

# Silicon Times Report

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(Since 1987)*

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**Special Inaugural PDF Issue**

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⇒ LottoMan v1.35 Results: 08/19/95: 2 matches in 14 plays



From the Editor's Desk...

On Wednesday, all day long, I enjoyed the company of reporters and camera operators from TWO Local TV stations. It looked like a major spectacle with their conspicuously marked trucks parked outside. The reporters, Michael Dillon, WTLV (NBC) and David Hanson, WJKS (ABC) asked all sorts of questions about Microsoft, Windows 95, NT and the future. While they were getting the best information, demonstrations and explanations I could muster I made certain ClubWin was mentioned and explained as best I could in both interviews. ClubWin will soon become a household word in the world of Windows. ABC gave us a 90sec spot as the first item in their newscast... and ABC gave us a 60 sec spot at a midway point in their newscast. Both stations did so at both 6pm and 11pm. Admittedly, it was an easy day for me after having been the host of a TV talk show in Ft. Lauderdale for almost two and a half years at WKID TV-51. Actually Windows 95 stole the show. That's as it should've been. Those of you who have machines on different platforms owe it to yourselves to go to the local computer store and have a good long look at Windows 95. See for your self just how badly maligned this excellent OS really is. I believe many of you will soon see exactly who is full of hot air and who is actually telling it like it is.

Microsoft, as I've stated many times before, has a real winner on their hands with Windows 95. All the naysayers and Gates bashers have made their personal agonies well known by their deceitful tirades against Windows 95. The truth is Brad Silverberg and his finely tuned staff have turned out what can only be called the software effort of the decade. Silverberg has single-handedly accomplished what other software companies have been trying to do for years. That is to bring software production to a point where the company can be more than only relatively confident the release version is stable. The manner in which Silverberg set about to accomplish this monumental feat was indeed revolutionary. Brad Silverberg had, what can only be termed extreme foresight into a highly productive future by recruiting a large beta team such as was involved with bringing Windows 95 to market. In fact, his concepts seem to border on an open NDA beta program especially when release time was drawing near. When asked about his unique approach to the entire Windows 95 development program, Brad quipped **"I came to Microsoft over 5 years ago, just as WIN 3.0 was launched, with the vision of "CHICAGO" in my mind. I knew that's what I**

wanted to build. Had to do a few things first, like WIN 3.1, MS-DOS 5,6, and WFW 3.1 and 3.11, but now WIN95 is a reality". If nothing else, Brad will always be recognized as a "can-do" kinda guy. Of course... Windows 95 is really only the "true beginning" for Brad Silverberg. He is a young dynamic executive with an aggressive and equally progressive company. It becomes very easy to believe that for him, the sky... barely a limit.

As mentioned above, the manner in which the entire beta program operated was truly unique. Now, with the release of the revolutionary new OS, Silverberg has managed to set another precedent... He encouraged ClubWin. ClubWin is composed of a group of the original beta team members who expressed a desire to help the computing community make the transition to Windows 95. One can easily obtain help from ClubWin members most anywhere ..all one need do is ask. This reporter is willing to wager that in the months to come many other software houses will be offering similar beta programs. The "elitist" attitude is gone and people helping people has taken its place. Obviously, its a successful approach. Windows 95 speaks loudly in favor of Silverberg's unique approach.

In this, our "**Inaugural Enhanced Issue**", We also celebrate the Windows 95 launch in our own way. Lord knows how badly I've wanted to have a pleasing weekly issue that was highly informative and good looking. The enhanced issue is done with the 32 bit Office 95 package and particular, Word 7.0 from Microsoft. The Ascii version is done with Word Perfect as it always has been. We are overjoyed to bring you the enhanced version in the Adobe PDF [Portable Document Format] as it preserves every minute detail that's planned in to each issue. Adobe's Acrobat Reader version 2.1 is available on most every popular computing platform. That makes the PDF version 99% cross-platform compatible. Please enjoy our humble efforts.

Ralph.....

**Of Special Note:**

<http://www.streport.com>

STReport is now ready to offer much more in the way of serving the Networks, Online Services and Internet's vast, fast growing site list and userbase. We now have our very own WEB/NewsGroup/FTP Site and although its in its early stages of construction, do stop by and have a look see. Since We've received numerous requests to receive STReport from a wide variety of Internet addressees, we were compelled to put together an Internet distribution/ mailing list for those who wished to receive STReport on a regular basis, the file is ZIPPED, then UUENCODED. Unfortunately, we've also received a number of opinions that the UUENCODING was a real pain to deal with. So, as of May 12,1995, you'll be able to download STReport directly from our very own WEB Site. While there, be sure to join our STR list. In any case, our mailing list will continue to be used for at least the next eight weeks. At that time, however, it will be discontinued. Each of our readers will have by then, received their information packet about how they may upgrade their personal STR News Services.

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*The Staff & Editors*

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# **STR INDUSTRY REPORT**

## ***LATE BREAKING INDUSTRY-WIDE NEWS***

**Computer Products Update - CPU Report  
Weekly Happenings in the Computer World**

***Issue #33***

**Compiled by: Dana P. Jacobson**

**General Computer News**

### **JUDGE OKS MICROSOFT SETTLEMENT**

A federal judge this morning approved an antitrust settlement reached more than a year ago between Microsoft Corp. and the U.S. Justice Department changing the way the software giant sells its key product. Reporting from Washington, The Associated Press says that during a hearing that lasted just 17 minutes, U.S. District Judge Thomas Penfield Jackson asked attorneys for Microsoft and the government whether there were any last minute changes.

Microsoft asked that the agreement -- which extends for 6 ½ years and covers the way it sells, or licenses, its main product to personal computer makers -- be made effective retroactive to Dec. 15, 1994. The government opposed that idea and Jackson sided with the Justice Department, saying it would take effect as soon as he approved it. A few moments later, he declared, "The decree has been entered." Assistant U.S. Attorney General Anne Bingaman declined to comment afterward. William Neukom, chief counsel for Microsoft, said the company was pleased by the judge's decision.

The order ends an unusually long judicial review of an antitrust case. The first judge to look over the agreement rejected it but was overturned on appeal. Meanwhile, a separate investigation into Microsoft's new Windows 95 operating system and its entry into the online services industry is continuing. Justice officials left open the possibility that evidence from the current probe could be presented to the judge, according to the Dow Jones news service.

### **MICROSOFT UNVEILS WEB BROWSER**

Microsoft Corp. has unveiled Browser software for the Internet's World Wide Web, available for free downloading. The Browser is specially designed to take advantage of Microsoft's Windows 95 operating system, which goes on sale next week. Vice President Brad Silverberg of Microsoft's personal systems division told United Press International at the company's Redmond, Washington, headquarters, "Our goal is to provide Windows 95 customers with a solution that combines superior integration with Windows 95, great ease of use and high performance."

UPI adds, "The announcement launches Microsoft into the red-hot battle to become publisher of the dominant Browser. ... Microsoft said computer manufacturers are pre-installing Explorer on all new machines running Windows95." The wire service adds the Internet Explorer takes advantage of Windows 95, a faster 32-bit system, while earlier browsers were configured for earlier versions of Windows, 16-bit systems. Also built in is the real-time Audio software for listening to sounds or music on the Net. The Microsoft's Browser will be available free at the firm's File Transfer Protocol site at <ftp.microsoft.com> at the Web address <http://www.microsoft.com>. CompuServe members now have access to the Internet's World Wide Web through the NetLauncher software. GO NETLAUNCHER for details. Or to reach the FTP site from CompuServe, GO INTERNET.

### **MICROSOFT READIES WIN95 TV SHOW**

Microsoft Corp. says it will promote its new Windows 95 operating system with a 30 minute TV special. The show, called Microsoft Presents: The Start of Something New, is scheduled to premiere in local U.S. TV markets on Sunday, Aug. 27, and Monday, Aug. 28.

Hosted by actor Anthony Edwards of NBC's ER and featuring Microsoft Chairman and CEO Bill Gates, the show "will introduce millions of Americans to the power and possibilities of computers," says the software giant. Gates and Edwards will serve as guides in the 30-minute broadcast special, which will include a visit to a remote Appalachian classroom connected to the rest of the world by computers; a backstage look at the intricacies of choreographing the magic of Cirque du Soleil; and a look at a cutting-edge rock band that combines music, video, art and graphics into a complete multimedia experience.

Microsoft Presents: The Start of Something New is produced by Universal Studios-based Zaloom-Mayfield Productions, whose previous credits include the syndicated television specials The Making of Jurassic Park and Cheers: Last Call, as well as the theatrical motion pictures Heart of Darkness and Encino Man. The show's national sponsors include Coca-Cola Co., Compaq Computer Corp., CompUSA, Eastman Kodak Co. and USAir.

## **STONES TUNE TO LAUNCH WIN95**

Members of the Rolling Stones, breaking their long-standing refusal to sell song rights to advertisers, reportedly have accepted \$12 million to let Microsoft Corp. use their hit "Start Me Up" to launch the Windows 95 software campaign next week. In London, The Sun newspaper reports Microsoft chief Bill Gates asked Stones lead singer Mick Jagger to let him use the song. An unidentified Stones source was quoted as telling the newspaper, "When Microsoft approached Mick, he quoted a ludicrous amount of money thinking they would turn him down. To his surprise they agreed almost immediately."

The paper notes this is the first time Jagger and Keith Richards, the Stones' songwriters, have allowed songs for which they own the copyrights to be used commercially. Gates apparently thinks "Start Me Up" will be the perfect accompaniment to an ad, because the first thing a user must do after turning on the computer is to click the mouse on the start button, London's Financial Times adds.

But UK-based Computergram International this morning wonders if Microsoft actually has listened to the song. "Mick and Keith have plenty to celebrate in Microsoft Corp's choice of their song to promote Windows 95," the newsletter observes, "and, unless Bill Gates has an unsuspectingly well-developed sense of irony, they get the last laugh too, because although the title of the song is 'Start Me Up,' the hook line in the song is actually the one all those foolhardy enough to wrestle with early versions of Windows 95 will be repeating, the one that goes 'You make a grown man cry.'"

## **HAPPY WIN95 EVE, FELLOW NERDS!**

"Computer nerds are a strange animal. They tend to be up at night, anyway." So says Kurt Schmidtke, manager of Egghead Inc.'s retail operations to explain in this morning's Wall Street Journal why his employer's 164 outlets will be open at one minute after midnight tonight to get a jump on the official release date for Microsoft Corp.'s new Windows 95 operating system.

Journal reporter Carlos Tejada notes some are even throwing parties.

For instance:

- For 95 minutes after midnight, CompUSA's 86 stores will be giving away pizza and offering \$95 discount coupons on some American Airlines flights to buyers of the \$89 upgrade or the \$209 operating system.
- Tandy Corp.'s chain of 79 Computer City stores will stay open until 2 a.m. and reopen at 7 a.m. Buyers will get a book with discounts on equipment and software. Its 10 Incredible Universe megastores will give away movie passes and sports tickets as door prizes, hold drawings every 30 minutes for \$95 in cash (dubbed "Win Dough 95") and conduct contests for the best-dressed nerd.
- At 2 p.m. EDT tomorrow, Microsoft Chairman Bill Gates is scheduled to make a televised speech from company headquarters in Redmond, Wash., and many retailers will carry his remarks live. Jay Leno will host the event.

Meanwhile, in Cambridge, Massachusetts, industry trackers at Ziff-Davis Interactive estimate more than 40 percent of us plan to upgrade to Win95 right away, while another 49 percent say we will use it within a year. ZD Interactive Vice President David Shnaider told United Press International, "It's not surprising that so many people plan to upgrade. But we were surprised to learn that many plan to upgrade immediately and will invest in new hardware as part of the move."

Based on results on more than 12,000 responses received through various online services, ZD reports:

- Of those planning to upgrade, 43 percent plan to do so immediately; another 30 percent will upgrade over the next six months, and nearly 89 percent expect to be using Windows 95 within the next year.

- More than 41 percent of the upgraders plan to upgrade hardware with the new operating system. Of those, most will be adding chips for more RAM and a third will be upgrading hard drives.
- More than 28 percent of the upgraders, or 12 percent of the total, plan to buy a whole new system.

Says UPI, "Most cited several reasons for upgrading: access to 32 bit applications (79 percent); better memory management (77 percent); better able to do more than one task at once (76 percent); more power (67 percent); ease of use (45 percent); and Internet access (35 percent)." (Ziff-Davis said the responses add up to more than 100 percent because respondents could give more than one reason for upgrading.)

## **CHINA BACKS IBM OS/2 WARP**

In a blow to Microsoft Corp., China's electronics ministry has endorsed IBM Corp's OS/2 Warp operating system over the rival Windows platform. The official Xinhua news agency notes that the endorsement by China's Ministry of Electronics Industry was part of a "statement of direction" signed by Chinese and IBM officials. According to Xinhua, "The ministry is to endorse OS/2 Warp as a preferred product and recommend it to Chinese users, so as to provide them with alternatives among various software platforms." The endorsement comes less than a week before the worldwide launch of Windows 95. A Chinese version of Windows 95 is scheduled for launch before the end of 1995.

## **WIN95 ANTI-VIRUS PROGRAM SET**

McAfee Associates Inc. of Santa Clara, California, has announced VirusScan for Windows 95, a native 32-bit anti-virus program. McAfee notes that the product, which is scheduled to ship on August 21, has been approved by Microsoft to carry the Windows 95 logo and is certified by the National Computer Security Association. The product can detect over 5,100 viruses, says McAfee

"The excitement and anticipated demand for Windows 95 clearly makes it a prime target for virus writers," says Scott Gordon, the anti-virus product manager at McAfee. "Windows 95 is also especially susceptible to viruses because it does not include bundled anti-virus capabilities."

VirusScan for Windows 95 will ship with a pre-configured list of recommended scanning options. Users can customize the options to meet their specific needs. The software's users can also define which drives, folders and file types will be scanned for infection. Additionally, users and network administrators can choose what actions the program, will take when a virus is discovered. VirusScan for Windows 95 will sell for \$65.

## **PC MAG DISPUTES WIN95 CLAIMS**

In its Sept. 26 issue, PC Magazine reports that its test results tell a slightly different tale for Windows 95 than Microsoft's performance claims. The publication says its testing reveals that Windows 95 performs at par with Windows 3.11 and Windows 3.1, running existing Windows applications on machines with sufficient memory. However, the new operating system is slower on some older configurations and in running DOS applications. Still, notes the magazine, Windows 95 strikes a good balance between stability and compatibility with existing applications.

PC Magazine recommends that individual users who are buying new systems, or who have systems with at least 8MB of memory should upgrade to Windows 95, because they will see similar performance, better stability, very good compatibility and the ability to run the many new applications being written for the operating system.

However, PC Magazine recommends that users who have systems with only 4MB of RAM stick with Windows 3.1 unless they are willing to purchase additional memory.

## **FRENCH STUDENT CRACKS NETSCAPE**

The security code of a foreign version of the popular Netscape Navigator software reportedly has been cracked by a French computerist. Business writer Catalina Ortiz of The Associated Press comments, "While the breach illustrates that such encryption codes aren't foolproof, it doesn't mean open season on credit card numbers and other sensitive financial data used on the global computer network."

For one thing, Ortiz says, "the cracked code was much less sophisticated than that used on the domestic version of Netscape Navigator." Also, "even the hacker admitted it took 122 computers and eight days to crack enough code to read just one single message, a process that would have to be repeated for any additional message." Still, Netscape and security experts said the breach signals the need for the U.S. government to eliminate rules that prohibit export of software with the stronger security features. Netscape Vice President Mike Homer told AP, "Many companies have been lobbying for that. I think it's likely it will change. I'm not sure how long it will take."

AP notes current export rules are designed to prevent foreign terrorists from stealing sophisticated security codes, potentially allowing them to communicate without intelligence agencies listening in. The wire service says Damien Doligez, a student at the French Institute for Research in Computer Science, announced on the Internet earlier this week that he cracked the security code in response to a challenge from a member of Cypherpunks, an Internet discussion group devoted to encryption and privacy issues. The task required 120 workstations and two supercomputers, he said, adding he did not break the master code but read only one encrypted message. In an update yesterday, Doligez said he learned that someone else broke the code two hours before he did.

"The version of Navigator available to Doligez," says Ortiz, "uses an encryption code with a so-called 40-bit key, the most sophisticated technology that the United States allows companies to export. In the United States, Netscape uses a 128-bit security key." At Netscape, Homer said breaking the security of that version required "10 to the 26th power" more computing power than Doligez used, adding, "That's 10 with 26 zeros behind it. There isn't an English word for it. The closest I could get when I tried to figure it out was more than 100 trillion times greater. ... That only gets you to 14 of those 26 zeros."

In his Internet announcement, Doligez said the technical implications of his feat were "almost zero." He added that knowledgeable people already knew it was possible to read messages protected by the 40-bit code and that the domestic version of Netscape Navigator is "practically impenetrable."

## **AOL RELOCATES EMPLOYEES**

The Washington Post reports that online service provider America Online Inc. of Vienna, Virginia, has asked 250 local employees to relocate to Jacksonville, Florida, and accept a pay cut. The newspaper states that the relocation affects most of AOL's Vienna-based customer service staff, representing one of every six AOL employees in Northern Virginia. It is the first downsizing at the 10-year-old company's headquarters. "It's more advantageous for us to have customer support centers in other parts of the country," where costs of living and business expenses are lower than in the D.C. area, AOL spokeswoman Pam McGraw told the Post. A man who identified himself as an AOL staffer contacted newspaper yesterday to complain about the relocation, saying that employees who made the move would face a pay cut after the first year of about one-third, from \$11 an hour to \$7 an hour. Employees were given only a few weeks to make the decision, he added. McGraw stated that AOL would offer affected employees "a very generous relocation package."

## **US ROBOTICS BUYS ISDN SYSTEMS**

Through a stock transaction worth about \$40 million, modem maker US Robotics Corp. has acquired ISDN Systems Corp., a Vienna, Virginia, developer of board-level Integrated Services Digital Network and Frame Relay-based client and server products. In a statement from its Skokie, Illinois, headquarters, Robotics says the acquisition enables it "to take advantage of applications that require ISDN-only connectivity, and positions the company to maximize opportunities in the growing worldwide marketplace for ISDN and Frame Relay access products."

The statement says all outstanding shares of privately-held ISC were converted into US Robotics shares. ISC becomes a wholly-owned subsidiary operated under US Robotics' Corporate/Systems Division. ISC President/CEO Asghar Mostafa will become a senior manager in that business unit.

## **COMPAQ UNVEILS NEW NOTEBOOKS**

Compaq Computer Corp. has introduced the LTE 5000, a new high-end notebook computer line, its first models co-developed with Inventec Electronics Corp. of Taiwan. The 75MHz and 90MHz Pentium-based system feature a modular design that allows users to access an integrated CD-ROM drive, up to 2.7GB of hard disk storage, two batteries with up to eight hours of operating time or a floppy disk drive. The notebooks also provide PCI local-bus graphics and a maximum RAM capacity of 72MB.

An optional MultiBay Expansion Base shares interchangeable devices with the notebook. The unit also provides storage expansion to 5.4 GB, two additional PCMCIA slots, integrated Ethernet support, MPEG and TV Video adapters and stereo speakers. "The new LTE 5000 is the ultimate business tool for mobile professionals who require the highest performance, most flexible notebook for advanced or specialized applications," says Hugh Barnes, senior vice president and general manager of Compaq's portable PC division. "Our customers have described their notebook wish list, including the ability to easily customize their portables to meet their individual needs, and we've designed the LTE 5000 to exceed their expectations. Compaq says it will announce the systems' prices and begin shipments in September.

## **COMPAQ WINS BIG PC CONTRACT**

Compaq Computer Corp. says it has been awarded a three-year contract by British Telecom (BT) to supply it with more than 9,000 network servers and desktop PCs per year. Compaq notes that the contract, valued at more than \$90 million, is the largest

PC contract ever awarded to a computer company in Europe. The deal calls for Compaq to provide Deskpro, ProSignia and ProLiant models to the British telecommunications giant. "We chose Compaq following a detailed evaluation of products from all the different manufacturers from a technical, commercial and customer perspective," says Claire Garrett BT's manager of desktop procurement, BT. "In particular, Compaq was able to demonstrate ease of upgrade and future -proofing.

## **COMPAQ NAMES FORMER SONY, L.A. CELLULAR EXECUTIVE**

In a move aimed at expanding its leadership role in the consumer market, Compaq Computer Corporation (NYSE:CPQ) today announced that Michael Heil, a former top executive with Sony and Los Angeles Cellular Telephone Company, an AT&T -Bell South partnership, has joined the company as senior vice president and general manager of Compaq's Consumer Products Division. Heil will report directly to Compaq President and CEO Eckhard Pfeiffer.

Compaq formed the Consumer Products Division early this year as part of its on going efforts to intensify the company's focus on this rapidly growing segment of its business. The company has rocketed to the top of the retail PC marketplace since Compaq launched its Presario family of consumer PCs in the second half of 1993.

As head of Compaq's Consumer Products Division, Heil will oversee all of Compaq's worldwide consumer business, including the development and marketing of all products and services for the consumer marketplace and the expansion of Compaq's worldwide retail distribution network.

"The addition of Michael Heil to our senior management team builds on the tremendous success of Compaq's family of Presario consumer PCs and puts us in an even stronger position to take advantage of the growing opportunities in the consumer marketplace," said Eckhard Pfeiffer, Compaq President and CEO. "In just two years, Compaq has helped spark the phenomenal growth of the consumer information technology marketplace -- a market that is expected to exceed \$100 billion by the year 2000 and Michael Heil brings the experience, vision and insight into both consumer electronics and consumer telecommunications that will expand Compaq's leadership role."

At L.A. Cellular, Heil was president and general manager of one of the largest cellular phone operating companies in the U.S., Los Angeles Cellular Telephone Company. Heil, who was with L.A. Cellular from 1989 to 1995, was responsible for all of L.A. Cellular's operations.

From 1985 to 1989, Heil was a top executive at Sony Corporation, where he was president of Sony's Consumer Display Products Company, managing the U.S. operations for direct view and projection television as well as Watchman products. He also served as vice president of marketing and vice president of national accounts for Sony Corporation of America. Heil previously held sales and marketing positions with several other consumer product companies, including Atari Corporation, where he was vice president of sales for Atari's Western division; Polaroid Corporation; and Lever Brothers.

## **HP JOINS PRICE-CUTTING CONTEST**

Following competitors IBM and Compaq Computer Corp., Hewlett -Packard is cutting PC prices by up to 18 percent. Observers say the firms are jockeying for position in advance of Microsoft Corp.'s release of the Windows 95 operating system this week. Reporting from Palo Alto, California, United Press International quotes HP officials as saying the company has cut prices on its entire family of HP Vectra desktops in order to match or go lower than leading competitors' PCs.

Said Jacques C. Clay, general manager of worldwide desktop PC business, "Our unmatched growth in the market shows that we are meeting business customers' expectations." UPI says HP also rolled out half a dozen business PCs with new models of the HP Vectra XU PCs, based on the fastest versions of Intel Corp.'s Pentium and running at speeds of 120 and 133 MHz. The new systems are expected to ship in mid-September.

HP said an entry-level HP Vectra VE PC with a 75MHz Pentium and 8MB of RAM will cost \$1,469, compared with \$1,599 for a similarly configured Compaq ProLinea and \$1,650 for a comparable Dell OptiPlex X500 PC. Last week, cuts of 13 percent to 25 percent were announced by Compaq, where officials said they are willing to minimize profits to boost market share and gain sales on more expensive machines such as servers running networks of PCs. And, as reported IBM has cut prices of 40 high -end desktop computers by an average of 16 percent.

## **HAYES WEIGHS MERGER ALTERNATIVES**

Hayes Microcomputer Products Inc. is looking at alternatives to a merger with Boca Research Inc., officials with the Georgia modem maker told a bankruptcy court yesterday. The U.S. Bankruptcy Court in Atlanta approved a letter of intent for the two modem manufacturers to merge, but did so, says writer Mark Boslet of the Dow Jones news service, "while objecting to \$1 million in breakup fees Hayes Microcomputer would owe Boca Research should the merger fail, company and industry sources said."

Dow Jones quotes an attorney who observed the proceedings as saying the bankruptcy judge has decided to review the fees at the time they might be requested. A company official who also watched the proceedings told the wire service Hayes has been presented with some alternatives to the Boca Research merger.

"Sources close to the company declined to comment on whether the 'alternative' financing would prove enough for Hayes to emerge from bankruptcy without Boca Research's help," Boslet reports. As reported earlier, Boca Research has agreed to acquire Hayes Microcomputer for the cost of its creditors' claims and 1,685,000 of its shares. (Previously Boca estimated the cost of creditors claims between \$70 million and \$80 million.)

"The source said discussions on the alternative financing were continuing," the wire service says. "The letter of intent allows Hayes to review proposals for minority investments in the company, but not majority ones. Company officials said that nevertheless due diligence in anticipation of the merger was continuing."

## **COMPUSERVE TO DEVELOP WIN95 CIM**

While it objects to how Microsoft Corp. is bundling its Microsoft Network with the new Windows 95 operating system, CompuServe said today it will develop a Win95 version of its CompuServe Information Manager software. In a statement from his Columbus, Ohio, office, CompuServe President/CEO Robert Massey said, "Windows 95, with its easy -to-use features and outstanding user interface, represents a milestone in the personal computing industry."

He added, though, "While we are pleased Windows 95 has finally arrived on the scene, we continue to oppose the bundling of Microsoft Network in the Windows 95 application. By attempting to leverage its control in the operating system market to dominate the online industry, Microsoft is casting a cloud over the future of cyberspace."

Meanwhile in Washington, Attorney General Janet Reno rained a little on Microsoft's parade, saying the Justice Department's anti-trust investigation into the firm is continuing. She declined, though, to say when a decision will be made. As noted, the Justice Department is looking at whether Microsoft's bundling of the new online service with Win95 gives the company an unfair advantage.

The Dow Jones news service quoted Reno as saying, "I can't specifically describe what we're looking at, other than to say the investigation is continuing." As reported, the Justice Department earlier this month took an unusual step in saying it did not expect to wrap up its investigation before today's release of Windows 95.

When asked today by reporters whether investigators thought it best now to wait and see what the actual impact of the new software is before concluding the probe, Reno said, "What the department is dedicated to doing is acting and proceeding based on the evidence and the law. And it will consider all the evidence that is appropriate in the conduct of this investigation."

Dow Jones says that, while scores of companies besides Microsoft had a significant stake in the release of the new operating system, Reno said those concerns have not played a role in the Justice Department's investigation, or the timing of its conclusion.

"Again," she said, "what we have tried to do is make a judgement based on the evidence that we have. And the evidence goes to the practices involved and not to ... what it may or may not do to other people."

## **ONLINE SERVICES SEE GROWTH SOAR**

The number of consumer online service subscribers grew 37.3 percent to 8.5 million in the first half of 1995, according to market researcher SIMBA Information Inc. of Wilton, Connecticut.

CompuServe remained the largest consumer online service with 3.2 million subscribers, reports the company, with America Online and Prodigy coming in second and third, respectively. Combined, the big three services accounted for 7.5 million subscriptions, or 88 percent of the consumer online market in the six-month period, says SIMBA.

SIMBA predicts that the number of consumer online subscribers will exceed 11 million by the end of 1995. Growth will be fueled by strong gains in existing services and the launch of The Microsoft Network, according to Paulette Donnelly, editor of SIMBA's Electronic Information Report.

"Expect online services to continue to grow dramatically over the next year, as scores of publishers, investors, software, cable, technology and telecommunications companies jump on the online bandwagon," says Donnelly.

**MATH ACE GRAND PRIX AND WORD CITY GRAND PRIX**

available separately on floppy disk and CD-ROM for Windows and Mac

**ages 8 to 14**

**MRSP \$39.95**

**from Sanctuary Woods**

**1825 S. Grant St.**

**San Mateo, CA 94402**

**415-286-6100**

Minimum Program Requirements

	IBM		Macintosh
CPU:	386DX-33	CPU:	LC III
RAM:	4 megs	RAM:	4 megs
OS:	Windows 3.1	OS:	System 6.0.1
Hdisk:	3 megs	Hdisk:	N/A
Video:	SVGA, 640 by 480, 256 colors	Video:	256 colors, 13" mon.
CD-ROM:	Double-speed	CD-ROM:	Double-speed
Misc.:	Sound card, speakers, mouse	Misc.:	Mouse

***The Kids' Computing Corner***

by Frank Sereno

Racers, start your engines! Sanctuary Woods has updated two of its award-winning educational titles and based them upon a racing theme which is sure to appeal to most boys and girls.

Math Ace Grand Prix features over 3000 math problems covering seventy mathematical topics. Concepts covered include addition, subtraction, multiplication, division, fractions, probability, algebra, geometry, decimals, and graphing. The CD-ROM version includes more advanced topics from advanced high school and college mathematics. These "Champ" topics can be added to the floppy disk version by requesting an upgrade diskette for \$12.95

Word City Grand Prix combines many activities so that children can learn spelling, reading comprehension, alphabetization, vocabulary, speed reading, antonyms/synonyms, parts of speech and prefixes/suffixes. The CD-ROM version contains advanced materials in the "Champ" level. This can be added to the floppy disk version by purchasing the upgrade diskette.

Game play in both programs can be customized to the desired level and to study a particular concept or to solve randomly selected problems. The playfield consists of a ten by ten-grid. Children must capture squares to build a road from the green starting flag to the checkered flag. To accomplish this, players must correctly answer questions. Meanwhile, a helicopter is dropping items to block the player's path to the checkered flag. If the helicopter drops enough items to block any possible path to the flag, then the game is over.

Other obstacles to the player's progress are challenge squares. These challenges include building words from letter combinations in Bridge Jump and driving over the missing letters to words in Spelling Track in Word City. Decoder asks children to decode messages by guessing letters. The final Word City challenge is Word Shoot in which the player must shoot the correct word using a moving cannon. Math Ace challenges include Paint Ball which is a study in probability and Function Shoot in which a player must enter a value into an equation to dissect a helicopter on a graph. Also included are Angle Cannon in which players must shoot a moving helicopter by adjusting the angle of the turret and Function Track, a racing game in which the player drives over the correct answers.

Upon completion of a level, the player can choose to race on a Grand Prix track. He must use the cursor keys to control his car to drive around obstacles and curves in the road. Bonus points are gained for successfully completing the course. Players can advance through eight levels of competition in the game portion of the program to become a "new Grand Prix champion."

Another option is to study in the Smart Lab portion of either program. Children can then choose from a menu of study options. Word City has the option of building custom word lists for Spelling and Vocabulary study as well the included words. Other

choices are Reading Comprehension and Speed Reading. In the Spelling section, the player can choose to see or listen to the word before spelling it. Unfortunately, custom word lists are not pronounced.

The Math Ace Smart Lab menu allows the selection of skill level and subject matter. Example problems and solutions are shown on one portion of the screen along an explanation of the procedures used. For more intense study, the student can go to the Reference section for detailed information on the available topics which include quadratic equations, calculus and trigonometry on the CD-ROM version. Some of the reference material was boring and dry, but that is probably why many children find higher level mathematics uninteresting.

The Grand Prix versions of Math Ace and Word City have colorful, rendered graphics which are very attractive. Both programs are filled with excellent sound effects and digitized voices. The music is MIDI and uses a variety of tempos and instruments. It is an aural treat.

The interface is quite simple. Help is provided in text windows. Audible help for younger players would be a nice addition to the programs. I found it difficult to control the on-screen devices in some challenge games. For example, in Spell Track it was difficult for me to read the clue and then look to the track to find the correct letters. Imagine how much more difficult it would be for younger children still learning to read. The Grand Prix race was made harder because my keyboard uses a ten-key cursor layout. Why couldn't it have been designed to use a mouse or possibly a joystick? The user manual is very concise and includes a troubleshooting section. Technical assistance is just a toll call away as well.

Children will enjoy playing both games. Each child will have his own preferences for favorite challenge games. I personally enjoyed the Bridge Jump. These programs would get a higher rating if the bonus level racing game was easier to play.

Both programs provide fantastic educational content. The challenges and resources are quite abundant. Math Ace and Word City will test your children through high school. I do wish the reference section in Math Ace used a teacher to audibly explain the concepts besides the text information provided.

Bang for the Buck is very high. Both titles come with a 30-Day money-back guarantee. Sanctuary Woods also offers a program through which your local school can receive a free copy of the program. With retail prices around \$30 and an excellent combination of play and educational values, either Word City Grand Prix or Math Ace Grand Prix would be an excellent addition to any home educational software.

### *Ratings*

Graphics	8.5
Sounds	9.0
Interface	8.0
Play Value	8.5
Educational Value	9.5
Bang for the Buck	9.0
Average	8.75

## **Activision's Atari 2600 Action Pack 2 for Windows**

Are you tired of games filled with gore and but lacking imagination? Are you looking for interesting gameplay? Do you wish for a chance to return to those thrilling days of yesteryear? The Atari 2600 Action Pack 2 could be your answer.

Action Pack 2 consists of fifteen more classic games from the heyday of the Atari 2600 gaming machine. Atlantis, a game of subterranean defense, is from Imagic while the other fourteen games are from Activision's own vaults of hit games. Future editions of the Action Pack will include Imagic's Demon Attack and Riddle of the Sphinx and also many classic games programmed by Atari.

Activision's contributions to this collection include Barnstorming, a side-scrolling flight game in which the player must fly through barns, over windmills and avoid geese in flight. Dolphin is aquatic adventure as the player guides a dolphin trying to escape deadly predators. Dragster is a game of head-to-head quarter mile racing. Enduro, a driving game, was one of the first games to feature changing environmental conditions. Ice Hockey is still great fun to play against the computer or a friend. Keystone Kapers is a cops and robbers chase through a department store. Laser Blast put a twist on the usual space invasion theme in which the player instead of defending his planet is now trying to recapture it.

Megamania is a shoot-em-up game in which the deadly targets include burgers and bow ties. Oink gives the player a chance to save the three little pigs by patching the holes blown in the wall by that nasty old wolf. Ever heard of a game about dental hygiene? Then you may have forgotten Plaque Attack, the game in which the player shoots toothpaste at food items to protect his teeth. River Raid II is the sequel to the original River Raid and is another vertically scrolling shoot-em-up. Skiing is a vertically

scrolling downhill racing game. Get along little dogies! Stampede is a challenging game of roping and herding cattle. The final game is Tennis which allows head-to-head or individual play.

Activision included some interesting features in Action Pack 2. The artificial Mom is a nice touch of nostalgia. Remember when your mother would lovingly remind to do your chores or homework instead of playing video games. Action Pack 2 gives you the option to simulate those golden years of your youth by including an artificial Mom. You can set her to nag you occasionally, constantly or any interval in between.

Another nice feature is that the Help section of each game also includes information about that game's history and its author. In a few cases, little is known about the author's whereabouts. For example, Larry Miller, the author of Enduro, has apparently left without a trace. But it is interesting to learn what many of these programmers have accomplished over the years. Many of them are still involved in video games.

These are great games for playing with younger children or for reminiscing about days gone by. Most of these games hold up really well for great gameplay despite the crudity of the graphics. It is a marvel to realize that these games consisted of either 2 or 4k of ROM. The Atari 2600 Action Pack can be an excellent addition to your gaming library.

Once again, I thank you for reading!

## InternetMCI STR Spotlight

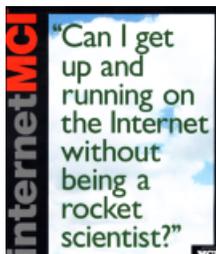
## "MOVE OVER.... InternetMCI!!!"



# HOW STRONG IS InternetMCI... ...TECHNICALLY SPEAKING?

by Ralph Mariano

Many of our readers should recall the "Name the Net" item we carried last week about MCI's wonderful, \$5,000.00 contest. Well... everything is NOT so wonderful about this contest... it seems there is a "ID Code Server" as some of MCI's telephone reps (called "**PROFESSIONALS**") believe its called. It conveniently croaked early Friday afternoon. Thus, effectively cutting off the MCI subscribers in entire southeastern United States. So much for the "big deal" contest for those folks. This reporter has finally concluded what MCI seemingly does with its profits... "they probably spend a small fortune having those cute "thankyou for calling..." recordings made with "the songs that go nowhere" playing in the background." I know.. been there done that! I was forced to listen to this trash for a grand total of two hours and fifty three minutes while waiting for one of these alleged "**PROFESSIONALS**" to answer the phone. Thank goodness for speaker phones. I was able to work on this article while being "entertained" by the professionally made recordings. Bleeech!



**ROCKET SCIENTIST???**  
**How about Albert Einstein's HEAD INSTRUCTOR!**



**The WEB Browser in MCI's**  
**Package is an OLD 1.x version of Netscape!**

The InternetMCI software is, in most cases, totally unnecessary.... Windows 95 handles the *whole shtick* easily, as does Warp and any number of other, far superior, packages than that offered by InternetMCI. Many of which are available for less and even free. The constant impression given by the Internet MCI "**Professionals**" is that one cannot use InternetMCI unless they **BUY (\$39.95)** the Internet MCI software! The Netscape Software included is old... Netscape is up to version 1.2 b3 and has many new features.

MCI ads are found just about everywhere in the computing community even in the Tiger Software Catalog. (where for an additional \$10.00, one can buy an instructional Videotape. InternetMCI and the tape for a total of over **\$50.00!!**) Why would anyone *NEED* a step by step video tape if the software is so easy to install and use to get on the net? In that catalog, the InternetMCI two page ad blatantly boasts;

**"THE COMPANY THAT REVOLUTIONIZED LONG DISTANCE NOW REVOLUTIONIZES THE INTERNET"**  
( **Joke, JOKE.. that has to be a joke, they can't be serious! ..in my best "BobCat" voice** )

From last Friday afternoon until Saturday afternoon, the InternetMCI dialup number continued to answer and generate incorrect error messages on client machines. Thankfully, shortly thereafter ..somebody had the common sense to not allow the defective server to pick up the incoming calls. The "Server" was finally back in operation last Sunday.

***In plain English;***

- ***The service interruption itself was UNBELIEVABLE.***
- ***The overall, knowledge of the "net", responsiveness to customer needs and levels of support from the InternetMCI Customer Service "Professionals" was virtually non-existent. (Read APPALLING)***
- ***The amount of time it took to restore the service made the interruption an unmitigated CATASTROPHE!***

Someone ought to inform those "***in charge***" of InternetMCI that ***IF*** the example set this past weekend of August 18, 1995 is their concept of how their performance in serving the Internet is to either be or a revolution they should instead, be in the "***MUSHROOM***" business. Apparently, they're under the impression their consumer base, both current and potential, is comprised solely of "***MUSHROOMS***".

The only thing revolutionary about InternetMCI's activities is the level of un-original creativity they've exhibited in generating excuses for the lame performance of their ***Internet Service Provider***. especially this past weekend. One can only wonder if their "***high powered executives***" have ever taken a course about "***truth in advertising***" or, "***the successful training of customer service personnel***."

The most aggravating of incidents this past weekend were the depressingly LONG periods of time involved in "***holding on***" for customer assistance when calling after midnight. Obviously, they're using a "***SKELETON CREW for the GRAVEYARD SHIFT!***" ***And... that UGLY BACKGROUND MUSIC!! It only added to the grief! It must be a total combination of all rejected elevator music!***

While on the subject of InternetMCI ads, its amazing that InternetMCI goes to great lengths to explain the "Client/Server" relationship in the Tigersoftware catalog ad but in reality, their telephone service reps haven't a clue about a Client, a Server and/or the Internet.

## **NAME THE NET AND WIN \$5,000**

**STREPORT'S SUGGESTION FOR A NAME IS.....**

**"WEAK-NET" MCI'S BEST SHOT!**

MCI Communications Corp. and New Corp. are offering \$5,000 to the person who comes up with the best name for their new online service. But if you have an idea, move fast: the deadline for entries is Friday night.

"We're appealing to one of the most discriminating – yet democratic -- segments of our society to help us name our new service," said Scott Kurnit, newly appointed president/CEO of the joint venture in a statement from Washington announcing the contest. "The cyber generation spends its time flaming, lurking and posting, so we thought it would be fun to involve them in shaping the future."...

...Kurnit says net surfers entering the "Name the Net" contest can submit suggestions online at World Wide Web address:

<http://www.internetMCI.com/venture>.

Entries must be received in English by midnight Friday and the winner, receiving \$5,000, will be announced by Aug. 31.

Is that "midnight Friday" the 18<sup>th</sup> of August or, the 25<sup>th</sup> of August?? The weekend of the eighteenth of August was wiped out for many of Internet MCI's customers by the outrageous failure of what appears to be an improperly BACKED-UP "ID Recognition Server" in the Atlanta Regional Center. When the server failed they were not able to simply substitute the faulty hardware and restore the software to it from a recent backup. Odd isn't it?? That's the very first thing taught to most budding computer professionals .. the VALUE of CURRENT & FREQUENT BACKUPS. I anxiously await the new crop of "creative

excuses" that will be offered by InternetMCI in more weak attempts to excuse away this serious failure of their "ID SERVER". So much for all the reliability hype! Is Internet MCI in the connectivity business or the excuse business??

One can only wonder if this incident is some sort of **Freudian** indication meant for Internet MCI's subscribers to pay attention to the **newest Internet Provider to enter the market .. AT&T!!**

**"Move Over AT&T??"** Its doubtful it'll be that way at all.

Of course, all this will change very shortly. STReport maintains all its lines with MCI.. And soon our ISDN lines will also be with MCI. In fact, if all goes well.. we hope to have MCI install and service a T-3 or T-2 in the not too distant future. In the long distance section, MCI has certainly offered savings above any of those we ever realized with AT&T. Sprint with its monstrous credits is amazing that they seem to think people are gullible enough to change services and receive these credit at piddily amounts every month for what seems like a ten year "spread".

**When it comes to real and very true savings... MCI does indeed deliver:** Now, when they finally get their InternetMCI service and service reps.. OOPS, "professionals", fully up to speed they'll be virtually unbeatable. As I understand it that is not far away from becoming a reality. We shall see.

**THE GREAT DEBUT IS**



**NOW A MAJOR EVENT!**

**08/24/95**

**Fact or Fantasy from IBM? STR FOCUS!**

**Clearing the Smoke & WARPO Mirrors!**

## **MICROSOFT'S ANSWERS TO IBM'S**

### **"THE REAL STORY ABOUT WINDOWS 95 - 15 QUESTIONS TO ASK MICROSOFT"**

The purpose of this document is to answer the questions raised in IBM's document entitled;

**"The Real Story about Win 95 -or- 15 Questions to ask Microsoft"**

This document has been circulating around the internet and other online services.

IBM's document repeatedly presents a series of arcane technical arguments concerning some of the design decisions Microsoft made in producing Windows 95. These can be grouped into the following three areas:

**Multitasking:** Windows 95 and OS/2 take essentially the same approach to running 16-bit Windows applications - that is to run them in the way as Windows 3.1 would. The reason for this is compatibility. 16-bit Windows applications were designed to be executed in a cooperatively multitasked environment. While OS/2 offers a non-default option to run 16-bit Windows applications preemptively, it does so by loading a full copy of Windows 3.1 for each application, which requires a great deal of memory and reduces performance. This option also introduces compatibility problems because 16-bit Windows applications were not designed to be run this way. For example, applications that use OLE are not able to exchange information in this mode. So this option offers marginally better multitasking at the cost of reduced performance, higher memory requirements, and incompatibility. If the benefits of this OS/2 feature were worth its cost, why is it not turned on by default? Further, if preemptive multitasking of applications is important, why has IBM stated that OS/2 will not run 32-bit applications designed for Windows 95 and Windows NT, which have as their key features preemptive multitasking and multiple threads of execution?

**Robustness:** There is no evidence that OS/2 is any more robust than Windows 3.1 when running 16-bit Windows applications, and Windows 95 has a number of important robustness improvements that go beyond Windows 3.1 and OS/2 such as increased

system resources, per-thread resource tracking, and better recovery from application failures. The only case that could be made for OS/2 in this regard is that its option to run each 16-bit Windows application in a separate session adds some protection, but at a great cost in resources and compatibility as explained above.

**Ease of Use:** The Windows 95 user interface is the result of thousands of hours of usability testing and has proven to be an easier and more productive user interface than OS/2. PC World and PC Computing magazines each conducted usability tests comparing Windows 95 to OS/2 and Windows 3.1 in their August 1995 issues. In both cases, Windows 95 and Windows 3.1 proved to be significantly easier to use than OS/2.

Rather than labor over these technical details, it is probably more relevant to evaluate how an operating system addresses customer requirements such as: Performance on mainstream hardware; the number of native applications developed for the operating system; compatibility with the applications, and hardware customers already own; ease of use (beyond the few technical details IBM discusses here), and the future prospects of the operating system. See "Key customer requirements for a PC Operating System" at the end of this document for a more thorough discussion of these issues.

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*The following section presents questions from IBM's document in italics, followed by Microsoft's answers.*

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## **Subject: The Real Story about Win 95 -or- 15 Questions to ask Microsoft**

***Can Windows 95 live up to the hype that Microsoft has generated for it? These questions, which are based upon published information about the final beta product in the "Windows 95 Resource Kit" and "Windows 95 Reviewer's Guide," might help you decide.***

### **About Reliability**

*Q1: What happens to 32-bit applications when a Win16 application crashes under Windows 95?*

*IBM A1: They can stop executing. Because Microsoft built Windows 95 using the same System Virtual Machine (VM) model found in Windows 3.1, the operating system is at the mercy of legacy 16-bit applications. If a Win16 program hangs, it can tie up critical 16-bit code modules located in the System VM. All other processing is halted.*

*IBM Bottom Line: Windows 95 is not a reliable platform for mission critical, line-of-business applications.*

**Microsoft:** Windows 95 provides a high level of robustness, improved over Windows 3.1, and is designed to recover from application crashes. If an application crashes on Windows 95, the user has the option of terminating that application, and continuing to run other currently loaded applications. It is possible, though unlikely, for a poorly written 16-bit Windows application to crash and temporarily hold up other applications in a Windows 95 system. The penalty for preventing this entirely would be incompatibility with a large number of existing Windows applications and/or unacceptably slow performance on mainstream hardware. Rather than unilaterally imposing this penalty on customers, the design of Windows 95 assumes most Windows applications are well-behaved and runs them as they were designed to be run. 32-bit applications running under Windows 95 add further robustness improvements such as asynchronous input queues and full memory protection. The result is that Windows 95 is substantially more robust than Windows 3.1 while as fast or faster on mainstream hardware. This level of compatibility and performance is demanded by customers, and is not fully provided by OS/2. Windows NT offers both full protection and better compatibility than OS/2 for users who require the highest level of robustness.

What happens to 32-bit OS/2 applications when one of them stops processing messages such as mouse and keyboard events? Because OS/2 processes messages synchronously, when one application hangs or for some other reason does not process its messages, no other 32-bit application gets any messages either, so all of them stop. The lack of separate, asynchronous message queues for 32-bit applications under OS/2 is a major architectural limitation - one that is not shared by Windows 95. Windows 95 provides separate, asynchronous message queues for each 32-bit application, so if one stops responding, the rest are unaffected.

**Bottom line:** Windows 95 is more robust than Windows 3.1 and OS/2 running 16-bit applications, and adds even more robustness when running 32-bit applications.

*Q2: Does Windows 95 protect the contents of its system cache against intrusion by Win32 programs?*

*A2: No. As with the afore mentioned system structures, Windows 95 also fails to protect the contents of its system cache - disk cache, network cache, and CD-ROM cache. As a result, an errant Win32 application can write to memory in use by the cache. The potential results: inaccurate data, corrupted file system entries, etc.*

**Bottom Line:** Data integrity is a question mark with Windows 95.

**Microsoft:** An application deliberately altering system data structures is an extremely rare case. Neither Windows 95 nor OS/2 completely protect system data areas because to do so would impose large performance penalties, require more system resources, and introduce incompatibilities with some applications. The same choice was made by IBM in the design for OS/2, for probably

the same reason - performance. It should be noted that an application would have to be more than just buggy to over-write system components or data in Windows 95 - it would have to be malicious - deliberately and specifically accessing those areas. A similar malicious application would also harm OS/2.

Specifically, does OS/2 protect any of its ring 3 system data pages? No. OS/2's system-wide data structures including the window manager, graphics engine, and non-kernel system components (the shell, desktop, object model) can be overwritten by an application, causing the system to crash. Only Microsoft Windows NT provides virtually complete protection from an application attempting to access memory outside its own.

**Bottom line:** Windows 95 provides a reliable and robust operating system that achieves excellent performance and compatibility on mainstream systems.

*Q3: How is Microsoft dealing with the issue of Virtual Device Driver (VxD) instability?*

*A3: They aren't. In fact, Windows 95 itself makes heavy use of VxDs to supplement and, in many cases, replace DOS functionality. VxDs are extremely powerful programs that can literally go anywhere and do anything in the operating system. They have free reign to address system memory directly, manipulate hardware, and even replace portions of Windows 95 itself at runtime. This gives the creative VxD programmer unlimited flexibility when designing applications that need to modify Windows 95's operation. Microsoft has itself often promoted the VxD interface as a mechanism for gaining good performance with time-critical Windows applications. Unfortunately, the power of the VxD can also be a curse. As more developers begin to exploit this interface - an interface that has only limited controls and almost zero inter-process isolation - a programming free-for-all may result where multiple third party VxDs modify the system in similar ways with unpredictable results. The failure of a single VxD can undermine the stability of the entire Windows95 environment.*

**Bottom Line:** VxDs are potential disasters waiting to happen in the corporate world.

**Microsoft:** IBM presents no evidence of stability problems with VxDs, because there is none. VxDs, which are merely device drivers, have been a fundamental part of the Windows operating system design since 1990 - tens of millions of people rely on them every day, though they probably don't realize it since they perform less visible tasks such as network support. If there was some kind of wide-spread stability issue with VxDs, Windows could never have achieved the success that it has. It is true that in Windows 95, if a device driver fails, the consequences can be severe, but that is the case with every PC operating system in existence.

Is OS/2 immune to the problems that can arise if an OS/2 device driver fails? No - nor is any other operating system. Additionally, since OS/2 is not compatible with Windows VxDs, it cannot run any application or component (such as Norton Utilities, Visual C++ , some communications applications, and the networking components of Windows for Workgroups) which requires them.

**Bottom line:** Windows 95 has comprehensive device support, providing high performance using a proven and stable device driver architecture.

*Q4: Is it true that Windows 95 doesn't fully protect its own operating system code against Win32 application failures?*

*A4: Yes. Win32 applications can write to regions of the extreme lower and upper address spaces in the System VM that are critical to the environment's operation. As a result, an errant memory operation can undermine system stability and potentially crash the entire operating system.*

**Bottom Line:** Windows 95 may be one errant memory operation away from total failure.

**Microsoft:** Windows 95 improves robustness, without sacrificing compatibility. It is true that Win32 applications have access to the 64K - 4MB range. The reason is compatibility with MS-DOS and 16-bit Windows applications and device drivers, something the designers of OS/2 decided to forgo. This level of compatibility means, for example, that users can continue to use their existing MS-DOS device drivers for devices like sound cards and those devices will work with 16 and 32-bit applications under Windows 95. An application would have to deliberately and maliciously write to a particular system memory area (out of the whole 4GB range) to cause problems. The technical details of IBM's argument are also incorrect - the extreme lower and upper addresses (near 0 and 4GB) are not addressable to Win32 applications. This feature catches a common error in applications where they may attempt to use null or near null pointers. Also see the response to question #2.

OS/2 provides no protection from applications writing into critical system data memory areas. If an application chooses to write into these areas, OS/2 can and will crash.

**Bottom line:** Windows 95's design successfully achieves high compatibility with existing applications and hardware, while improving robustness and reliability over Windows 3.1.

*Q5: When running DOS applications, does Windows 95 fully virtualize the PC's hardware to protect against buggy applications?*

*A5: No. Windows 95 fails to virtualize critical hardware components like the interrupt flag. This, in turn, can lead to a system crash if an errant DOS program becomes unresponsive while interrupts are disabled.*

**Bottom Line:** Legacy applications are the Achilles heel of Windows 95 memory management.

**Microsoft:** Windows 95 has superior MS-DOS application and device driver support to OS/2. While it's unlikely that an MS-DOS application would turn off interrupts, certain real-mode device drivers will. If Windows 95 virtualized all of these services and did not allow an application or device driver to turn off interrupts, then those device drivers wouldn't work. This would prevent the use of device drivers that support products like Bernoulli drives. The choice was made to retain compatibility with these drivers because some users will require them to support their hardware.

If interrupts are disabled in an unresponsive application on certain bus architectures under OS/2, OS/2 will also hang. OS/2 does not provide the benefit of the use of these device drivers for compatibility reasons, yet still pays the cost in robustness for allowing this type of operation.

**Bottom line:** Windows 95 is the only 32-bit operating system that successfully retains compatibility with existing real-mode device drivers.

## About Usability

*Q6: Does Windows 95 track objects dynamically?*

*A6: No. Windows 95 uses a series of static DOS pathnames and .INI files to track the relationship between icons on the desktop and files on disk. For example, the shortcut mechanism of the Windows 95 interface relies on a stored copy of the original's path information when locating and invoking it. If the file is moved within the directory structure, Windows 95 must search the hard disk for it based on file size and date stamp. Although this technique works most of the time, it is limited to searching a single volume - if you move the file to another disk volume, the link is broken completely. And, because Windows 95 will search your entire network if attached, it may take forever if it is connected to, say, five gigabytes of storage.*

**Bottom Line:** Help desk calls will be on the rise as users experiment with shortcuts and long filenames.

**Microsoft:** When it comes to usability, Windows 95 is certainly superior to OS/2. This is evidenced by the PC World and PC Computing tests reported in their August 1995 issues in which OS2 loses not only to Windows 95, but also to Windows 3.1. Shortcuts and long file names are two of the many usability improvements in Windows 95 that were driven by extensive usability testing with the goal of reducing user support burden.

To address this particular question, files that appear on the Windows 95 desktop are stored in a directory just like any other file regardless of whether they have long or short file names. Shortcuts are a special type of file that contain data on the location of the original object. If the original object is moved, Windows 95 will update the location data the next time the object is accessed. If the object that a shortcut points to is moved to another drive, the user must specify the new location. Windows 95 will only search a network drive if that was the original location of the object. Whether the object or shortcut uses long file names makes no difference.

OS/2's implements a rough equivalent of Windows 95 shortcuts, called shadows, however they are less powerful and less easy to use in several ways. Windows 95 allows easy creation of shortcuts to any type of network resource. While OS/2 allows the user to create a shadow of a folder on a network server, the shadow disappears when the computer is rebooted. If a Windows 95 user creates a shortcut to a network resource, and later accesses the shortcut when not connected to the network, Windows 95 is smart enough to invoke its dial-up networking feature to connect to the network and access the resource. If OS/2 users attempt the same operation, they get an error message. Unlike Windows 95's shortcuts, OS/2's shadows cannot point to a particular part of a document, nor can they be embedded into a document or mailed to another user. While both shortcuts and shadows can point to content on the Internet, only Windows 95 is smart enough to launch a connection to the Internet automatically when a user opens the shortcut.

**Bottom line:** The design of Windows 95 was driven by extensive usability testing, which resulted in a user interface that surpasses Windows 3.1 and OS/2 in its ease of use, productivity and reduction of support burden.

*Q7: Does Windows 95 make consistent use of drag & drop?*

*A7: No. Windows 95's drag & drop features are applicable to some objects, like files and folders, but not to others. You cannot, for example, drag a dial-up networking connection to the Windows 95 Recycler; nor can you drag objects to the My Computer folder - both are "special" objects in the Windows 95 interface and aren't subject to the normal Windows 95 drag & drop rules. This introduces a level of inconsistency to the interface and a possible stumbling block for new users trying to take advantage of drag & drop.*

**Bottom Line:** *The Windows 95 interface is inconsistent from function to function.*

**Microsoft:** Again, Windows 95 is demonstrably superior to OS/2, especially in terms of usability. Windows 95 makes dragging and dropping objects both easy, and safe. My Computer is designed to show the objects that are on the user's computer: the disk drives, network connections, and related settings. It would be confusing to allow users to add new items to this list since those items would not be disk drives, net connections, or settings. Dragging a dial-up network connection to another location automatically creates a shortcut to that connection, leaving the original in the dial-up networking folder where it belongs. It certainly would not make sense to create a shortcut in the recycle bin, where it would then be discarded.

OS/2 forces the user to remember inconsistent dragging techniques. The non-default (right) mouse button is used to drag objects, but the left mouse button is used to drag windows, and to drag objects in the Windows UI and in Windows applications running under OS/2. Objects cannot be dragged from windows in OS/2 to Windows-based applications.

**Bottom line:** Windows 95 provides the easiest, most productive user interface of any PC operating system. Don't take Microsoft's word for it, read the August issues of PC World and PC Computing.

*Q8: Is the Windows 95 interface consistent and object-oriented?*

*A8: No. For example, while you can invoke the right mouse button pop-up menu on most objects, entries in the Start menu and its submenus are not included. This makes manipulating Start menu entries an awkward process involving the Taskbar properties dialog box and several layers of menus and windows. Since the right mouse button works in most other areas of the interface, the Start button's deviation from this norm exposes Windows 95's object-oriented support as incomplete.*

*Bottom Line: Windows 95 does not fully exploit O-O technology.*

**Microsoft:** Clicking the right mouse button on the Windows 95 Start Button produces a complete set of options for manipulating items contained on the Start Menu including Open, Explore, and Find. These features make it very easy and efficient to add, change, and delete those items. How is object oriented technology (which is a software development approach) relevant to how users interact with the user interface of an operating system?

**Bottom line:** See question 7.

## **About Windows 95 and Multitasking**

*Q9: Can Windows 95 preemptively multitask Win16 applications?*

*A9: No. Because Win16 applications were written for a cooperative multitasking environment, they cannot handle the stress of being "preempted" during execution. Therefore Windows 95 must handle these applications in the same way that Windows 3.1 does: by giving them exclusive control of the CPU for as long as they are executing. When, and only when, the application makes a specific API call - one of the few such calls that constitute safe points at which Windows can wrest control away from the program - are other programs allowed to execute. This is "cooperative" multitasking, and has proven to be ineffectual when running more than a handful of programs simultaneously or when running CPU-intensive programs such as communications, print and/or fax programs.*

**Bottom Line:** *Windows 95 adds little value for the large base of legacy Win16 applications.*

**Microsoft:** Both Windows 95 and OS/2 take the approach of running 16-bit Windows applications cooperatively. Windows 95 cooperatively multitasks existing Windows applications because that is the best way to achieve high compatibility with those applications. Windows 95 adds an improved user interface, better robustness, greatly increased system resource capacity, 32-bit printing, networking, disk I/O, multimedia, communications components, and more - all of which provide benefits when using 16-bit or 32-bit applications, without compromising compatibility or performance. All new 32-bit applications designed for Windows 95 offer fully preemptive multitasking and can use multiple threads of execution.

OS/2 provides a non-default option to run 16-bit Windows applications in separate, preemptively multitasked sessions. However this comes at great cost in terms of memory - since a copy of Windows 3.1 is loaded for each application - and compatibility because OLE-based applications cannot exchange information when run in separate sessions. If the separate session option really provides tangible benefits worth its costs, why is it not enabled by default in OS/2? OS/2 is not compatible with any of the 32-bit applications designed for Windows 95, and which run with preemptive multitasking.

**Bottom line:** Windows 95 adds significant value in running 16-bit Windows applications including an improved user interface, better robustness, greatly increased system resource capacity, 32-bit printing, networking, disk I/O, multimedia, communications components, and more.

*Q10: Are there any caveats to multitasking Win32 applications under Windows 95?*

A10. Yes. In its effort to maintain a high degree of backward compatibility while simultaneously minimizing the RAM requirements of the operating system, Microsoft has chosen to rely on its existing, Windows 3.1-era USER (window management) and GDI (Graphics Device Interface) modules rather than create new, 32-bit versions. In order to utilize this older, 16-bit code in potentially preemptive (with regard to Win32 applications), 32-bit multitasking environment of Windows 95, Microsoft was forced to serialize access to USER and GDI. As a result, only a single Win32 or Win16 program can access these critical modules at any given time. This hurts application performance on heavily loaded systems as programs are forced to "line-up" and wait for a chance to execute a USER or GDI routine. All USER calls (for both 16 and 32-bit applications) are serialized and handled by the 16-bit code, while the majority of GDI calls are similarly handled (the other 50 percentage handled by newer 32-bit routines).

**Bottom Line:** Windows 95's multitasking is best described as "preemptively challenged."

**Microsoft:** Windows 95 provides excellent multitasking of 32-bit applications while maintaining compatibility with 16-bit applications designed for Windows 3.1. Windows 95 provides this high-level of compatibility by running 16-bit Windows applications the way they were designed to be run, using time-tested, proven code for compatibility and lower memory requirements. The result is good cooperative multitasking and fast performance with 16-bit applications plus great preemptive multitasking of 32-bit applications. For users that require a high level of compatibility with 16 and 32-bit Windows applications, plus the option to run 16-bit Windows applications preemptively, Microsoft offers Windows NT.

OS/2, which has a significant amount of 16-bit code itself, requires more memory to run 16-bit Windows applications, and runs them slower than Windows 95. OS/2 also adds compatibility problems if its preemptive option is used, and is totally incompatible with 32-bit Windows applications designed for Windows 95 and Windows NT.

**Bottom line:** Windows 95 and Win32 applications provide smooth preemptive multitasking.

Q11: What happens to Windows 95's multitasking when you run a mixture of application types?

A11: It reverts to a cooperative multitasking model. Windows 95's continued reliance on the single system VM model of Windows 3.1 places the operating system's multitasking capabilities at the mercy of the lowest common denominator: the 16-bit Windows application. Whenever a Win16 application is running, the operating system's multitasking capabilities are compromised by the need to allow such programs to execute "undisturbed" for as long as they require. As a result, when multitasking a mixture of applications - Win16 and Win32 - true preemptive operation is impossible since, at any given time, a 16-bit application may require exclusive control of the CPU. Worse still, since the Win16 application is typically executing a portion of the 16-bit USER or GDI code - access to which must be serialized among processes - all other processes, including Win32 applications, are blocked from executing. The net result is what would be best described as "semi-preemptive" multitasking.

**Bottom Line:** When Win16 applications enter the mix, Windows 95 takes on an alternate personality: Windows 3.1.

**Microsoft:** Windows 95 runs both 16 and 32-bit applications simultaneously and allows multitasking both types of applications. When a 16-bit application is executing on Windows 95, its control of the CPU lasts for only a very short time, after which time is allocated to other running applications on a preemptive or cooperative basis depending on the application. The user experience, in most cases is that all applications run essentially at the same time, regardless of whether they are 16 or 32-bit. Readers who are concerned about this can try a simple test: print a long document from Microsoft Word 6.0 (16-bit), while performing a copy of a large file using the Windows 95 Explorer (32-bit). Both operations will proceed smoothly and simultaneously to completion. As users migrate to 32-bit applications, multitasking becomes even smoother.

As stated above, OS/2 provides a non-default option for running 16-bit Windows applications preemptively, but this option requires significantly more memory (so applications run slowly), and introduces compatibility problems such as the inability to use OLE to exchange data between applications. OS/2 will not run 32-bit Windows applications at all so users cannot take advantage of their superior multitasking if they use OS/2.

**Bottom line:** Windows 95 runs existing 16-bit applications on top of new 32-bit system components, which provide smooth operation along with the preemptive multitasking of new 32-bit applications..

Q12: Does Windows 95's multitasking resolve any of Windows 3.1's multimedia-related deficiencies?

A12: Not really. Windows 95's inconsistent multitasking performance - a byproduct of the single System VM model - compromises its performance as a serious multimedia production platform. Complex .AVI clips break up noticeably when a significant I/O strain is placed on a Windows 95 system. Even simple operations, like opening an application program, can have a negative impact on multimedia playback.

**Bottom Line:** You still can't play multimedia and do heavy I/O simultaneously.

**Microsoft:** Windows 95's new 32-bit multimedia subsystems give a tremendous boost to its playback performance, making even full screen full motion video playback possible on high end systems. Among the many improvements in this area are an improved, swappable and tunable CD-ROM cache, 32-bit video CODECs, game development tools, plus high-performance graphics and disk

I/O. The May 1995 issue of NewMedia magazine was particularly enthusiastic about the multimedia improvements in Windows 95, stating "The potential benefits - especially to multimedia - of a 32-bit, multitasking, multithreading system are mind-blowing."

Already, multimedia titles for Windows 3.1 far outnumber and outsell titles for OS/2 (go into any software reseller and try to locate even one OS/2 multimedia title). Windows 95 is receiving a high-level of attention and investment from multimedia ISVs who are eager to take advantage of Windows 95's multimedia improvements, so there will soon be a large number of games and titles designed specifically for Windows 95 (these applications will not run on OS/2 at all).

**Bottom line:** Windows 95 offers significant improvements in all areas of multimedia performance.

## About Windows 95's relationship to DOS

*Q13: Does Windows 95 really do away with DOS?*

*A13: No. Windows 95, though touted as a "completely new, 32-bit" operating system, is in fact still based on DOS technology that dates back to the early 1980s. Under Windows 95, even Win32 applications rely on at least a few data structures within the real mode DOS environment (most notably, they all maintain real mode PSPs). Despite Microsoft's claims to the contrary, Windows 95 is highly sensitive to the configuration of a PC's real mode DOS environment. If, for example, the available conventional memory in the System VM - the DOS virtual machine where all 16-bit Windows applications and some Windows 95 codes executes - dips below a certain level, Windows 95 will report "out of memory" messages when you try to open additional Win16 or Win32 programs. This is unrelated to the well known System Resources phenomena, and the only real solutions are to either replace as many real mode device drivers as possible with VxDs or to invest in a third party memory manager to optimize the pre-Windows 95 DOS environment.*

*Bottom Line: Windows 95 can be viewed as DOS/Windows with a new interface and some new VxDs.*

**Microsoft:** Windows 95 employs new 32-bit code in all areas in which it produces performance and/or robustness improvements, and uses time-tested, proven 16-bit code in some areas for compatibility and reduced memory requirements. To provide compatibility that allows 32-bit applications to exchange data with 16-bit applications and device drivers, Windows 95 continues to use data structures such as the MS-DOS PSP. It is highly unlikely that users would ever run out of real-mode memory under Windows 95 since each application only allocates one 256 byte PSP (out of 655,360 bytes of real mode memory), nor are any additional MS-DOS memory managers required. Virtually all of the things that take up conventional memory under Windows 3.1 (network, CD-ROM drivers, sound drivers, etc) are now implemented as 32-bit protect mode components in Windows 95. So there is even less of a chance that real mode memory will become an issue. For example, a typical system which has device drivers for a CD-ROM drive, SCSI card, network card and protocols, and sound card will still have over 600K free conventional memory since all of those device drivers are now 32-bit and loaded into protect mode memory.

OS/2 employs 16-bit code in performance-critical areas such as the file system and network components. OS/2 also exhibits lower compatibility with 16-bit Windows applications than Windows 95, even though it runs them using 16-bit Windows 3.1 code. OS/2 is also totally incompatible with 32-bit applications designed for Windows 95 and Windows NT. So, not only is OS/2 compromised by the use of 16-bit code in performance-critical areas, it has poor Windows application compatibility as well.

**Bottom line:** Windows 95 is the only operating system that provides 32-bit power while retaining a high level of compatibility with real-mode device drivers and existing applications.

*Q14: What is Single MS-DOS Application mode and how does it affect other running applications?*

*A14: Microsoft touts Single MS-DOS Application (SMA) mode as its ultimate solution to any and all DOS compatibility complaints. SMA is essentially real mode DOS, except that instead of booting DOS and then loading Windows, the order has been reversed: you first boot Windows 95, then "unload" it as the machine is reset into the real mode of SMA. This indeed eliminates virtually all remaining DOS application incompatibilities since the PC is no longer running in V86 protected mode - it has been reset to real mode, loaded with a copy of DOS, and left at a command prompt. What Microsoft doesn't like to admit, however, is that to invoke an SMA-dependent application is to essentially shut-down Windows 95 - all running applications are closed, network connections are severed, and VxD support for peripherals like CD-ROM drives disappears. To maintain these functions you need to add real mode DOS device drivers to your system and then configure them via the SMA dialog box. And since Windows 95 is no longer running, any users who are connected to shared resources on the system are disconnected when it enters into SMA mode.*

**Bottom Line:** SMA is really only a viable solution for home users and other non-networked environments.

**Microsoft:** Windows 95 provides the MS-DOS Mode compatibility feature for running MS-DOS applications (typically games) that require absolute control over the hardware of the PC. Microsoft tested approximately 1,300 of the most demanding MS-DOS applications under Windows 95, and found that only one in ten require the use of MS-DOS Mode. If a real-mode device driver is required to run the MS-DOS Mode application, it can be specified and automatically loaded via a CONFIG.SYS and/or AUTOEXEC.BAT file unique to that application. Windows 95 will suggest the use of MS-DOS Mode automatically for applications that are known to require it, or when applications perform certain operations - so users do not have to perform special operations to run their applications. Windows applications, which are the vast majority of applications sold and used, do not

require MS-DOS Mode. OS/2 also provides a way to boot MS-DOS when an MS-DOS application does not work under OS/2, but it is far less convenient, requiring the user to issue BOOT /DOS, run their application, and then type BOOT /OS2 to return to OS/2.

**Bottom line:** Microsoft has done the extra work that allows Windows 95 to run even poorly behaved MS-DOS applications, significantly improving MS-DOS application compatibility over Windows 3.1.

*Q15: How does Windows 95 handle real mode DOS device drivers?*

*A15: Windows 95's dependency on the real mode DOS environment undermines the product's ability to support DOS applications. Because Windows 95 relies on an "image" of the pre-Windows 95 boot-up environment when creating the System VM, and because subsequent DOS virtual machines are similarly based on this boot-up image, Windows 95 users are forced to load any required real mode device drivers as part of the original boot-up CONFIG.SYS file. The ramifications of this limitation are significant: each and every DOS session under Windows 95 contains a running copy of, and surrenders valuable conventional or upper memory to, real mode device drivers. This is true even if the drivers are not required or desired in a particular DOS session.*

**Bottom Line:** *There's no way to load a real mode driver into a specific DOS session -- it's an all or nothing proposition.*

**Microsoft:** Windows 95 does not depend on real mode MS-DOS device drivers. Windows 95 is however, compatible with existing real-mode drivers if they are required for a particular device. Windows 95 is the only 32-bit operating system that retains compatibility with existing real mode device drivers. This means that users can continue to use devices with Windows 95 even if they do not have 32-bit device drivers. Device drivers loaded via CONFIG.SYS are available to all DOS sessions since that is what users expect, not wishing to maintain multiple CONFIG.SYS files. Most users will run few if any real-mode drivers since Windows 95 provides a large selection of new 32-bit drivers that support most popular devices. In fact most users won't even need to maintain a CONFIG.SYS file.

OS/2 does not allow the use of real-mode MS-DOS device drivers for network cards, sound cards, graphics adapters, CD-ROM drives, or other devices that users need to run under OS/2. This means that users often cannot use a particular device under OS/2 since its device support is not as comprehensive as that of Windows 95. OS/2 also requires users to maintain a complex and large (often over 200 lines) CONFIG.SYS file when adding or removing device drivers. The ability to have multiple copies of CONFIG.SYS files under OS/2 adds even more complexity for minimal benefit - most users would never take advantage of this "feature".

**Bottom line:** See question 14.

## **KEY CUSTOMER REQUIREMENTS FOR A PC OPERATING SYSTEM**

Windows 95 is the result of input from thousands of customers representing all types of uses from end user to corporate IS manager. The criteria that emerged from discussions with those groups is summarized below.

- Performance:** Customers want to run their applications with the best performance, using the fewest resources. Windows 95 provides better performance than OS/2, across the entire range of RAM and processor configurations.
- Applications:** Customers buy an operating system to run their applications - pure and simple, and they want a wide choice of high-quality applications designed for the operating system. During the first quarter of 1995, 78% of all applications sold worldwide were Windows-based, while less than 1% were OS/2-based. ISV support for native OS/2 applications has always been very low, and few, if any OS/2 applications are likely to be offered by typical software resellers. Over 200 new 32-bit applications designed for Windows 95 are part of Windows 95 launch co-marketing programs. These applications represent a huge commitment to Windows 95 by every major ISV.
- Compatibility:** Customers want to know that the operating system they chose will run on the hardware they have, with the applications they have today, plus those they buy in the future. Windows 95 runs almost all existing 16-bit Windows and MS-DOS applications, and provides a platform for new 32-bit applications designed specifically for Windows 95 which are now under development at all major ISVs. OS/2 has significant compatibility problems with 16-bit Windows applications, and is totally incompatible with the new generation of 32-bit Windows applications.
- Ease of Use:** Users of all types want their operating system to be easy and efficient to setup, learn, and use. Windows 95 has many features designed for enhanced usability such as Wizards, a great help system, the Start Button and task bar and many others. OS/2 is difficult to install, and has two totally different user interfaces: the OS/2 WorkPlace shell, and the Windows 3.1 UI. PC World and PC Computing each conducted usability tests

comparing Windows 95 to OS/2 and Windows 3.1 in their August 1995 issues. In both tests, Windows 95 and Windows 3.1 proved to be significantly easier to use than OS/2.

**Strategy/Future:** Customers make a large commitment when they choose an operating system and they want to know that the product will be supported and enhanced for many years. Windows 95 and Windows NT, which share many design features and the same programming interface, are Microsoft's operating systems for today and the future. There is no question that these products are and will be well supported and enhanced by Microsoft and ISVs. OS/2 has never garnered the level of industry or customer support that is necessary to ensure its future viability.

*For more information on Windows 95's design and feature set please download the Windows 95 Reviewer's Guide from our web site ([www.microsoft.com/windows](http://www.microsoft.com/windows)).*

## MUSTANG'S WILDCAT 5 STR FOCUS!



### **Mustang Software, Project Annihilator Preliminary Information Sheet August 22, 1995**

#### **Interactive Multimedia Reaches the On-line Application Market**

Mustang Software is developing a system to empower the corporate, business, small office and hobbyist community to offer full on-line multimedia to customers, staff and prospects. The development name of the project is *Annihilator* and it has entered beta testing at several hundred locations. It is targeted for release between Thanksgiving and the end of the year as *Wildcat! 5 for Windows 95 and Windows NT*.

*Annihilator* is a true Windows 95 or Windows NT client/server application designed to provide a BBS-based solution for a broad range of customers. It delivers an exciting interactive multimedia experience for callers by allowing the system operator to make use of familiar multimedia tools, including JPEG and GIF editors, for customization of the caller interface. For backward compatibility all aspects of the system are accessible via standard ANSI connectivity but when accessed using the free remote client, the caller is greeted with an exciting multimedia experience. The support engine for offering remote graphics to the caller is included at no additional cost, and the remote graphical client suite is slated for free distribution.

*Annihilator* takes full advantage of the new multitasking in Windows 95 and the robust server operations in Windows NT to provide a solution for every online need. The Windows 95 platform has been selected to support small to medium load systems while the Windows NT platform was chosen to provide high performance on-line solutions utilizing its single and multi-processor support.

#### **True Client/Server Technology**

The Bulletin Board System arena is the latest market segment to be courted by advertisements touting the benefits of "client/server" technology. However, upon closer inspection, "client/server" is often used to refer to the use of a proprietary remote program (the client) to dial into a BBS application (the server). While the use of a remote graphic client is an exciting aspect of many of the newer BBS technologies including '*Annihilator*', it does not represent *true client/server* functionality at the application program level, the location where its true power can be unleashed.

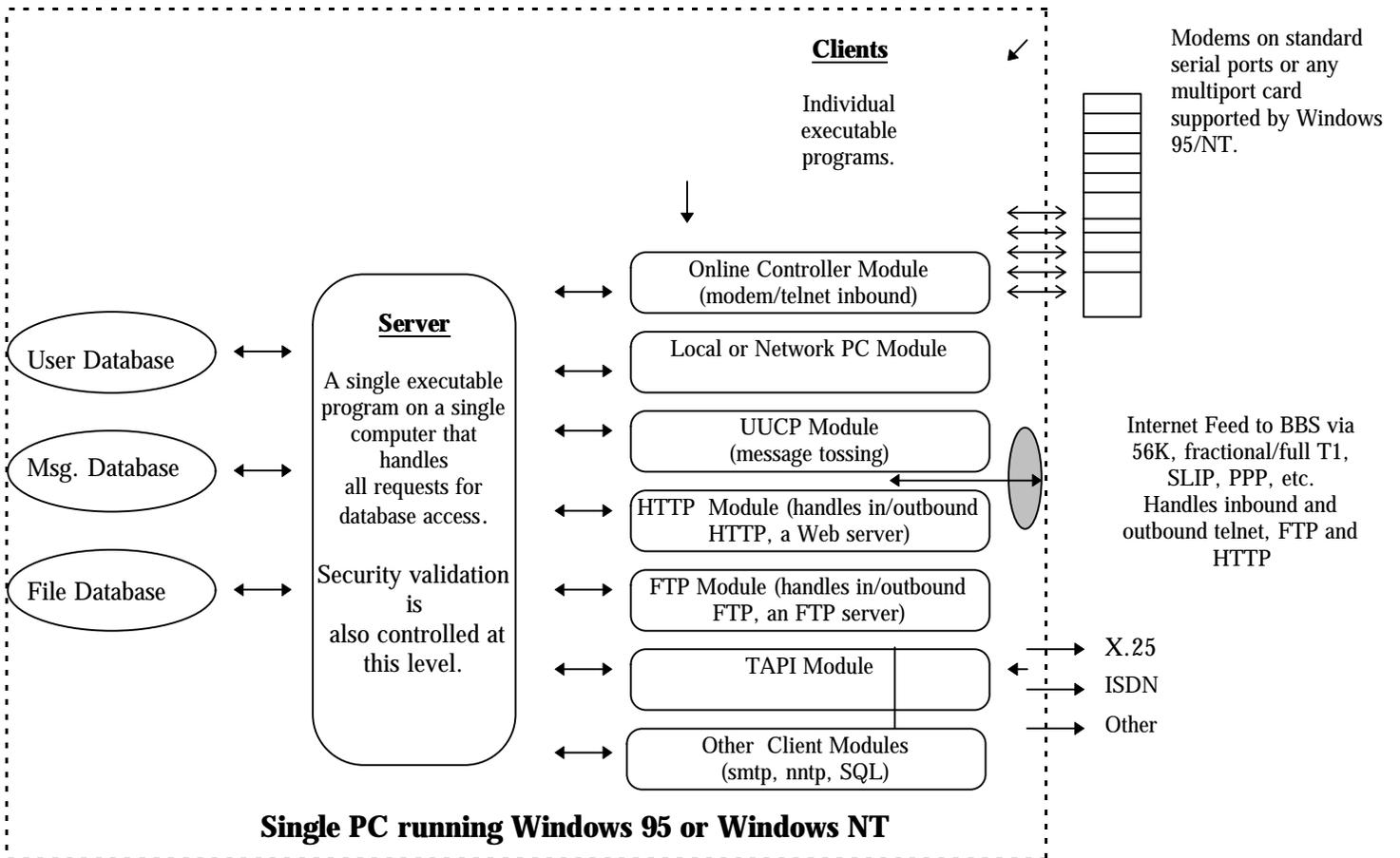
#### **So What is Client/Server?**

Client/server, at its simplest level, is an architecture that involves client processes requesting service from server processes. Client/server computing recognizes that those client modules need not all be executed within the same memory space, that is, the processes that distribute the information need not all be a part of the same single program. Separation of the client and server

modules provides improved security and performance. By implementing a BBS with a core information server, and routing that information using a number of application clients *at the sysop's location*, a system can be established that delivers more information at greater speed, *even on a single PC running Windows 95*.

### Isn't It Complicated?

Client/server can be as simple as running two or three familiar programs on a single PC or as intricate as a multiple-PC network running several applications on each PC. The beauty of client/server model is that once you understand the relationship between the different executable programs (the clients and the servers) you can set it up in any of several ways that best meet your needs.



The client/server model of *Annihilator* above is a simple setup with the server and all clients running on a single PC. The computer can operate under Windows 95 or Windows NT Workstation or Server. This configuration offers the most compact system and allows for total management from the single BBS computer.

An alternative to operating all client executables on a single PC is to distribute the processing over a Microsoft Network. The server executable runs on a Windows NT (workstation or server) PC while the client modules can be run on either the server PC or networked PCs running either Windows 95 or Windows NT. The advantage of separating some client operations from the server is increased power through distributed processing. For example, in an extremely active system the sysop may find it advantageous to establish three PCs, one for the Server and TCP/IP connectivity, including WWW access, and two others, each running a rack of 32 modems with its own copy of the Modem Controller Client.

### Use of the client/server model provides a number of advantages:

32-bit Windows multitasking means no additional multitasking software is needed and 16-32 lines can be run easily without loading multiple copies of the BBS.

The entire BBS configuration in our client/server model can be modified even while in full operation, but only by authorized personnel. The system server accepts change requests and implements them as soon as usage permits.

The number of inbound sessions on a single computer is significantly increased. Thanks to the enhanced multitasking of both 32-bit Windows platforms, a much larger number of connections is possible on any given PC. As inbound access (via modem, telnet, HTTP, etc.) reaches the processor limits for any given PC, additional client PCs can be added which communicate automatically with the server. Clients for modems, HTTP, telnet and other activities can be operated on a single PC or on a variety of additional systems, depending on load.

This new generation BBS can truly isolate the core of the host activities, providing secure, private system access even to local users. The server portion of the system is established in an area on disk with restricted user access. The server controls all access to messages, files and other system information. Requests are submitted to the server by all support programs and third-party utilities through an easily adopted application program interface (API). This methodology has the added advantage of allowing the actual BBS program-flow code to be written in wcCODE and to be fully customizable.

True Client/server technology provides total flexibility. It allows the sysop to offer a BBS on a desktop platform and to expand the system capabilities as desired.

## **Standard *Annihilator* Modules Included With Every BBS Create a Foundation**

### **Server module**

This module provides the base functionality for processing all database and configuration requests through a published API structure.

### **Local or LAN Client**

This module is included with every package and is used by anyone connecting at the host PC. It can also be used by anyone on the network for local login. It is an ANSI text connection. Note that the Graphical Client used for remote connection also can be used locally for a graphical local connection.

### **Online Client**

This module is included with every package and answers the phone for all dial-in lines. It can present the BBS information to a caller in ANSI, ASCII or in full graphics when called with the free remote graphical client.

### **QWK Echo Client**

This module is included with every package and handles QWK mail exchange processing between the host and other BBSs.

### **TAPI Client**

This module is included with every package and provides a link to the Windows Telephony Application Program Interface. It talks to TAPI-aware add-on cards or hardware that offer ISDN, X.25 or other connectivity.

### **Graphical Remote Client**

This module is a set of freely-distributable Windows programs for callers to experience full multimedia when connected. This program suite operates on Windows 3.1, Windows 95, Windows NT and any OS/2 release with Windows support. It can also be run locally, over a LAN or via a telnet connection. The core language of the remote graphical client is HTML, the language of the World Wide Web.

## **Optional *Annihilator* Modules Increase Client/Server Power**

### **UUCP Client [wcGATE]**

This optional module handles dial-up Internet email and newsgroup support. It includes a dial-out program and mail tosser, allowing callers to send and receive Internet email and newsgroup messages. It also supports feeding messages to downline nodes.

### **Internet Package**

This optional accessory package handles TCP/IP support and includes several individual clients. Note that many of the modules included with the Internet Client Package operate as clients to the BBS host, but act as a server to the wider Internet connection:

### **Telnet Module**

This module handles inbound telnet, connecting callers to the BBS when they connect from a remote internet site. In this mode it acts as a telnet server. With the Telnet module installed the BBS also supports outbound telnet sessions requested by callers, connecting them to other locations on the internet. In this mode the BBS acts as a telnet client for the caller. Inbound telnet connections support ANSI, ASCII and the graphical remote client interface.

### **FTP Module**

This module handles inbound FTP file requests and functions as a FTP server. Requests can be made anonymously for a restricted file set, or using a name and password on the BBS for FTP access to files based on the caller's access profile.

### **WWW Module**

This module provides BBS connectivity to callers connecting using a WWW browser. It functions as an HTTP server that dynamically creates HTML files for file and message data and is fed by a set of display files in HTML format customized by the sysop.

## **IRC Module**

This module provides a link to internet relay chat to expand the live discussion capabilities of the BBS. It functions as an irc client for callers. Note that standard inter-node chat is supported without this module.

## **SMTP Module**

This module provides support for simple mail transfer protocol messaging and acts as a server for SMTP. It provides the link to allow callers to send and receive internet email.

## **NNTP Module**

This module provides support for network news transfer protocol messaging and acts as a NNTP client to process mail from an Internet NNTP server (many providers offer nntp mail services). It provides the link to allow callers to read and reply to usenet newsgroups.

## **MAPI Client**

This optional module provides a link to the Windows Mail Application Program Interface. It provides a mechanism to exchange messages between any application that supports MAPI such as Microsoft Mail, cc:Mail, Lotus Notes, etc. With MAPI support the sysop can easily establish a single repository for all messages by routing e-mail to Microsoft Exchange or any favorite mail package.

## **CODE Development Package [wcCODE]**

This optional package is a new, enhanced high-speed 32-bit development language so powerful that all standard BBS functions are written in it. The CODE package allows the sysop to create custom BBS operations and programs to be run by the caller.

## **Source Code**

For total customization of all online activity the wcCODE source for all BBS functions is available for purchase. (Requires wcCODE)

## **Database (SQL) Client**

This optional module provides full remote connectivity to distributed database processing using the SQL standard.

## **Reports Client [wcPRO]**

This optional module provides extensive reporting on BBS usage and activities.

## **Billing Client [wcBILLING]**

This optional module provides a complete billing for pre-pay or post-pay systems.

## **How Do I Set Up a Client/Server BBS?**

The configuration of *Annihilator* is very similar to the DOS Wildcat! BBS except that all configuration programs are 32-bit graphic Windows applications. Once you have run the installation and configuration programs you maintain the BBS using other Windows applications that provide functionality similar to the DOS Wildcat! MAKEMENU, MAKEWILD, MAKEQUES, wcFILE, and other support programs.

## **How Do Callers Connect?**

There are several methods for callers to connect to your *Annihilator* (Wildcat! 5 ) BBS and several types of presentation:

Dial-in modem callers using a standard comm package receive standard ANSI screens, just like WC4.

Dial-in modem callers using the Graphical Remote Client package receive a full graphical HTML presentation. The BBS main "page" and all other informational pages such as bulletins, etc. are created by the sysop as HTML (www) documents using any HTML editor.

Telnet in connections using a standard telnet or comm package receive ANSI screens, just like WC4.

Telnet in connections using the Graphical Remote Client package receive a full graphical HTML presentation.

FTP inbound connection requests can log in as "guest" or "anonymous" for limited file access as set by the sysop, or can log in as a BBS user with the correct password for full file lists based on BBS access profiles.

HTTP inbound can be made using any browser (Netscape, Mosaic, etc.) and will receive dynamically generated HTML pages for files and messages, with other information and a main "page" prepared by the sysop as HTML documents.

## **What Internet Services Can I Offer?**

Your callers can make use of a number of Internet services if they dial-in using the Remote Graphical Client. By connecting to you over a standard phone line they are able to telnet to any other internet location, they can ftp to any other location and they can surf the World Wide Web (because our Remote Graphical Client is a web browser). We hope to add the ability to offer PPP connectivity as well, but the implementation may not be available until after Christmas.

## **What Hardware Will I Need?**

**Annihilator** was designed to provide a platform for everything from a single line BBS to a 1,000 line corporate connectivity server. The same set of client/server modules are used in all installations.

For a simple one or two line BBS the easiest installation platform would be a 486/66 PC with 8 MB of memory running Windows 95. The standard communications ports in the PC can be used and the sysop just needs to run the Server Module and the Modem Client. Minimize these two programs on the desktop and your BBS is operational. To login locally you run the Graphical Client for a full graphical BBS session.

As the BBS expands the sysop might add a multiport card from Digi, Comtrol, Stallion, Equinox or any other manufacturer that offers Windows 95 or NT support. A 4-16 port card can be installed in the same 486 PC to increase line count and the only additional hardware changes might be to add additional memory to 16 MB. The same Modem Client will handle the additional lines with the installation of a line count increase module.

Further expansion of the BBS can be accomplished in many ways. As line count increases the power of the PC can be increased to handle the added load by moving to a Pentium 90-120 MHz CPU. With the technology available today it is entirely possible to operate a single-box PC that can address hundreds of incoming lines and other connections by taking advantage of the multi-processor capabilities of the Windows NT platform.

For those that would rather make use of a LAN environment for BBS connectivity the *Annihilator* project also has a solution. By using Windows NT (Server or Workstation) the sysop can establish a server PC that handles the core server duties and separate PCs for different aspects of the remote connection. Each Client module can be operated on a networked PC running Windows 95 or NT, and will communicate with the server PC automatically. No messy drive mappings and no specific Networking components are required, other than those that come with Windows NT (workstation or server) and Windows 95. This type of distributed processing system really make sense for large systems with several different types of access, including local, TCP/IP, modem, X.25 and ISDN. Different client processes can be run on less-powerful PCs depending on their load.

## **What about Novell Networks?**

*Annihilator* is totally compatible with NetWare. A workstation PC in a NetWare LAN can run Windows 95 or Windows NT and operate the complete BBS. Other LAN PCs can access the BBS using the Local/LAN client.

Although the BBS PC can access files located on the NetWare Server drives, it is recommended that all BBS files be located on the PC that operates the BBS Server Module, with the possible exception of the downloadable files, which can be located anywhere on the LAN.

The sysop can set up BBS clients on other PCs on the LAN providing the BBS server module is on a PC running Windows NT and the other client PCs run Windows 95 or NT. The same cabling for NetWare connectivity is automatically used by the Windows networking to share BBS client/server data using NT's routing technology.

## **Can it Run Doors?**

**Annihilator** supports DOS-based doors on all port connections, and includes a program for DOS program redirection. However, operation of 16-bit DOS doors does limit the number of lines that can be supported on any given PC. Programs specifically written in the new 32-bit wCODE are an exception, and do not cause this system degradation.

Doors do not require any modification and operate in their own memory session for each node. Door operation is virtualized, a process that isolates the door itself from the port, and prevents it from knowing whether it is talking to a standard com port, a DigiBoard or a telnet connection. All doors all think they are talking to a standard COM 1.

## **Release Information and Pricing**

No specific release date has been set for project *Annihilator*, but the target date is between Thanksgiving and year end. The majority of the program modules are expected to be available in fourth quarter '95 but some optional modules will not become available until early 1996.

## **Pre-release CD Special**

**A special *Pre-Release Annihilator CD* will be made available in mid-September for \$49.** Only 5,000 copies of this special CD release will be mastered, and they will be distributed solely as an instructional and informational exercise. Although the BBS on the CD program will be operational, it is not intended to be used as a commercial BBS because it will not have completed testing nor will it include full printed documentation.

The Pre-Release *Annihilator* CD has two functions:

Provide an early introduction to new technology for leading-edge sysops.

Establish eligibility for a staggering price discount on the purchase of the full product release.

Those who purchase a copy of the CD and invest the time in learning the new technology ahead of time will be rewarded with a 75% discount off the purchase price when *Annihilator* is released. Wildcat! BBS sysops who elect not to participate in the *Pre-Release Annihilator CD* special will be eligible for a 66.6% (2/3) discount. The following table outlines the expected manufacturer's suggested list price, the Pre-Release participant discount and the Wildcat! sysop discount:

<b>Product</b>	<b>MSRP*</b>	<b>75% off*</b>	<b>66.6% off*</b>	<b>Availability</b>
<b>Annihilator M2 (two node + local)</b>	\$149	\$37	\$49	4th qtr. '95
<b>Annihilator M16 (16 node)</b>	\$349	\$87	\$115	4th qtr. '95
<b>"Annihilator: M32 (32 node)</b>	\$699	\$174	\$230	4th qtr. '95
<b>8 Pack Node Increase</b>	\$199	\$49	\$65	4th qtr. '95
<b>UUCP Client (dial-up)</b>	\$149	\$37	\$49	4th qtr. '95
<b>Internet Pkg. (telnet, FTP, www, uucp, irc)</b>	\$799	\$199	\$265	4th qtr. '95
<b>MAPI Client</b>	\$799	\$199	\$265	early '96
<b>CODE Development Language &amp; IDE</b>	\$149	\$37	\$49	4th qtr. '95
<b>BBS Source Code</b>	\$799	\$199	\$265	4th qtr. '95
<b>SQL Database Client</b>	\$799	\$199	\$265	early '96
<b>Reports Client [wcPRO]</b>	\$149	\$37	\$49	early '96
<b>Billing Client [wcBILLING]</b>	\$149	\$37	\$49	early '96

\* MSRP - Manufacturers Suggested Retail Price; 75% off - to participants in the special Pre-Release *Annihilator* CD program; 66.6% off - to any Wildcat! sysop with a valid registration number

The CD will include an unlimited line count program, a dial-up UUCP client, Internet support for telnet in/out, ftp in, and email/newsgroup message tossing. It will also contain the wcCODE Integrated Development Environment and source code for the BBS operation.

To obtain a copy of the CD contact MSI direct.

The current DOS version of Wildcat! will continue to be supported and updated by its own separate team of engineers. We have no current plans for a native OS/2 BBS system and do not anticipate such development in the foreseeable future.

**Win'95 Facts STR FOCUS!**

***CLEARLY A POSITIVE STEP AHEAD***

## **MICROSOFT® WINDOWS® 95** **MORE POWER, MORE FREEDOM, MORE FUN**

With the Microsoft Windows 95 operating system, you can unlock the potential of your computer. So you can work even easier and faster. Explore exciting new possibilities. And make it all more fun. For years, millions of people worldwide have relied on MS-DOS®, Windows, and Windows® for Workgroups operating systems to help them work better and accomplish more. Now and for years to come, people will go even farther with the next-generation successor to these systems-Microsoft Windows 95.

For computer users everywhere, it's a giant leap forward. With the Windows 95 operating system, the things you do now are easier and faster. The things you've always wanted to try, from electronic mail to Internet connections, are now possible. And Windows 95 makes computers more friendly and accessible, so whatever you do, you enjoy it more. The first thing you'll notice is a redesigned graphical interface that's not only dramatically simpler to use, but more efficient and more customizable as well.

Plus, configuring Plug and Play-compatible modems, CD-ROM drives, and other peripherals isn't just easy, it's automatic with new Plug and Play technology in Windows 95.

You also gain easy access to a whole new world of possibilities. Windows 95 offers enhanced multimedia, more powerful features for laptop users, integrated and seamless networking, and support for traveling the "infobahn."



And because Microsoft Windows 95 is made to run the new generation of 32-bit programs, you can take advantage of powerful new features such as preemptive multitasking and multithreading that let you perform several actions at the same time. Windows 95 also runs your current MS-DOS-based and Windows-based programs in a more stable environment. Did we mention fun? Windows 95 offers larger, smoother video and enhanced support for fast action games. And every day, an easier, more efficient way of working takes the frustration out of computing. And puts back the satisfaction. All of which makes Microsoft Windows 95 one of the biggest improvements ever to come to PCs in general-and to your PC in particular.

**Easier and faster.** 

- The Start button is always visible. Click it anytime to use the full power of Windows 95 for opening programs, file management, system maintenance, and far more.
- The taskbar makes switching between multiple programs simple. Each time you start a program, a button for it is placed on the taskbar. When you want to use any program, just click its button.
- Plug and Play can free you from manually setting up hardware devices. Windows 95 detects and configures Plug and Play-compatible devices automatically.
- Long filenames make it easy to find what you're looking for. Names can be up to 250 characters.
- Windows 95 works with the hardware and software you already have, so you can get the most from your current applications for the MS-DOS and Windows operating systems.
- Increase your productivity with faster disk and file access and faster printing.
- Windows 95 virtually installs itself-you select a few on-screen options and the rest is automatic.
- Customize and use resources efficiently. Just click the right mouse button anywhere, and a menu appears with the most common commands to use with the object at hand.
- Even network installation is simplified with built-in client support for NetWare®, Windows NT™ Server network operating system, and Windows for Workgroups. Windows 95 also supports all major network transport driver standards.
- Windows Explorer makes your system remarkably easy to navigate by giving you a graphical view of everything on your computer. And that makes information easy to find.

### ***An open door to doing more.***

- Accomplish several tasks at once. Running 32-bit programs, Windows 95 offers preemptive multitasking and multithreading and runs programs in their own memory space.
- With built-in Microsoft Exchange Inbox, you can send and receive e-mail and faxes via one universal Inbox.
- **msn.** Sign on to The Microsoft Network,\* the exciting new online service that gives you Internet access, e-mail, the latest news, reference information, and more.
- Easily connect to your organization's network from anywhere. Built-in Dial-Up Networking takes the complexity out of remote computing, so you can connect one simple way, no matter where you are.
- Make your laptop computer even more convenient. Windows 95 equips it with a wealth of helpful features, including Briefcase for automatically updating files between two PCs, Plug and Play support for PC cards (PCMCIA) and docking stations, and Battery Meter.

### ***Instead of working at it, you can enjoy it.***

- Windows 95 takes the frustration out of computing with its improved interface, wizards to assist with common tasks, and a more powerful Help system.
- Faster, smoother video makes Microsoft Windows 95 awesome for multimedia programs and games.
- Multimedia titles of all kinds are easy to use with AutoPlay. Just pop in an AutoPlay CD and it runs automatically.

## **Performance Features**

### ***For working easier and faster***

- Start button
- Taskbar
- Great support for existing MS-DOS- and Windows-based applications
- Plug and Play
- Long filenames

- Letter MS-DOS support without MS-DOS
- Faster file and disk access; faster printing
- Easy installation
- Right click for pop-up command menus
- Out-of-the-box compatibility with NetWare and all major networks
- Supports all major network transport driver standards
- Windows Explorer enhanced file management tool

***For more possibilities***

- 32-bit preemptive multitasking and multithreading
- Microsoft Exchange Inbox
- The Microsoft Network
- Dial-Up Networking
- More convenient laptop computing

***For more fun***

- Faster, smoother video
- AutoPlay
- Enhanced support for fast action games

**Accessibility Features**

***For more use by more of us***

- Customizable fonts, sizes, colors, and mouse pointers for people with low vision
- StickyKeys, MouseKeys, FilterKeys, and SerialKeys for people with limited dexterity
- ShowSounds and SoundSentry for people who are deaf or hard of hearing
- Accessibility features easily adjusted through the Control Panel and taskbar
- User profiles and time-outs make these features safe and convenient for public and multi-use machines

**Specifications**

***To upgrade to Microsoft Windows 95, you need:***

- Personal computer with a 386DX or higher processor running the MS-DOS operating system version 3.31 or later and Microsoft Windows version 3.0 or later or OS/2® version 2.0 or later
- 4 MB of memory (8 MB recommended)
- Typical available hard disk space required: 35-40 MB (actual requirements will vary based on features you choose to install)
- One 3.5" high-density disk drive or CD-ROM drive
- VGA or higher-resolution graphics card

***Options:***

- Microsoft Mouse or compatible pointing device
- Modem/fax modem
- Audio card/speakers for sound

***To access Microsoft Exchange Inbox and The Microsoft Network:***

- 8 MB of memory
- 20 MB of additional hard disk space
- Modem required for The Microsoft Network\*

***Note:***

- System requirements for Windows 95-based programs may exceed system requirements described above for Windows 95.
- To get the full benefits of preemptive multitasking requires exclusive use of 32-bit, Windows-based programs such as those products bearing the Designed for Windows 95 logo.

**90-day, no-charge support.**

- In the United States and Canada, count on 90-day, no-charge support (toll charges apply) for all issues other than networking.\*\*

- Outside the United States and Canada, contact Product Support Services at the Microsoft subsidiary office that serves your area.



The easiest Windows yet. The improved interface of Windows 95 plus its 32-bit architecture make working with the system simpler and faster.



Easy mobile computing. Wherever you are, connect your laptop or other PCs to remote networks or online services.

Dial-Up Networking makes it simple to



Faster graphics and enhanced sound support help you get all the fun and excitement from multimedia programs, including today's hottest games.

\*The software to access The Microsoft Network is a feature of Windows 95. Access to and use of The Microsoft Network requires payment of a separate fee. \*\*Networking issues are defined as setup, installation or usage of Windows 95 in a networked environment. This includes LAN- or server-based setup, network administration, dialing into a computer, connecting to the Internet via a service provider, using MSN, and using e-mail or fax from within Windows 95.

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## MICROSOFT WINDOWS 95 REGISTRATION WIZARD

### Q & A

### SUMMER 1995

**Q: What is the Microsoft® Windows® 95 operating system Registration Wizard?**

A: The Windows 95 Registration Wizard is simply an electronic version of the paper-based registration card that will ship in the Windows 95 product box.

**Q: Must I use the Registration Wizard?**

A: No. You may use the paper registration card if you prefer. And just like paper-based registration, online registration is completely optional.

**Q: How does the Registration Wizard work?**

A: The Registration Wizard helps you step by step through the process of registering your copy of Windows 95. The wizard helps you provide the same information that you would fill out using the paper registration form. For example, the wizard starts by asking your name, company name, address and phone number. It then gives you the option of sending information about your computer system's configuration (such as the processor type, amount of memory and hard-disk space) and your hardware peripherals (such as your network card, CD-ROM drive and sound card). The wizard also asks if you'd like to send information about the applications on your system.

The wizard makes it easy for you to provide information about your system configuration, because it automatically queries the system registry of your computer and displays a list of your computer's configuration information. You can see all of the information, and you can choose to send or not send it.

Similarly, the wizard makes it easy for you to provide information about the applications you use, because it checks your local hard disk for the names of commonly used programs and lists on the display the names of the ones you have (a maximum of 12 are listed). You review the list, then choose to send or not send the information.

**Q: What is the difference between registering online and filling out the paper registration form?**

A: Online registration can be more accurate and convenient. It eliminates the need to write answers on a card and mail it. The wizard also checks your local computer and fills in some answers for you to review, so that you don't have to guess or look up system-configuration and application information. The wizard also conveniently sends the information to Microsoft Corp. via MSN The Microsoft Network, eliminating the need for the information to be manually entered into a database once it reaches Microsoft.

**Q: Can I choose to send some, but not all, of the information requested by the wizard?**

A: Yes. For example, you do not have to send the system-configuration information. It is completely optional. In fact, unless you explicitly choose to send the information, the wizard does not send it.

The same is true for the information about the applications on your system. You must choose to send the information, or the wizard does not send it.

**Q: How is the information sent to Microsoft?**

A: The information you choose to send to Microsoft is transmitted via MSN.

**Q: Do you have to subscribe to The Microsoft Network to use the Registration Wizard?**

A: No. You do not have to be an MSN subscriber to register online, and using the Registration Wizard to register your copy of Windows 95 does not make you an MSN subscriber. Signing up for The Microsoft Network is a separate process.

**Q: Why does Microsoft need the system-configuration and application information?**

A: The information helps Microsoft build better products and provides you with better product support. Information about users' systems — such as memory and hard-disk space, and the presence of a CD-ROM drive — helps Microsoft understand customers' configurations and therefore design products that meet the majority of users' needs. Knowing your exact system configuration and

the applications you run makes it easier for product-support specialists to provide fast, accurate telephone responses to your questions.

Like paper-based registration, online registration enables Microsoft to send you information about Microsoft programs that are tailored for your needs and interests. Just as with paper-based registration, the online registration information stays at Microsoft and is never provided to other parties. Occasionally, information may be sent to you about non-Microsoft products or programs when appropriate, but you can check a box in the wizard if you wish never to receive such materials.

**Q: Why should I register at all?**

A: Registration is optional. However, registering your software brings you a number of benefits. These benefits often include qualifying for special Microsoft product offers and upgrades to new versions of the software at special prices or at no charge, in addition to improved product support.

**Q: Can I see exactly what information is being sent to Microsoft when I register online?**

A: Yes. The wizard is carefully designed to allow you to easily see and review all the information before it is sent. For example, the dialog boxes about system configuration and applications do not support scroll bars. This eliminates any possibility that information scrolled out of view could be transferred without your knowledge.

**Q: If I choose to cancel out of online registration, will I have another opportunity to register?**

A: Yes. The Online Registration button is displayed on the Welcome dialog box for Windows 95 until the registration process is completed. Once registration is successfully completed, this button disappears.

**Q: Does the Registration Wizard track serial numbers or registration information about the user's registration of other products?**

A: Not at all. It also does not query computers on a local or wide area network.

**Q: Is this Microsoft's way of tracking down illegal copies of products?**

A: No. The Registration Wizard is not designed to be an enforcement tool of any kind and does not capture any information that would be useful in tracking illegal software. For instance, the information that is collected does not include serial numbers or other registration information about products installed on the hard disk. Thus, the Registration Wizard is not useful for fighting software piracy.

**Q: Do other companies offer online registration facilities?**

A: Dozens of companies in the computer software and hardware industries offer online registration facilities like the Windows 95 Registration Wizard. These companies include IBM, Compaq Computer Corp., PROCOMM, CompuServe Inc. and America Online Inc., to name a few.

**Q: Do any other Microsoft products use this technology?**

A: Windows 95 is the first Microsoft product to offer online registration as an option for the convenience of customers. We anticipate using this technology in future products. In fact, we plan for online registration to be offered in other Microsoft products soon.

**Q: How does the information sent to Microsoft during online registration differ from that sent in by paper-based registration?**

A: The information basically is the same, and it is used in the same manner by Microsoft. Online registration simply uses the system to check the configuration and installed applications and offers you that information, which makes it easier for you to respond precisely to the registration questions.

**Q: Can I be sure that additional information will not be sent accidentally to Microsoft from my hard drive or memory?**

A: The Registration Wizard sends no information without your explicit permission. Information cannot be sent accidentally from your hard drive or memory. The Registration Wizard uses a memory buffer that is first cleared of all information (initialized to contain all 0s). Your registration information is copied into the buffer one string at a time — copying only the exact information you see on the display. There is no way for the Registration Wizard to upload information that you did not see on the display.

If you want to view the exact information gathered during your online registration, you can view the REGINFO.TXT file found in the C:\WINDOWS directory of your local computer.

**Q: Can I remove the wizard from my computer if I want to?**

A: Yes. Your network administrator also can remove the Registration Wizard during batch setup of Windows 95-based computers.

### IBM DOOMED OS/2 2.0!!!

In comp.os.os2.advocacy, gordon@lab.lwpi.com (Gordon Letwin) wrote:

In an earlier posting to c.o.o.a I promised a posting about OS/2's recent past and future. Originally I'd planned on posting this on Aug 24, but real life events are foreshadowing things so I'll post a bit early.

IBM doomed OS/2 2.0, in terms of a successful desktop system, almost from the start. The folks at Microsoft realized this; we were always amazed that so many folks at IBM didn't. I speak here not of the faceless low level drones at IBM but the senior guys who are, *for the most part*, pretty smart guys.

#### **By successful I mean by either of two metrics:**

1. successful in market penetration. To run on enough desktops that developers would consider writing for it first. Heck, to run on enough that developers will consider writing for it \*at all\*.
2. successful financially. If it turns an acceptable profit then that by itself is generally sufficient. But note that a 2 or 3 billion dollar product needs to turn a \*big\* profit 400 million net, maybe \$1 billion a year in gross sales.

Sure, the product can be "successful" as an O/S layer for machines dedicated to custom apps, such as airline reservation terminals. Of course, \*anything\* that can support a custom app can be successful in this role. I'm sure that there are still Pick machines out there. But this role is uninteresting because it fails to meet either of the two above criteria.

IBM will never earn back even a fraction of the billions blown on OS/2 by selling it into this niche. I'm not even confident - although this is admittedly out of my area of expertise - that they can even run a positive cash flow selling to such a small market. What was OS/2's problem? Why was it doomed? Because it's main attraction was as an engine to run MS -Windows applications. The problem is one of standards, and one of critical mass. Standards are of incredible importance in the computing world. They're critical in other domains that folks don't often think about. Your hi-fi CD player, for example. It plugs into your preamp. And that plugs into your amp. And that connects to speakers. Each of those can, and usually does, come from a different manufacturer. The RCA connectors, and the signal levels themselves, are standardized.

Standardization is a big plus in the computer field. You're much better off having thousands of products and vendors compatible with a single standard, even a mediocre one, than having dozens of products, one or two each for each of a dozen fragmented standards.

For example, I bought a Tektronics 222 scope. It has an RS232 port on it to upload and download waveforms. It came with a floppy disk with driver software on it. For which processor and OS was the software written? And what was the disk format? Guess. The fact that it's not hard to guess is exactly my point. If there were 5 standards for PCs then that software would cost 5 times as much and it just wouldn't exist at all.

Note that even the RS232 port itself is a standard. And an inferior one; sending stuff at 9600 baud over a 7 wire connection is a travesty by modern standards. But it's a travesty that all machines can understand. So this is the classic chicken and egg problem. Who will buy OS/2 when it has no apps, and who will write apps then no one has bought OS/2?

A fundamental problem. When Microsoft and IBM first came out with OS/2 1.1 we expected the 640k limit to drive us over this barrier. The thinking was that because living in 640K was so terribly painful folks would upgrade to OS/2 1.1 and buy all new OS/2 apps because the pain was too great. The knowledge of that reality would cause app writers to invest in writing the apps, and the feedback engine is started up, if a little slowly.

The miscalculation came about with the 386 coming out sooner than we expected. And then various folks writing DOS extenders for the 386, which took a lot of the pressure off of the 640K barrier. When the 386 did come out earlier than expected and we saw what was happening,

Microsoft wanted to abandon OS/2 1.0 before it was released and work on a 386 -only version, one that would be able to emulate more than one DOS box and do a better job, at that. But, as you'll remember, Compaq was the first to have a 386 box; IBM was slow to follow suit. IBM was strong in 286's and weak in 386's, so they were strongly opposed to dropping the 286 in favor of leapfrogging to the 386 and they insisted that we stay the course for the 286.

Another problem that came up here was that IBM didn't want us to use the windows API for the graphical environment under OS/2. Many key folks inside IBM had always hated Windows. IBM had this crazy thing called TopView, it was a character oriented windowing scheme and not very good. Bill Gates, myself, and some other folks made several trips to Boca Raton to try to explain to those guys why a character oriented windowing scheme was obsolete before it was even written, but to no avail. One

of IBM's most major problems is that although their top guys may be smart, they aren't technically savvy. And their low level guys are often neither.

IBM doesn't promote on the basis of your skills and ability; they promote on the basis of seniority and other secondary factors. So the guy who makes these decisions often doesn't know what he's doing. And he doesn't know that he doesn't know, because his peers are equally butt-ignorant too. So these guys can never figure out how other folks, including but not limited to Microsoft, keep doing better! Must be dumb luck, they think. I always agreed that it \*was\* dumb luck. If you catch my drift...

So the technical guys to whom we made our presentation thought that a crude character oriented interface (and the other major problems that I've since forgotten) was good enough. It said "IBM" so people would have to buy it. And their very senior managers couldn't understand our argument, and their own folks said that we were wrong, so that was that.

TopView died a very quick death and Windows, while not a red hot success at the time, did reasonably well. I don't understand the internal personalities, etc., but the upshot was that several key people at IBM would turn livid at the mention of Windows. So one of the "costs" of doing OS/2 with IBM was - as a form of punishment - that OS/2 would \*not\* have a windows API. The windowing API, in fact, would be designed by some IBM guys. This was their revenge.

We thought that this was stupid - refusing to run these hard-won windows apps, shooting ourselves in the foot before OS/2 was even coded! But it was the price for getting IBM on board and we figured that - with IBM and Microsoft together, and the 640K crunch looming, that the success of OS/2 would appear so inevitable to the ISVs that they'd write for it anyhow and the success feedback would be started. Now you know why the OS/2 windowing API even puts the screen origin at a different corner! They wanted to be as different from Windows as they could as a matter of personal vendetta.

OK, as we know, the 640K pressure was helped a lot by DOS extenders, 386 machines quickly took over from 286 machines, and IBM and MS were left with a product that wasn't going anywhere fast. We also didn't have application critical mass. So we started on OS/2 2.0, together, a couple of years later than we should have. This would be a 386 version, have good multiple DOS boxes, and hopefully pull the fat out of the fire. At roughly the same time our windows group - which was not our prime focus - was working on a 386 version, as well.

The windows product - 3.0 - came out and did very well indeed. IBM was unhappy. They were unhappy cause they thought we were being disloyal to OS/2 by writing a competitor. And they were running scared because it was their old enemy Windows - the ones that a lot of IBMers told their bosses would never be a success! MS's reaction to the Win 3 success was to say that OS/2 had to support the Win 3 API - that we'd then have a "low end" kernel - windows - and a high end kernel - OS/2 - to run the app base. IBM said that we either had to stop development of windows - not just as an OS/2 API, but completely - or we were fired from OS/2 the OS/2 project.

We still believed OS/2 2.0 could be made a success. But Win 3.0 was \*already\* a big success. It seemed just stupid to us to kill a healthy animal in the hopes of nursing a sick one into recovery! So given that choice, we kept Windows and IBM kicked us out of the OS/2 team. Also note that IBM insisted on no Windows API in the product, so we'd have to drop Windows and abandon the apps. We'd seen how hard it was to build windows critical mass and to just shoot all of those apps, and all of those ISVs, and all of those users seemed completely out of the question.

It's extremely ironic that within a few months, IBM was announcing that OS/2 2.0 would support the Windows API! It was for that that they kicked us out! It was clear that there are a lot more emotions than intellect running things over there, when they'd make a decision, let it drive a terrible divorce, and then un-make the decision a little while later!

Why was IBM doing these random things? I dunno; they never invited me to their inner strategy meetings. But I'd guess that they were driven too much by hatred of Windows, hatred of Bill Gates, envy at MS's success, etc. The hatred and envy of many of IBM's folks - even senior folks - is well documented in various books and articles. It's my opinion that they let their emotions cut off their noses to spite their faces. Their first goal wasn't for OS/2 to succeed, it was for Microsoft to fail.

But here's the problem with OS/2 in a market where Windows has been very successful and has a big share. Win 3.0 had the critical market share, and OS/2 didn't. OS/2 could be a good platform to run Windows programs, but very few vendors would write for the OS/2 API. Why write for OS/2 and sell into a world of 5% of machines, when you can write for the Windows API and sell to \*all\* of them, OS/2 included!

If OS/2 had some good features - like HPFS :- ) - then folks could get the advantages while running Windows apps, you didn't need to use the OS/2 API to take advantage of HPFS, or the shell, or whatever. So there's no strong motivation for ISVs to hurt themselves by writing to the OS/2 API. What hurt the good news for OS/2 is that - with its WIN 3.0 support - it could run from a massive pool of applications and therefore be an interesting system to some customers, even in its infancy. The bad news is that there'll never be a significant number of apps using the OS/2 API.

So OS/2 could have a successful career as a "high end" windows engine. So that does IBM do? They come out with their infamous "Curtains for Windows" campaign! Microsoft controlled the Windows standard. By that I mean that if we say that future versions of our OS's are going to have some new features - such as OLE - people take that seriously.

Whereas if IBM decides to extend the Windows API - which they could easily do, from a technical standpoint - people know that only a small percentage of machines will be able to support that extension, so they won't use it, and it languishes.

It's extremely hard to do development work on an operating system when someone else controls the standard. "Control" in this case is a matter of public perception. For example, Microsoft was once very big in the UNIX world. In fact, we considered it our candidate for the future desktop operating system, when machines got powerful enough to run something good. We were the worlds biggest seller of UNIX systems. DOS was, when we first wrote it, a one-time throw-away product intended to keep IBM happy so that they'd buy our languages.

The UNIX contracts were all done when Bell Labs was regulated and couldn't sell UNIX into the commercial marketplace. So although they wrote it and were paid royalties, they couldn't develop it in competition to us. But after a few years that changed. Bell was deregulated and now they were selling UNIX directly, in competition to us! They might sell it for cheaper than we had to pay them in royalties! But that wasn't the real killer, the real killer was the Bell now controlled the standard. If we wrote an API extension that did X, and Bell wrote an incompatible one that did Y, which one would people write for? The ISVs know that AT&T was a very big company and that they'd written the original, so they'd believe that AT&T controlled the standard, not MS, and that belief would then define reality. So we'd always just be waiting for what AT&T announced and then frantically trying to duplicate it.

Bill Gates knew, right away, that there was no strong future in UNIX for us any more. Fortunately at that time, DOS was taking off and we were learning, along with everyone else, about the power of standards. So the primary OS team - the UNIX guys - joined with the secondary OS team - the DOS guys - and the earliest versions of OS/2 were born. (This was before IBM came on board, so it wasn't called OS/2!)

So to get back to the main track, IBM has a product which could become a successful windows executive. But they don't control the windows standard, Microsoft does. So a wise company would enter into some kind of formal or informal relationship with MS. MS would be helped by the presence of this high end windows executive - it makes the windows API more attractive - and a cooperative venture would be born. But instead, \*unbelievably\* - IBM challenges us publicly to a fight to the death! "Curtains for windows", indeed! Yes, IBM could add WIN 3.0 support because they had the WIN 3.0 source code, but their contract which gave them that source was due to expire soon! The entire survival of OS/2 as a product depends upon that contract, and their nasty ads, their character assassinations (Hi, J. Soyring!) and their "curtains for windows" didn't leave much chance of our ever extending their contract!

Why do this crazy thing? Again, I speculate that they let their envy at our success, and their anger over their own past failures, warp their thinking. They wanted to hurt us more than they wanted to help themselves. Also, IBM grew up in the days when it had a stranglehold on the industry and they dreamed of returning to that stranglehold. The Microchannel was intended to achieve that, but it failed. Now if they could own the only OS standard they could use that to leverage their hardware and regain dominance in both fields. The brilliance of the prospect of returning to their past glories blinded them to the fact that it wouldn't work.

So that's where Microsoft has been sitting for the past two or three years. Every few months I read some c.o.o.a and I marvel at all of the folks there that just don't get it. They argue about how OS/2 now has a 3% market share, or is it 5%, and they think that that means anything. It's like two race cars - one with hundreds of gallons of gas - and a 20 lap lead - and the other way behind with only a cup of gas. And it's proponents are crowing that it's slowly gaining!

Also, I see folks argue about the sales figures that show that OS/2 apps don't sell worth a darn, try to deny the fact that there aren't very many widely interesting OS/2 apps available. Nobody seems to understand why there aren't - and won't be - big draw OS/2 apps available. And people think that the "5%" penetration number contradicts the "no OS/2 apps sold" number. Every time I'd marvel at how folks could just look at it in the face and not understand what that means.

It means that OS/2 is selling, however well it does, as a Windows engine. That's why some number of copies have been sold, but very few OS/2 API apps were sold along side. So OS/2 is a windows engine, and that engine is going to jump the tracks each time an improved Windows ships. It will take IBM two or three years to reverse engineer the new stuff, and by that time MS will have it's \*next\* release out. You can't establish your own direction, and you can't play catch up. It's just an untenable position. MS refused to get into that position with AT&T, yet IBM burned all of it's other bridges \*before\* it crossed them. The only way to live in that kind of a situation is to cooperate with the company that controls the standard, not slander and belittle it.

The only thing that interested me about this was making bets with my friends on how long it would be before Lou Gestner wised up. Mr. Gestner, whom I don't personally know, is clearly a very sharp guy. But he was a cookie salesman and didn't understand the kind of dynamics I've discussed above. He had to take the word of underlings - guys who spun crazy tales of somehow overthrowing Microsoft, IBM regaining it's rightful position as ruler of the world, "curtains for windows", and the incredible profits that would come from an IBM stranglehold. It sounds good if you don't understand the real underlying dynamics, and IBM desperately needs major new profit centers, so these guys convinced Gestner to support them.

But, as I've said, while Gestner was ignorant, he isn't dumb. And he won't be ignorant forever. Eventually he'll come to realize that the OS/2 emperor has no clothes. So my friends and I would occasionally speculate when that might be - 6 months, 12 months, 24 months, etc. There was no doubt \*what\* would happen, it was just a matter of \*when\*.

Clearly, Gestner has reached that point. First, note that IBM said that they weren't even going to try to modify OS/2 for the new WIN95 APIs. That means that they don't want to launch a 2 year product because they figure there'll be nothing there in 2 years to run that API. IBM has to run behind Microsoft playing "catch up", and they've stopped running and are walking slowly, panting. This is a critical sign.

Secondly, Gestner is saying publicly that the OS battle is the "previous battle" and that groupware is now where he should fight. I won't argue with that, but this is as clear a statement as you'll ever find that they've given up on OS/2 as a mainstream desktop system. It's not curtains for windows, but curtains for OS/2. For anyone who has eyes to see, IBM has thrown in the towel on OS/2 as a mainstream, successful operating system. They'll continue to support it for the folks who are using it as a dedicated platform. But that won't go far or for very long, IMHO.

There are two problems. First, it's my uneducated guess that they can't even turn a positive cash flow developing it for dedicated platforms. Even if they just write off the billions blown, IBM is not an efficient developer and they'll have a hell of a lot of programmers writing and supporting it.

At one time in the past IBM might have lost money for 10 years as a strategic move to increase customer confidence in IBM support. But as their mainframes start melting seriously IBM won't be able to afford such luxuries. It's my guess - and again, I admit that this is outside of my area of expertise - that there'll be a lot of scouts-honor promises, but that after a few years of loosing money IBM will phase out of OS/2 altogether, one way or another.

Note that they *\*have\** to spend a lot of money developing it, even for this niche. Otherwise stuff like NT - which is so much cheaper because of the larger number of copies - is too attractive. NT, for example, would have the latest technology and a stagnant OS/2 wouldn't. NT would have the latest tools and compilers, and a stagnant OS/2 wouldn't. So even as a niche system, OS/2 can't be just milked, it has to continue to undergo development. And it will be damned hard for anyone, especially IBM, to make money doing that.

So, in a few nutshell, that's it. IBM doomed OS/2 years ago when they said it was "us or them". Folks at MS walked around with their mouths hanging open for days - we couldn't believe that IBM was that dumb. And now you see the result. OS/2 is dead as a general purpose operating system. And I, for one, am highly skeptical of it's longevity as a dedicated platform.

### ***Gordon Letwin***

*not a Microsoft spokesperson*

p.s. - please note that all of this is my personal opinion. I don't set or participate in Microsoft strategy, I'm just a programmer. None of this represents Microsoft's view of the situation, either formally or informally.

### **Editor Note:**

Looks like all is not quite right in Warped land... its a shame. It also appears that they are taking some kind of weird delight in letting the World know the Red Chinese Government is using El Warpo. If it were I, I would fastidiously hide that factoid as best I could.

### ***Thank God the Chinese Reds decided to release Harry Wu.***

They're still an oppressive, hateful government. Just ask those in forced slavery manufacturing textiles and all sorts of dry goods for less than a bowl of food per day. The really sad part is most of those in this "forced slavery" are either political prisoners and children.

The slimy Entrepreneurs (some Americans included) who are taking advantage of this human misery should be sent there to live and stripped of their citizenship. They are Americans not to be proud of. They also cast a gray pall of disgrace upon the rest of the USA and especially those who died bravely fighting the Chinese Communists.

Come on Pres. Clinton.. Newt G.? ? Bob Dole?? Why is this great nation allowing this to happen? ...And Clinton wants to send Hillary to visit the principals of the Chinese Government?? Isn't that literally giving tacit approval to the Chinese Reds ..of their ongoing nefarious violations against human rights?

## THE OS/2 WARP CORNER STR FEATURE

*This week, we are previewing a hot piece of OS/2 software from Stardock Systems called Object Desktop.*

### ENHANCE OS/2 WITH STARDOCK'S OBJECT DESKTOP

by Matt Hite

While most of the mainstream software industry is busy preparing for the arrival of Windows 95, Stardock Systems has been hard at work giving OS/2 Warp a new-and-improved look. Called Object Desktop, Stardock is hoping that this facelift will do for OS/2 what Norton Desktop did for Windows.

Object Desktop is described as a set of new "objects" which integrate seamlessly into the existing Workplace Shell, providing an enhanced operating environment. Because of the object-oriented design of OS/2, not only can additional objects be created, but the default "stock" objects can be altered in both appearance and behavior. Object Desktop does both, effectively offering a 3rd party upgrade to an already superior operating system.

#### PERFORMANCE

When folders are opened in OS/2, the Workplace Shell individually retrieves each icon from their various locations on the hard disk and displays them. The icon retrieval time is usually brief, but is comparatively slower than the equivalent action in Windows. The

HyperCache feature attempts to address this shortcoming – frequently used folders can be cached so their contents are always held open in memory, providing instantaneous access. Another speed improvement is the HyperDrive option. Instead of searching the system for the icon associated to a data file, HyperDrive will attempt to make its best guess based on the file extension. After these icon "predictions" are displayed, HyperDrive can then optionally use the standard Workplace Shell icon retrieval facilities to correct any erroneous guesses.

#### INTERFACE

Object Desktop provides folder objects with a new look. Typically, OS/2 opens a new folder object when accessed from a parent folder. This can lead to a chaotic and disorganized desktop. A new browse mode option decreases desktop clutter by repopulating the currently active folder with the child folder's contents.

Two new buttons are also added to the folder object's window frame. The folder traversal button (denoted by a left arrow icon) allows the user to easily move back up the folder object hierarchy. The other button (a prominent "X") permits one -click closing of folder objects. A status line also appears at the bottom of the window frame, denoting the number of objects occupying the folder and the amount of physical space (in kilobytes) they consume.

#### UTILITIES

The Control Center utility provides a visual representation of system usage, which includes memory, drive, and swap file usage graphs. A miniature CPU-usage line graph and digital clock is also shown on the Control Center console. Another console feature is the Object Browser, which is similar to the Windows 95 "Start" menu. Its user -adjustable menus provide easy navigation through an object's hierarchy to launch an application, eliminating the need to open folder objects on the desktop. For example, my Browser includes the folders I access most frequently, such as the Drives folder and the System Prompts folder.

Virtual work areas can also be managed from the Control Center. Using the virtual desktop manager, applications and folders can be opened in their own work-area. Switching desktops is simple -- just click on the thumbnail representation of the work-area. Virtual desktops aren't for everybody, but for those of us whose monitors are stuck in a low resolution, they can be helpful. New archive template classes are also included with Object Desktop.

Creating an archive is as simple as dragging the ZIP template onto your desktop and copying files into the new folder. And because all OS/2 file associations will remain intact when browsing an archive, access to an object's appropriate viewer or application requires only a double-click.

To make access to applications from the Launchpad more organized, users can opt to use Stardock's Tabbed Launchpad. With these tab headings, programs can now be arranged into categories. As each tab is clicked, the icons are updated to reveal the items associated with the category heading.

If you don't like a launchpad cluttering up valuable screen space, short-cut keys can be assigned to program objects. However, the real power of this feature is the ability to associate multiple objects to one hot -key. I use this feature to login to my Internet service

provider and download my email. By assigning both programs to the same hot -key, I can effortlessly start it all in the background and save myself a few mouse clicks.

To manage files, folders, and other objects, Stardock has included an Object Navigator utility, which resembles the Windows 95 Explorer and provides quick, easy access to the directory structure of each drive. The Navigator possesses much of the same abilities as OS/2's Drives object, but organizes and displays directory information in a more intuitive and useful fashion. Not only can you launch programs from within the Navigator, but objects can be moved, copied, shadowed, and shredded using the buttons along the window border. And since this is all integrated into the Workplace Shell, file associations are fully supported. For those of us who like a simple and easy way to maneuver around the desktop and file directories, the Object Navigator proves to be an elegant alternative.

### **THE CHALLENGE**

If Windows 95 poses a threat to Warp, it's not because it is more powerful or more stable; people may simply find Windows 95 more visually appealing. But Stardock has succeeded in meeting Microsoft's challenge by transcending the forthcoming Windows 95 interface. Object Desktop is more than a suite of applications and operating system enhancements -- it is what OS/2 advocates have been waiting for all these years.

This review was based on a beta copy of Object Desktop. The release version will begin shipping in late August of 1995. Stardock Systems can be reached at (313) 453-0328 or via Internet email at wardell@ibm.net. Matt Hite is a freelance writer. He can be contacted at sexhoc@netcom.com.

[Thanks to Matt Hite for granting us permission to reprint this article. It can be found on the Internet at <http://www.mother.com/iomag/io795/objdesk.html>]

As always, direct any feedback to our editor, Ralph Mariano, at [rmariano@streport.com](mailto:rmariano@streport.com), or directly to me at [mike.restivo@np.newpower.com](mailto:mike.restivo@np.newpower.com) Happy Warping!

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**ATTENTION—ATTENTION—ATTENTION**

**STReport's MAILBAG****Messages \* NOT EDITED \* for content****SERVICE NEEDS A TUNEUP?**

Subject: #109242-Sell on other service -  
 Msg Number: 109258  
 From: Frank Heller 74544,2214  
 To: RICHARD RIVES 76031,1247  
 Forum: ATARIPRO Sec: 01-Forum Business  
 Date: 20-Aug-95 14:43:36

Richard:

As a former GENie subscriber, I must say that it is true that the Atari section is decently active and reasonably well run, by the sysops there. Unfortunately, Aladdin won't really help, as the up/downloads are unbearably slow and, in spite of the custom front end that Aladdin (if it were bug free) might provide, it is still an archaicly S L O W system. Let's face it, GENie is years behind the times. The Midi and music sections were the main reason I joined and then subsequently left. The sections were run by (for the most part) uncaring, snotty and incompetent weasels who couldn't upload a user file if there lives depended on it. In a one year (that's right, ONE YEAR) search, only 20-30 files were uploaded into the midi section...and that was done by an ATARI sysop helping out. I miss the Atari section...but I just couldn't tolerate the system. Just thought I'd tell this little story.

Regards,

Frank Heller

**BUGS in WARP?? ...Really??**

Date: 08-21-95  
 Msg # 9169  
 From: JERRY BURSZTYN  
 Conf: (121) ITCSysopOpsE  
 To: BILL LANSCHE  
 Stat: Public  
 Subj: More stable

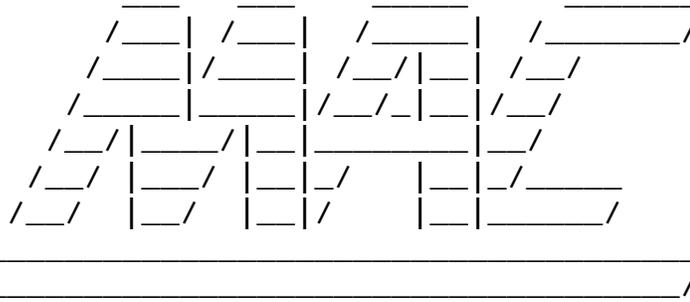
OK, now I know why my board was being so unstable in the short past. SIO 1.52 had a nasty little bug that would not reset the DTR/DSR. Now that I am running 1.53, my board is a LOT more stable.

Also, I just received the new service pack for OS/2 Warp (XR\_W009.\*DK). This fixes a LOT of bugs (45K in a text file list |>) and the one that caught my attention the most is a fix that repairs HANGS on Pentiums, DX4's and newer DX2/66's. I so, I will benefit because I use a DX4. And after that, I really will be more stable.

See, I strive to be better. So, I can say that even though my board was unstable, I am WORKING to get it all fixed.

Pall

=== [Team OS/2] / [iMAGe] / PRICE-LESS COMPUTERS ===  
 E-MAIL:pall@getnet.com (85:823/607)



 Apple Computer **MAC/APPLE SECTION**

**John Deegan, Editor** (Temp)

**IS THIS FOR REAL? STR SOUND OFF**

***A TRUE PICTURE OF SOUR GRAPES!***

## **IS THIS GUY FOR REAL?**

This writer, for the Orange County Register, really did let loose with an emotional tirade against Windows 95. What was his real purpose?? Was he well informed? Read this item and see for yourself. If you feel you have something worthwhile to offer, send it to us for publication.

ANALYSIS: Take Your Windows PC and Toss It; Macs Are Clearly Superior

By Stephen Lynch  
The Orange County Register, Calif.  
Knight-Ridder/Tribune Business News

Aug. 19--What's on my PowerBook? Well, whatever it is, you can be sure I can find it. Which is more than I can say for Windows -- where user-friendly operating system is an oxymoron. Yet Apple is scoffed at, sneered at, reviled by Ivy League Ph.D. candidates for whom sadomasochism is the fine art of DOS. Through bullying and intimidation, they have convinced a population that the road hard traveled is the road to heaven -- electing one of their own, Bill Gates, tollman.

Apparently a good print job or modem connection is an accomplishment unappreciated without a good afternoon of reconfiguring your system. Now there is Windows 95, in which Microsoft blatantly rips off the Macintosh operating system in an effort to reinvent the wheel. It's like Marco Polo coming back from China with pasta, and then Italy taking the credit for the rest of history.

Inside Apple, officials have started using the slogan Windows 95 is Macintosh 89. Seeing as how Microsoft has finally started incorporating plug and play and hierarchical menus into its operating system, I'd say Windows 95 stole Macintosh 89."

Like many of Apple's converts, I love my Mac more than I love my friends. The computer's certainly more reliable, hardly ever snips at me, never makes fun of me (unless I easily configure its sound system to spout taunts) and fits into my trunk. My friends won't fit in my trunk unless I'm committing a felony. For you PC slaves still unconvinced that easy -to-use does not mean stupid, I use Microsoft's own crown jewel as argument. Windows 95, the most overhyped sequel since Batman Forever, is Gates' concession to simple.

Suddenly there is a Recycle Bin to easily delete files (the Macintosh Trash Can). There is a friendly Start button from which programs can be launched (the Macintosh Apple Menu). Shortcuts can be created on the desktop for easy access (an imitation of Mac aliasing). Gates cribbed his classmate's notes so thoroughly I'm surprised he remembered to change the name of the program.

The reason for all this thievery is simple -- Microsoft knows it cannot attract new customers without an easier interface, or ever hope to shake faithful Apple users from their Macintoshes with Windooze 3.1. Truth is, they're never going to be able to convert

the Mac users. I, for one, am required to use Windows 95 for my job. But my sanity requires my PowerBook 520. My portable is useful. It's fun. It's easily configured to elicit soundbites from The Prisoner and screen savers from Star Trek. It doesn't have an operating system that eats up most of my hard disk space.

And in the same month that Microsoft unveiled an operating system that takes a fortnight to load, Apple unveiled the PowerPC 9500, which moves like a jackrabbit on hot asphalt. So why do PC users make up more than 80 percent of computer owners? Why is there such a blatant prejudice against Macintosh users? My theory -- there's a secret coalition of corporations (the same one that had JFK killed and introduced New Coke) that pays off journalists to keep the Windows machine alive.

After all, without such a product, how would all those training, repair, hotline companies survive? Microsoft has generated a cottage industry of people who fix bugs. Therefore I call on all Mac users to take to the superstores and toss Pentiums off the roof like Yankees at a tea party. With our PowerPCs in tow and our single-button mouses a-clicking, we can rout that troll troll and introduce the world to simple nirvana.

***Give me Macintosh or give me death.***

Stephen Lynch can be E-mailed at [number6\(at\)ocr1.freedom.com](mailto:number6(at)ocr1.freedom.com)

#### **Editor Note**

Beginning next week, we shall be presenting a series of obviously "Apple" approved attacks upon Windows 95. Like the article above, we ask that you read it and see if you have something to say. We feel the above article reeks of the odor of fear... Fear that the release of Windows 95 is the beginning of the end for MAC as we know it. How do you feel about this?? Let us hear from you.



#### **ATARI/JAGUAR SECTION**

**Dana Jacobson, Editor**

#### **From the Atari Editor's Desk**

***"Saying it like it is!"***

I've been having a ball playing around with a CDROM on the Falcon, when I've been able to find a few spare minutes. Imagine a 600+ mb hard drive partition, loaded with software. Or, imagine the same thing loaded with clip art, pictures, animations, and more. Amazing - it's something Atari users should have been able to use years ago.

I was hoping to have a review of a couple of the CDs that I've been looking at, but some weird split-shift hours at work made my productive "leisure" hours almost negligible this week. I'll keep working on it, though. Atari users who either use multiple platforms, or moved over to the PC side of things will enjoy knowing that a Gemulator for Windows 95 has just arrived. So, if you want the new OS, but still want to use Atari software, Gemulator 4 is for you. We've got the news of this new product from Darek Mihocka, below.

Speaking of Windows 95, after all of the hype, it's amazing to see the number of articles on television, newspapers, and magazines that are covering this product. What's even more amazing is how much negative coverage this product is getting! The product may be a good one, most say, but what a typical user will need to accommodate this new operating system is the problem. I won't pretend to understand PCs and Windows 95 - I can't. But, after reading a number of these articles, I'm glad I'm not face d with the decision to upgrade!

Until next time...

## GEMULATOR 4 Atari STE Emulation Card For Windows 95

August 21, 1995

For additional product information contact Darek Mihocka at:

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MSN: BRASOFT  
World Wide Web: <http://www.halcyon.com/brasoft/>

### ***Introducing Gemulator 4***

Branch Always Software is proud to introduce Gemulator 4 For Windows 95, the world's first Atari ST and Atari STE emulator designed specifically for use on the new Windows 95 operating system. Gemulator 4 turns your PC into an Atari clone with many of the features of a high end Atari Mega ST or Atari TT030 computer, yet it allows you to run Atari ST and STE software in a window right on the Windows 95 desktop, side-by-side with Windows and MS-DOS programs.

Gemulator 4 is the latest product in our family of Atari 8-bit and Atari ST emulators. Branch Always Software was the first to release an Atari 130XE emulator for MS-DOS last year (PC Xformer 3.0), the first to release an Atari ST emulator for MS-DOS (Gemulator 1.0) in 1992, and now the first to offer an Atari STE emulator for Windows 95.

If you have Internet access or use an online service, you can browse our Internet World Wide Web page at <http://www.halcyon.com/brasoft/> to see a screen shot of Gemulator 4 running on the Windows 95 desktop. Our web page also has an up-to-the-minute computer dealer listing as well as additional product information about Gemulator 4 and PC Xformer.

Gemulator 4 emulates all of the standard Atari STE video modes and supports 360K and 720K Atari floppy disks. It also supports CD-ROM, high resolution Super VGA and Moniterm graphics modes, up to 14 megabytes of emulated Atari ST memory, up to 4 modems and 3 printers, STE hardware emulation including blitter chip emulation, 4096 colors, stereo sound, and more.

The Gemulator 4 emulation card plugs right into any 8-bit or 16-bit ISA slot in your PC and comes pre-installed with TOS 2.06. Additional sockets on the card allow you to plug in earlier versions of TOS (such as TOS 1.0 or TOS 1.4) for compatibility with very old Atari ST software. Once the card is plugged in, simply copy the Gemulator 4 emulation software to your Windows 95 desktop and double click the Gemulator 4 icon. Various settings, such as the amount of Atari memory being emulated, the hardware mode (Atari ST or STE), configuring the printer and modem ports, and other options can be changed on -the-fly with an easy to use dialog box and a few mouse clicks. No AUTOEXEC.BAT or CONFIG.SYS files to edit, no .INI files to edit, no MS-DOS to mess with, period!

With Gemulator 4 For Windows 95, you can run your favorite Atari ST and STE applications, such as Pagestream 2, Calamus SL, Word Writer, GFA Basic, FLASH!, Tempus II, Prism Paint, Neodesk, Degas Elite, Laser C, and hundreds of others.

You can pay \$900 for Calamus SL for Windows, or you can use your existing Calamus SL on Windows 95 now. Which would you prefer? Waiting for Pagestream for Windows? Keep waiting! Most Atari software will never be ported to Windows. With Gemulator, it doesn't have to be!

## Pricing and availability

The English language version of Gemulator 4 For Windows 95 begins shipping August 24 and will be available from Atari computer dealers in the United States, Canada, the U.K., and Australia by September 1. German, French, and Dutch versions will also be available within a few months. See ads in Atari World, ST Informer, ST Applications, and other magazines for details.

The list price of Gemulator 4 for Windows 95 is \$219.95 U.S. complete, which includes the emulation card, emulation software, a 40 page manual, and TOS 2.06 ROMs installed. In the U.K. the price is 159 UKP complete. Due to fluctuating exchange rates, prices in other countries will vary, so call your dealer.

Existing users of Gemulator 1.0, 2.0, 2.1, or 3.0 can upgrade to Gemulator 4.0 for only \$59.95 directly through Branch Always Software or participating Atari dealers. TOS 2.06 ROM upgrades are also available for about \$60.

Beware of imitators. Other Atari emulators now on the market cost up to 3 times as much as Gemulator 4 and may run slower. Some don't even use real TOS ROMs. None offer the list of features that Gemulator does. Gemulator was the first and is still the best Atari ST emulator on the market.

## Hardware requirements and performance

Gemulator 4 runs on any 486 or Pentium based PC with at least 8 megabytes of RAM, an 8-bit or 16-bit ISA card slot, and which is running the released version of Windows 95. We recommend using a "Windows accelerator" type VGA card for best performance. A mouse, modem, printer, joystick, and sound card are all optional but recommended to make full use of Gemulator's features. Gemulator 4 does not run on 286 or 386 based PCs, nor does it run MS-DOS, Windows 3.1 or OS/2 Warp. A Windows NT 3.51 compatible version of Gemulator 4 will be available in a few weeks.

To get an idea of what kind of speed to expect from your PC, the following list shows the speed of the PC's processor and the corresponding approximate emulation speed of Gemulator 4 when running on Windows 95:

486 (25 to 33 MHz):	8 MHz 68000 (e.g. Atari 1040ST)
486 (66 to 75 MHz):	16 MHz 68000 (e.g. Mega STE)
Pentium (60 MHz):	16 Mhz 68030 (e.g. Atari Falcon)
Pentium (90 to 100 Mhz):	32 Mhz 68030 (e.g. Atari TT)

As with a real Atari computer, you can use software accelerators such as NVDI, Quick ST, Warp 9, or Turbo ST to increase Gemulator's performance considerably.

## Feature list

Gemulator 4 for Windows 95 is not just our old Gemulator for MS-DOS running in a window. Many features have been greatly improved from earlier versions of Gemulator and several brand new features have been added:

**EASE OF USE:** Gone are the restrictions of the earlier versions of Gemulator for MS-DOS and Windows 3.1. There is no longer a GEMUL8R.INI file to edit, no CONFIG.SYS file to edit, and no AUTOEXEC.BAT file to edit. No MS-DOS commands to type in. All settings are now configured with simple easy to use menus and dialog boxes. Just double click on the Gemulator icon on your Windows desktop and a few seconds later the Atari GEM desktop is running in its own window.

**HARD DISK and CD-ROM SUPPORT:** Gemulator 4 breaks the old 32 megabyte partition barrier found in all versions of TOS. Any disk partition on your PC, including CD-ROMs and ones that are larger than 32 megabytes in size, can be accessed by the GEM desktop and by Atari programs. Partitions compressed with DoubleSpace, DriveSpace, Stacker, and other disk compression utilities are fully accessible. 1 gigabyte hard disk partitions? No problem. Since not all Atari ST software is written to run with large hard disk partitions, Gemulator 4 also has a "virtual disk" mode which is compatible with earlier versions of Gemulator. In this mode, your Atari files are stored on four 32-megabyte Atari-only partitions which behave exactly like a real Atari hard disk. Virtual disk mode is set up automatically and does NOT require reformatting your hard disk.

**FLOPPY DISK SUPPORT:** Gemulator 4 still allows you to read and run your old Atari ST floppy disks, formatted by older versions of TOS, as well as boot disks and 1.44M PC disks. We now include a utility which re-writes the boot sector of the floppy disk to make it MS-DOS compatible. This allows you to then read your floppy disks from other

Windows 95 programs. Gemulator 4, for legal and technical reasons, does not support copy protected disks.

**VIDEO SUPPORT:** Unlimited screen size! The GEM desktop can grow to as large as your Windows desktop. So now you can take advantage not only of 640x480 and 800x600 color modes, but also use 1024x768, 1280x960 (Moniterm mode), and even higher resolutions. Most well written GEM software will run in all these modes.

**MODEM AND PRINTER SUPPORT:** Modem baud rates from 110 to 115200 baud are now supported, allowing you to use your high speed 14.4k or 28.8k baud modem with your Atari ST terminal software. All serial ports (COM1 through COM4) are supported. All printer ports (LPT1 through LPT3) are now supported.

**STE FEATURES:** Other Atari emulators offer only the basic functionality of an Atari ST. Gemulator 4 has most of the sound and video support of a Mega STE, including emulation of stereo sound, 4096 colors, and the blitter chip.

**TOS ROM SUPPORT:** All ST and STE TOS ROM versions including TOS 1.6, 1.62, and 2.05 are now supported, in addition to TOS 1.0, TOS 1.2, TOS 1.4., and TOS 2.06 which were supported by earlier versions of Gemulator. The TOS ROMs that you plug in are what Gemulator 4 runs, and the Gemulator card includes additional sockets for plugging in multiple versions of TOS. TOS 2.06 is what is recommended for use with Gemulator 4 and what it is optimized for.

### **Why Gemulator 4.0 on a PC is cheaper than a real Atari!**

If you currently use an Atari ST, STE, Falcon, or even a TT, then you are not getting the full potential out of your Atari ST and STE programs. Why? Because your Atari computer is based on a 10 year old design that places severe limits on such things as the maximum amount of memory in the computer, the speed of the serial ports, the size of the hard disk partitions, the capacity of your floppy disks, and the screen resolution of the monitor.

The Atari ST, Mega STE, and even the Falcon computers still have a built-in maximum screen resolution of 640x400 or 640x480 pixels. Your ST or STE also requires the use of two monitors, one for color and one for monochrome. To achieve higher screen resolutions such as 1024x768 and 1280x960 requires yet another monitor, a special video card, and special software drivers, which together can easily cost from \$500 to \$1000 more.

To be able to use the industry standard 1.44 megabyte floppy disks used by today's Macintosh and PC computers requires installing a new floppy disk drive in your ST, another \$100 cost. To add more memory beyond the 4 megabytes that most STs allow requires complicated memory expansion boards costing many hundreds of dollars more. To install the latest

TOS 2.06 into an Atari ST requires a \$140 expansion board. A CPU accelerator? At least another \$200.

As you can see, it can easily cost well over \$1000 to upgrade an existing Atari ST or STE computer to the point where it becomes usable and can run power applications such as Calamus SL. That same money spent upgrading an ST is enough to buy a brand new 486 or Pentium based computer!

With Gemulator 4, you get the best of both worlds: the familiar Atari GEM desktop running your familiar Atari applications, while having a computer that not only costs less than a real Atari computer but also runs Windows 95.

### **Gemulator 4 dealers**

The following dealers will have Gemulator 4 For Windows 95, with TOS 2.06 ROMs, available for sale by September 1. Many also offer all-in-one 486 and Pentium systems which have Windows 95 and Gemulator 4.0 (with TOS 2.06) pre-installed:

#### **U.S.A**

##### **ATY Computer**

3727 13th Avenue  
Oakland, CA 94610  
phone: 510-482-3775  
fax: 510-482-3775  
email: a.yu@genie.geis.com

##### **B & C Computervisions**

1725 De La Cruz #7  
Santa Clara, CA 95050-3011  
phone: 408-986-9960  
fax: 408-986-9968

##### **Godfather Computer**

1177 Quarry Lane, Suite E  
Pleasanton, CA 94566  
phone: 510-174-6809  
fax: 510-417-8787  
email:ercorp@aol.com  
web page: <http://www.netrep.com/home/GODFATHER/>

**Run PC**

524 West Laurel #2  
Fort Collins, CO 80521  
phone: 800-326-2344  
phone: 970-493-5565  
fax: 970-493-5571

**Toad Computers**

570-F Ritchie Highway  
Severna Park, MD 21146  
phone: 800-448-TOAD (8623)  
phone: 410-544-6943  
fax: 410-544-1329  
web page: <http://www.toad.net/pc/systems.html>

**Xanth Computers**

14100 N.E. 20th Street #105  
Bellevue, WA 98007  
phone: 206-643-9697

## CANADA

**Falcon Systems**

330 6th Street  
New Westminster, B.C. V3L 3A8  
phone: 604-522-2915  
fax: 604-522-2721

## RGB Data

100 Dyke Rd.  
E. Passage, NS B3G 1K2  
phone: 902-465-2321  
fax: 902-465-9966

## Scarborough Computers

3331 Sheppard Ave. E.  
Scarborough, Ont. M1T 3K2  
phone: 416-491-3139  
fax: 416-491-3280

## UNITED KINGDOM

## FaST Club

7 Musters Road  
Nottingham N2G 7PP  
phone: + 44 0115 945 5250  
fax: + 44 0115 945 5305

## System Solutions

17-19 Blackwater Street  
London SE22 8RS  
phone: + 44 (0181) 693 3355  
fax: + 44 (0181) 693 6936

## 16/32

173 High Street  
Strood, Kent ME2 4TW  
phone: + 44 (01634) 107 788

fax: + 44 (01634) 295 895

## AUSTRALIA

Music Graphics  
P.O. Box 357  
Belgrave 3160  
phone: + 61 (03) 754 8588  
fax: + 61 (03) 754 8101

See our World Wide Web page for the latest product information, product screen shots and demos, and the dealer listing.

### **Product support**

Branch Always Software provides free phone support on weekday mornings, as well as email support over the Internet and online services. Gemulator cards are replaced free of charge up to 30 days after purchase if you find that yours does not function properly, although to date less than 1% of the more than 3000 Gemulator cards currently in use have failed.

Bug fix and maintenance upgrades of the Gemulator 4 software will be provided free of charge. All Gemulator 4 users who purchase or have purchased either the Gemulator 4 Beta, Gemulator 4 for Windows, or Gemulator 4 for Windows 95 will receive a free maintenance upgrade release of Gemulator 4 for Windows 95 in the mail during the month of September. Additional maintenance upgrades will be available via email to users of the Internet or online services.

Branch Always Software has also exhibited at dozens of Atari shows and user group meetings over the last 7 years. This year we have already shown Gemulator 4 at the Toronto, Sacramento, and Indianapolis Atarifests and will be doing so again October 7th at the Dallas show.

We hope to see you there.

## JAGUAR SECTION

JaguarCD Ships...Quietly...  
CATnips! Video Gaming Decline?  
WMCJ Tips! And much more!

### **FROM THE EDITOR'S CONTROLLER**

### **PLAYIN' IT LIKE IT IS!**

I must say that I am somewhat disappointed, but not surprised, at the lackluster release of the JaguarCD. Yes, it started shipping yesterday. Will we be able to buy it in the next couple of days? Unlikely. It will probably take a week or so before the bulk of the units make the dealer shelves - it does take some time for it all to happen.

It's also unfortunate, or fortunate depending on your viewpoint, that there won't be the 6 -8 additional CD games available at the same time. Atari was committed to the August 24th ship date; the games were supposed to be ready, but are not, as far as we know. Look for September for the games we were expecting these last few days of August.

Also, expect the hype to pick up within the next couple of weeks. The quiet shipping of the CD unit may be a letdown, but I understand that there will be some major promotions starting in early September. So yes, we're a little down, but I think that will be overshadowed in the next few weeks.

It's my impression that the JaguarCD's release was going to be a public lose -lose situation. They could have either held back the release to wait for the games and incur the userbase's wrath' or they could ship the unit with the available pack -ins and wait for the eventual release of subsequent games. Not a great choice, but under the circumstances, the pack -ins, VLM, and Myst demo should keep us busy long enough to wait for the other games - providing that those Games arrive soon!

At any rate, I can wait a little while longer as I have enough cart games to keep me busy for a long time! I'm waiting for the JaguarCD more as a result of anticipation than anything else at the moment. Stay tuned here for the news as it happens!

Until next time....

**UNCERTAIN GAME MARKET SEEN**

The health of the video game will depend on how well four "next generation" systems fare over the next two years, says a new report from DFC Intelligence of San Diego. The report notes that in 1994 video games and entertainment software for PCs generated \$4.3 billion in U.S. revenues. This was down slightly from 1993's \$4.4 billion. The video game hardware market took a more significant dip in 1994, declining 18 percent to \$1.5 billion.

"The market will not pick up until the next generation hardware systems start to gain momentum," says David Cole, DFC's president. Cole states that there are four separate systems that could rejuvenate the market: the Sega Saturn, the Sony PlayStation, the Nintendo Ultra 64 and 3DO systems.

Unfortunately, it could take over a year for the new systems to gain momentum. DFC forecasts that in 1995, software revenue will be down 14 percent, while the number of hardware units sold will be down 36 percent. Cole claims that the 1995 holiday season is shaping up to a major disappointment.

"The 16-bit market will decline sharply in 1995 and nothing has come along to replace it," he says. "The next generation systems are starting to look good, but still suffer from high price points and limited software availability."

**Jaguar Catalog STR InfoFile    *What's currently available, what's coming out.***

## Current Available Titles

CAT #	TITLE	MSRP	DEVELOPER/PUBLISHER
J9000	Cybermorph	\$59.99	Atari Corp.
J9006	Evolution:Dino Dudes	\$29.99	Atari Corp.
J9005	Raiden	\$29.99	FABTEK, Inc/Atari Corp.
J9001	T McFur/Cresc Galaxy	\$29.99	Atari Corp.
J9010	Tempest 2000	\$59.95	Llamasoft/Atari Corp.
J9028	Wolfenstein 3D	\$69.95	id/Atari Corp.
JA100	Brutal Sports FtBall	\$69.95	Telegames
J9008	Alien vs. Predator	\$69.99	Rebellion/Atari Corp.
J9029	Doom	\$69.99	id/Atari Corp.
J9036	Dragon: Bruce Lee	\$39.99	Atari Corp.
J9003	Club Drive	\$59.99	Atari Corp.
J9007	Checkered Flag	\$39.99	Atari Corp.
J9012	Kasumi Ninja	\$69.99	Atari Corp.
J9042	Zool 2	\$59.99	Atari Corp
J9020	Bubsy	\$49.99	Atari Corp
J9026	Iron Soldier	\$59.99	Atari Corp
J9060	Val D'Isere Skiing	\$59.99	Atari Corp.
	Cannon Fodder	\$49.99	Virgin/C-West
	Syndicate	\$69.99	Ocean
	Troy Aikman Ftball	\$69.99	Williams
	Theme Park	\$69.99	Ocean
	Sensible Soccer		Telegames
	Double Dragon V	\$59.99	Williams
J9009E	Hover Strike	\$59.99	Atari Corp.
J0144E	Pinball Fantasies	\$59.99	C-West
J9052E	Super Burnout	\$59.99	Atari
	White Men Can't Jump	\$69.99	Atari
	Flashback	\$59.99	U.S. Gold

Available Soon

CAT #	TITLE	MSRP	DEVELOPER/PUBLISHER
	Ultra Vortek	\$69.99	Atari
	Flip-Out	TBD	Atari
	Rayman	TBD	UBI Soft
	Power Drive Rally	TBD	TWI
	Jaguar CD-ROM	\$149.99	Atari

Hardware and Peripherals

CAT #	TITLE	MSRP	MANUFACTURER
J8001	Jaguar (complete)	\$189.99	Atari Corp.
J8001	Jaguar (no cart)	\$159.99	Atari Corp.
J8904	Composite Cable	\$ 19.95	
J8901	Controller/Joypad	\$ 24.95	Atari Corp.
J8905	S-Video Cable	\$ 19.95	
	CatBox	\$ 69.95	ICD

### Jaguar Developers STR InfoFile *Current Developer Lists & Titles*

Game Title	Date	Game Type	MSRP	Publisher
Air Cars	TBA	Racing/Combat	\$59.99	MidNite Ent.
Alien vs Predator		NOW Role Play/Adventure	\$69.99	Atari
Alien vs Predator CD	2/96	Role Play/Adventure	TBD	Atari
Arena Football	10/95	Sports	TBD	V Reel
Assault	2Q/95	Action/Combat	\$59.99	MidNite Ent.
Atari Kart	11/95	TBD	TBD	Atari
Att. of Mut. Penguins	10/95	Arcade	TBD	Atari
Baldies (CD)	09/95	Action/Simulation	TBD	Atari
Batman Forever (CD)	04/96	Action/Adventure	TBD	Atari
Battlemorph (CD)	09/95	Flying/Action	\$59.99	Atari
Battlesphere	09/95	Space/Combat	TBD	4-Play
Battlestar	11/95	Space/Combat	TBD	?
Battle Wheels	2Q/95	Racing/Combat	TBD	Beyond Games
Black ICE/White Noise	12/95	Action/Adventure	TBD	Atari
Blue Lightning (CD)	08/95	Flying/Action	\$59.99	Atari
Braindead 13 (CD)	10/95	Action/Adventure	TBD	ReadySoft
Breakout 2000	11/95	Puzzle	TBD	Atari
Brett Hull Hockey (CD)	11/95	Sports	TBD	Atari
Brutal Sports Football	NOW	Sports/Combat	\$69.99	Telegames
Bubsy	NOW	Action/Adventure	\$49.99	Atari
Cannon Fodder	NOW	Action/Adventure	\$49.99	Virgin
Chas Barkley Basketball	09/95	Sports	TBD	Atari
Checkered Flag	NOW	Racing	\$69.99	Atari
Club Drive	NOW	Racing	\$59.99	Atari
Commando (CD)	11/95	Action (3D)	TBD	Atari
Commander Blood (CD)	11/95	RPG	TBD	Atari
Creature Shock (CD)	08/95	Adventure/Sci-Fi	TBD	Atari/Virgin
Cybermorph	NOW	Flying/Action	\$59.99	Atari
Dactyl Joust	11/95	Action	TBD	Atari
Dante (CD)	06/96	Action	TBD	Atari
Deathwatch	11/95	Arcade	TBD	Atari
Defender 2000	10/95	Arcade	TBD	Atari

Demolition Man (CD)	09/95	Action/Combat	\$59.99	Atari
Doom	NOW	Action/Combat	\$69.99	Atari
Double Dragon V	NOW	Action/Adventure	\$59.99	Williams
Dragon:Bruce Lee Story	NOW	Combat	\$59.99	Atari
Dragon's Lair (CD)	08/95	Adventure	TBD	Ready Soft
Dragon's Lair 2 (CD)	10/95	Adventure	TBD	ReadySoft
Dreadnought (CD)	2Q/95	Adventure	TBD	Atari
Dune Racer (CD)	01/96	Racing	TBD	Atari
Dungeon Depths	2Q/95	Action/Adventure	\$59.99	MidNite Ent.
Evolution: Dino Dudes	NOW	Puzzle/Adventure	\$49.99	Atari
Fight For Life	TBA	Combat	TBD	Atari
Flashback	NOW	Action/Adventure	\$59.99	US Gold
Flip-Out	08/95	Puzzle	TBD	Atari
Formula Racing (CD)	12/95	Racing	TBD	Atari
Frank Thomas Baseball	04/96	Sports	TBD	Atari
Gotcha!	01/95	Challenge	TBD	Unknown
Hardball Baseball	2Q/95	Sports	TBD	Atari
Highlander I (CD)	11/95	Action/Adventure	\$59.99	Atari
Highlander II (CD)	02/96	Action/Adventure	TBD	Atari
Highlander III (CD)	04/96	Action/Adventure	TBD	Atari
Horrorscope	2Q/95	Combat	TBD	V Reel
Hover Strike	NOW	Action/Combat	\$59.99	Atari
Hover Strike CD	09/95	Action/Combat	TBD	Atari
Hyper Force	TBA	Unknown	TBD	Comp. West
Ironman/XO-Manowar	04/96	Action	TBD	Atari
Iron Soldier	NOW	Action/Strategy	\$59.99	Atari
Iron Soldier II (CD)	01/96	Action/Strategy	TBD	Atari
Jack Nicklaus Golf(CD)	2Q/95	Sports	TBD	Atari
Kasumi Ninja	NOW	Combat	\$69.99	Atari
Magic Carpet (CD)	12/95	Action/RPG	TBD	Atari
Max Force	09/95	Action	TBD	Atari
Mindripper (CD)	02/96	Adventure	TBD	Atari
Mortal Kombat 3	04/96	Fighting	TBD	Atari
Myst (CD)	08/95	Interactive Novel	TBD	Atari
NBA Jam T.E.	12/95	Sports	TBD	Atari
Phase Zero	10/95	Action/Arcade	TBD	Atari
Pinball Fantasies	NOW	Arcade	\$59.95	Comp. West
Pitfall	09/95	Arcade	TBD	Activision
Power Drive Rally	08/95	Driving	TBD	TWI
Primal Rage (CD)	12/95	Fighting	TBD	TWI
Rage Rally	2Q/95	Racing	TBD	Atari
Raiden	NOW	Action/Adventure	\$49.99	Atari
Rayman	09/95	Action/Adventure	TBD	UBI Soft
Redemption (CD)	11/95	Action/Adventure	TBD	Atari
Rise of the Robots (CD)	11/95	Action/Arcade	TBD	TWI
Robinson's Requiem (CD)	09/95	Adventure	TBD	Atari
Rocky Horror Inter. (CD)	04/96	Adventure	TBD	Atari
Ruiner Pinball	09/95	Arcade	TBD	Atari
Sensible Soccer	NOW	Sports	TBD	Telegames
Sky Hammer (CD)	12/95	Flying/Action	TBD	Atari
Soccer Kid	2Q/95	Sports	TBD	Ocean
Soul Star (CD)	09/95	Action/Sci-Fi	TBD	Atari
Space Ace (CD)	09/95	Space/Combat	TBD	ReadySoft
Space War	09/95	Action/Adventure	\$59.99	Atari
Starlight BowlaRama CD	10/95	Simulation/Sports	TBD	Atari
Star Raiders	2Q/95	Space Simulation	TBD	Atari
Sudden Impact	12/95	Action	TBD	Atari
Super Burnout	NOW	Racing	\$59.99	Atari
Supercross 3D	09/95	Sports	TBD	Atari
Syndicate	NOW	Simulation	\$69.99	Ocean
Tempest 2000	NOW	Action/Adventure	\$59.99	Atari

Thea Realm Fighters (CD)	10/95	Action/Fighting	TBD	Atari
Theme Park	NOW	Simulation	\$69.99	Ocean
Tiny Toon Adventures	2Q/95	Action/Adventure	\$59.99	Atari
Towers II	12/95	RPG	TBD	JV Enter.
Trevor McFur	NOW	Action/Adventure	\$49.99	Atari
Troy Aikman NFL Ftbll	NOW	Sports	\$69.99	Williams
Ultimate Brain Games	2Q/95	Puzzle	TBD	Telegames
Ultra Vortek	09/95	Action/Adventure	\$69.99	Beyond Games
Val D'Isere Skiing .	NOW	Sports	\$59.99	Atari
Varuna's Forces (CD)	11/95	Action/Adventure	TBD	Atari
VidGrid (CD)	08/95	Puzzle/Music Video	TBD	Atari
Wayne Gretzky NHL (CD)	12/95	Sports	TBD	TWI
White Men Can't Jump	NOW	Sports (w/Team Tap)	\$69.99	TriMark
Wolfenstein 3D	NOW	Combat/Action	\$59.99	Atari
Zero 5	01/96	Unknown	TBD	Unknown
Zool2	NOW	Action/Adventure	\$59.99	Atari

## JAGUAR EASTER EGGS/CHEATS/HINTS STR INFOFILE

## *Solving Those Riddles!*

We've been getting a lot of e-mail from readers who have been frustrated trying to figure out the Super Dunks for White Men Can't Jump. Well, we gave you one of them a few weeks ago, but you wanted more! So, here are a couple more of them, but we'll hold back giving them all to you!

As it turns out, white men actually can jump, and all of the white male characters possess the same Super Dunks. They are described here, along with the proper button presses to activate them. Remember that the button presses must be done quickly, and while the "B" action button is held down. When the "B" action button is released, the player will perform the Super Dunk. Timing is critical to getting off the more complex Super Dunks.

The following Super Dunks are for all white male characters.

- To perform the SIMPLE slam, press the D-PAD LEFT.
- To perform the SPIN-FLIP slam, press the D-PAD DOWN TWICE.
- To perform the POWER slam, press the D-PAD RIGHT, THEN DOWN.
- To perform the BEHIND-THE-BACK slam, press the D-PAD LEFT, THEN DOWN.
- To perform the SEE-SAW-SPIN slam, press the D-PAD RIGHT, THEN UP, THEN LEFT.

All of the males with tank tops characters possess the same Super Dunks. They are described here, along with the proper button presses to activate them. Remember that the button presses must be done quickly, and while the "B" action button is held down. When the "B" action button is released, the player will perform the Super Dunk.

Timing is critical to getting off the more complex Super Dunks.

The following Super Dunks are for all males with tank tops characters.

- To perform the SIMPLE slam, press the D-PAD down.
- To perform the SIDEWAYS slam, press the D-PAD LEFT.
- To perform the TWO-HANDED slam, press the D-PAD UP TWICE.
- To perform the UNDER & IN slam, press the D-PAD DOWN, THEN UP.
- To perform the REWIND & ROTATE slam, press the D-PAD RIGHT, THEN DOWN, THEN LEFT.

*[Courtesy of Lance Lewis, at Atari]*

## CATNIPS... JAGUAR TIDBITS FROM DON THOMAS (95.08.23)

It's here! D-Day! No, I'm not talking about Windows'95. I'm talking about the Jaguar CD-ROM. This morning, Ted Hoff gathered us together and was grinning big time as he verified that the final pack -ins were being delivered and the boxes would roll off the packout lines just as predicted. Ted feels a peripheral as important as the CD -ROM should be blessed by the retail buyers by sending the first units off the line to their attention. Another batch will be shipped ahead of his arrival to New York to host a formal press presentation next week.

In the past four weeks, orders from retailers for the CD -ROM have exploded and Atari will ship in quantity as soon as ample quantities of the complete packouts have been amassed. Unlike some of our software releases in the past when only pre -orders are fulfilled, Ted is demanding that delivery schedules to retailers are timed to be equitable and as fair as possible. The CD -ROM should be available nationwide within just a couple of weeks! Yea!

FlipOut! will be shipping this Friday. I think it will be a surprise hit. We will see. < g>

· *New Jaguar Book Contest from Atari Explorer Online....*

It has a black glossy cover, with peering yellow eyes. It's full of cool stuff. It even includes a few AEO interviews. Now **you** can win an author signed copy of Sandwich Islands' "Atari Jaguar Official Gamer's Guide."

How? Atari Explorer Online Magazine is holding a contest, of sorts.

It's the "AEO 'Read Between The Lines'" contest. It's easy to enter, and you could win a copy of the book that shows (among other things):

- Just WHERE that darn Motion Tracker in Alien Vs. Predator is located.
- How to lower the drawbridge over the Big Pit O'Acid in Level 3 of Doom.
- Exactly the path needed to complete the final level of Zool 2.
- Cheats, Codes and Funny Captioned Fotos of eighteen Jaguar games.

### **How to Enter....**

E-Mail a tip about a Jaguar game to AEO < aeo.mag@genie.com> before Midnight CDT (UTC -5) August 31, 1995. (Please put the word "Contest" in the subject line!! AEO regularly receives dozens of EMail every day, and it would make the sorting job easier!) **Any tip for any Jaguar game will suffice. (Don't know any tips? Make one up! This contest is well named.)**

Two tips will be selected in a random drawing of all entered tips. The winning entries will be notified, and their entries will be published in the next issue of AEO, due out the weekend of September 2, 1995.

All submissions will be considered the property of Subspace Publishers, and may be used in future issues of Atari Explorer Online Magazine. **Void where prohibited.**

### **Get those tips in NOW!**

Hey if you're a kid or know any kids between the ages of 8 to 14 years of age AND they have access to Web Domains within the wonderful world of the Internet, tell them about KIDSCOM. KIDSCOM is a new wholesome way kids can learn, participate in surveys, exchange ideas on the "Graffiti Wall" and even win prizes. To visit KIDSCOM, steer your Web Browser to <http://www.kidscom.com>.

KIDSCOM currently includes Jaguar news including screen shots AND soon, kids can win cool Jaguar stuff too! Kristine Chambers tells me that "Hover Strike: Unconquered Lands" (the CD descendent) looks really good. For you audiophiles, the left/right stereo has been corrected < g> and there's a whole bunch of exciting new improvements over the cart -based game that is available now. Kristine said I could share some of them with you...

In the new CD version, there are full motion video sequences including a real cool intro, between mission scenes and an exciting end-of-game reward. There are 10 entirely new missions and 2 brand new terrain types. A new rendering engine allows lighting effects on the texture mapped terrain as well as more efficient overall coding and animated terrain textures. There are high-resolution terrain textures for new missions and a new control panel so the user can customize flying physics of the craft. Gamers will discover improved flying with smoother movement physics and there will be CD quality music during gameplay.

"Hover Strike: Unconquered Lands" will be available by the end of September according to Kristine. Based on what she tells me, the new game will be a natural for those who love the cart based game and it will offer a lot of appeal for those who felt the original game may have been a bit hard to control. Get on the pre-sell lists now!

I know it's off topic, but my wife treated me to an unusual **get-a-way** this past weekend. On Friday, she drove us to Wine Country (Napa Valley, CA). We checked in to what I later learned was one of the region's highest rated Bed & Breakfast (Foothill House). On Saturday, she rolled me out of bed at 4:30 a.m. to take a hot air balloon ride at dawn across the valley. There is no effective way to describe the beauty, courtesies and pleasures of where we stayed or the nice times we had, so I won't even try. Let me just tell you to book the best bed & breakfast in Calistoga, call 800/942-6933. Insist on the **Quail's Roost** cottage for at least two nights. You can also have them book reservations at any one of the nicest nearby restaurants for dinner.

There are several. If you go all out and want the best balloon ride, call 707/944-4408. Tell them you want to ride the balloon named "Lucy" and you want it piloted by "**Sonoma Bob**". Feel free to tell them that Don and Lynn Thomas promised the time of your life!

Stay tuned for a lot more Jaguar-related news coming soon. There are some exciting releases scheduled for the upcoming weeks.

BTW, we know it may be frustrating if you're anxiously waiting for the CD-ROM. This long awaited peripheral is being distributed very carefully so that as our retailers and the gamers receive quality merchandise that passes stringent Quality Assurance tests rather than simply loading them in overnight sacks for the sake of just being fast.

I am anxiously awaiting the opportunity to get my hands on one too...

I never did get to finish any of the games I started at E3. < g>

### ***From CompuServe's Atari Gaming Forums:***

Sb: Ultra64 Expensive!  
Fm: Daniel Skelton 73742,464  
To: All

I just picked this up from Simon over on the Video Games+ forum, a message that he in turn captured from the WWW site for IGOOnline (Intelligent Gamers Online).

"First NU64 titles announced: Kyoto-based Nintendo Co. Ltd. Has shattered their Ultra Famicom silence by announcing the first two titles for their much-hyped 64-bit game machine. According to company officials (source: Nikkei English News), Nintendo will release a Mario title and a Final Fantasy RPG for the system, which will be released in Japan this December. The two games, both very popular on the 16-bit Super Famicom and Super NES platforms in Japan and North America, will retail for about 10,000 yen (U.S. \$110) each. Many of Nintendo's recent \$70 SNES titles have sold for roughly the same yen price in Japan.

The video game manufacturer has, according to the Nikkei English News, teamed up with 12 firms outside of Japan and five domestic software developers to make games for the new machine. Although release dates have yet to be decided, Nintendo continues to claim that the machine will cost less than 25,000 yen (U.S. \$275) in Japan and under \$250 in the United States."

In short, U64 + 1 game = \$360!  
Jaguar + 1 game = \$210

I think we can all do THAT math.

Dan Skelton  
Antique Videogame Aficionado and Proud Jaguar Owner

# PEOPLE... ARE TALKING

## *On CompuServe*

compiled by  
Joe Mirando  
73637,2262

Well folks, it's official. Windows 95 is out the door. What has been called biggest marketing push in the history of the computer industry is just starting. Now it's time for we non-Intel users can sit back and watch what happens.

Is Windows 95 a good product? Of course it is. Is it as good as all the hype? Probably not. I'm sorry Mr. Gates, but in order to live up to all this hype, Win 95 would have to make me breakfast in the morning, dinner at night, and do things that I can't mention here. But that's okay. Software, like a person (most people, anyway) matures.

Throughout the next week or two, the real abilities, necessities, and shortcomings of this cult -inspiring product. Prices of hard drives and memory chips/simms/what-have-you are expected to rise as folks find out how to get the most from MicroSoft's latest offering. Now this isn't a slam at the product, it's simply a statement of fact. Win 95 will be most useful on computers with large hard drives and at least 12 meg of RAM. So if you're in the market for a bigger hard drive or more memory, go out and get it now. And when all the people you know who got Windows 95 start talking about what they've got to do in order to get the most out of it, you can say "Yeah, I heard about that in my favorite ATARI column.

I just heard the MicroSoft commercial for Win 95 (really, just this minute). I question the decision to use a theme song that contains the phrase "you make a grown man cry".

As Norm Crosby used to say: "A word to the wise is deficient". Now let's get on with the reason for this column... All the great news, info, hints and tips available every week right here on CompuServe.

From the Atari Computing Forums

Mark Kelling posts:

"I just uploaded a new version of Ghostscript to the library. Hopefully, this will be of interest to some users.

I did run into a problem when trying to type in the description. The system kept complaining of the description being over the limit, but would not allow me to make any changes to the text. What you ended up with as a description is going to be a surprise. This is what I intended:

The Latest update to Ghostscript, the "FREE" PostScript (R) interpreter for the ATARI ST line of computers. This version, 312B, gives full GEM window control over the programs functions (you can now change output devices and res with a mouse click!). A very nice update to a great program

Please note: This file expands to over 1MEG of files. You MUST use the Questor LZH program to unpack it (other expanders complain of "too many files"). Also look for new font files."

Sysop Ron Luks tells Mark:

"I'm looking for the new upload right now and cant locate it. Did the upload seem to go correctly other than the description problems? (Fortunately, uploading to the libs is free)"

Mark replies:

"Everything went OK with the upload, got a normal response, but then had the problems with the description. Maybe I didn't finish it properly and CIS dumped it?..."

I just finished reuploading GhostScript 312. Everything went fine tonight! I will also post the improved font files to go along with the update as soon as I retrieve them.

Most likely the problem last night was my ST. I'm working with a recently resurrected MEGA4 and it still is giving me fits. The power supply got fried and although the new supply got me up and running,

I think some other components may have also got zapped!

Thanks for your time checking into the upload."

Christian Roth asks Mark:

"Does Ghostscript handle EPS files as well? Does it make use of NVDI and its scaling abilities? Does it support Speedo and TrueType fonts?"

Albert Dayes of Atari Explorer Online Magazine tells Chris:

"GhostScript only handles PostScript Type 1 fonts. You can print EPS files I believe but I have not tried it myself. It works with Warp 9 so I would assume it should work with NVDI without any problems. To scale the picture via NVDI I am not sure since I have not used it.

You can scale the drawing/picture using the postscript scale command.

x y scale

To scale the picture to 70% of its original size.

.70 .70 scale

To scale the picture 110% of its original size.

1.10 1.10 scale

You can change the x and y values independently so you can have some very interesting results. Such as ....

.30 .70 scale

One would have to edit the postscript file to set the scaling values."

Chris replies:

"I guess it's not easy digging into PostScript.

hmm Type 1 fonts - looks like a new adventure to me < g> ."

Albert adds:

"PostScript is not too hard to learn it just takes time. Two good books on the subject include ....

Learning PostScript: A Visual Approach by Ross Smith  
ISBN: 0-938151-12-6

PostScript Language Reference Manual by Adobe  
ISBN: 0-201-18127-4 (also known as the "red book")

On the subject of CompuServe Information Manager, Hans Kummer posts:

"I...am interested in a cim for ATARI. So I went through many forums to find a documentation of HMI, the 'window -language' of CompuServe. But I just can get the full documentation when I find a software house that will develop my program. And 'cause I don't know whether I could realize such a program, it's impossible to try it out only. It seems that CompuServe isn't interested in new and cheap cim's for alternative systems. So what else can we do, since ATARI does nothing themselves?--I don't know..."

Chris Roth tells Hans:

"Me too. I was always interested in a cim for Atari, and CompuServe's restrictive policy in this case always annoyed me. I can't imagine that it would be very difficult for a professional programmer to realize a cim. But CompuServe even goes so far that it hides the protocol and just provides programming toolkits for developers. They never made one for the Atari's. So they simply claim that there's no such toolkit available for the atari and therefore a cim development not possible. Regarding this it's no miracle why the InterNet is so successful, providing possibilities for various platforms. Sure, we had to wait a long time for a www Browser, but finally it seems that now we're going to see them soon. So, a cim would easily have been possible in the meantime.

I guess there would be a lot more (atari) users within CompuServe, at least in Germany. Meanwhile, the InterNet is going to make it..."

Ronald Buneo asks:

"Does anyone know of a program that will double or increase hard drive space? Is there a PD or shareware program for this?"

Albert Dayes tells Ronald:

"There are a couple compression programs out there. One is from HiSoft/ORA and another is from Keith (former Double Click software). I do not recall the names of the products unfortunately. You might wish to check with your Atari dealer for specifics. Hopefully someone will jump in who has used on the above products for details."

Paul at Double Click Software tells Albert and Ronald:

"The product is Data Diet that Trace Technology (Keith) is now supporting. I believe it's up to version 2.0? His number is (713) 771-8332."

Simon Churchill posts this:

"...These system's are known to be distributed from the following companies which are both based within the United Kingdom.

MEDUSSA T40:

System Solutions

Windsor Business Centre  
Vansittart Road  
Windsor  
SL4 1SE

Tel: (01753) 832212  
Fax: (01753) 830344 (Numbers for U.k. Add international number as needed)

#### EAGLE SYSTEM:

Gasteiner  
126 Fore Street  
Upper Edmonton  
London  
N18 2XA

Tel: 0181-345-6000 or 0181-345-6868 International code add as above.

Hope these guy's can give you the latest low-down on their new machines."

Good ol' Simon also posts this on the subject of accelerators for the ST series of computers:

"One of the best compatible accelerator boards I know of and use is the T28 and T36 series. They are basically a 68000 running at Txx, so a T28 is a 28Mhz and the T36 is a 36Mhz version. Most ST's except the T28 and a few will except the T36, but some mods are normally required.

These board's are designed for the STFM, Mega ST and STE. There is no mention of the Mega STE being able to use the STE's board, you would need to contact the distributor and ask them if it's possible to fit.

They also have a 64K fast cache memory on board which can be switched on the fly and the speed of the system can be reduced back to the normal 8Mhz by switching a switch and resetting the computer. As a 68000 is used there is NO compatibility problem's with program's or hardware.

My STFM has a T28 in it and this increases the speed of the CPU to 300% (Gembench) and 337% if I install GEMRAM and other util's which put TOS in memory. (Don't ask me why this should increase the CPU, I think it's just gembenches multiply test's.)

To install these board's your simms MUST be 100nano second's or faster as although the buses stay at 8Mhz they have a higher demand put on them and the memory HAS to keep up.

The T board's are also compatible with Cubase and Notator Logic, these programs use critical timed event's and with complete compatibility with the T board mean's MIDI user's get that extra speed needed when editing there work.

There are also the PAK 68/3 accelerator boards, these are 32Mhz 68030 boards and have 32K cache with 32bit wide TOS. There is also an optional FPU chip and it is possible to have the board's running at 40Mhz and 50Mhz!!

Minimum TOS for these board's is 2.06, 3.06 is recommended. The speed by gembench is 775%. This is just over twice that of the T boards. However the price for twice the speed is TWICE the price!

Also being a 68030 CPU makes some program's cripple quickly so some software is inevitable. However your machine would be heading along the Falcon's 68030 chip set and some of the newer program's would run happily on a PAK board.

There is a software accelerator called NVDI and this can REALLY speed up the screen display. For example my ST at normal 8Mhz has 100% CPU and 100% Graphics, With a T28 AND NVDI installed (+ utils) The CPU is 337% and graphics is at 1057%. YES, that's over TEN times faster screen updates! And with a cool CPU running 3.5 times faster, your ST becomes a dream machine.

Hope this is of interest."

Well folks, I'm going to keep this short and end here so that, with the extra Win 95 info that I'm sure will be included in this issue, you won't have to download a HUGE file. So tune in again next week, same time, same station, and be ready to listen to what they are saying when...

## PEOPLE ARE TALKING

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