new PowerPC or Pentium technology. Today, software vendors are telling us that we better be prepared to move to the new operating systems or we will be left behind. Alone.

There are always going to be users who move slow and are resistant to change, so I expect that DOS will be running on a few machines for a while. But the software and hardware vendors tell us that they are moving on. Oh, and by the way, they tell us that support will be available only to those who...well, those who move on with them.

## Support?

That's right! I'm hearing, and you are too,

that the software applications you've grown to love, and from which you are not yet ready to change, will not be supported by the "next generation" operating system. Users will have to get the updated versions of their favorite applications.

The fascinating thing is that DOS and Windows users, who are not in a hurry to change, have a new ally, a new champion—one whom they may have thought was a former villain. I'm talking about IBM's OS/2, the most backward-compatible operating system around. When I talk about IBM's backward support, I mean it in the nicest way! In its latest release, OS/2 goes to even greater lengths than ever before to support DOS and Windows users.

The "next generation" operating system is here today—OS/2: customer-proven, multitasking, using less memory than ever before, and supporting all your current applications! In fact, if they want, users can make it look a lot like their old friends, DOS and Windows.

## Upgrading?

The DOS and Windows users who are reluctant to give up their comfy applications may be joined by other like-minded users—users who aren't yet ready to buy a new PC. In fact, these users aren't all that interested in buying a processor upgrade or a new planar, and they may only spring for a memory expansion kit under great duress!

These users are quick to point out that it wasn't that long ago that their 4 MB 16 MHz machines were the height of fashion. I have to include myself in that group. Heck, my office machine is

only a 25 MHz, and my home machine is slower than that!

Now that doesn't mean that when we're sitting around the fireplace at the ski lodge and talking about multitasking, we want to sound like some of our applications may still be running when the spring thaw opens up the valley! OS/2 Warp to the rescue! Its performance enhancements allow users with modest hardware configurations to multitask with very respectable speed—and you can't beat the price!

Oh, sure, there are folks with big, sizzling machines who claim that OS/2 Warp "runs like a scalded dog" (you know, OS/2 users are from all walks of life!). Like the old saying, "the rich get richer"—but in OS/2 Warp's case, the poor get richer, too. Users with modest hardware, many who were unable to even run OS/2 in the past, can now benefit from its multitasking and even experience some of that sizzling speed. I like the trend! The new OS/2 reflects a significant effort to support a wide range of PC hardware—system hardware, peripherals, and device support. And don't forget, it runs every application you're using today!

## Interesting Times?

So, if I want to keep running my DOS and Windows applications, OS/2 will work for me—and for you. And it works better and faster than ever before! Why wait for anything else? OS/2 Warp is here today!

Oh, yeah, OS/2 Warp has a bunch of leading edge "stuff" that other operating system developers are still dreaming about. But I have the option of jumping off that bridge when I get to it. Right now, I'm just suggesting that there are a lot of us who should be getting cozy with a new, old friend.

Interesting times? Actually, it's looking better all the time.

# New Product Information: OS/2 Utilities Package

**S**tardock Systems (SDS) Inc. announced a mini-application suite called "SDS OS/2 Essentials." SDS, the developers of "Galactic Civilizations," is quickly following up their hit game with a more mainstream product. This package includes over a half dozen applications. Some of the applications include:

- **DirMaster file manager.** An advanced and speedy multithreaded file manager that allows the user to quickly and safely manage the files on their systems.
- **A feature-rich screen saver** that includes several dozen modules to keep your monitor from experiencing burn in. The screen saver even supports "Green" monitor features.
- **Filebar task manager.** Filebar allows users to launch applications or tasks directly from a small file bar that can reside at the top or bottom of the screen. Many users have found that they prefer Filebar to the LaunchPad that ships with OS/2 Warp.
- **FileGraph/PM directory space monitor.** This heavily threaded PM program allows you to graphically view how much space your directories are taking up.
- **WPS Trashcan shredder replacement.** A true trashcan where you can put or take out items. You can empty the trash at your convenience. It is highly configurable as you can change the trashcan's various states icons and works well with MMPM/2.

- **The SDS Icon library** with icons made with OS/2 Warp in mind.

...And the ROIDS arcade game. Heavy Duty arcade action in one of the best OS/2 games available; fast, great MMPM/2 support, and supports dozens of levels of play.

An SDS spokesperson adds: "OS/2 Essentials is amazing, and that includes our price. The suggested retail price is just \$24.95, and we have aggressive site licensing agreements. All the applications are fully enabled and ready to go right out of the box."

For information on ordering or site licensing on carrying the product for resale, please call SDS at (313)/782-2248 or FAX SDS at (313)/782-9868.

## IBM AntiVirus Version 2.0

**I**BM's AntiVirus Version 2.0 will protect OS/2 Warp software products with the most reliable and advanced anti-virus products and services available. IBM AntiVirus Version 2.0, is a full 32-bit OS/2 application. Its new features include more powerful scanning technology that enhances IBM AntiVirus's ability to detect polymorphic and encrypted viruses and neural networks to detect unknown boot viruses. In addition, IBM AntiVirus 2.0 can update virus data files.

IBM AntiVirus Version 2.0, which supersedes IBM AntiVirus Version 1.7, supports OS/2, DOS, and Windows systems. It

offers LAN Server protection, including a NetWare Loadable Module that now checks inside compressed files. IBM AntiVirus Version 2.0 uses heuristics to defend against previously unknown viruses to detect more than 3,000 known viruses and can eradicate most common computer viruses.

"There is an optimal policy for spending on anti-virus awareness, software deployment, and emergency response," says Alan Fedeli, manager, IBM AntiVirus Products and Services, IBM Business Recovery Services. "That optimal policy is based on solid information, not just reactions to rumors. IBM AntiVirus has

the lowest rate of false alarms in the industry and offers more reliable disinfection than other anti-virus software. This is critical because unnecessary disinfection can sometimes damage programs."

IBM Business Recovery Services (BRS), which markets the antivirus product, provides consulting, planning, testing services, and recovery facilities for large, mid-range, and distributed computing environments at 17 sites throughout the United States, including remote recovery options at 14 locations. BRS is provided by IBM Integrated Systems Solutions Corporation (ISSC).



# Windows to Warp Migration (Smart!)

IBM has signed an agreement with One Up Corp. to distribute current and future versions of One Up's SMART (Source Migration Analysis Reporting Toolset®) to help developers migrate 16-bit and 32-bit Windows™ applications to IBM's OS/2® Warp as well as other versions of OS/2. Through this agreement, IBM makes SMART Version 2.0 generally available for the first time, giving developers significant enhancements over earlier versions. SMART 2.0 doubles the speed of conversion efforts, providing acceleration that saves tremendous time and money for developers who are converting to 32-bit OS/2 applications from 16-bit Windows, 32-bit Windows NT, and 32-bit applications for future versions of Windows, as well as 16-bit OS/2 applications.

"This announcement will significantly enhance the availability of leadership solutions for OS/2 customers," said Dave Harrington, director of software development programs, IBM Personal Software Products. "We are embracing the SMART technology as an integral part of our developer support offerings to provide a significant advantage for independent

and corporate developers who want to support the OS/2 platform now."

IBM's distributor of SMART 2.0 will be The Developer Connection for OS/2, a CD-ROM/newsletter subscription which ships quarterly to thousands of application developers around the world. The Developer Connection is the essential source for software technology, tools, and information for OS/2 development efforts. Developers who wish to subscribe to the SMART toolset can call IBM at 800-6DEVCON (800-633-8266) or at 407-982-6408. Future versions of SMART will be distributed in the same manner.

The SMART Toolkit consists of an Analysis and Reporting Tool and of a Source Migration Tool. The Analysis and Reporting Tool measures the size of a conversion effort and provides a roadmap for migration, which typically takes a day rather than the six person-month effort it usually requires. The Source Migration Tool automatically converts as much as 70 percent, or more in some cases, of the API and message code to 32-bit OS/2 code.

"Version 2.0 significantly gives developers greater flexibility," said Richard Dews, president/CEO of One Up Corp. "This version allows users to override or amend existing SMART function and to build their own migration database. This results in an automation that is more tailored, either dynamically or statically, to the specific requirements of the developers' code."

In addition to distributing the toolset, IBM will support One Up's SMART Partner Program. Through this program, those interested in the business opportunity of providing OS/2 education, consulting, and development support can leverage One Up's migration experience to dramatically expand the availability of OS/2 education, development support, and other consulting offerings. For more information, call One Up at 214-620-1123 or IBM at 407-982-6408.

IBM is withdrawing the Mirrors migration program from active marketing. One Up will continue to provide service and support for Mirrors through Dec. 31, 1995, for current licenses. SMART now replaces Mirrors as the recommended approach for application migration to OS/2.

## Security for Warp Users

Pinnacle Technology, who makes the security offering for OS/2, agreed with M&T Technologies, Inc. to bring additional function to The Desktop Observatory. The new offering, codename "C2-4-OS/2," combines the security, networkability, and management functions of Pinnacle's The Desktop Observatory and the access security of M&T's MicroSAFE™ products. The new function will be an inexpensive upgrade to The Desktop Observatory and should be available early first quarter, 1995.

General features include:

- **Access Security:** When invoked, all access to disk data is inhibited. You cannot access data by removing the hard drive or booting up with DOS.
- **Application Security:** Prevents users from using the things they shouldn't. You can secure specific applications, commands, and objects.
- **Reporting:** You can log and report specific events and initiate other events.

- **Manageability:** You can centrally maintain and manage passwords and desktop profiles in a file that is less than 10 K bytes, which is easy to manage and replicate.
- **Networkability:** The Desktop Observatory works over many network operating systems including Novell, IBM, Microsoft, Banyon, DCE, and dial-in implementations.

For additional information contact Pinnacle at 1-800-525-1650 or M&T at 602-994-5131.

# Warp: Fast Action for "Gamers"

**O**S/2 Warp will provide users with a new level of high-performance game play that is currently not available in the DOS or Windows environments. By fine-tuning special settings for more than 100 software game titles and by adding new features such as improved audio/video synchronization and enhanced memory management, OS/2 will deliver unprecedented speed and improved realism to today's popular arcade-style, simulation and strategy games.

IBM also announced a new development tool that makes it easy for developers to quickly build exploitive native OS/2 games. With the DIVE (Direct Interface Video Extensions) programming tool, game developers have direct access to the video drivers they need to perform high-speed animated graphics that are critical for action-based games. A Game Developers Toolkit for OS/2 will be available in beta in early 1995 to provide additional development support.

## Built-in Memory Management

Since most games run on DOS, gamers are faced with the limitations of the DOS environment. Common problems include lack of adequate memory, system configuration issues, and the inability to reliably run more than one application at a time. OS/2 Warp eliminates most memory problems, makes system configuration easier, and allows multiple application processing

in a reliable environment. OS/2 Warp easily enables gamers to take full advantage of the memory they have by supporting most popular standards such as EMS, XMS, DPMI, and high memory.

## Settings for Today's Popular Games

To boost ease-of-use, IBM has identified over 100 of the best-selling DOS, Windows, and OS/2 game titles and incorporated settings for each game into the base OS/2 Warp operating system. Gamers no longer have to navigate system configuration and AUTOEXEC.BAT files—the new OS/2 automatically chooses the proper game setting. Gamers gain easy access to their favorite games with drag-and-drop speed. Should gamers wish to manually change settings, OS/2's multiple VDMs (Virtual DOS Machines) will allow session configuration without having to reboot the system or maintain separate boot diskettes.

The VDM technology also takes advantage of OS/2's CrashProtection\*, multitasking and memory management—gamers can play while running print jobs, faxing documents, or accessing a communication session without disrupting performance.

Several OS/2-specific games designed to utilize the inherent stability of the 32-bit operating system are in development, including Sim City Classic for OS/2, Sim

City 2000 for OS/2, Galactic Civilizations, and DOOM for OS/2.

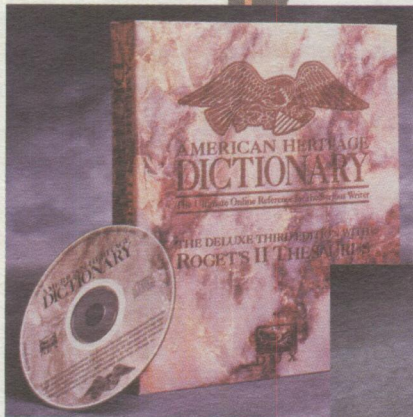
"Gamers playing Sim City 2000 for OS/2 will see performance increase and smoother play because of OS/2 Warp's multitasking capabilities. The multitasking also enables gamers to work on other projects while their simulator continues to run in the background," says Joe Scirica, vice president product development, MAXIS, Orinda, Calif. "We see OS/2 as a great platform for games. Given IBM's lead on Windows95, we also see this as a real opportunity to gain market share."

"One key feature for a game with complex graphics and sound is multithreading, which allows parallel running of different processes and enhances overall performance," says Bob Adams, president, DUX Software Corporation, Palo Alto, Calif., which has obtained the license to port Sim City Classic for OS/2 from MAXIS. "Our excitement in porting Sim City Classic for OS/2 came from the fact that we could develop into a GUI environment that was built on a real 32-bit multiprocessing networked operating system."

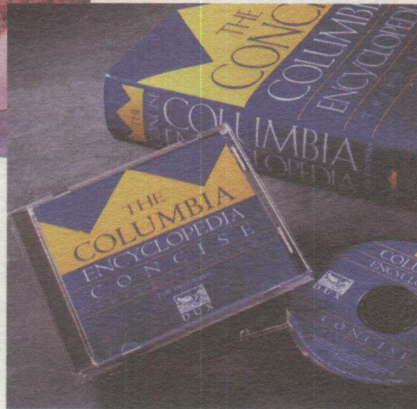
The new release OS/2 combines the performance and reliability of the 32-bit OS/2 environment with mobility and productivity features, such as reduced memory requirements and the BonusPak (see *PC Computing Done Right!* on page 9).

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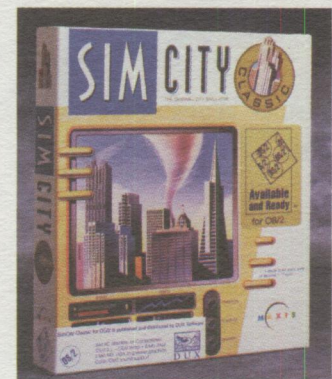
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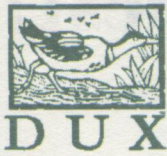
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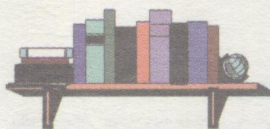
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# Booklist

## OS/2 Warp Books

Provided by:  
IBM Independent Vendor League  
IVL News Service

Publisher, Title, Release Status/Date,  
ISBN #, Author(s)

- Abacus, *Stepping up to OS/2 Warp*, Dec '94, <ISBN TBD>
- Abacus, *The OS/2 Warp Bible*, Dec '94, <ISBN TBD>
- Abacus, *The Photo CD Book* (with OS/2 Warp applications disk), Dec '94, <ISBN TBD>
- Sams, *Your OS/2 Consultant* (OS/2 Warp Edition), Dec '94, <ISBN TBD>, Tyson
- Sams, *OS/2 Unleashed* (OS/2 Warp Edition), Dec '94, <ISBN TBD>, Moskowitz & Kerr
- Sybex, *Mastering OS/2 Warp*, Dec '94/Jan '95, <ISBN TBD>, Dyson
- QUE, *Using OS/2 Warp*, Dec '94/Jan '95, <ISBN TBD>, Clifford et al
- John Wiley & Sons, *OS/2 Warp Advanced Graphics GPI*, Feb '95, <ISBN TBD>, Knight and Ryan
- Wiley-QED, *OS/2 Warp Presentation Manager Programming for Power Programmers*, March '95, 0-471-05839-4, Stern and Morrow
- Wiley-QED, *OS/2 Warp Control Program API*, March '95, 0-471-03887-3, Stock
- Wiley-QED, *Making OS/2 Work for You: Installing, Configuring & Using OS/2 Warp*, April '95, 0-471-06083-6, Azzarito & Green
- Wiley-QED, *OS/2 Warp Presentation Manager API*, April '95, 0-471-03873-3, Stock
- Wiley-QED, *OS/2 Warp Workplace Shell SOM*, <Date TBD>, 0-471-03872-5, Stock & Pollack
- Prima Publishing, *OS/2 WARP, April '95*, David C. Gardner
- managers. IBM # SR28-5572, ISBN 0-442-01941-6. \$25
- "Objects for OS/2" (VNR, 1994), by Bruce Tate, Scott Danforth, and Paul Koenen covers SOM, metaclasses, and Workplace Shell programming. It contains a wealth of code. IBM # SR28-5568, ISBN 0-442-01738-3. \$37
- "Object-Oriented Programming Using SOM and DSOM" (VNR, 1994) by Christina Lau covers SOM and SomObjects—it's also an excellent new book for programmers. IBM # SR28-5570, ISBN 0-442-01948-3. \$39.95
- "Client/Server Programming with OS/2" (VNR, 1993) by Robert Orfali and Dan Harkey covers SOM/WPS programming in client/server environments. IBM # G325-0650-02, ISBN 0-442-01833-9. \$39.95
- "The GUI-OOUI War: Windows Vs OS/2" (VNR, 1993) by Theo Mandel explains the benefits of object-oriented user interfaces such as the Workplace Shell. IBM # SR28-5251, ISBN 0-442-01750-2. \$29.95
- "OS/2 C++ Class Library" by Kevin Leong, Bill Law, Bob Love, Bruce Olson, and Hiroshi Tsuji covers the UI class library in depth. This long-awaited book will appear in November. ISBN 0-442-01795-2

## OO Books

The following list of object-oriented programming books for OS/2 is helpful to anyone who wishes to learn about Object Technology but does not know what resources are available.

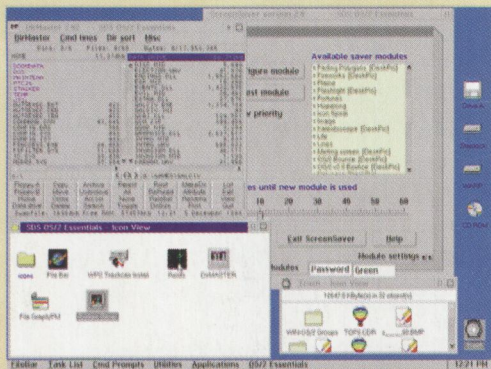
- "Client/Server Survival Guide with OS/2" (VNR, 1994) by Bob Orfali and Dan Harkey provides a gentle introduction to CORBA, SOMobjects, Taligent frameworks, OpenDoc, OLE, ODBMSs, ObjectStore, and distributed objects. IBM # SR28-5494, ISBN 0-442-01798-7. \$39.95
- "Essential Client/Server Survival Guide" (VNR, 1994) by Bob Orfali, Dan Harkey, and Jeri Edwards provides an even gentler (and shorter) introduction for

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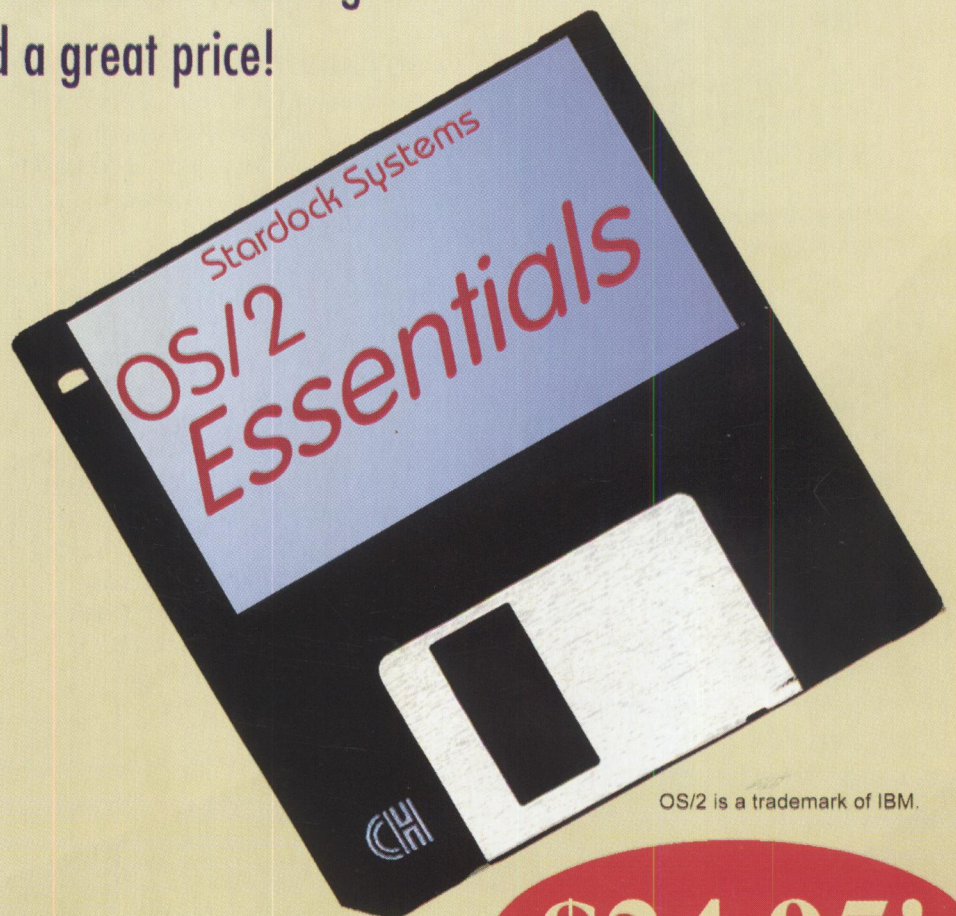
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