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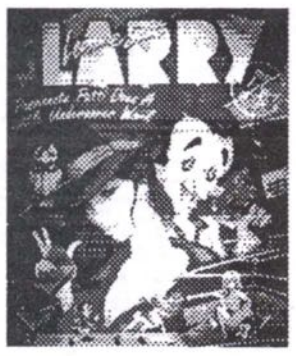
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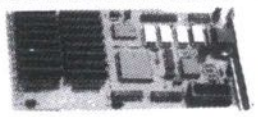
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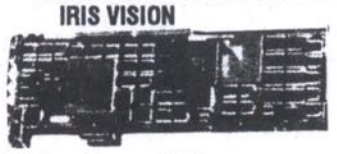
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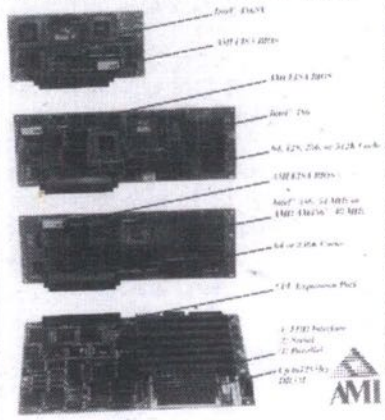
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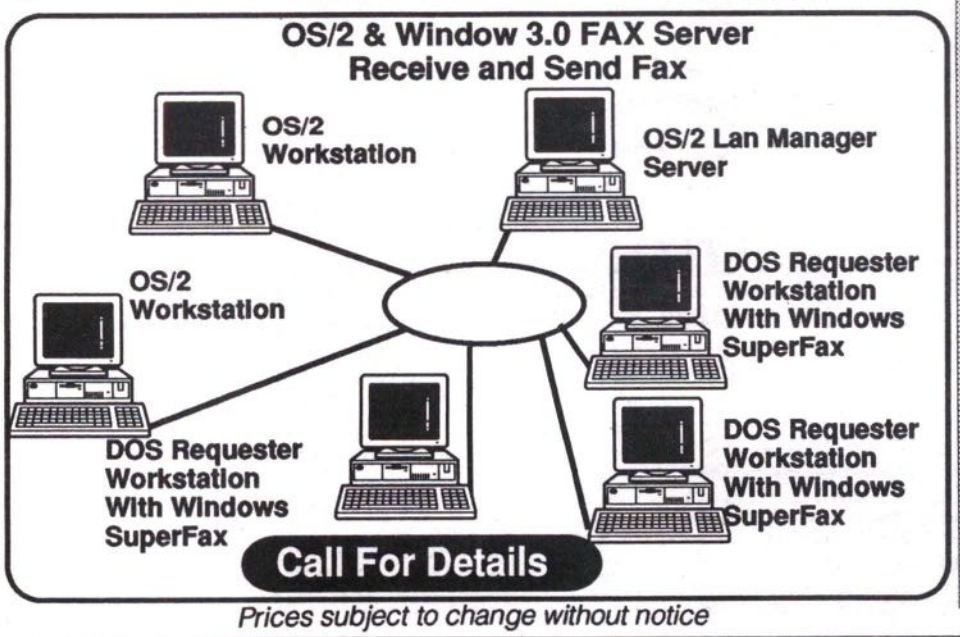
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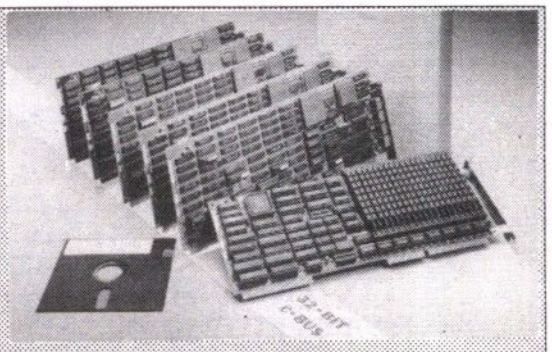


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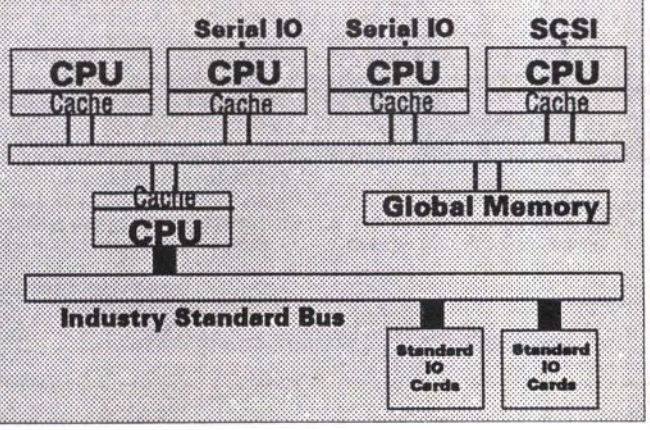
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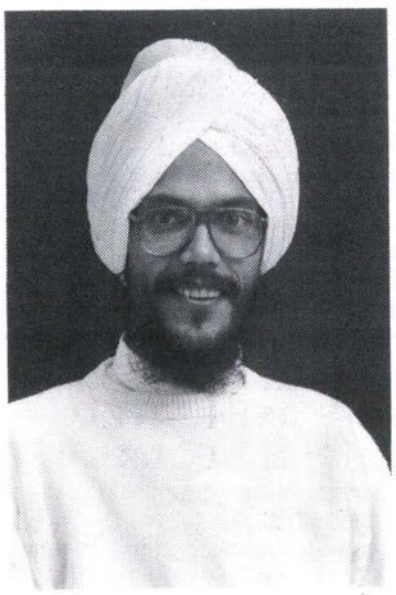
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From the Editor



The real cost of computing

What do you think a PC costs? Do you include the computer ($1,000-$5,000 depending on how high-powered and feature-laden), a printer ($300-$5,000 running from 9-pin dot matrix on through ink jets, up through laser printers to PostScript high-res lasers or color laser printers), some software (here the range gets really wide, $100 on up)? The kicker here is that according to a number of studies, the upfront hardware and software costs are only a third of the real cost of business computing. Training, support, and development is where the rest of the money goes in a business environment.

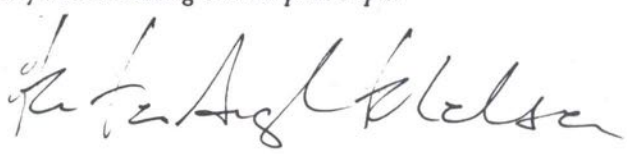
This is where a product range like the Windows software environment starts to really make sense. If a user can open a brand new program and already know how to perform 30-40% of the basic functions such as printing, saving, setting up pages, previewing, cutting, pasting and other basic editing function, they are miles ahead. Repeated studies have shown that users of graphical user interface products (such as Windows and the Macintosh) are more likely to use more kinds of software. Theoretically this can translate into more productivity for the user. (I say theoretically, because we all know office tweakers who spend more time doing things than getting things done.)

Windows is not the be-all-end-all of computing, at least in its current incarnation. It requires a lot of horsepower to perform adequately (a fast 386 with a graphics co-processor seem to help it move along) but it is an indication of where computing is going—easier-to-use programs with a standard interface.

Many of our feature articles this month focus on these issues. We look at Windows word processing and how to buy a monitor for the demanding Windows environment. Additionally, you'll find reviews of literally dozens of Windows products in this, our biggest issue ever.

In this issue, you'll find *The Computer Paper* Reader Survey (see page 55). Please be sure to fill it out and drop it in the mail to us. You will feel much better getting all of that personal information off your chest, and by returning the questionaire you might even win an OkiLaser 400 page printer! Oh, by the way, you will NOT end up on a mailing list by filling in the Reader Survey. You will, however, be helping us to understand our market better by finding out exactly who is reading *The Computer Paper.*

Enjoy the issue.



Kirtan Singh Khalsa
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- Hard Drive Buyer's Guide
- Is there UNIX in your future?
- Workstations: The RISC factor
- Graphics tablets & paint software
- Interview with Aldus' Paul Brainerd

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Masthead

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Mailbox — Letters to the Editor

All the right info!

I have just received the September issue of The Computer Paper and I was very pleased to see the exposure given to All The Right Type and Crosscountry Canada in both the reviews and the Editorial column. Congratulations on another good issue.

One point: On page 76, Cathalynn Labonté-Smith refers to Crosscountry USA as being available in "the Macintosh format." I'm sorry to disappoint the Mac users out there, but Crosscountry USA (and Canada) are available for MS-DOS and Apple only. But we will sell them All The Right Type for Macintosh!

Brian Sellstedt
Director of Sales & Marketing
Didatech Software Limited

We Want Steve

I have been reading *The Computer Paper* for some time now, and I find the articles to be very informative. I would like to particularly compliment you on the writing of Steve McIlwain and George Slade, who seem to know what we readers want to know and deliver the information in a form that is easy to understand. In many cases I have used these articles to help me with a software purchase decision. In each case, I have found the information to be honest and accurate. I feel it is very valuable to have access to unbiased info when it comes to making purchase decisions for a business. I thank you for publishing such a fine publication with such information. Please bring back Steve McIlwain as I find him to be one of your best writers.

Tracy Taylor
Vancouver

Lasers clarified

Having been involved in the computer industry for the past few years, I congratulate you on your fine magazine that seems to be getting heavier each month. There was an article "PostScript Color Lasers available at Service Bureaus" (September 1991) that may have misled some of your readers. The Canon Color Laser Copier is not a "photocopier." It is a digital copier with a 400 dpi scanning bed and a 400 dpi printer capable of scanning and printing at 256 shades per pixel and up to an 11 x 17 paper size. The price of the units that Laser's Edge and WYSIWYG have is $50,000 inclusive; that is for the CLC and the PSIPU, an Adobe PostScript, RISC-based microprocessor, which enables Macintosh, IBM (and compatibles) and UNIX machines to access it as a 400 dpi, 11 x 17 color laser. Anyone who is interested in seeing a demo or wants more info should contact Benndorf-Verster Ltd. at (604) 293-9800.

Peter Stannard
CANON Color Laser Division
Benndorf-Verster Ltd.

Reflections on learning

The article "A Tale of Two Dyslexics" by George Slade in the September issue is interesting...I agree absolutely with it. In fact, as a (retired) elementary school teacher, I feel that the computer is a valuable tool for many situations and kinds of people.

Children have incredible persistence and patience and will stay with an activity that they 'enjoy.' Some feel comfortable when there is no air of urgency, and the computer is not often programmed to say, "Have you finished?" Also, there is a sense of privacy which some like by contrast with the usual goldfish bowl competitive arena.

The computer may afford a child the sense of getting the whole attention—which is not always easy with a busy adult.

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Sometimes a child feels success when doing computer work, which may be a refreshing experience if he feels he is not very good at 'ordinary' work.

Some of the educational programs are excellent and help the harried teacher. Some material is better than any non-specialist could be expected to produce. After all, in this information age, a teacher is becoming as much a guide as an instructor. For people learning to write reports, stories and such, the word processor is a gift...And then there are people of all ages who, like me, love toys. I still have a little giggle when I remember having to persuade parents that the calculator was here to stay and is not the work of the Devil.

George A. Jameson
Vancouver

Techniques

by Graeme Bennett

The illustration on this month's cover of *The Computer Paper* was created using Adobe Photoshop 2.0. Here's how:

I started with four scanned images: a cloudy sky, a computer circuitboard (from a NeXTstation, if anybody wants to know), a fish, and the earth. Additionally, I found an image of a picture frame on the "backgrounds" disk of Electronic Arts' Studio 8. Because this hand-drawn image was of fairly low quality, I modified it almost beyond recognition, changing the dimensions, wood grain texture, color and adding the cross-bars to create my own window frame.

In the original scan of the sky, there were some buildings. Using Photoshop's Rubber Stamp tool, I cloned blue sky areas overtop of the areas I wanted to remove, adding and moving several clouds in the same fashion. I also adjusted the brightness and color balance of this, and most other images as the work progressed.

Next, I decided to fade the sky into the circuit board image. The first step was to fade out the bottom of the sky image. To do this, I created a mask channel and made a gradient fill from white to black. Where the mask is trasparent (white), the sky image would show through, and as the mask faded to solid (black), the sky faded out. For the next step, I cropped a large photo of a circuitboard to focus on a smaller section featuring SIMM chips and various other circuitry which I felt was visually pleasing. I then faded it in the opposite direction to the sky's fade, so that the two could blend together.

After combining the two images, I pasted the image of the picture frame onto the sky-and-circuits image. Whenever an image is going to be pasted into another, it is always best to soften its edges with a one-pixel "Feather" setting before cutting or copying. By grabbing sections of the frame's edges, I created the cross-bars. After a little blending with the Smudge tool, they looked like part of the original image.

Next, I added the earth by opening it as a separate document, selecting a section of black "space" and using Photoshop's "Similar" command, which selects all similarly-colored areas. I then used the Invert command to select all areas but black.

With the lasso selection tool, I extended this selection to include the shadowed areas of the earth, and, after again feathering the edge of the selection to help it to merge smoothly with the blended window background, copied this image to the clipboard for pasting into the cover image.

After the selecting the four panes of the window frame, I created a diagonal blend which filled the windows with a glaze of light.

Using the Paste Into command, the image of the earth and stars appeared "behind" the cross-beams, allowing exact placement of the earth in the lower corner.

I decided to add the fish later. I resized each one and made slight modifications to make each one unique. Originally they were to be red, green and blue respectively—a reference to the issue's article on RGB monitors. I decided against this for purely aesthetic reasons. They were feathered and pasted into (and, in the case of the largest, in front of) the masked window frame as the earth was.

Finally, I created the transparent Windows type by using Photoshop's anti-aliased type setting in conjunction with Adobe Type Manager to render the large letters in a mask channel.

With the mask selected via the Load Selection command, I could adjust the brightness of only the masked area. I made one section darker, and then moved the mask up and over a bit and made a lighter version, which partially overlapped the darker one. Both areas allowed the background imagery to show through, creating the transparent look of glass.

The image at this point was 14.5MB in size when saved as a TIFF. Amazingly, after saving it with JPEG (joint photographic experts group) compression at "high" quality, the image was only 870K!

To create the final cover, I exported the TIFF to Aldus FreeHand, adding the TCP logo, body text and turned-down page corner as Postscript elements.

The color separations were printed on a Linotronic 300 at WYSIWYG (400 W. Georgia, 604/684-5466) at 1270 dpi.

What's New

ASAP Fax Turns Printer into Plain Paper Fax

AURORA, COLORADO, SEPT 18 (TCP)—Command Communications has introduced an attachment for most popular printers that allows them to receive incoming faxes and print them as if your printer was a plain paper facsiminle machine. With the unit—actually a compact stand-alone PC with its own disk drive—you can also send faxes via your own IBM-compatible computer.

The ASAP Fax works with HP LaserJet, Deskjet, Canon laser printers and Epson FX 80 dot matrix printers.

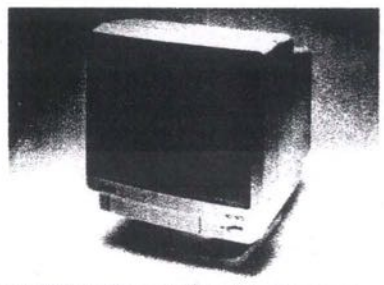
Contact: Command Communications, Inc., 303/751-7000 or 800/288-6794.

Javell intros Modular Systems

VANCOUVER, B.C., SEPT 18 (TCP)—Featuring a CPU, math co-processor and high-speed cache all mounted on a snap-in board, Q by Javell's newest PCs are designed to be easily upgradeable.

According to the company, a range of systems from 25MHz 386DX to 40MHz 486DX are available.

Contact: Q by Javell, 604/685-7003.



New Monitors from Raven

VANCOUVER, B.C., SEPT 18 (TCP)—Raven has released two new high resolution color monitors. Both products offer compatibility with 8514/A, XGA, VESA, SuperVGA and VGA video, and can also be used with Macintosh II computers.

The RD-1475 (shown) is Raven's premium 14" color monitor. It features a .28mm dot pitch and a non-interlaced resolution of 1024x768 at a suggested list of $989.95.

The RD-1466 offers similar compatability, dot pitch and 1024x768 interlaced resolution in an monitor for $779.95. Both products carry a two year warranty.

Contact: Raven, 604/273-4453.

Computer Problems Wanted

BURNABY, B.C., SEPT 18 (TCP)—BCIT is looking for individuals, businesses or government agencies with specific computer problems they need solving—something a computer systems technology student can work on part-time as a project.

New projects begin each September and January but are accepted anytime subject to a brief evaluation. Once accepted, the project is placed on a list from which students can choose. There is no charge for labor, but clients may be required to buy certain software packages to use the software developed by the syudents. To help defray the cost of stationary, copying and computer supplies, a one-time fee of $100 is charged.

Contact: Hans Holst, Computer System Technology, BCIT, 604/434-5734 loc. 5786.



Image Club Stops TrueType Conversions

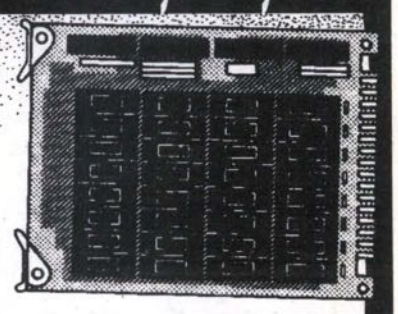
CALGARY, Alberta, SEPT 18 (TCP)—Citing Apple Computer's recent announcement to include direct support for Adobe's Type 1 fonts in a future version of System 7, Image Club Graphics Inc. has

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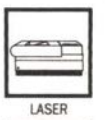

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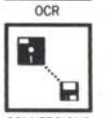
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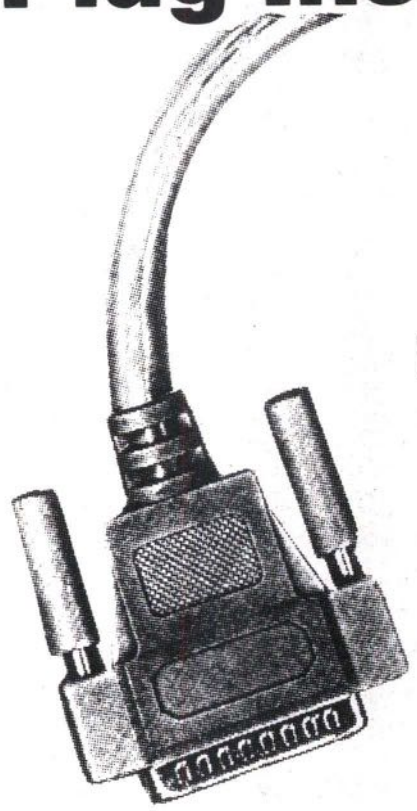

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discontinued development of TrueType fonts.

Image Club president Brad Zumwalt announced that the company's future typeface development efforts will be focussed on Type 1 fonts and, as such, it has stopped the conversion of its typeface library to TrueType.

TrueType font users can still access the company's library of over 630 fonts using Image Club's Evolution v2.0 product, which converts between TrueType, Type 1 and Type 3. For a limited time, the company is offering Evolution v2.0 for only $10 to purchasers of Image Club fonts.

Contact: Brad Zumwalt, Image Club Graphics Inc., 403/262-8008.

CD-ROM Update

We received a call from the folks at FM Waves who produced that great CD-ROM of clip art we reviewed in our CD-ROM edition in June.. Seems when we did the review back in June, we messed up on the price. In fact, their CD-ROM sells for $279, not $544 as previously stated. This makes their wonderful collection even more worthwhile. They should be out very soon with a new DTP Pro CD-ROM full of Icons, elements and borders.They are also looking for a Canadian contributor to their upcoming CD-ROM. If you draw well and have a portfolio of cartoons, characatures, give them a call. Their number is 1-800-487-1234.

Correction

The Computer Paper accepts responsibility for a series of typographical errors in the ad of A & S Advanced PC Services Ltd in the September edition. Through a mixup during the proofing stages, the wrong version of the ad was run. *The Computer Paper* regrets any inconvenience this may have caused.

What I saw at the Computer Show *by Kirtan Singh Khalsa*

The first annual Vancouver Business Computer Show sponsored by Industrial Trade and Consumer Shows, (a Maclean Hunter company) was held recently in Vancouver. I managed to get a few hours to scan the show, what follows are the highlights I noticed.

By far the niftiest thing I saw had to be the Canofile document storage system on display in the Ano booth. Let me first say that I think this system is flawed, if only because it is not executed in MS-DOS. That said, what the system does is awe-inspiring. I guess I had heard of these type of document scanning systems, but I had not seen one in operation.

Basically, it is a system that scans in documents and saves the image as a compressed image file on a magneto-optical 512 MB disk. To call back an image, you simply look up a code number or short name for the file, push a button on the bottom of the proprietary screen, and bingo, your scan comes back.

The system sells for around $17,000 and includes a Canon laser printer to restore your documents to the paper world. There is also a $60,000 network option. The target market for this type of product is lawyers offices and other places with large volumes of documents that must be stored for long periods of time. This system was fast.

The scanner can scan 40 pages a minute at 200 dpi (about the same resolution as your fax machine). It is very impressive to see this machine suck back a stack of papers at the same speed those bank machines count out hundred dollar bills. I look forware to the day when I can hook that type of system into my network and link it into an

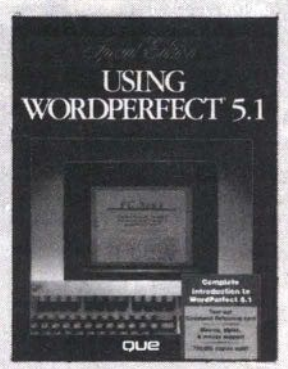
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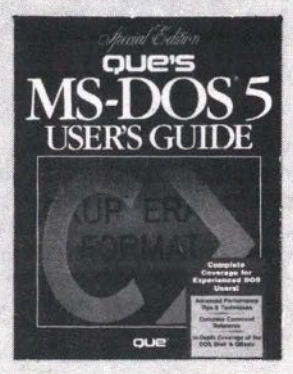
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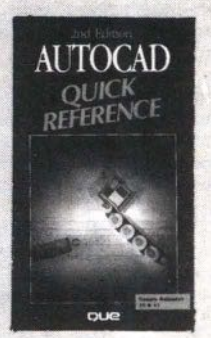
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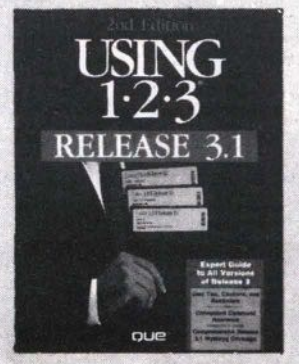
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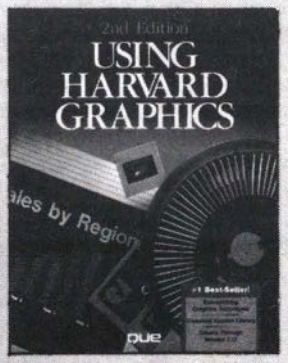












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NewsBytes

Apple Preparing New Mac Portable Range

SAN FRANCISCO, CA, AUG 16 (NB)—After several months of snippets of information leaking to the press, The San Francisco Mercury newspaper has told the Apple world what it wants to her—Apple is readying a new range of portables for launch this October.

The paper asserts that Apple will unveil a blistering array of new products at Comdex Fall. These include a small Japanese-manufactured notebook, thought to be made by Sony, as well as a five-pound portable plus two heavier laptops.

Also being readied are two additions to the high end of the Mac range plus a new version of the budget Mac Classic. Both the new high-end machines are based around the Motorola 68040 microprocessor.

The three lightweight portables are bound to capture the Mac market's attention. The Sony-produced notebook is the Powerbook 100, a 2MB RAM-equipped machine with a 20MB hard disk. Based around a 68000 CPU, the machine is said to be as powerful as the existing Mac Portable, which tips the scales at 16 pounds.

The two lightweight portables are the Powerbook 140 and 170. The 68030-based Powerbook 140 comes with 2MB of RAM, a 20MB hard disk and tips the scales at 8.8 pounds. This is said to be a Mac IIcx in a portable case.

The Powerbook 170 comes equipped with 4MB of RAM, a 40MB hard disk and, like the 140, is based around a Motorola 68030 CPU.

So what about pricing? According to the Mercury, prices have not yet been fixed. Sources suggest that the Powerbook 100 will sell for under the magic $2,000 mark, while the 140 and 170 will price, respectively, for under the $3,000 and $4,000 price points.

Apple is making no comment on the leaks, which have been reported widely in the U.S. press.

Apple And Adobe Systems Sign Co-Operative Font Deal

CUPERTINO, CALIFORNIA, AUG 21 (NB)—Apple Computer and Adobe Systems have signed a letter of intent that could lead to the inclusio. f Adobe's Type 1 font technology in a fu. e version of Apple's System 7.0 operating s m.

The agreement calls for the development of the software necessary to support the Type 1 rasterizer and Type 1 fonts within the Mac system software. It forms part of an interim strategy to deliver the capability to handle Type 1 fonts prior to the system software release.

Plans call for Apple to continue to support the TrueType font format within system software as well as peripheral devices.

Charles Geschke, president and chief operating officer, Adobe Systems, said: "We are delighted to be working with Apple to provide Macintosh users the ability to use the font format that best suits their needs by having equal access to both Type 1 and True Type font formats in the future."

Under the terms of the letter of intent, Apple will make the ATM rasterizer and some Type 1 fonts available to purchasers of Mac systems and printers through an interim offer. The offer will be available in the fall of 1991 and the companies said specific details will be available at that time.

Roger Heinen, Apple's vice president and general manager of the Macintosh Software division, said: "Our goal with Macintosh system software is twofold: first, to build in unique functionality that capitalizes on the close integration between hardware and software, and secondly, to provide a more open architecture in areas where other vendors can provide valuable tools and technologies for our customers."

One of the new Macintosh System 7.0 operating system features is TrueType, Apple's outline font technology, that the company claims provides users with high-quality text on the screen and the printed page. The agreement with Adobe will eventually allow users to access both TrueType and Type 1 fonts.

Currently Macintosh users can use Type 1 fonts in Adobe's Type Manager 2.0 program running under System 7, although Apple maintains that the inclusion of the Type 1 format into the Macintosh system software will greatly simplify the process for the user. Implementation of the letter of intent is contingent on the execution of a definitive contract.

Contact: Linda Prosser, Adobe Systems, 415-962-3840; Patty Tulloch, Apple Computer Inc., 408-974-5449.

NEW FOR MAC: SoftPC 2.5 DOS Emulation Program

MOUNTAIN VIEW, CALIFORNIA, SEP 12 (NB)—Insignia Solutions has introduced version 2.5 of its Universal SoftPC DOS emulation package for all Macintosh platforms.

According to the company, the new version features support for Novell PC networking, and includes CD-ROM capabilities and System 7.0 compatibility.

Additionally, the product offers a new user interface and faster installation. According to the company, SoftPC is beneficial for the education market, because it includes support for Microsoft CD-ROM

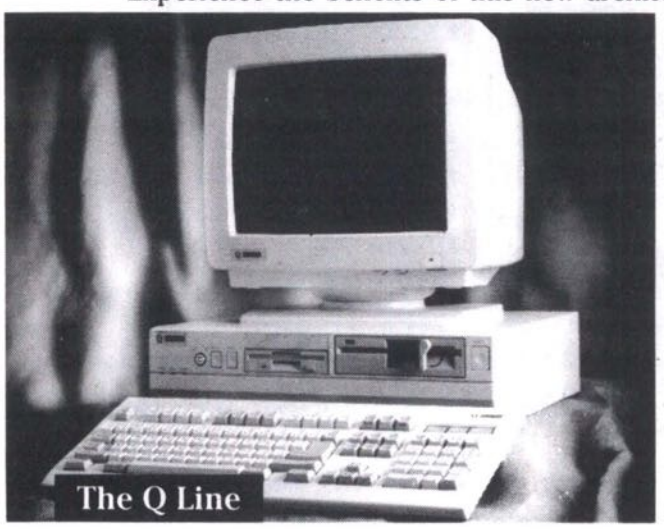
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extensions. It also has multiuser access, allowing for PC files to be opened for shared use, or locked for individual use.

Don Gallagher, vice president of sales for Insignia, said: "The additional features of Universal SoftPC 2.5 will provide our customers with the ability to store and retrieve large amounts of information, access Novell PC networks, and utilize features such as multitasking and file-sharing, offered by Apple's System 7.0 operating system."

For Classic and Mac Portable users, there is also the Entry Level SoftPC version 2.5 available, which costs $199 and only requires one megabyte of memory.

For Macintosh power users working on Motorola 68020-based systems, additional features are available by purchasing the $499 SoftAT version 2.5. Additional features include EGA/AT graphics and 80287 capabilities.

Priced at $399, Universal SoftPC will be available in September 1991, as will all other 2.5 versions.

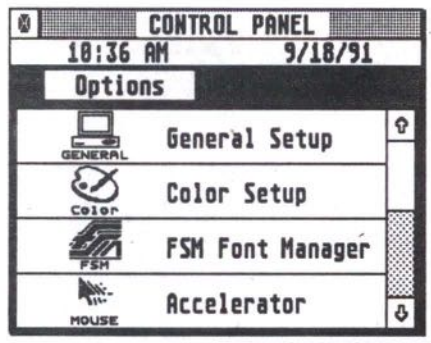
Contact: Don Gallagher, Insignia Solutions, 415/694-7600.

ATARI

Atari Releases New Control Panel For ST/TT

IRVINE, CALIFORNIA, AUG 20 (NB)—After several months of rumors in the user community, Atari U.S. has released the new control panel for the ST and TT machines.

When the online rumors about the new control panel began late last year, many



Atari users presumed that it would only work with the TTs and Mega STes, but , in fact, it will work on all ST, Mega, Stacy, STe, Mega STe and TT systems.

So what is the new control panel? Depending on where you first heard about it, the new control panel comes under several names—the "new" control panel, X-control, and the extended control panel.

Despite these working names, its official title—in Atari circles at least—is the "extensible control panel" or ECP for short. The ECP is a replacement for the old control panel seen on the ST.

Like the first control panel, the ECP allows users to configure the ST's systems: double-click rate, key repeat rate, colors, modems, and printers.

What makes the ECP different, says Atari, is that it loads in individual CPX program modules as it needs them. This cuts down on the amount of memory required for each different function.

This procedure is similar to that supported by Borland with its latest versions of Sidekick on the PC. While the program overlay technique cuts down on the amount of memory required for the program, it does mean a lot of disk reading and writing.

According to Atari, the new ECP can easily be customized. Several versions of the ECP can be placed on disk, for use in different situations. For instance, where memory is tight, a barebones ECP can be loaded. When running a simple program, the full ECP suite of software can be loaded.

The new ECP is available for download on most U.S. online systems and BBSs. On Genie, type M512 for access to the Atari area. On Compuserve type GO ST for the Atari forums.

Contact: Atari Canada, 416/479-1266

COMMODORE

Newtek Shows New Driver S/W For Amiga Video Toaster



TOPEKA, KANSAS, AUG 20 (NB)—Newtek, the developer of the Video Toaster for the Amiga, has begun previewing version 2.0 of the driver software for the add-on graphics unit. First reports suggest that the software greatly enhances the capabilities of the unit.

Newtek's Video Toaster is actually a video controller board for the Amiga that allows the computer to simulate

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professional-quality video effects. With version 2.0 of its software, Newtek has added several new transitional effects to its switcher, including animated effects such as turning gears and disco effects such as smoke and clouds.

Newtek is shipping the Video Toaster workstation in two versions—version one, at $3,995, comes with an Amiga 2000 equipped with 5MB of RAM and a 50MB hard drive. Version two, meanwhile, costs $8,995, and comes with an Amiga fitted with a 50-MHz 68030 microprocessor and math coprocessor, along with 9MB of RAM and a 105MB hard drive.

Contact: Newtek, 913/354-1146.

GENERAL

Dataproducts Ships 1st PostScript Level 2 Printer

MOUNTAIN VIEW, CALIF., AUG 19 (NB)—Dataproducts Corp. is now shipping the LZR 960 desktop printer, which the company claims is the first monochrome laser printer to incorporate PostScript Level 2 software from Adobe Systems Inc.

The LZR 960 is a nine-page-per-minute, 300 dots-per-inch (dpi), black-and-white laser printer with a Weitek 8200 RISC (reduced instruction-set computer)-based controller and Sharp printer engine.

The printer comes equipped with AppleTalk/LocalTalk/RS-422, IBM-PC and conventional RS-232-C interface ports to enable it to work in mixed PC/Macintosh environments.

The LZR 960 comes standard with two megabytes of memory, expandable to 10 megabytes, and 35 Type 1 fonts from the Adobe Type Library. Shipping now in the United States and internationally, it is priced at $2,995.

According to Adobe, the PostScript Level 2 software in the LZR 960 represents a major revision of the PostScript language and PostScript software, although it is compatible with existing application software and with other PostScript output devices.

PostScript Level 2 incorporates previous extensions to the language and adds new language features. Adobe says it is easier for PostScript language programmers to use, can improve the performance of PostScript output devices for end-users, and offers better support for printer-specific features, such as multiple paper trays and duplex printing.

The new LZR 960 offers such PostScript Level 2 features as form and pattern caching, which allow users to more quickly print pages containing text, graphics or patterns used multiple times.

According to the company, new data compression and decompression features can reduce the time required to transmit files to the printer, and the PostScript Level 2 software in the LZR 960 enables it to handle the large character sets of such non-Roman languages as Japanese.

Contact: Patricia J. Pane, Adobe Systems Inc., 415-962-3967; or Chris Richter, Dataproducts Corp., 818-887-8344.

RasterOps And Truevision Terminate Merger

SANTA CLARA, CALIFORNIA, AUG 19 (NB)—Citing an inability to reach an agreement on the transaction, RasterOps and Truevision Inc., have mutually agreed to terminate the planned merger of the two companies.

At the time of the original announcement in May, Keith Sorenson told Newsbytes that he saw the merger as a benefit to both companies. He considered RasterOps as the market leader in Macintosh video products, while Truevision was the market leader in IBM products, "but

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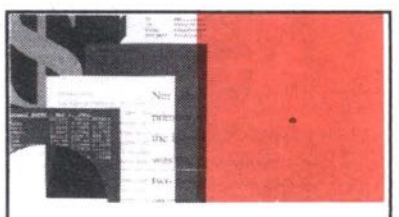
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the underlying technologies are basically the same," he said.

Commenting about the failed merger, Keith Sorenson, president of RasterOps, said: "We continue to have the greatest respect for Truevision, but it unfortunately does not appear that we will be able to reach agreement on a transaction that would be satisfactory for both sides."

Cathleen Asch, Truevision's president, agreed with Sorenson's assessment. "We have two fine companies," she said, "but I think it is better that they remain independent of each other."

Contact: Keith Sorenson, RasterOps, 408/562-4200.

Help With Acronyms—A PC Glossary

ST. PETERSBURG, FLORIDA, AUG 16 (NB)—Do you know what a CRC check is, or what the differences are between SIMMs, SIPs and DIPs? Doug Fickle, owner of Disston Ridge Software, said he had trouble with the ever-expanding number of acronyms in the IBM personal computer (PC) industry too, and in doing something about it, a new software product, the PC Glossary was born.

PC Glossary is a friendly, fast way to look up that acronym using an IBM or compatible PC, according to Fickle. The software will search for the term, then provide a complete explanation of the term, its use and its implications offered, he said.

The sources for the definitions come from many sources including "The McGraw-Hill Computer Handbook," "Inside the IBM PC" from Peter Norton, "Que's Computer User's Dictionary," and the "Dictionary of Computing" by IBM.

The software also offers reference tables. These tables include the ASCII control codes, bytes to terabytes conversion, computer organizations, data bus facts, the extended ASCII character set, floppy disk specifications, hard disk specifications, IBM PS/2 models, disk data transfer rates, interrupt request lines, network



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transmission rates, a review of local area network cabling, microprocessor clock rates, a review of DOS versions, a list of the common meanings of DOS filename extensions, and video display standards.

PC Glossary is offered on a subscription basis and is updated quarterly. Rates are $29 per year for up to two computers and go up from there.

By the way, a CRC is an abbreviation for a Cyclic Redundancy Check and is used to determine whether an error had occurred during the reading, writing or transmission of data. It is done by calculating the CRC character and comparing its value to the CRC character already present in the block of data transmitted. If they are equal, the data is assumed to be correct.

SIMMs, SIPs and DIPs are memory chips and are available in a variety of styles. The Single In-Line Package (SIP) is a single package array of computer chip logic assembled so that all the connecting legs are in a straight line, like the teeth of a comb.

The Dual In-Line Package (DIP) is the traditional computer chip with 8, 14, 24, or even 40 or more metal legs or prongs, evenly distributed on the left and right sides.

The Single In-Line Memory Module (SIMM) is a type of memory chip design whereby individual logic devices are installed on a printed circuit board, creating a component module that can be plugged into a larger device. A SIMM holds nine DRAM (dynamic random access memory) chips, eight for data and one for parity or error checking.

These explanations are courtesy of PC Glossary.

Contact: Doug Fickle, PC Glossary, Tel: 813/323-0961, Fax: 813/327-0822.

ROUNDUP:

Stories Carried By Other Media

WASHINGTON, DC, AUG 16 (NB)—Roundup is a brief look at some computer stories carried in other publications received here this past month.

The cover story on the September 10 *PC Magazine* is a first look at the new, lower-priced AT bus PS/2s from IBM.

Byte's September cover headlines Silicon Graphics' new IRIS Indigo, a hybrid 3-D graphics and business computer.

ComputerWorld for August 12 looks at the diversity available in special interest bulletin board systems.

September's *PC World* looks at 77 2400 baud modems and IBM's latest desktop system.

Lotus magazine for September carries a "special report" on "1-2-3 Network Power, How to get it - How to use it."

The Seybold Report on Desktop Publishing dated September 2 looks at Ventura's entry into the desktop color arena and also explores the latest in grammar and style checking technology.

The October issue of *Science PROBE!* magazine, the amateur science experimenter's publication, carries an article on how to exchange scientific knowledge and data using public-access and government BBS. This issue also looks at the Westinghouse Science Talent Search and a nuclear radiation monitor which can be used with a computer to collect sunspot and other data.

Computer Reseller News dated September 2 says that Digital Research is about to unveil DR DOS 6.0, which will include such features as data compression and task switching.

September 24's *PC Magazine* looks at spelling and grammar checkers, fonts, and tests Dell's PowerLine 450, the first 50MHz 486 PC the magazine has tested. Also, don't fail to miss John C. Dvorak's very funny "Great Operating System Quiz."

Data Based Advisor for September looks at the inside story behind the Borland buyout of Ashton-Tate. Also included in the issue is a 44-page premiere of "*Client/Server Advisor.*"

Zenith Intros 486-based PCs

BUFFALO GROVE, ILLINOIS, SEP 12 (NB)—Zenith Data Systems has rolled out two new 486-based computers. The company is introducing a 486i, a 33 megahertz model, and a 486SX 20 megahertz desktop system.

The Z-486/33 comes equipped with the Texas Instruments Graphics Architecture high-speed, high resolution video card, which the company says operates up to five times as fast as a standard VGA graphics card.

The Z-486/33 is available with a 400-megabyte hard drive and has a suggested list price of $9,699. A 200-megabyte hard drive model will sell for $8,799. Either model comes with 4-megabytes of memory (RAM), which can be expanded to 64 megabytes.

The Z-486SX/20E is the first Zenith system based on Intel's 486SX processor. It comes with 4 megabytes of RAM and a VGA card. The 200-megabyte hard drive version carries a list price of $5,799, and its also available with an 80-megabyte drive for $4,999. A basic system with neither a hard drive nor a video card, for those who want to customize their own system, has a price of $4,299.

Contact: Glen-Eric Nelson, ZDS, 708/699-4848.

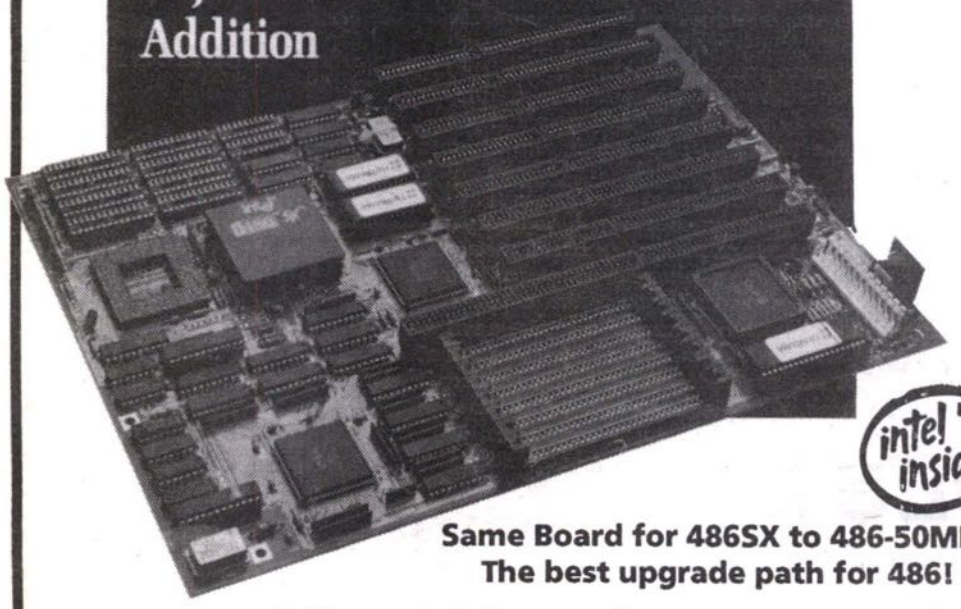
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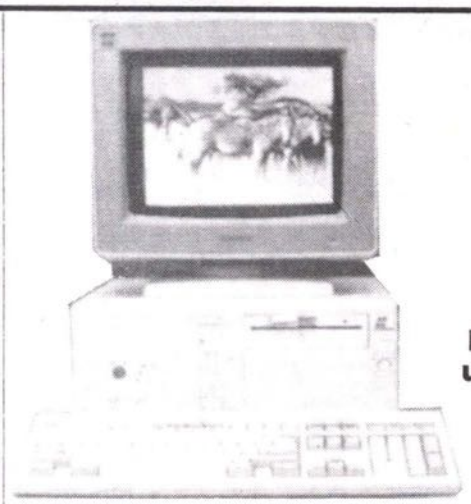
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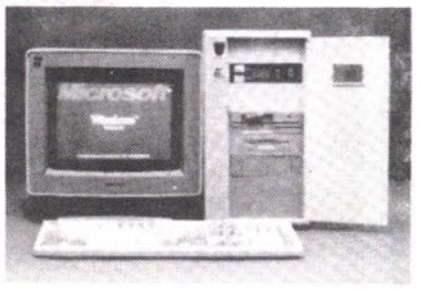
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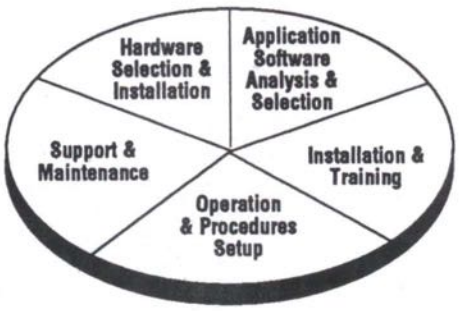
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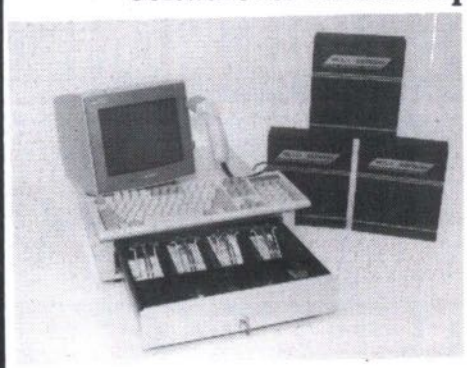
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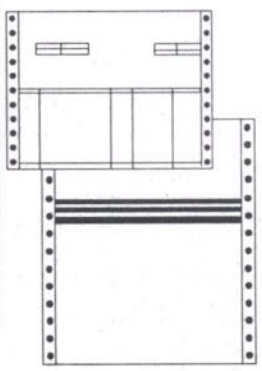
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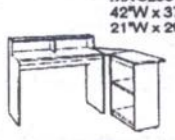
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NEWSBYTES

Borland Aims New Products At Home & Small Business Users

SCOTTS VALLEY, CALIFORNIA, AUG 16 (NB)—Borland has announced it is offering reduced price and functionality versions of its Quattro Pro and Paradox products aimed at home and small business users of the IBM PC. The new versions are called Quattro Pro SE and Paradox SE.

Quattro Pro SE is a fast, fully compatible low-end version of the Quattro Pro spreadsheet product. According to the company, the package competes functionally with Lotus 1-2-3 release 2.3.

Borland is claiming that the SE version offers greater spreadsheet capacity on the varied range of hardware configurations than Lotus 1-2-3 release 2.3 offers. The new Quattro Pro SE carries a $69.95 price tag in comparison to Quattro Pro's retail price of $495.

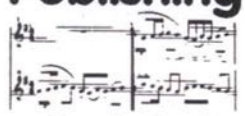
Paradox SE, meanwhile, is a low-end version of the Paradox database package from Borland. The product is aimed at first-time database users and can be used to track customers and clients, print mailing labels and generate form letters, Borland officials said.

The retail price on Paradox SE is $99.95 compared to the $795 price tag of Paradox 3.5 or the $349 price of Q&A, another relational database.

Rob Dickerson, vice president and general manager of Borland's Database Business Unit, said: "Many flat file database users find that they need a relational database to meet all their needs."

"Paradox SE is a cost-effective product that is both easy to learn and use, yet provides users with the power they need to

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NEWSBYTES

manage important information," he added.

Referring to Borland's new low-end versions, Stephen Kahn, vice president and general manager of Borland's spreadsheet business unit, said: "Borland has a heritage of providing software value to all its customers."

Borland is a software development company of end-user and programming software products. Some of its offerings are C++, Sidekick, ObjectVision, Turbo Pascal for Windows, as well as Paradox and Quattro Pro.

The company is in the process of purchasing Ashton-Tate, best known for its dBASE line of products, and has already announced a dBASE for Windows product.

Contact: James Strohecker, Borland, Tel: 408/439-4765, Fax: 408/439-8080.

Quattro Pro Beats 1-2-3 In *InfoWorld* And User Group

SCOTTS VALLEY, CALIFORNIA, SEP 6 (NB)—Borland is touting its Quattro Pro IBM personal computer spreadsheet product has outscored Lotus 1-2-3 in a leading computer industry journal's comparison testing. *InfoWorld* rated Quattro Pro at 6.4 vs. 5.7 for Lotus 1-2-3 Release 2.3 ("Spreadsheets on 286s," *InfoWorld*, Aug. 26, 1991).

Borland says this marks the fourth time since Quattro Pro's entry on the market two years ago that the product has been rated higher by InfoWorld than the industry de facto spreadsheet standard, Lotus 1-2-3. In fact, Borland says Quattro Pro has also been awarded InfoWorld's Buyers Assurance Seal.

This will come as no surprise to computer users who attend the Pasadena IBM compatible user group. One of the largest user groups in the Los Angeles area, led by Steve Bass, who also writes for *PC World* magazine, the group sponsored a "Shoot Out" between Lotus 1-2-3 and Borland's Quattro Pro. Both companies came and side by side on projection screens displayed feature for feature the two products.

Bass reported in the group's newsletter that the demonstration went so badly for Lotus that company officials became quite angry. Newsbytes attended a meeting of the user group and saw members publicly attempting to trade unopened copies of 1-2-3 won in a drawing at the shoot out for software won later by other group members, to rounds of laughter by the entire group.

Interest in the Quattro Pro/1-2-3 competition by industry professionals is stimulated in part by the fact that Lotus is bringing a "look and feel" suit against Borland over the company's Quattro Pro product.

The Lotus suit against Borland is over a menu structure in the Borland product that has the same wording and command structure as the Lotus 1-2-3 product.

In June, a Wall Street financial analyst who closely follows Lotus told Newsbytes: "By separating the menu structure from the rest of the product, Lotus adds another level of abstraction that may verge on patent rather than copyright consideration."

A similar suit was brought against the Santa Cruz Operation (SCO) by Lotus and SCO stopped marketing its spreadsheet product and recommended customers go to Lotus. Not so with Borland. Borland's President and Chief Executive Officer Philippe Kahn was reported by Newsbytes as saying, "...It's the principle of the thing...."

Newsbytes reported Kahn said at a meeting of the Pasadena Users Group in July that a hierarchy of commands based on functionality should not be copyrightable, and it could be disastrous if they became copyrightable. Kahn said that, in the Lotus suit against Borland, Borland is using a hierarchical set of commands from a Lotus menu based on functionality.

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Kahn added that Borland would be willing to pay Lotus a royalty, but Lotus wants to say it owns those commands and no one else can use them. "We could easily just remove that part of the program from the Quattro Pro product, and most of our users would not miss it," Kahn said.

Borland claims one million users have switched to Quattro Pro. The company quotes Paul Jones, second vice president for Information Management Systems Operations at Acacia Mutual Life Insurance as saying, "We switched to Quattro Pro from Lotus 1-2-3... because it [Quattro Pro] provides the superior functionality that we need, including efficient memory management, high-quality graphics and spreadsheet publishing."

Quattro Pro has received an unprecedented 41 major international industry accolades and product roundup victories since its introduction in October, says Borland. Borland also quotes Dataquest, a market research firm, which said Quattro Pro is the only software product to achieve a 20 percent worldwide market share in its first full calendar year on the market.

Contact: Dick O'Donnell, Borland, Tel: 408/439-1631, Fax: 408/439-9273.

First Mouse For "Kidz" Introduced By Logitech



ORLANDO, FLORIDA, SEP 12 (NB)—Logitech, known for its production of a computer input device commonly called a mouse, has introduced the Kidz Mouse, a mouse it claims is the first developed especially for children. It works with PCs.

Logitech says the mouse is ergonomically designed to fit the smaller hands, looks like a friendly mouse and has two button "ears" that can be set to act as one so children can press either "ear" and get the same result. The mouse is installed so the child merely types their own name to activate it, which prevents the mouse from affecting any other mouse or trackball already installed on the computer, the company said.

The mouse has a lifetime warranty and is built to withstand years of rough treatment, the company said.

Vanessa Mills, product marketing associate at Logitech, said, "We developed Kidz Mouse in response to the growing use of computer technology in both the home and classroom. Humanizing this technology for children will help prepare them for the important task of dealing with computers as adults."

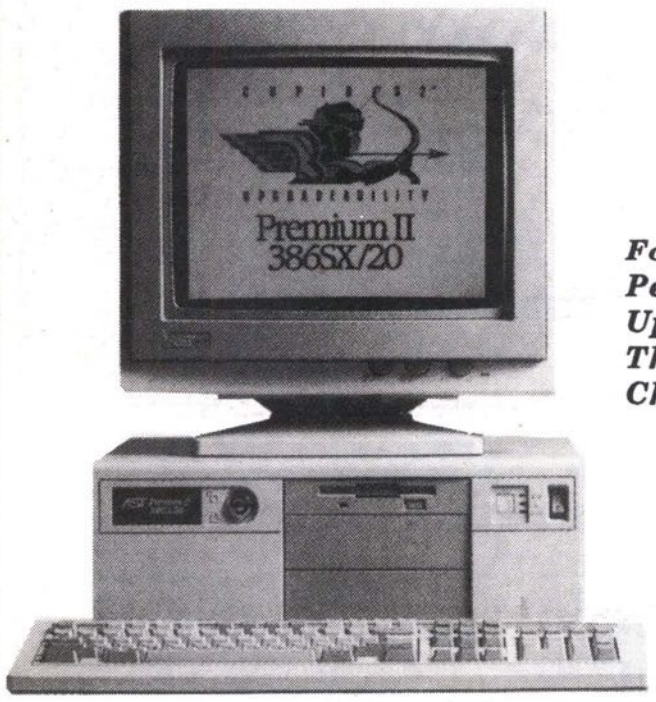
The Kidz Mouse bears a retail price of $79 and comes with Mouseware for Kidz software and a Kidz Mouse User's Guide written for children, the company said. It has a 9- to 25-pin serial adapter and is fully Microsoft plug compatible, Logitech said.

The Dinosaur Discovery Kit from First Byte, an educational program for development of reading and problem-solving skills, is also included with each mouse, Logitech said.

The mouse is IBM personal computer (PC)-compatible and requires DOS 3.0, two floppy disk drives or one hard disk and a floppy disk drive, the company said. Logitech said the mouse should be available through Logitech dealers and distributors in December of this year—just in time for the Holiday season.

Contact: Amy Samborn, Logitech, 510/795-8500, ext. 1041, Fax: 510/792-8901.

Inspiration



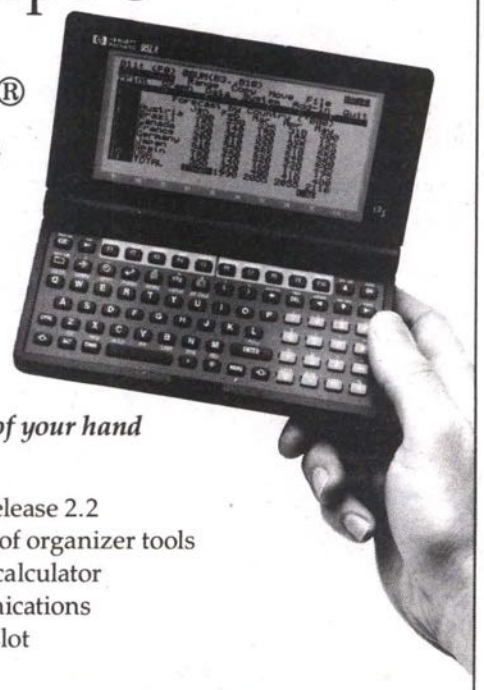
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Using FotoTouch, images can be stored in a standard image file format and used for applications such as desktop publishing, image databases or presentation graphics. FotoMan can store up to 32 images on an internal RAM chip, and does not use any type of removable media, as do some other digital camera products.

Once the images are stored, they can be transferred to a desktop, laptop, portable or notebook computer through the computer's serial port. No intermediate hardware is required. Since FotoMan is a digital camera, no special boards or frame grabbers are required, the company claims.

The average image requires 90-100 kilobytes of disk storage space, once it has been transferred to the computer. FotoTouch stores images in PCX or TIFF format. The TIFF files can be compressed or uncompressed. Fotoman uses a camcorder screw-mount lens.

Some examples of FotoMan's use are real estate agents capturing the image of properties for sale; law enforcement identification photos; pictures of catalog items, which could then be included in a desktop publishing-produced catalog; and photos for personnel records.

Logitech says that FotoMan will be available in late October or early November of this year, and will carry a suggested list price of $799 including the FotoTouch image editing software. The user must provide a copy of Windows 3.0.

The FotoTouch software is an improved version of a program originally called Ansel, which is included with Logitech's ScanMan 256 hand-held gray scale scanner. For use with FotoMan, an additional module has been added to support the specific features of the camera.

FotoMan comes standard with a camera docking unit, built-in flash, base unit with power supply, a six-foot serial cable to transfer images to a computer, a NiCad battery, and a neutral-density filter and adaptor for use outdoors.

When the user sends in the registration card, Logitech will send out a carrying case for the camera. Optional accessories such as additional lenses are available through local camera stores.

Contact: Serge Timacheff, Logitech, 415-795-8500.

NEW BOOKS: TAB Announces Four New Windcrest Titles

BLUE RIDGE SUMMIT, PENNSYLVANIA, AUG 16 (NB)—TAB Books has just announced several new books available to PC users starting this month.

Microsoft Word for Windows Revealed, $24.95, by Herbert L. Tyson, covers the WordBASIC macro language and other features.

DOS 5 Demystified, $24.95, by James S. Forney, explores the strengths, weaknesses, and quirks of the new version of the world's most popular operating system.

QuickBASIC 4.5, $22.95, by Gary Cornell, Ph.D. is a hands-on tutorial for the latest version of Microsoft's BASIC.

From FORTRAN to C, $24.95, by James F. Kerrigan, shows how each Fortran compares to its counterpart in the C language and looks at the special features found only in C.

Contact: Kimberly Martin, TAB Books, 717/794-2191.

New QEMM-386 6.0, QRAM 2.0, Desqview Boosts Memory

SANTA MONICA, CALIFORNIA, AUG 15 (NB)—Quarterdeck has announced that the new version of QEMM-386 (Quarterdeck Expanded Memory Manager - 386) could give users as much as 211 kilobytes of extra RAM above what was previously possible.

QEMM came with Optimize, a program to automatically configure memory for the user, so users could load drivers for mice, screens and other peripherals into memory above the 640 KB of RAM the DOS can use for running applications software. QEMM-386 has enhanced Optimize by adding new read-only memory (ROM) detection and utilization previously unavailable to users, which could add as much as 115 KB to the user's available RAM, Quarterdeck said.

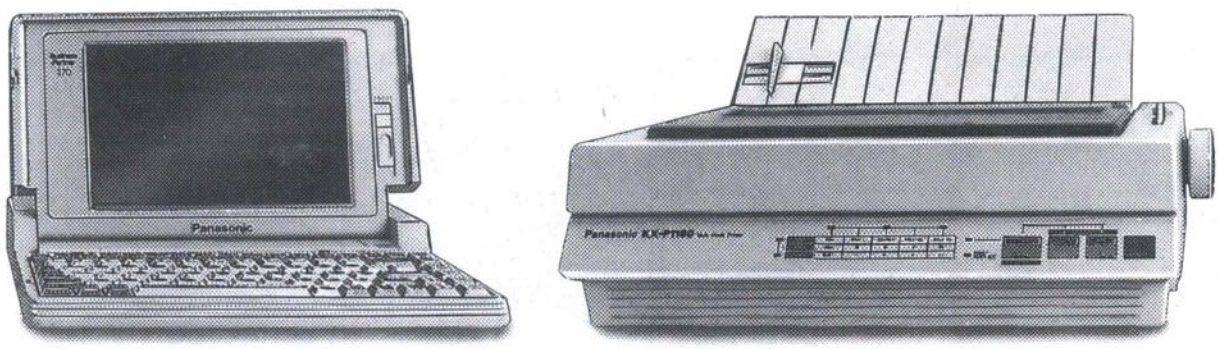
"Stealth" is Quarterdeck's name for the technology that allow users to utilize ROM memory as high RAM. The Stealth technology hides the ROM code, but makes it available when needed, then allows the ROM memory addresses to be mapped as high RAM, or RAM above the 640 KB used addressable by DOS, the company said.

The ROM, up to an extra 115 KB, is now available to the user as RAM for other purposes, Quarterdeck said. The design of the ROM could prohibit some or all of its use, but Quarterdeck said Optimize is programmed to look at the ROM and recommend to the user which Stealth methods will work, and only attempts to use Stealth if it cannot load all TSR (terminate-and-stay-resident) or drivers into high memory.

Gary Pope, Quarterdeck's co-founder and executive vice-president of development, said about Stealth: "This important new technology, unique to QEMM-386 version 6.0, is compatible with Microsoft's Windows environment."

Other new features include support for the "suspend-resume" facility found on many battery-operated computers, that allows users to power up a system in an

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application right where they left off.

Also, additional support for using Shadow RAM as extended memory is available in version 6.0, the company said.

Quarterdeck said it is also releasing QEMM 50/60 version 6.0 for Intel 80286-based IBM PS/2s.

The company claims, though QEMM works well with DOS 5.0, it is better and easier to use than DOS 5.0's Expanded Memory Manager (EMM). Quarterdeck said that DOS 5.0's EMM is very similar in functionality to its QEMM 4.1 released in 1988 in the way it functions—in other words, EMM is based on old technology.

Quarterdeck claims that running QEMM-386 and DOS 5.0 together will deliver more memory for DOS applications in less time and effort. The strength of Quarterdeck's argument here is in the Optimize part of QEMM.

QEMM-386 version 6.0 is expected to ship in early September. Registered users of any QEMM-386 or QEMM 50/60 version can upgrade for $30 until December 31, 1991. Retail price for the new product is $99.95.

The company is also releasing Desqview and Desqview-386 versions 2.4. Desqview allows users to run multiple programs at the same time in different windows on screen in the DOS environment. Desqview users can upgrade to Desqview version 2.4 for $25; Desqview-386 users can upgrade to Desqview-386 version 2.4 for $50.

Qram version 2.0, the company's product for allocating memory resources on IBM PCs, XTs and ATs is also being released. The product has the Optimize feature and allows use of Chips and Technologies' Shadow RAM. Registered users will be able to upgrade for $25.

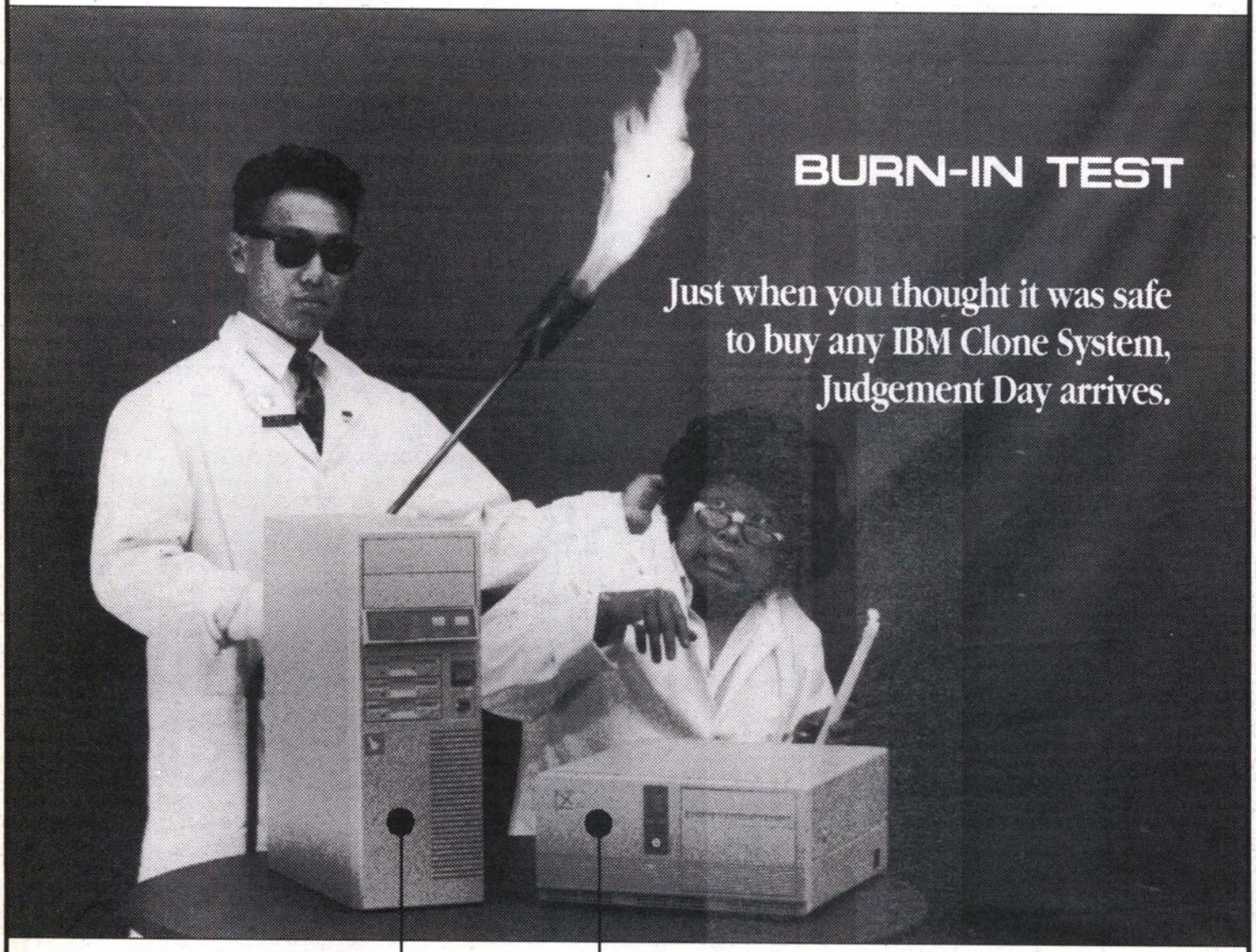
Contact: Charles McHenry, McHenry & Associates, Tel: 503/722-2382, Fax: 503/776-6909.



Quarterdeck's QEMM386 expanded memory manager now has an automatic Optimize function that analyzes your system and sets up a configuration to make the most of available resources.

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Quarterdeck Signs With Adobe/Rational Systems

SANTA MONICA, CALIFORNIA, AUG 21 (NB)—Quarterdeck Office Systems has signed a licensing agreement with Adobe Systems, and at the same time signed a joint development deal with Rational Systems of Natick, Mass.

The licensing agreement with Adobe will make available to DESQview/X users and developers PostScript scalable fonts and extensive printer support, at the operating environment level, through Adobe Type Manager technology.

The joint development deal with Rational will result in the addition of system-level 286 and 386 shared dynamic link libraries (DLLs), embedded 16- and 32-bit DOS extenders, and virtual memory capabilities to future Quarterdeck products.

"The Adobe Type Manager software technology will be supplied with all DESQview/X systems," said Therese Myers, president and co-founder of Quarterdeck.

"We have embedded this technology at the system level of DESQview/X so that all applications being displayed in DESQview/X windows, including remote X applications, will be able to take advantage of high-quality fonts—regardless of size," she added.

The company maintains that DESQview/X is a graphical, multitasking and windowing operating environment that is a full client/server implementation of the X Window System under DOS.

According to Quarterdeck, the agreement with Rational to will allow programs to share 16- and 32-bit DOS Extenders—enabling users to run X Window clients and 16- and 32- bit DOS programs in any combination. For developers, the DESQview/X system provides a 32-bit environment with a large address space for porting from Unix and mainframe operating systems.

It is intended for DESQview/X to use a derivative of Rational System's DOS 16/M, 16-bit DOS extender; and DOS/4G, the company's recently announced 32-bit DOS extender, to deliver these capabilities.

Dynamic Link Libraries are shared libraries of routines, designed to manage an array of common, generalized tasks, stored separately from an application program's regular code. In the DESQview/X system, shared DLL services will be performed by the Rational Systems' technology embedded in the system.

DESQview/X is expected to ship in the fall, and, according to the company, will allow users and developers a choice of window managers; the ability to run DOS extended applications up to four gigabytes in size; the ability to multitask DOS applications and X Clients either locally or remotely on DOS or non-DOS machines; and will provide a logical growth path from character-based DOS to industry-standard graphical user interfaces.

Contact: Charles Henry, McHenry & Associates, 503/772-2382.



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NEWSBYTES

ATM Bundled With Ventura Publisher 4.0 For Windows

MOUNTAIN VIEW, CALIFORNIA, AUG 15 (NB)—Adobe Systems has announced Ventura Software is bundling the Adobe Type Manager (ATM) with the newly announced 4.0 version release of Ventura Publisher for Windows.

This marks the second major software company that has bundled ATM with its applications. Lotus announced with Adobe in May at Spring Comdex that it would bundle ATM with all its Microsoft Windows products.

Software companies are attempting to give users "What You See Is What You Get" (WYSIWYG) and Adobe says ATM delivers WYSIWYG to users transparently in Windows applications. ATM displays on screen are smooth representations of what prints, not jagged approximations, Adobe claims.

Adobe says that despite the fact ATM utilizes PostScript fonts (PostScript is a printer control language), the fonts will print to a PostScript or non-PostScript printer.

Ventura Publisher, Windows Edition 4.0 is slated for shipment in the fourth quarter of 1991, Ventura said. Retail on the product is $795, but previous users under IBM personal computer (PC) DOS can upgrade for $129, and the upgrade is $195 to owners of the Macintosh or OS/2 Ventura Publisher editions.

Contact: Patricia Pane, Mountain View, Tel: 415/962-3967, Fax: 415/961-3769.

NETWORKS

Intel Jumps Into LAN With Both Feet

SANTA CLARA, CALIFORNIA, SEP 12 (NB)—Intel has jumped into the IBM personal computer (PC) networking market with its announcement of the introduction of 23 new products in three "families" for the purpose of setting up local area networks (LANs).

Intel says the installed base of PCs with an Intel x86-based microprocessor worldwide is 80 million and the company wants to get into the business of connecting those machines.

Frank Gill, senior vice president and general manager of the Intel Products Group, said, "We are at the threshold of the age of 'Just-In-Time Business' where getting information quickly to where it's needed is a strategic advantage for a company."

Intel says it hopes to attract users to these products by its name recognition and by touting its expertise at the microprocessor and pointing to traditional networking problems saying it can offer more reliable networking products. The reasoning here is, Intel built the "brain" of the PC, so it stands to reason that it must know more about how to make PCs connect than anyone else.

Gill said networks have been difficult to build, hard to maintain. Setting up a network has been "...easier said than done," Gill said.

However, Intel says its new products will make setting up a network easy. Gill said, "By building on Intel's unique knowledge of silicon technology and the networking marketplace, we are in a position to make the use and management of these networking resources simple."

The new network products fall into three families, Intel says: LAN printing and fax, network interfaces, and network

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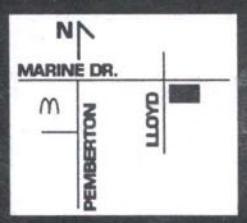
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management.

Most significant is the fact that Intel says its LAN adapter boards have "silicon knowledge" in them, so they can configure and test themselves automatically as soon as they're installed, and are invisible to users. "Users will be able to plug these products into the network and forget about them," noted Gill.

Intel is offering both hardware and software, the company says. The software includes network management software for both monitoring and analysis. Hardware offerings include adapter cards that support Ethernet and Token-Ring LANs, fax cards and plug-and-play printer and plotter connection hardware.

Intel is even offering software to teach new users how to use software on a LAN, called LANschool. Intel says the software allows instructors to broadcast program screens and processes onto multiple networked PCs, as well as browse through the individual student work in progress.

Contact: Jeanne Silsby, Hastings, Humble, Giardini & Freeman, 503/221-1063, Fax: 503/221-6953.

Canada's Stratford Software Bankrupt

Suzy Goes Under

BURNABY, B.C., SEP 13 (NB)—Sixteen months after launching its national online service, Suzy, and two weeks after a refinancing deal fell through, Stratford Software has filed for bankruptcy. The Suzy service has already been shut down.

Stratford's president, Thompson McKie, told Newsbytes the company hopes to be able to pay its creditors in full. "Unfortunately we just didn't get into the plus side of the book," he said, "and we couldn't keep going."

The company's future had looked bleak since the end of August, when Stratford announced that The Becker Group of Companies, of Edmonton, Alberta, had withdrawn an offer to buy a controlling interest in the cash-strapped firm for C$500,000. Over the past two weeks Stratford talked with other potential investors, but Thompson McKie, the company's president, had warned that Stratford had very little money left.

Formerly Bedford Software, the company sold its successful line of PC accounting software to Computer Associates in the summer of 1989, complete with the Bedford Software name. It wanted the money to finance development of Suzy, a national online service for which Stratford sold specially tailored access software for IBM and compatible PCs.

After some delays, Suzy finally went live at the end of April last year. The service received a major boost later in 1990 when IBM Canada decided to distribute the access software with its PS/1 home computers. But Stratford was running through the proceeds from the sale of the Bedford accounting software, and Suzy was still not turning a profit.

Last November Alex Morton, a former Borland International marketing executive who had joined Stratford when it was still an accounting software vendor, was removed as president. Thompson McKie, a long-time Stratford investor, replaced him at a lower salary. McKie said at the time that the move was a cost-cutting measure designed to "cut down our burn rate" until Suzy started making money.

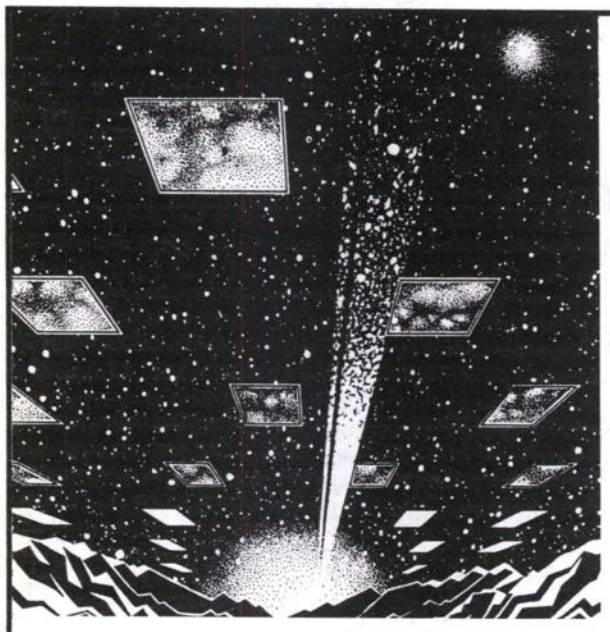
Stratford took further cost-cutting measures a month later when it cut staff in operations, administration, and marketing, and reduced its advertising and marketing budgets. At the time, Sharka Chobot, vice-president of marketing, said Stratford's revenues were rising and it hoped to be profitable by early 1991.

By May, though, Stratford was still losing money. "We were on virtually cruise control," McKie told Newsbytes later. "We saw the bottom of the barrel coming up." The answer seemed to have appeared when the Becker Group offered to buy in. The deal was announced at the end of May.

After studying the deal, though, Becker backed out. McKie apparently decided enough was enough. "I've been putting money into the company for a long period of time," he told Newsbytes recently.

Trading in Stratford shares was halted on the Toronto Stock Exchange on September 11. Trustee Ernst & Young is scheduled to hold a meeting of creditors October 3.

Contact: Thompson McKie, Stratford Software, 604/439-1311.



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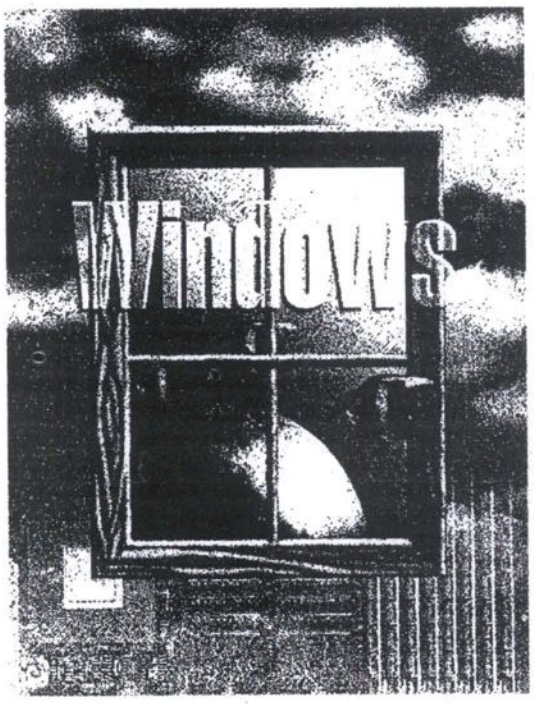
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WINDOWS WORLD

An Early Look Through Windows 3.1



REDMOND, WASHINGTON, AUG 20 (NB)—Microsoft has given its Windows developers an early look at Windows 3.1, and they liked it. The developers also believe Microsoft listened to them when it crafted the new release.

As reported by Newsbytes, Windows 3.1 was previewed for more than 2,000 software developers in Seattle last week. Attendees at the conference, which some analysts believe to be the largest gathering of developers ever, heard company officials talk about the new features of Windows and future plans for Microsoft products.

The company used such terms as: "easy to use," "more powerful," and "versatile" when talking about Windows 3.1. From what they saw, many developers seem to agree.

Stan Graham, a senior systems architect at Intel Corporation, reportedly said about Windows 3.1: "There is now much more momentum behind Windows. People who are not computer literate need to be educated about the computer and new types of applications need to be written for them. Windows 3.1 will help make that possible."

Software designer Dan Baer of Canon Business Machines was quoted as saying: "For the everyday DOS user, the move to Windows is the right choice—one I think many people will make. With the enhancements for MS-DOS 5.0 and now Windows 3.1 Microsoft is clearly concentrating on getting feedback and using it to improve their product."

While Newsbytes has not yet had the

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WINDOWS WORLD

opportunity to test Windows 3.1, most of the reported new features seem to be aimed at making the developer's task easier.

Some of the new features include: a parameter validation system, to help eliminate Unreasonable Application Errors (UAE); a system that will demand-page DOS applications which are running in the background on and off the hard drive in four kilobyte pages, allowing background applications to execute even while part of the application is stored on disk; the ability for developers to write programs which save printer settings with individual documents or programs; and Dynamic Link Libraries (DLL) that support version 1.0 of the Object Linking and Embedding (OLE) protocol, allowing developers to write less code.

Other new features include a DLL that will provide code that supports common user dialogs such as file saves and font choices. Also expected in 3.1 is the introduction of a new version of the Windows help system, and source code for a graphical installation which developers can include with the applications they develop, making user installation easier.

The next (second) beta test version is expected to be available to beta testers in early September, with the final version ready by the end of 1991. However, a Microsoft spokesperson said the product will not be released "until it's ready."

Microsoft claims to have shipped more than four million copies of Windows 3.0, along with more than 70,000 developer kits. The company says it plans further upgrades in the future, including Windows NT (new technology), which is reportedly a Windows version for high-powered personal computers and computer workstations. Microsoft says it expects to release Windows NT early in 1992.

Microsoft Windows
Home Products Due

SEATTLE, WASHINGTON, SEP 6 (NB)—Microsoft has confirmed that it will soon introduce a low-end product for home and small office computing using the Windows graphical interface.

Microsoft spokesperson Marty Taucher declined to elaborate on a release date or any specific information about the product. However, Taucher did say that "Microsoft's entry into this home entry-level market is imminent." He added that Microsoft can be expected to offer a series of products aimed at the small business and home market.

One industry analyst said he expects the company to introduce the product early next week, and says it will consist of a low-end desktop publishing product, a Windows version of Microsoft Works, and a home finance spreadsheet.

Other personal computer makers have tried to penetrate home use of personal computers, which they consider a huge potential market, with relatively little success.

If industry sources are correct, the new Microsoft product is being introduced earlier than expected, and could begin shipping as soon as October of this year.

Contact: Marty Taucher, Microsoft, 206/882-8080.

NEW FOR PC: Accelerator Kits For Windows, LaserJets

RIDGELAND, MISSISSIPPI, AUG 21 (NB)—The XLR8-IT (say "accelerate it") card will speed up Microsoft Windows, according to manufacturer Ergon Systems.

When combined with the company's printer adapter it will also boost the speed of Hewlett-Packard LaserJet and compatible laser printers, the company claims.

Ergon is now shipping the XLR8-IT card,

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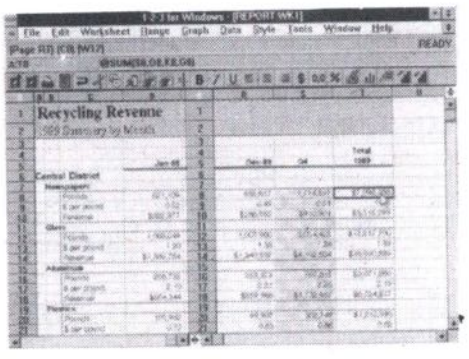
which fits in a 16-bit, AT-bus slot in an IBM or compatible personal computer. The card uses Chips & Technologies' Programmable Universal Micro Accelerator (PUMA) chip set to speed up the redrawing of screens in Microsoft Windows by offloading much of the work from the PC's central processor.

An additional circuit card, which fits an adapter slot in the HP LaserJet and many compatible laser printers, bypasses the printer's own electronics and provides faster printing of Windows documents, the company said.

Barrie McArthur, vice-president of marketing at Ergon, told Newsbytes that the printer accelerator will work with any printer that uses the same Canon print engine as the HP LaserJet line and has a printer adapter slot.

The XLR8-IT Windows accelerator card costs US$499. The printer adapter is an additional US$129. Both are available now. The company is also planning special accelerator software for Autodesk's AutoCAD computer-aided design software, to be released early in 1992.

Contact: Barrie McArthur, Ergon Technologies, 601/856-4968, fax 601/856-2888.



With a customizable set of "SmartIcons" that provide single-click access to basic and advanced spreadsheet functions; and 1-2-3 Classic commands, **Lotus 1-2-3 for Windows** looks potent enough to take on Excel 3.0 and other challengers. Note the Excel-like toolbar.

NEW FOR PCS: Lotus 1-2-3 For Windows

CAMBRIDGE, MASSACHUSETTS, AUG 19 (NB)—Lotus has released a Windows version of its venerable 1-2-3 spreadsheet.

Lotus 1-2-3 for Windows includes SmartIcons, a customizable set of icons that provide single-click access to basic and advanced spreadsheet functions; and 1-2-3 Classic commands, which give users the option of accessing the familiar 1-2-3 menu by pressing the "/" key. It also features point-and-click file linking, a select-by-example graph gallery, and Adobe Type Manager scalable font technology.

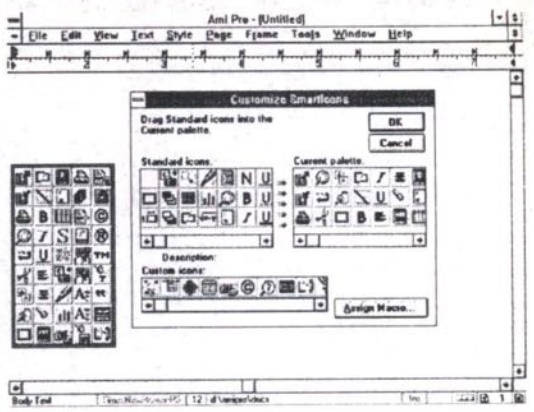
Lotus 1-2-3 for Windows will be priced at $595. Network Server and Node Editions will be $895 and $595, respectively. All customers who purchased a version of 1-2-3 since January 8 of this year are eligible to upgrade to 1-2-3 for Windows for $49. Every other owner of a version of 1-2-3 can upgrade for $150.

In order to entice other spreadsheet users and match the competition's ploy for defectors from 1-2-3, Lotus is offering the $150 upgrade to users of Microsoft Excel and Quattro Pro.

Lotus 1-2-3 for Windows requires an IBM PC AT or compatible (286 and higher) including most IBM PS/2 and Compaq models; Windows compatible displays; a mouse (recommended); 2 MB system RAM; 5 MB hard disk space; Microsoft Windows 3.0 or higher installed; and DOS 3.0 or higher.

Contact: Lisa Landa, Lotus, 617/693-1263.

Lotus Ships Ami Pro 2.0



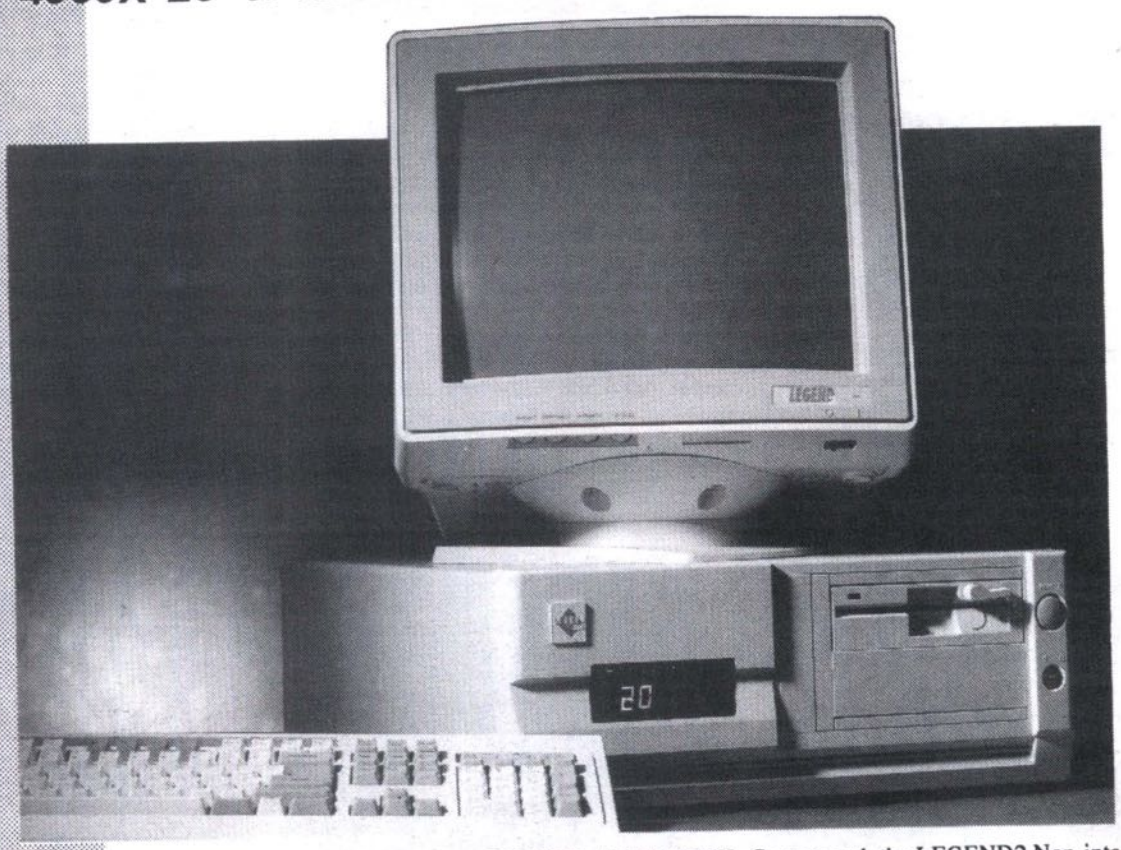
CAMBRIDGE, MASSACHUSETTS, SEP 5 (NB)—Lotus Development Corp. has announced that it has begun shipping Ami Pro Release 2.0, its word processing program for the MS-DOS Windows 3.0 environment. Lotus also announced a number of bundling and upgrading plans.

Ami Pro has a suggested retail price of $495 with upgrade pricing of $49 to purchasers of Ami Pro since March 1, 1991 and $99 to all other registered owners. Additionally, Lotus is offering an upgrade price of $49 to all users of its non-Windows word processors, Lotus Manuscript and Samna Word IV, as well as a $149 upgrade price to users of other non-Lotus word processors such as Word Perfect, WordStar, Microsoft Word, and DisplayWrite.

Purchasers of Ami Pro 2.0 will receive, under a limited-time promotional program, upon registration of the software, a special edition of Reference Software International's Grammatik Windows 2.0 grammar and style checking software. Announcing the arrangement,

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Bill Jones, director of product marketing, Lotus Development Corp., said, "Grammatik is the leading style and grammar checker for Windows and a great add-on to Ami Pro. The products are tightly integrated; users can access Grammatik with a single click through Ami Pro's SmartIcons."

Lotus also announced a promotional program, Double Up, under which registered users of Lotus 1-2-3 and any one of its word processing programs may upgrade to both 1-2-3 for Windows and Ami Pro 2.0 for $199. Lotus said that a number of common features in the two products allow users to work easily with both: "consistent graphical interfaces and menu structures, common SmartIcons for shared functions like text formatting and chart creation, a SmartIcon that allows users to launch the other application from within the program they are using, and built-in Adobe Type Manager, the industry's leading scalable font technology, with 13 ATM fonts, enhancing the products' presentation and publishing capabilities."

Contact: Allison Parker, Lotus Development Corp., 617/693-1819/1991-0906.

NEW FOR PCS: Chinese Version Of Windows

REDMOND, WASHINGTON, AUG 19 (NB)—Microsoft has announced the release of a Chinese version of Windows 3.0, bringing to 13 the total number of foreign-language versions of Windows now on the market.

Windows 3.0 is currently available in Dutch, Finnish, French, German, Italian, Kanji (Japanese), Norwegian, Portuguese, Spanish and Swedish. The company says it will also release Windows in Arabic, Czech, Hebrew, Hungarian and Turkish.

Kempin says that Windows is becoming the international standard for graphical computing. The company says it has shipped four million copies worldwide, and over 1,500 Windows-based applications have been developed internationally.

Microsoft says it has delivered 100,000 copies in Japan in the first three months that the Kanji version was available.

Contact: Liz Sidnam, Microsoft, 206/882-8080.

Power Up Windows Products Due 4th Q

SAN MATEO, CALIFORNIA, SEP 6 (NB)—At a lavish buffet held at a winery near Silicon Valley, Power Up Software introduced three new products aimed at the small business market. All are scheduled to be released sometime between October and December.

TextAppeal ($129.95) is a Windows-type styler and manipulation program. Its main use will be to create headlines, logos, and text-based graphics. Text can be stretched, shadowed, or rotated and can flow around any geometric shape including circles, stars, rectangles, and curves. Graphics can be incorporated into the text design. Files can be imported and exported to CGM, EPS, PCX, TIFF, and WMF formats for use by DOS and Windows programs. TextAppeal will work with any Type 1 or Speedo font and is bundled with Adobe Type Manager and 13 scalable fonts.

The second product is a Windows version ($249.95) of Power Up's entry-level desktop publishing program, Express Publisher. New features include thumbnails, color, 48-page document size, easier text rotation, and more style sheets. The program contains a complete version of TextAppeal. Current users of the DOS version of Express Publisher can upgrade for $69.95. Users of other DOS DTP programs can purchase Express Publisher for Windows for $99.95 (with proof of purchase).

The third product, Express Presenter ($249.95), is designed as an easy-to-use presentation program for DOS. Users can create charts, graphs, and text with a few key strokes. Express Presenter will generate slides, overhead transparencies, computer screen, and hard copy output in up to 252 colors from a palette of 16.8 million.

Power Up began in 1983 as a division of Software Publishing Corporation. By 1985 it

Macromind *Action!* Multimedia For Windows

SAN FRANCISCO, CALIFORNIA, AUG 29 (NB)—At Boston's World Trade Center during the recent Windows & OS/2 Conference, Macromind finally brought its considerable Macintosh expertise to Windows with the introduction of Action!, a program described by company President Bruce Cummings as "Instant multimedia for people who don't make a living making presentations."

Action! is designed to let users easily create presentations incorporating sound, motion, and animation with text and graphics. It includes dozens of ready-to-use templates which users can customize by adding their own text, sound or graphics. Also included is a Clip Media Library of special sounds, as well as still and animated graphics.

Cummings said he has been talking to some notebook PC manufacturers about incorporating sound capability that products such as Action! would be able to exploit. The $495 Action! package is compatible with SoundBlaster, a popular PC add-in card. Action! is scheduled to ship late September.

Contact: Macromind, 415/442-0200.

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had $3 million in sales and was purchased by outside investors. Its name was changed to Channelmark and it became primarily a mail order company. Over time, the company began publishing more of its own software and in 1989 changed its name back to Power Up.

This year the company, which now has over 160 employees, expects over $35 million in sales. Although the company ships over one million of its Power Up catalogs annually, more of its products are sold externally by other mail order companies and in computer stores.

Contact: Judy Merrill, Corporate Communications, Power Up Software, 415/312-5104.

NEW FOR PCS: Aristosoft Adds Sound to Windows

PLEASANTON, CALIFORNIA, AUG 29 (NB)—Aristosoft, Inc., has announced Wired For Sound, a US$49 utility that adds sound capability to Windows software using the internal PC speaker. No add-on cards are required.

Wired For Sound lets the user personalize the Windows desktop with more than 50 sound effects, musical cues and voices, including a barking dog, a cartoon bonk, a cat's meow, a doorbell and a foghorn. These can be assigned to dialog boxes, various types of alert boxes, application messages, system startup and exit. A talking clock lets users set alarms (one-time, daily or weekly) to alert a user to appointments, meetings, or weekly reports due, using a Big Ben sound, for example. It can also speak the time in 15-minute or hourly intervals, or sound a chime.

All sounds still work while the user is in another application, when the alert message is buried, or in DOS. A Wired For Sound Dynamic Link Library is included for use with macros in such programs as Word, Excel, and Lotus 1-2-3 for Windows.

Customized sounds are available from the company. Aristosoft plans to offer the capability for user-created sounds in the future.

Contact: Aristosoft, 510/426-5355 or (outside Calif.) 800/338-2629.

Software Handles Windows 3.0 Printer Bug

VICTORIA, B.C., SEP 4 (NB)—Avondale Technologies said its Rspool version 5.1 software corrects a problem that crops up when PCs running Microsoft Windows share serial printers.

Rspool lets any Windows 3.0 or DOS application print directly to any printer sharing system, the company said.

According to Avondale, Windows has for years failed to recognize "busy" signals from some unbuffered printer sharing systems. That means the application sends data for printing, not knowing the printer is busy, and the data is lost. The problem can even arise with buffered printer sharing systems when large amounts of data are sent for printing, the company said.

Avondale, which also makes printer sharing systems, came up with Rspool to solve the problem. The software acts as a buffer controlling the flow of data to the printer sharing device, Avondale said.

Rspool 5.1 is available directly from Avondale, Morgan said. By itself it costs $49.95, in Canadian or U.S. currency depending on where it is sold. Rspool is also available bundled with Avondale's $460 P-Mux printer sharing system, which is also available from Kyocera laser printer distributors in the United States and through Raven laser printer dealers, labelled as the Raven R-Link Printer Sharing System, in Canada.

Contact: Ray Morgan, Avondale, 604/384-5000, fax 604/388-6764.

Video LSI for Windows Released

TOKYO, JAPAN, SEP 18 (NB) — ASCII Mitsuibussan Semiconductor, a joint venture of ASCII and Mitsui Bussan Trading, has released a video graphic LSI (large scale integration) chip for Microsoft Windows.

The LSI chip, called the 82C9001PC Video, works with the VGA (Video Graphic Array) standard. With this chip, pictorial screens of tekevision and video images can be imported into a PC. The screen image can be stopped, imposed or saved onto a disk.

This chip was developed by Chips and Technologies in the U.S. ASCII Mitsuibussan Semiconductor is currently shipping the LSI to mainly computer board makers and personal computer makers. It is expected that the application software or hardware using this LSI chip will be developed as early as this December.

Contact: +81-33285-7554)

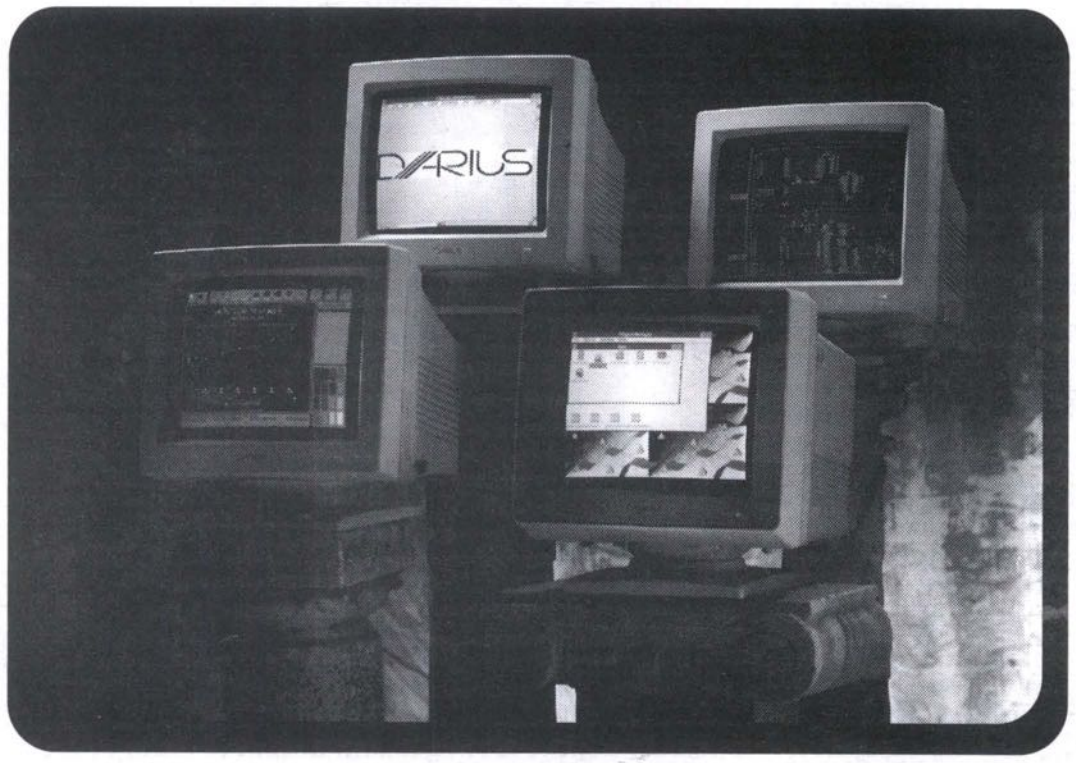
Alacrity's Windows Doc File/Fax/Copy Board

HACKETTSTOWN, NEW JERSEY, SEP 16 (NB) - In an attempt to further automate the electronic filing of paper documents, the sending and receiving of plain-paper faxes, and the copying of paper documents within Microsoft Windows, Alacrity Systems has introduced a single PC expansion board called the Alacrity Desktop Document Manager.

The board, which retails for under $2,000, comes with a number of Windows applications, and works with a laser printer and scanner.

Continued on page 29

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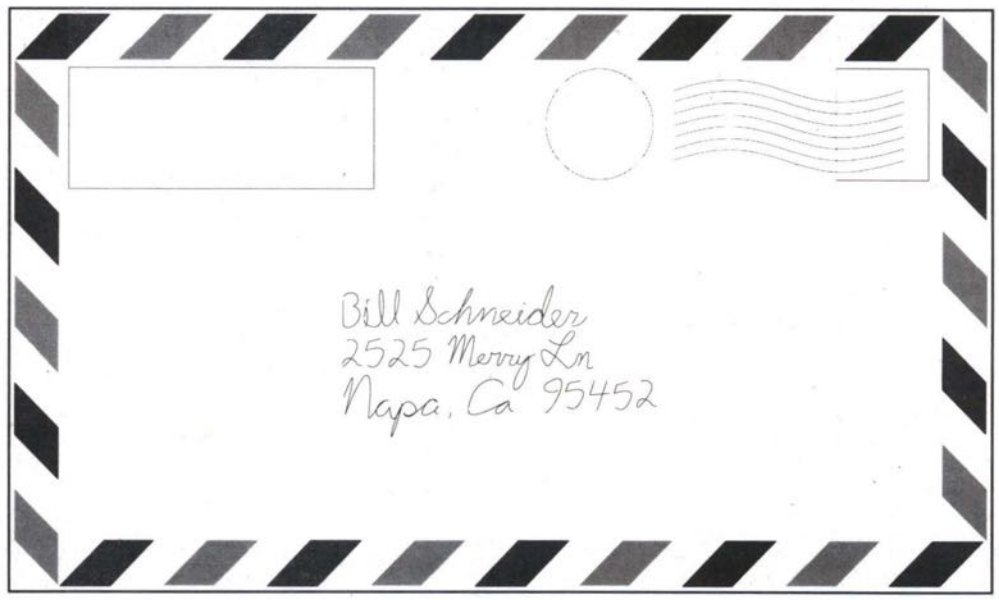
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Hot News

ANOvation Goes Direct

October 1991 marks the end to a very successful marriage between The Computer Paper and ANO Office Automation's ANOvation Newsletter. Effective immediately the ANOvation Newsletter will be distributed on a direct basis only via the mail.



"When we first began distributing the newsletter (ANOvation) back in April of 1990 we had no idea of how widely accepted it would be.", exclaims Salma Janniff of ANO Office Automation,"Our database alone has grown from a few hundred to a few thousand in just over a year."

ANOvation is a streamlined source for end-user information. By providing data on new and innovative products, as well as helpful hints, readers find it a quick and easy way to keep up to date without sifting through larger publications.

Those of you who are not receiving ANOvation on a monthly basis can do so by simply filling in the Reader Response Card below and mailing it to the ANO Office Automation location nearest you (see side bar). Don't worry about missing the October issue as we have purposely moved production to later in the month.

NOTE: If you are already receiving ANOvation but will be moving please drop us a line so that we can change your address in our database. Thank you.

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Continued from page 27

According to the company, the product also improves the print speed for graphics-intensive documents from within almost all Windows applications by up to ten times, and printing is done in the background.

"To copy, file or fax a paper document, professionals will simply place it in their scanner and click on an icon. Similarly, faxes can be received, viewed, and stored electronically with a few clicks of a mouse," said Jim Folts, president of Alacrity Systems.

The Desktop Document Manager allow from 200 to 500 pages of paper documents to be stored as images in 10 megabytes of hard disk space, through compression and decompression of images documents at ratios of up to 30 to 1, the company claims.

The Alacrity Desktop Document Manager consists of an AT-compatible controller card with built-in send/receive fax modem, a high speed laser printer raster interface, and a number of Windows document processing applications.

The product supports the IBM 4019 laser printer, HewlettPackard's LaserJet II, IID, III or IID products, and also Olivetti's PG306 laser printer. Also supported are manual and sheet-fed scanners from HP and Microtek.

According to the company, the product will be available to OEMs (original equipment manufacturers), systems integrators, and resellers in the fourth quarter of 1991.

Contact: Alacrity Systems Inc., 908-813-2400)

UNIX

Sun Challenges IBM, Apple, And Microsoft

SAN JOSE, CALIFORNIA, SEP 5 (NB)—Sun Microsystems, well known for its high-powered workstation systems, has announced that it will develop a new operating system for computers based on the popular Intel chip family. The current big players in PC operating system software are Microsoft, IBM, and Apple Computer, with Apple software being produced only for the company's own computers.

Microsoft and IBM, until recently very closely coordinating their systems software developments along the two major lines, MS-DOS and OS/2, have recently split into two separate warring camps with Microsoft's announcement that it would develop NT or Newer Technology, a new operating system compatible with MS-DOS and Windows.

Solaris, Sunsoft's (Sun's new subsidiary) operating system, is based on AT&T's venerable Unix operating system. Microsoft already has a piece of the Unix pie in conjunction with SCO Xenix, and the Mark Williams company is making strides selling a $100 Unix clone.

Many observers have predicted that Unix will become the operating system of choice within a few years, although this prediction has been made every few years since 1980 and Unix still holds a very small portion of the market.

Of major importance is the fact that both SPARC (Sun's RISC workstation systems) and Intel versions of Solaris will use the same source code, allowing software developers to easily port applications from one platform to the other with little or no modification, reducing costs and decreasing development time.

Sun reports that its software will be available by the beginning of next year.

Contact: Shernaz Daver, SunSoft, 415/336-0678.



Xerox Intros Workstation To Compete With Sun IPX

SUNNYVALE, CALIFORNIA, SEP 13 (NB)—Xerox's software organization XSoft is comparing its newly announced 6500 series Unix workstation, the Xerox 6522, to the Sun IPX workstation.

XSoft says the 6522 comes with the Xerox GlobalView software, a graphical networked environment with a graphical user interface (GUI), and can execute 28.5 million instructions per second (MIPS) in a small desktop unit with 16 megabytes (MB) of memory and a 207-megabyte disk drive, which is the same performance and configuration as the Sun IPX.

The new 6522, which XSoft says is twice as fast as the Sun SPARCstaion IPC, is available with several color and monochrome displays. Prices start at $13,995 for a 19inch monochrome display system, and at $16,995 for a 19-inch color display system. The systems are available immediately.

Contact: Barbara Burke, Xerox, 213/333-3613, Fax: 213/333-0775.

NEWSBYTES News Network is the largest independent computer industry news service in the world, published continuously since May, 1983, with 4 U.S. and 7 international bureaus in London, Brussels, Toronto, Tokyo, Hong Kong, Moscow and Sydney, Australia, devoted to gathering the week's most significant microcomputer and consumer technology news. NEWSBYTES was honored to receive the "Best Online Publication" award from the Computer Press Association. Editor In Chief: Wendy Woods. Janet Endrijonas, Dana Blankenhorn, John McCormick, John and Barbara McMullen, Steve Gold, Peter Vekinis, Ken Takahashi, Naoyuki Yazawa, Paul Zucker, Sean McNamara, Keith Cameron, Norman Wingrove, Kirill Tchashchin.

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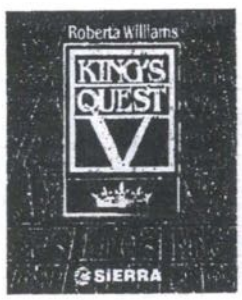


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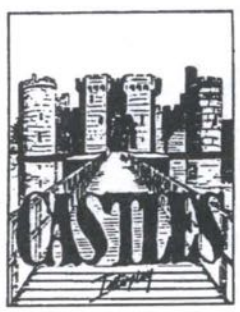


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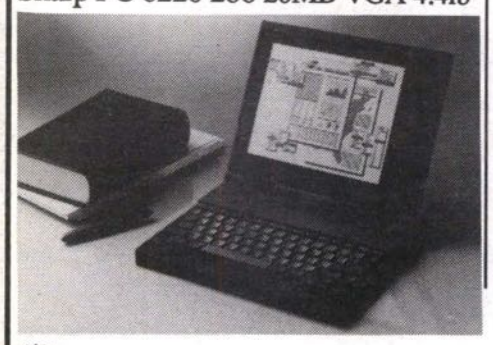
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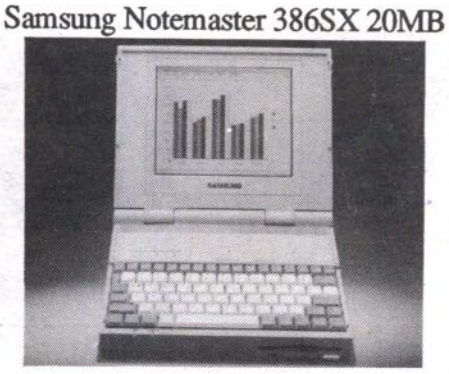
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NEWSBYTES

First Mac Notebook Software Ships This Month

PHOENIX, ARIZONA, 1991 SEP 16 (NB) — Although Apple isn't talking about its notebook computer to the public yet, Phoenix-based First Wave is making no secret of its revised TimeMaker personal information manager (PIM), which now has features to complement the new Macintosh notebook computers due to be unveiled in October.

First Wave says it will begin shipping TimeMaker 3.0 this month. John Glitsos, president of First Wave, says nearly 30% of the people requesting product information from First Wave during August specifically requested Mac notebook-compatible features.

First Wave says TimeMaker 3.0 will be able to look up phone numbers when it sees the key word "call" in an action item. The phone number is appended to the action item text, and can be auto-dialed through the Mac speaker or a modem.

Other notebook compatible features include the ability to print any report, including letters, envelopes, calendars, or daily schedules to a disk file or to the screen for later viewing or hard copy printing.

The company also says the windows and text sizes have been increased to be more readable on the portable Macs. TimeMaker is based on HyperCard 2.0 and Reports 2.1 from Nine-To-Five software. First Wave President John Glitsos says TimeMaker has the same look and feel as other Macintosh applications with pull-down menus, command keys, and the ability to run under System 7.

TimeMaker 3.0 is unchanged in price, at $149 for the software, or $249 with a vinyl zippered binder, index tab dividers, and an audio cassette to improve time management skills. A leather binder version is also available for $299, and come in two sizes and colors. Registered owners will receive a free upgrade this month.

Apple has had little to say about its new notebook computers but recent Newsbytes stories have reported that the unit is being built by Sony, and will be unveiled at Comdex in Las Vegas next month. The unit is expected to weigh between 4 and 7 pounds, have 2 megabytes of RAM and a 20 megabyte hard drive. It is believed that the unit will use a 68030 chip and will be priced around $1850.

Contact: TimeMaker, 602-951-3812, FAX 602-266-4285.

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BUYER'S GUIDE

Monitors and Display Adapters

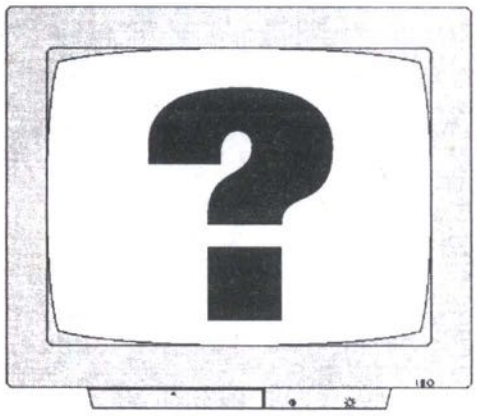
by Roedy Green

Overview

Since I last wrote about monitors and display adaptors in the March 1990 issue of *The Computer Paper,* prices have plummeted, making equipment only the Pentagon could afford now available to everyone.

I will tell you about these new high-end video co-processors and about the more mundane VGA and Super VGA systems, as well as give you tips on how to buy equipment.

If you see any unfamiliar terms or acronyms, you will find them explained in the glossary (see sidebar).



The Basics

Computers display pictures and text on TV-like boxes called monitors. The electronics to control the monitors sit on video display adapter cards hidden inside the computer.

The key specification for video is "resolution." If you look closely at the image on the screen, you will see it is formed of horizontal lines. Each line is made up of minuscule dots called pixels. If the monitor has a resolution of 640x480, it means there are 640 pixels in each line and 480 lines. The more dots per line and the more lines per screen, the finer and clearer the image will be. High resolution just means more, finer dots.

High resolution is more expensive, but it is not always a good thing. As I will explain in detail later, higher resolution can mean smaller, harder-to-read type and slower painting.

If you get out a magnifying glass and look at the surface of a color monitor, you will see the pixels are formed of even smaller phosphor dots, arranged in groups of blue, green and red. When an electron beam hits them, these tiny dots glow with varying brightness to create the myriad colors you see on the screen.

If you examine a monochrome monitor with a magnifying glass, you won't see any phosphor dots at all, just a smooth, unbroken sheet of amber or white phosphor. This is the main reason even cheap monochrome monitors display sharper images than the most expensive color monitors.

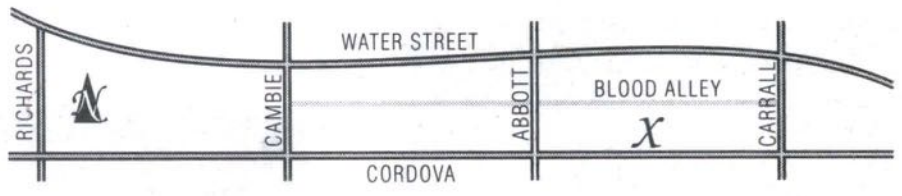
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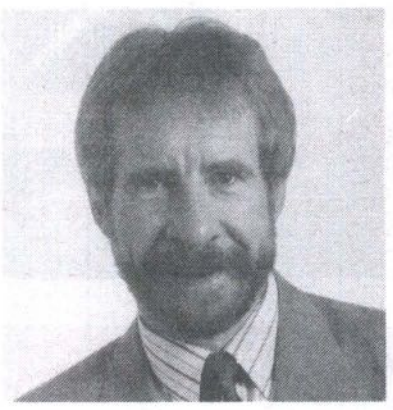
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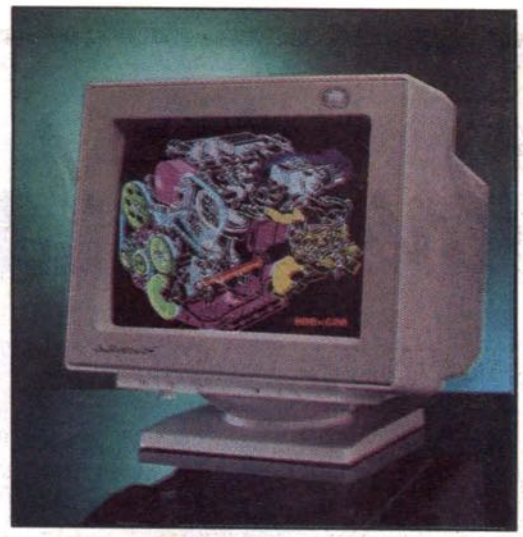
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- DOT PITCH: 0.39mm
- RESOLUTION: 1024 x 768
- SCANNING FREQUENCIES: 31.5/35.2/35.5KHz hor. 50-100Hz ver.
- BANDWIDTH: 45MHz



Low Radiation 3A

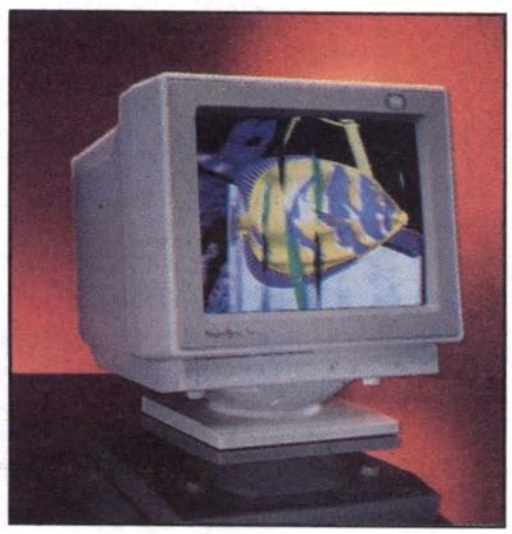
- SCREEN SIZE: 14 inch
- CRT: Dark-tinted, Non-glare
- DOT PITCH: 0.28mm
- RESOLUTION: 1024 x 768
- SCANNING FREQUENCIES: 31.5/35.2/35.5KHz hor. 50-100Hz ver.
- BANDWIDTH: 45MHz
- X-RAY RADIATION: 0.0 Complies with MPR Specifications





TVM 4A+

- SCREEN SIZE: 14 inch
- CRT: Dark-tinted, Non-glare
- DOT PITCH: 0.28mm
- RESOLUTION: 1024 x 768 Interlaced and Non-interlaced
- SCANNING FREQUENCIES: 30 - 48KHz hor. 40-100Hz ver.
- BANDWIDTH: 65MHz
- Supports VESA 72Hz Standard



TVM 5A

- SCREEN SIZE: 15 inch
- CRT: Dark-tinted, Non-glare, Flat-square
- DOT PITCH: 0.28mm
- RESOLUTION: 1024 x 768 Interlaced and Non-interlaced
- SCANNING FREQUENCIES: 31.5/35.2/35.5/48KHz hor. 40-100Hz ver.
- BANDWIDTH: 65MHz
- Supports VESA 72Hz Standard

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Fuelling the Revolution

The key factor that brought these new lower prices was not a new kind of monitor or display adapter technology but rather a large, resource-hungry computer program. Microsoft Windows 3.0, almost overnight, created a demand for computer hardware that could rapidly draw detailed, full-color pictures. Up to that point, people were satisfied with plain text (letters and numbers).

Microsoft Windows makes MS-DOS computers behave something like the Macintosh. You point with a mouse and click on little pictures called icons to get work done.

Windows created a mass market for fast video hardware. Hardware quality shot up and prices plummeted.

The Catch

Not everyone is rejoicing about this change, however. Why?

Though it may be pleasing to look at and more fun, the Windows graphics method is much slower than the old text method. Some people, such as myself, would far sooner have a fast computer than a comely one.

What is the problem? Why is displaying graphics so much slower than displaying text? If you don't care, just skip this section. There is plenty coming up to interest you.

When Windows paints text, it considers it as just another type of picture. A "picture" the size of a letter "A" might contain 126 dots. Traditional programs draw the letters on the screen a character at a time. Windows paints them a dot at a time. Painting by dots is about sixteen times slower than painting by characters.

It gets worse. Now add color to this. We now want a large palette of colors. We used to be content with eight colors; now we might want 256 or 32,768 or more. Each dot then has to carry with it the baggage of extra color coding. In theory these extra colors would slow us down about another five times!

Wait! There is more. Next add resolution. Let us say we used to be content with 640x200 dots (pixels). Now we want 1024x768. In the first case there are 128,000 dots. In the second there are 786,423. We have six times as many dots to paint. In theory we would need a computer six times faster.

Argghh! Perhaps you can see why Windows has a reputation for slowness. You need expensive new computers just to get the same speed as the "old fashioned" text mode applications.

Technology To The Rescue

Clearly something drastic had to be done to speed things up if Windows was ever going to fly.

Engineers set to work to increase the speed of the brains of the video system—the display adapter.

The computer composes the screen image in mathematical form in RAM. A matrix of rows and columns of numbers encode the color of each pixel at each (x,y) location on the screen.

So engineers speeded up the RAM on the adapter card. They improved the RAM so the computer could be changing the picture while the adapter was sending the picture to the electron gun to display. In older designs the computer and the display logic took turns looking at the picture stored electronically. This new kind of RAM is called dual-ported VRAM.

They invented ways of changing several dots all at once.

They invented faster and faster and more expensive computers—the 386 then the 486. Still, Windows crawled along.

The Video Co-processor

Finally engineers invented a truly powerful solution—the video co-processor. It is an auxiliary computer—very fast (e.g., 60 MHz) specialized just for the business of drawing dots.

Don't confuse the video co-processor with the numeric co-processor. A numeric co-processor is also an auxiliary computer, but it specializes in trigonometry and other mathematical calculations.

Windows can ask the video co-processor to "paint the phrase 'Roses have thorns and silver fountains mud' in Helvetica 10 point type" and the video co-processor will go off and laboriously paint the individual dots forming the letters. Or Windows can say "draw a yellow circle five inches across" and the co-processor will calculate the mathematical co-ordinates of the circumference of the circle and flood the center with color, dot by dot.

The 386 or 486 CPU specializes in arithmetic and text processing. It is clumsy at handling dots (or binary "bits" as computer programmers think of them). In contrast, the video co-processor's whole purpose for existence is to draw dots, so it handles them adroitly.

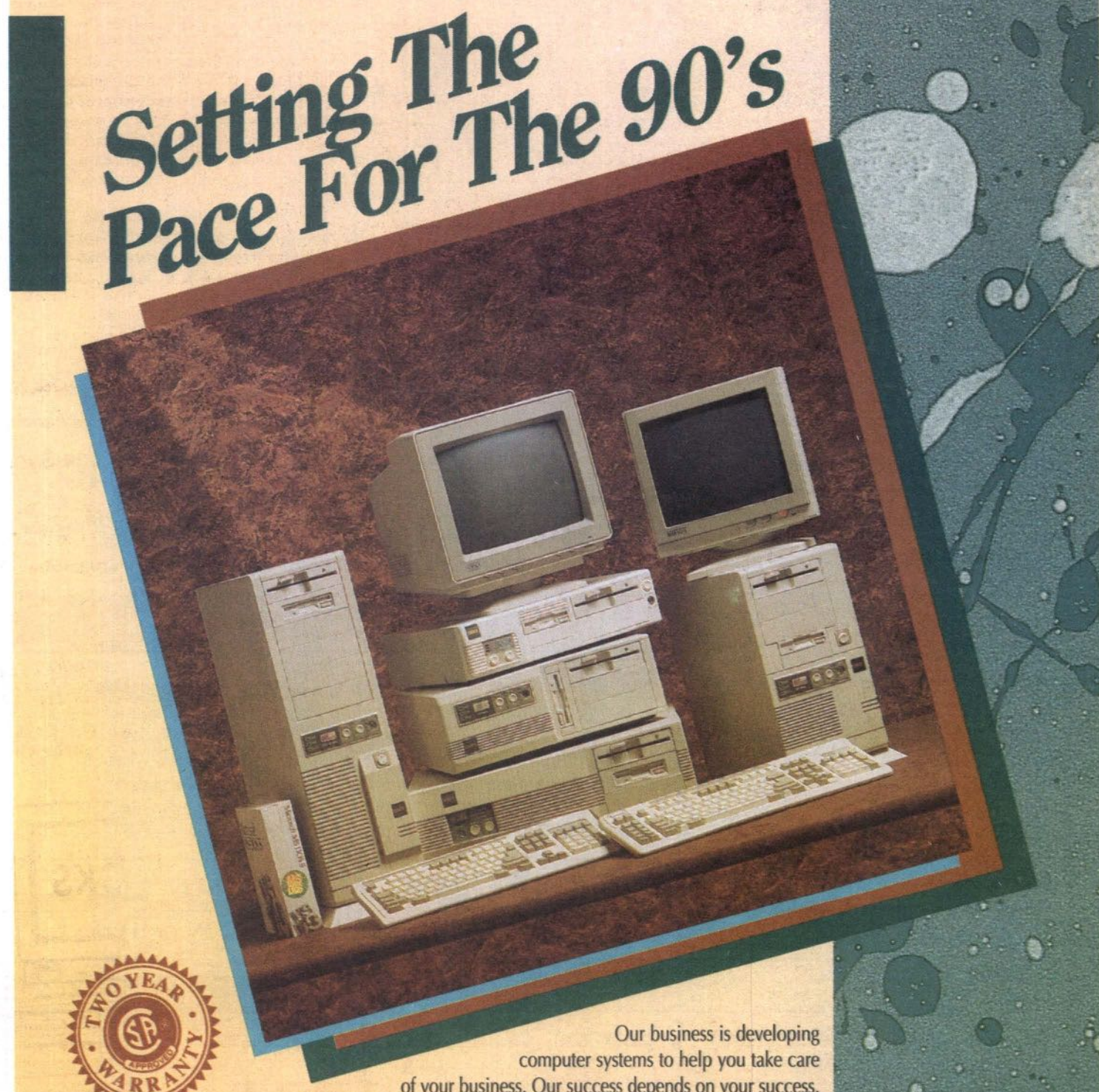
While the co-processor is chugging away, the 486 CPU can go off to compute something more interesting than just millions of individual dots. With the two computers working in tandem, fully simultaneously, screen painting can really crank along.

Unfortunately, the video co-processor just does Windows. If there are no dots to paint, it cannot help out with other tasks. This means when Windows is thrashing away at the disks, the co-processor can do nothing to help speed things up.

Further, if you are running ordinary text applications, the video co-processor just twiddles its thumbs and again does nothing to help. The two main programs where a video co-processor earns its keep are Windows and AutoCAD.

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Do I need a GUI?

A GUI is a Graphical User Interface. If you want to work with graphics and a mouse, you need a GUI; if you want to work with just text you do not. Windows is the most famous example, though there are others such as GEM and Geoworks Ensemble. Before you select your video hardware and monitor, you must first decide whether you are going to use a GUI.

Let us examine the reasons why you might want one:

1. All programs work similarly. This makes them easier to learn. Once you have mastered your first one, the others are easy.
2. Many new programs are coming out for Windows only. There is no text mode version. For example, Ventura Desktop publishing only works under Windows and GEM.
3. WYSIWYG. What You See Is What You Get. If you use a GUI-style word processor such as AMI or Word For Windows, the image on the screen will look very much like the final printout. You can see the type size and the font style choices more accurately.
4. Multitasking. With GUIs you can run more than one program at a time and transfer information from program to program. However, you can also do that without a GUI, even more quickly.

Let us examine why you might not use a GUI.

1. The hardware needed for acceptable speed is much cheaper for text mode applications. I recommend at least an SX with 4 MB of RAM to experiment with Windows. To use it seriously I suggest a 386 DX 25 MHz or better. In contrast, for many text mode applications an inexpensive 12 MHz AT 80286 will do fine.
2. GUIs use decorative, proportionately-spaced fonts. These tend to be smaller and harder to read than text mode fonts.
3. On the same hardware, a text mode application will run much faster than the equivalent GUI program. If you are a quick typist, the slowness of the GUI may irritate you. For me, even with a 33 MHz 486 and the fastest video co-processor on the market, Windows is barely responsive enough. Then, many people consider me unusually impatient.
4. Your application may only be available in text mode: e.g., most accounting programs are available in text mode only.
5. The mouse is fun, but for most operations, it is slower than using the keyboard. GUI applications do not always have fast keyboard shortcuts.
6. GUI software is new and extremely complex for developers to write. Usually GUI programs have more bugs than the well-seasoned text mode equivalents.
7. GUI control software is much more complex to install than the older character mode equivalents. GUIs requires much tweaking and fiddling to get them working. However, once the base is working, adding new applications is easy.
8. Playing with a mouse and pointing at little pictures might strike you as undignified, effete or childish. In other words, you might lack the manual dexterity to control the mouse.

Text Mode

Let us presume first that you choose a low-cost text mode video system. Here are your choices:

Continued on page 36

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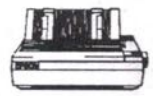
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		MS-DOS 5.0 (w/ system)	$69
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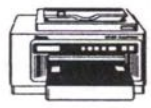
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Raven 2416 24-pin 192cps	$299
Raven LP-800 Laser 8ppm w/ Postscript Emul.	$1,249
Raven LP-1110 Laser 11ppm w/ Postscript Em.	$1,799

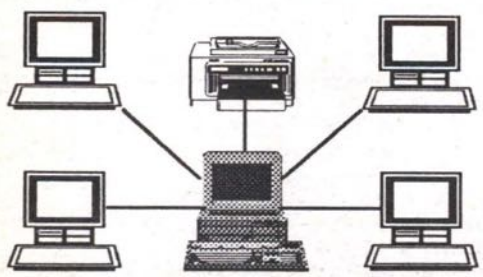
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- 1MB RAM, 1.44MB 3 1/2" FD, 40MB HD, 2 Ser, 2 Par, 1 Game Ports, Desktop Case
- 12" Monochrome Monitor, Monochrome Graphics Card, 101 Key Enhanced Keyboard

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Continued from page 34

Herc Option 720x348

The lowest-cost option is the Hercules clone card with a monochrome TTL monitor. You can choose a paper-white on black or an amber on black 14" monitor. The letters will be exceptionally crisp, just as clear as on equipment costing thousands more. It can also show 720x348 graphics. It cannot do color or shades of gray. A good quality Hercules clone adapter board such as the Diamond Flower will cost about $58. You can get a decent monitor such as the Samtron or Samsung for about $120. You can scrimp by going to a 12" monitor, but the saving is not worth the reduced legibility.

VGA Gray-Scale Option 640x480

The next-highest cost option is to get a plain VGA display adapter card, one that precisely emulates the IBM VGA card. A fast VGA card such as the ATI Basic will cost about $106. This will give you 640x480 graphics in sixteen shades of gray.

You can pair that card with either a gray-scale monitor—one that shows images in shades of gray, or a color monitor. You can get a Samtron or Samsung Gray-scale monitor for about $120—the same as a plain TTL monitor. Sometimes people erroneously refer to gray-scale monitors as monochrome monitors. A monochrome TTL monitor does not work with VGA, only with a Herc adapter.

The disadvantage of gray-scale is that most software presumes color. Authors may choose a color scheme such as dark yellow on pale green, which displays as pale gray on pale gray—completely unreadable. You have to tweak the various programs to use color schemes that display proper contrast in gray. There is no general mechanism to do this tweaking. Every program has its own unique way of making the adjustments and some programs unfortunately provide no method for changing the color scheme.

Often people who cannot afford a fancy color monitor buy a high-resolution video card and pair it with an inexpensive gray-scale monitor, and upgrade later to color.

VGA Color Option 640x480

You can pair that same $106 basic VGA video card with a color monitor. Normally you would pick an inexpensive 14" monitor like the $355 Samtron SC428VS. The ubiquitous Samtron is cheap, but produces an image in the same league as monitors costing hundreds more.

If you are a salesman and plan to use your computer primarily to give presentations to customers, you might want to look at the $900 Zenith flat tension monitor. This monitor has a perfectly flat screen with no glare. It has the richest colors of any monitor I have ever seen. It is like watching a miniature movie theatre. Unfortunately, it is VGA only. It cannot do any of the high-resolution super VGA modes.

GUI options

If you have decided you need graphics there are three main categories:

1. Graphical user interface (i.e., Windows)
2. Desktop Publishing and related applications
3. AutoCAD and other high-end graphics applications

Each has its special needs:

• Windows primarily needs **speed** and color.

• Desktop Publishing needs a tall screen. There is no need for color, unless, of course, you plan on publishing in color. There are special screens and adapters for desktop publishing. If you do desktop publishing professionally, it is important that you see your entire layout at once on the screen. You cannot afford to waste time scrolling the image to bring only bits of it at a time into view.

• AutoCAD needs a big screen, speed and color. AutoCAD also needs plenty of computer power—a 486 with its built-in floating point calculating engine.

The options are VGA, Super VGA, Graphics Co-processor, interlace, non-interlace. If you buy any of these high-end graphics style video systems, they can still handle the simpler text modes as well.

The Stereo Analogy

If you went into a stereo store and bought a $5000 amplifier and a $30 pair of speakers, the sound might be a little disappointing. Just as in stereos, you have to balance your purchase so that you do not overspend on any one component. You want balanced quality in your computer, RAM, video card and monitor. Overspending in one area will not hurt the overall quality, but you will not get any value for your money either. In other words, a chain is as strong as its weakest link.

Let us watch what happens when you overspend on your video card in proportion to the monitor. Let us say you buy a Super VGA video card that can handle 1024x768 resolution. You hook this up to your 14-inch monitor. You have a bigger playing field to view, but icons are the same number of dots tall as before with more dots squeezed smaller and closer together. The writing is so small you have to squint to read it.

So you either tell your expensive video card to back off and emulate a cheaper 800x600 card, or you can hire a Windows guru to fool Windows into using a bigger, more readable font.

When you increase the resolution, unless you have very good eyes, you also have to increase the size of the monitor screen, say to 16, 17 or even 20 inches. When you increase the resolution and keep the screen size the same, you are cramming more detail into the same area.

What happens when we overspend on the video card and monitor in relation to the CPU? To correct your previous mistake,

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Intel 80387-33	$258

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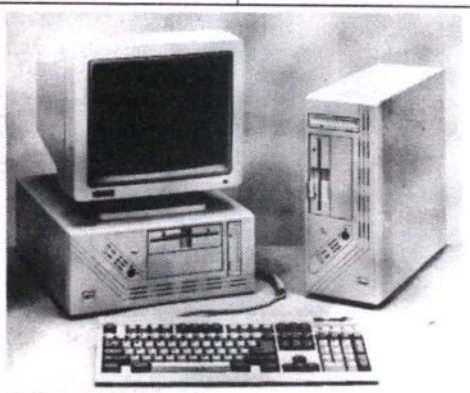
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Oak 16Bit VGA Card (800x600)	$65
Tricom Excel 16Bit 512K (1024x768)	$80
ATI VGA 512K OEM (Exp. 1 MB)	$140
ATI VGA XL 512K (Exp. 1 MB, w/Mouse)	$238
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Goldstar 14" 1024x768 .28dp Monitor	$355
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let us assume you went out and forked out the considerable money for a big 17" monitor. Now you sit down to use it and what happens? When we went from 800x600 to 1024x768 we increased the number of dots 1.6 times. Our poor little SX is having a terrible time keeping up painting all those extra dots. So we end up again taking our expensive video system back to 800x600 just to get some decent speed. If you don't upgrade your CPU, you might as well have used a cheap video card and small monitor all along.

So when you increase resolution, you may need to increase the size of your monitor, and you may need to increase the speed of your dot-painting engine (CPU or video co-processor). It does you little good just to improve one component. You have to improve everything in concert.

The Super VGA Option 800x600

The very same VGA gray-scale and color options I discussed under text mode make fine sense if you plan to use an inexpensive 14" monitor. However, you can easily take a 14" monitor beyond VGA to 800x600 resolution and still read the screen.

If you do this you need a Super VGA card such as the $157 ATI Integra. This card can go all the way to 1024x768, but that resolution needs a 16" or 17" monitor to be legible. With a 14" monitor, it is best at 800x600.

Lower cost monitors usually cannot handle the 800x600 or 1024x768 well, so when you start using these resolutions you need more expensive Super VGA monitors.

If you select Super VGA you might go for a higher quality monitor such as the $530 NEC 2A at 800x600 or the $740 NEC 3D at 1024x768. The advantage of a more expensive monitor is a steadier image at finer resolution.

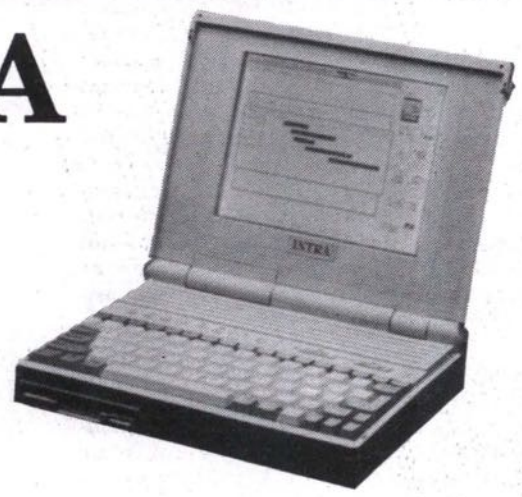
Super VGA 1K 1024x768

Let us say you want the very fine resolution—1024x768. This gives you the biggest possible playing field in Windows; it lets you see most of a page in desktop publishing; it lets you show intricate detail in AutoCAD. (If you have the dollars, you can go even higher into the 1280x1280 range.)

You now have to make a choice—interlace or non-interlace. Some people might find a 14" interlace monitor such as

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the $355 Samtron SC428VS or the $740 NEC 3D is adequate. Others will only be happy with a non-interlace monitor. The non-interlace 16" NEC 4D is $1200 and a non-interlace 17" Idek monitor is $1500. You are paying more both for non-interlace and the bigger screen.

Interlace

Interlace makes some people's eyes start to bleed after a few minutes of viewing. I exaggerate a little for effect. Some people cannot tell the difference. It depends partly on lighting. Overhead fluorescent lights make interlace even worse.

Whatever you do, test the monitor with your own eyes before you buy interlace!

What is interlace? A monitor works by directing a beam of electrons at the screen. It waggles it back and forth like an ox ploughing a field, from top to bottom. What happens when you increase the resolution? You increase the number of lines on the screen. The poor electron beam has to waggle much faster than before to get the screen done in time. In fact, it might even have to waggle twice as fast. To keep up with the beam, everything in the monitor has to work twice as fast. Guess what that does—it makes it much more expensive, because all the components must be rated for twice the speed.

To bring the costs back down, engineers devised a way to get away with cheap, slow components. These interlacing monitors do the even lines in one pass, then go back and do the odd lines. This way the electron beam has effectively twice as much time to do its work. The catch is, at least to my eyes, the screen swims and jitters.

Interlacing applies **both** to the video card and to the monitor. Some cards and monitors can work both ways, some do not interlace at 800x600 but do interlace at 1024x768. You have to make sure your card and monitor match.

Final warning: Do not buy interlace style equipment before checking out that your eyes can handle it. Do not order non-interlace equipment till you are sure your budget can handle it.

Video Co-processor

The purpose of the video co-processor is to help speed painting dots on the screen. High resolution means more dots, so then you need a co-processor more than ever.

There are three main classes of co-processor:

1. Texas Instruments TI 34010 chip;
2. faster TI 34020 chip; Intel i860
3. clones of the IBM 8514 co-processor.

A Canadian company, ATI, came out with a line of co-processor cards called Vantage and Ultra from $425 to $736. They won the June 1991 *PC Magazine* Editor's Choice. Their 8514 cards are much faster than nearly all the competitors and are much cheaper.

Though co-processor prices have come down drastically in the last year, they are still not cheap enough to use routinely. Be patient. They soon will be.

Crystal Fonts—Anti-Aliasing

If you look at the diagonal line forming one side of the letter "A" on a computer screen, because it is formed of dots, it looks a bit like a staircase. The ATI people use a clever process called anti-aliasing to smooth out these jaggies in the Vantage/Ultra line. They found that painting different parts of the "A" with subtly different colored dots fools your eye into seeing a sharper image than is really there. They claim the image is as sharp as a laser printer. To my eyes, it is nowhere near that sharp, but it is still sharper than anything I have ever seen on a computer screen.

How to Pick A Monitor

You must choose your video adapter card and monitor as a pair. They must be closely matched for resolution and interlace/non-interlace. You can even damage your monitor if the card is not closely matched. Buy them both from the same dealer. This will save you headaches later if there is trouble. You will not have to deal with two dealers blaming the other for any problems.

Treat the specs with a hefty grain of salt. The Matsushita Viewperfect and the NEC 3D have almost identical specs, but the NEC monitors have a much steadier, clearer image.

Your monitor is one of the most expensive parts of the computer. You cannot afford to make a mistake. Spend some time in front of it typing. Demo software usually shows pictures of birds, volcanoes, girls, etc., but most of you will not be using your computer to look at digital photos. Run the programs you plan to use. Try reading the text in the corners of the screen.

Visit various shops to see your proposed monitor under a variety of lighting conditions. Some monitors are hard to read if there is sunlight shining on the screen, or if there are fluorescent lights. If you get a headache, try a different monitor. If you wear glasses, you will find some monitors cause eyestrain. Find out **before** you buy.

Listen for a high-pitched whine. Men often cannot hear the noise, but it drives women mad. Make sure the monitor you choose is sufficiently quiet.

A monitor is like a TV, using a giant vacuum tube to create the picture. Low-quality monitors tend to be delicate, fussy things needing service adjustments to keep a sharply focussed picture. Look for a two-year warranty, and ask others how well theirs have stood up. *PC Magazine* and *Byte* often review monitors. Check out their recommendations.

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BUYER'S GUIDE

Drivers

Unfortunately, except for Hercules clone cards and plain VGA, there are no standards to speak of. This means you need special software called drivers to make your video card work with various programs. Usually it is the duty of the video card manufacturer to write a Windows driver, an AutoCAD driver, etc. to make the card strut its stuff. Without the driver, the card is useless!

Headland Video Seven makes a remarkable guarantee. They promise to keep your card compatible with current software for seven years. I have seen them provide, free of charge, new EPROM chips and drivers even for cards they no longer manufacture. As you might expect, Headland charges a premium for its cards. Other companies provide new drivers continuously and post them on bulletin boards, where you can pick them up if you have a modem.

Conversely, many no-names and near no-names do not even provide an initial set of working drivers with the card at the time of sale. The cards can never be used as anything other than plain vanilla VGA cards, no matter how impressive the specs.

VESA

I exaggerated when I said super VGA has no standards. VESA, the Video Electronics Standards Association, has defined a super VGA standard for 640x480 with 256 colors and 800x600 with 16 colors. However, for the myriad other modes, you're on your own. There are no standards for 1024x768. You cannot even count on a VESA-compliant board having all the VESA modes since all the modes are optional. There is not even a validation suite to check if a manufacturer has complied with VESA's lax standards.

Monitor Specs

You can use specification sheets as a rough guide to narrow down which monitors you might want to consider, but don't use them to make your final decision. Use your eyes.

The **dot pitch** is a number such as .28 mm. On the front of the screen are millions of tiny red, green and blue phosphor dot that glow when the electron beam hits them. These are the smaller dots that compose the bigger pixels. The dot pitch is the distance between the phosphor dots measured in millimeters. The **smaller** the number the better. Thus a .28 dot pitch is better than a .31. The finer the dot pitch the smoother-looking the image. About the best you will ever see is .26 mm.

The **horizontal frequency** in kHz is how many thousand times a second the electron beam can dart from side to side. The faster, the bigger the number. The bigger the better. An ordinary VGA card is 31.5 kHz.

The **vertical frequency** in Hz is the number of times a second the beam can plough its way from top to bottom of the screen, waggling from side to side as it goes. The faster, the bigger the number. The bigger the better. An ordinary VGA card is 70 Hz.

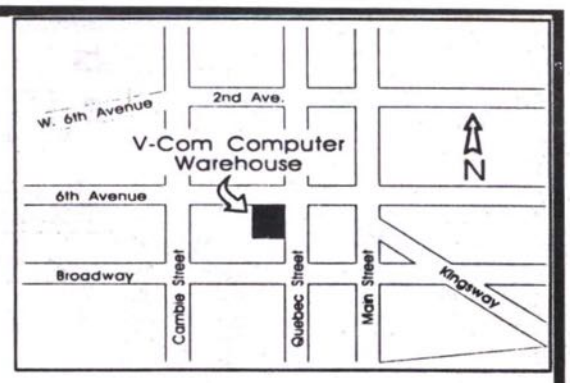
Interlace means the beam takes two trips to scan the entire screen; non-interlace means the beam scans the entire screen in one trip. Non-interlace is better.

Parting Advice

If you remember anything from this article, remember this. Trust your own eyes, not the specifications or the experts. You want to use your applications, running on your proposed monitor and video card combination before you buy. What constitutes acceptable image quality, acceptable speed and acceptable image size are all very subjective.

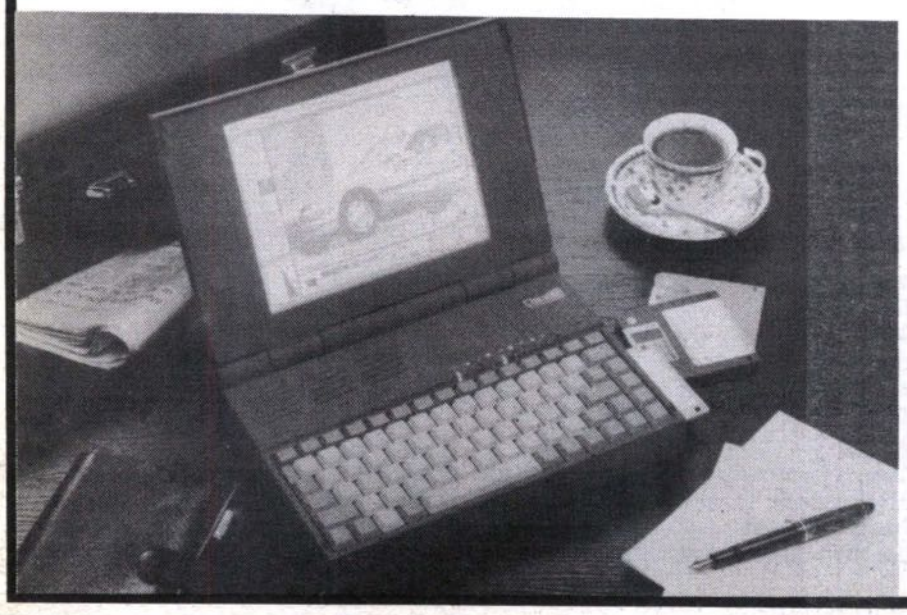


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BUYER'S GUIDE

Glossary

8514—IBM engineers decided that the VGA design would never give sufficient speed for new applications like Windows. So they radically redesigned the way the adapter works. They built a video co-processor to take over the work of drawing dots. IBM's version was not sucessful because it ran only in interlace mode and the co-processor was too slow. Since then, other companies have made faster clones that work both in non-interlace and interlace modes.

Adapter—A card of electronics that fits inside your computerThe image exists as a picture made of zeros and ones in RAM on the adapter card. The card scans the entire RAM image about 70 times a second, continuously sending a TV-like signal to the monitor to deflect the electron beam to create the picture. There are many kinds: MDA, Hercules, Hercules Plus, CGA, EGA, VGA, 8514, graphics co-processor.

Analog—Monitors that can display any possible shade of gray or any possible color. The voltages that control them vary smoothly.

CGA—Color Graphics Adapter. IBM's original color card, with a maximum resolution of 640 x 200. A 320 x 200 CGA screen can show 4 colors on the screen at once from a palette of 16. It has been obsolete for six years, but you still see them from time to time in low-ball clones. These cards have chunky, hard-to-read text, snowy graphics, and an annoying blink when the screen scrolls.

EGA—IBM enhanced color adapter: 640 x 350 x 16 colors from a palette of 64; requires a special EGA-style enhanced digital display. IBM's EGA standard was a precursor to VGA, and is often no longer supported by new software.

Grayscale—An analog monitor that can display shades of gray with a VGA or Super VGA adapter card. Often erroneously called monochrome monitors.

Herc—Hercules Graphics Adapter. This gives excellent monochrome text, and some primitive graphics. Works with a TTL monitor. Poor-quality clones sell for under $20, but decent quality would be about $58. Cannot do color or shades of gray. Ironically the Hercules company itself no longer makes Herc cards.

Herc Plus—Hercules Graphics Adapter Plus. This was a great idea that never caught on. Only a few programs such as Word 5.5 exploit its features. It combined the speed of text mode with the WYSIWYG of graphics mode.

Icon—A small picture, or logo. By pointing the mouse at the icon and clicking a button on the mouse, you ask the computer to perform the service represented by that icon, for example start up the Excel spreadsheet.

MDA—Monochrome Display Adapter. IBM's original green-on-black text-only system. It could do no graphics at all. The Herc cards emulate MDA for text.

Monitor—The TV-like screen that sits on your desk. It might be full color, paper-white

Continued on page 42

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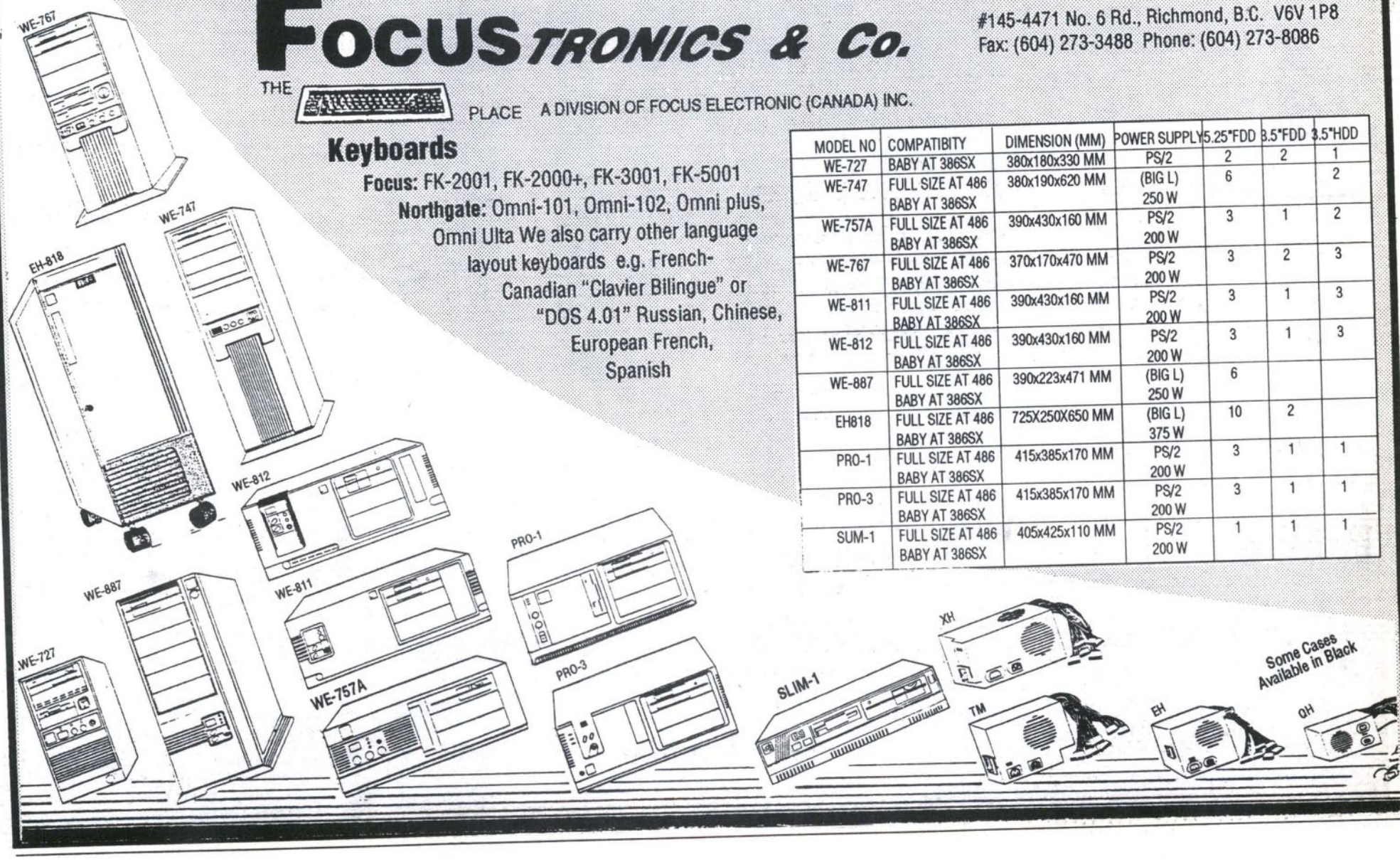
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WE-767	FULL SIZE AT 486 BABY AT 386SX	370x170x470 MM	PS/2 200 W	3	2	3
WE-811	FULL SIZE AT 486 BABY AT 386SX	390x430x160 MM	PS/2 200 W	3	1	3
WE-812	FULL SIZE AT 486 BABY AT 386SX	390x430x160 MM	PS/2 200 W	3	1	3
WE-887	FULL SIZE AT 486 BABY AT 386SX	390x223x471 MM	(BIG L) 250 W	6		
EH818	FULL SIZE AT 486 BABY AT 386SX	725X250X650 MM	(BIG L) 375 W	10	2	
PRO-1	FULL SIZE AT 486 BABY AT 386SX	415x385x170 MM	PS/2 200 W	3	1	1
PRO-3	FULL SIZE AT 486 BABY AT 386SX	415x385x170 MM	PS/2 200 W	3	1	1
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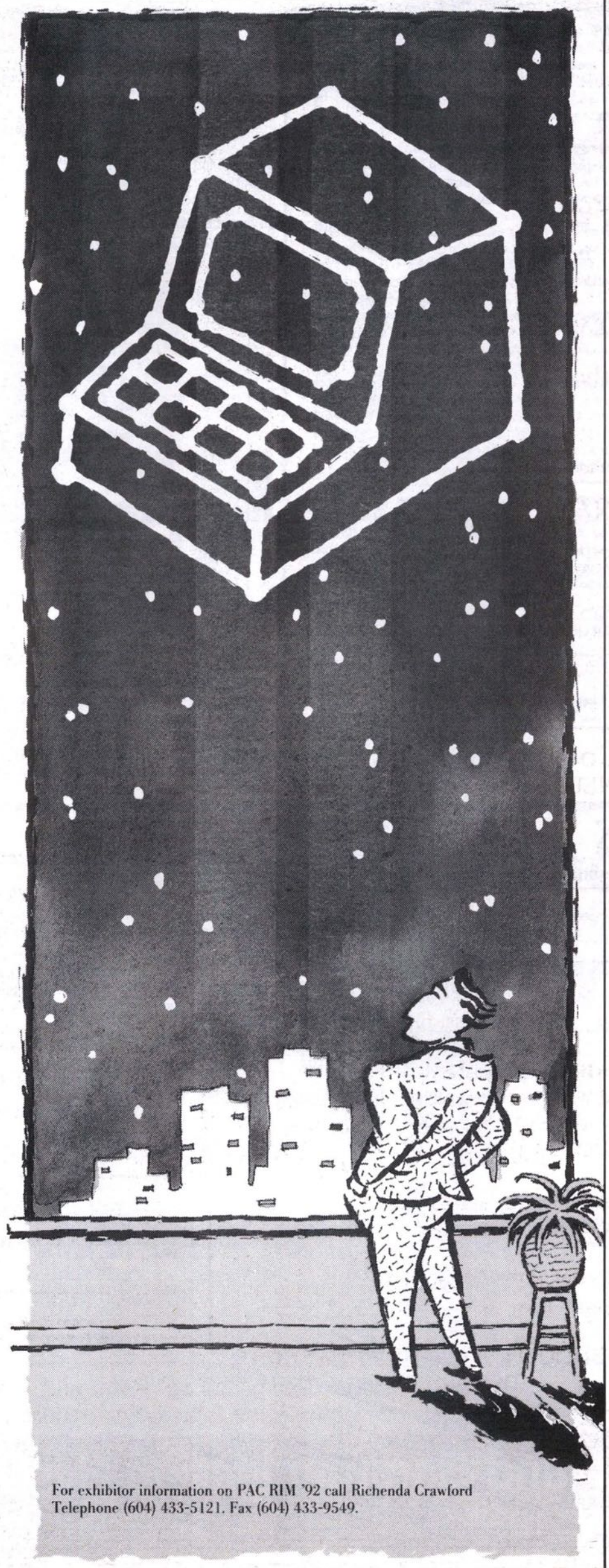
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GLOSSARY

on black, amber on black, green on black, or various shades of gray—gray-scale. There are digital TTL monitors whose control signals are either on or off, and there are analog monitors whose signal voltages vary continuously—allowing them to express fine shades of color or gray.

Monochrome—Literally one-color. This as alternate name for an amber or paper-white TTL monitor. Sometimes erroneously used to refer to VGA grayscale monitors.

Palette—The set of possible colors an adapter card can display. Usually, it can only display a limited number (e.g., 16) of the possibilities at any one time.

NTSC—stands for National Television Standards Committee but is more commonly known as Never The Same Color. These ancient monitors had low-quality TV-like images suitable only for games.

Refresh Rate—The number of times per second the picture is refreshed on the screen. 60Hz is average. For some people, anything less creates an annoying flicker. To test the effect, look at a screen that is mostly white background.

RGB—Red, Green, Blue monitors can display only 16 different colors and again are used mainly for games. They work with the old CGA cards.

Super VGA—IBM invented VGA, then to everyone's irritation, refused to invent a new improved high resolution version of it that everyone could copy as a standard. So each manufacturer went off on his own designing his own enhanced version. Even when two manufacturers both chose to do 1024x768, they each did it a slightly different way. None of these enhancements are compatible with each other. This hodge-podge of various higher resolutions is known collectively as Super VGA.

TTL (Transistor-Transistor-Logic)—This is a type of monitor that has only two colors—white on black, amber on black or now rarely green on black. It works with a Herc card, but not with VGA cards.

VESA—Video Electronics Standards Association. Having all the super VGA cards incompatible with each other made life impossible for computer programmers. They had to write special versions of their programs for every different brand! So a group of manufacturers (known as VESA) got together to hammer out a common standard. The politics and jockeying for position meant the only things that VESA is ever able to standardize are already out of date.

VGA—Video Graphics Array. This adapter card can do three things: display text, allow custom screen fonts, and display pictures at 320 x 200 with 256 colors from a palette of 262,144, or 640 x 480 in 16 colors. Nearly all software written works on this type of card. Nearly all the fancier types of card can also pretend to be a plain VGA card. Requires a grayscale or color analog monitor. Can also be used with the more expensive variable-frequency (multi-sync, multiscan) monitors.

About the Author
Roedy Green, president of Canadian Mind Products in Vancouver, (604) 684-6529, builds custom computers. He also writes custom computer software, primarily for non-profit organizations and charities, and offers training and consulting. ❐

NOTE:
Certain information was omitted from this article due to time and size constraints. The complete text may be available directly from the author. Please contact him at the above number if you wish to get the "whole picture."

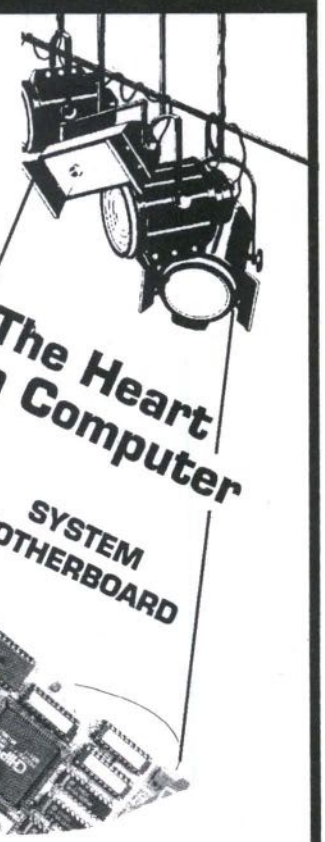
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And now, for your viewing pleasure...

More About Monitors

by Graeme Bennett

As you'll discover when shopping for monitors and video cards, there are several display standards (for a discussion of the most popular of these, see *Monitors & Display Adapters* in this issue). Some video cards offer more colors or higher resolutions, which you must match to the monitor's capabilities.

Many of today's video cards and so-called multisync (multiscanning) monitors can adapt to a variety of display standards—ideal for times when you want to run software for which no driver exists for a particular mode.

Another consideration is the size, or pitch, of the dot elements that make up the display. This so-called dot pitch is a major factor in how sharp the display appears. A great monitor can have a dot pitch as low as .25mm. The lower the numbers go, the better. Generally, you should avoid anything higher than a .28 dot pitch.

Of course, to take full advantage of higher resolutions, you'll need a premium-priced video card. I am always amazed at how many people plunk down $3,000 or so for a hot-stuff computer, and then scrimp on the display by buying a cheap monitor and bottom-of-the-line video card.

Categorically, I recommend that you get a high-performance video card with some sort of on-board acceleration, especially if you plan on running graphics-intensive programs like Windows 3.0. The difference in performance over "basic models" is quite shocking, as you start to realize that Windows isn't as inherently slow as it appears on most systems—the bottleneck is in the screen display.

There is a direct relationship between the number of colors displayed and the speed of screen redraws. Again, to use Windows as an example, you might have a video card and driver that supports 256 colors. You can use the Windows Setup option to reconfigure your system for less colors (i.e., 16) to approximately double your screen-drawing speed. This makes Windows a *lot* faster. When you need the extra colors, just choose the 256-color driver from Setup again. Your dealer can probably help you set up this simple procedure.

Be sure that the video card and monitor combination you choose is supported by the software you want to run. Big-name brands like ATI, Paradise and Genoa are compatible with nearly all PC applications, while some obscure ones may not be. Generally, any video card with a chipset from Genoa Systems, Headland Technologies, Oak, Trident Microsystems, Tseng Labs, and Video Seven have good repuations for compatibility.

For other brands, ask your dealer specifically if it has drivers for your programs. Remember, too, that even if the obscure brand is "compatible" with a big name, you will usually find (as with most things in life) that you get what you pay for.

Buyer Beware

On the subject of dot pitch, I notice that at many computer stores, the advertised prices for the "feature systems" usually consist of *really* low-end video monitors and graphics adapters. (A distributor of monitors with a dot pitch of .41 (*really* bad!) told me that he sells a thousand a month!)

At one store I shopped at recently, the salesperson easily sold me on the idea of a "only $160 more" VGA color display instead of a VGA monochrome one. Unfortunately, the VGA color display featured a .39 dot

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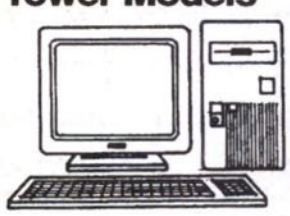
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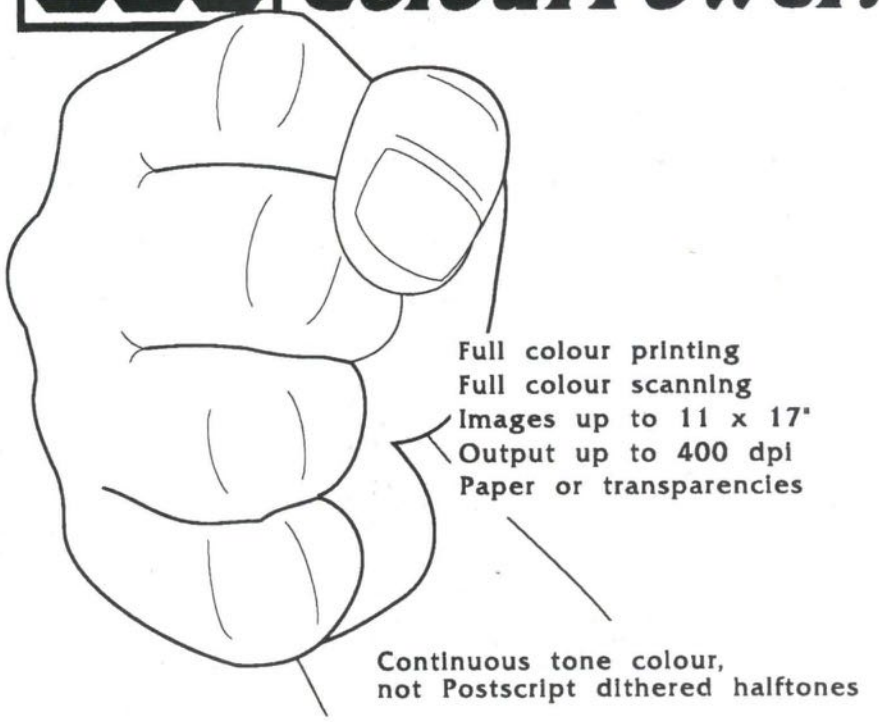
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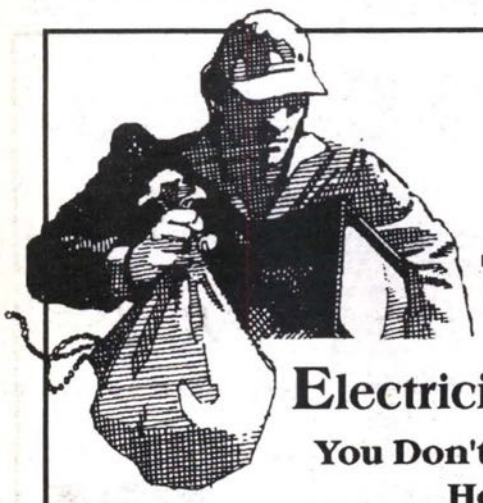
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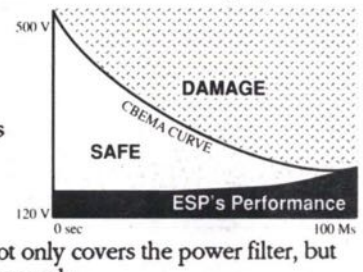
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pitch, which I find very hard to look at for extended periods (The larger the dot pitch, the less focussed the individual dots of the display are). For a couple of hundred dollars more, I found out that I could add a color display with a .28 dot pitch monitor, with higher resolution to boot.

The quality of your screen is an inappropriate place to scrimp. Be good to your eyes!

Even specs can lie. I saw mention of a .28 dot pitch VGA monitor in a 386-powered 40MHz system found in one of *The Computer Paper's* advertisements. Intrigued by the low price, I went to see the system. The distortion at the sides of the image (called pin-cushioning) on this monitor was so *bad*, I remarked to the salesperson that it must be defective. Surely, said I, nobody would buy a monitor that poor. He confided that "nearly everyone" paid $110 more to upgrade to a better monitor.

> The quality of your screen is an inappropriate place to scrimp.

There are other considerations when choosing a monitor, too. Examine the corners and edges of the display. Here, where the tube curves sharply, is where the greatest potential for fuzziness or misconvergence occurs. For this reason, you will usually find that the flatter the screen, the better the image.

Be on the lookout, too, for any jitter or interference lines that plague many "bargain" monitors. Also, color purity may be a problem. All monitors have some degree of "color cast," typically a bluish hue to supposedly pure whites. While this is essentially normal, you should look for sharp, bright colors with a minimum of impurity, and especially a minimum of variance from one corner of the screen to the other.

Better monitors have a facility for what is known as *degaussing*. Because we are surrounded by magnetic fields (e.g., telephones, TVs, electric motors or fans, speakers, even the earth's gravity), monitors eventually acquire blotches or discolored areas that require demagnetization. Some monitors have a Degauss button, others do it automatically, but one or the other is important. (Obviously, to minimize disturbances to your monitor, don't place any of the above-mentioned devices near it.)

Another consideration is the display adjustment controls: are they conveniently located? When changing resolutions (for example, multi-sync monitors are so named for their ability to synchronize to a variety of video signals, e.g., CGA, EGA, Herc, VGA, Super VGA and sometimes other signals from today's better video cards.

Buying Strategies

Ideally, when buying any system, you should see in action the *same* setup running the *same* software that you plan to use, before the purchase. That way, you can check out the feel of the keyboard, look at the display quality and see the program's performance with the CPU and hard disk. (But be reasonable! Few retailers will enjoy tearing open and installing a dozen or more video cards, mice or what-have-you at the whim of an indecisive customer.) Remember also, most PC configurations are custom-built these days. You can (and should) assemble the exact system best for you. ❐

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ENVIRONMENT

Ozone—Friend or Foe?

by Chris Small



We are all aware of the need for more ozone in the stratosphere to block the ultraviolet rays of the sun and protect us from skin cancer, but did you know that the same ozone exists down on the surface of our earth and is considered to be a toxic gas that harms plants and our lungs? Ozone, according to Environment Canada, is one of the most dangerous components of city smog. Recently, Federal and Provincial governments released a $100-million plan to combat ground-level ozone.

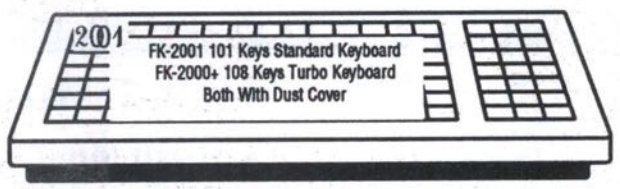
Ozone is an unstable gas produced by air pollutants reacting in the presence of sunlight and/or by oxygen coming into contact with high-voltage electric fields. It came as a considerable shock to me as a vendor of laser printers and supplies to find that laser printers and copiers emit ozone gas directly into the office atmosphere, contributing to indoor air pollution. These machines use a high-voltage corona assembly to electrically charge the paper so it attracts the toner from the photoelectric drum. When these machines leave the factory they produce very low levels of ozone and are fitted with special carbon filters to break down the ozone. The problem is that time and use make them less efficient. Dust from paper, toner, or normal room air will clog these filters, rendering them useless and possibly overheating important circuit boards.

Hewlett-Packard, Apple, Brother, QMS and a number of other popular laser printers use the famous Canon engine which has an easy-to-replace filter (some of the earliest Series II engines require a conversion kit). The Hewlett-Packard Service Technician's manual (for Series II and III) states that the filter should be replaced at least every 50,000 pages or when an odor is detected. Visual inspection of the filter is not a sufficient test, although I will say that if the filter appears dirty, you should replace it anyway.

Steve Ayer, head of Brother International's Western Canada Service Department, has told me that these filters can be rejuvenated by vacuuming them thoroughly and them heating them in an oven at 350 degrees Fahrenheit for three hours. Replacing them with a new one is much more preferable for obvious reasons. Ayer warns against using the cheaper foam filters that are impregnated with carbon rather than the OEM type. It seems that the foam is not porous enough to allow full circulation of air, and this could cause overheating in the delicate circuit boards.

Some of the effects of ozone poisoning are respiratory ailments, nausea, headaches and premature aging of the skin.

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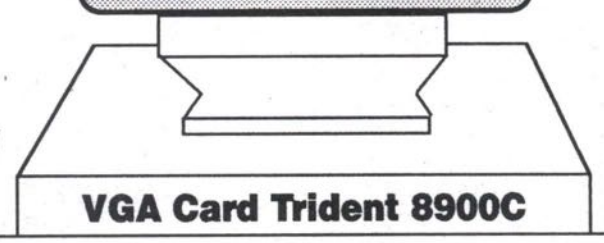
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WORD PROCESSORS

A Bumper Crop

1991 Harvest of Windows Word Processors

by Cathalynn Labonté-Smith

Rustic Beginnings

The evolution of word-processing tools started with our own hands—laborious long-hand—then to the mechanical but still brutal manual typewriter, then to the more civilized electric typewriter. Finally, we saw an electronic tool, the computer, which can wipe out mistakes before they ever touch a page. Character-based word-processing started with the 40-column, all upper-case, monochrome display of dedicated word processors. The 40-column barrier was broken to a give a more page-like 80-column screen. But word processing programs were still too complex for most users, and there began an evolution toward user-friendly programs. Color monitors became available and now pretty yet practical graphical user interfaces are abundant.

Reviewers seem to demand more and more from software. For instance, before I wrote this story, I constructed a "Dream Word Processor" in my head. A word processor that would include not only a style-checker, grammar-checker, dictionary, and animated encyclopedia, but also a metaphor-checker and a fact-checker. I wanted a program to have picons and object-oriented word-processing tools. I wanted not just a color palette, I wanted a spectrum palette with all the colors of the spectrum including infrared and ultraviolet. I wanted a screen developed to be as large as my ideas. I wanted an intuitive AI chip on the motherboard that would not only obey my commands but would also anticipate them.

Well, instead of dreaming about word processors I should be thinking more about how to get the most out of the terrific word processors in existence and in development. Now, enjoy the harvest of 1991's fine crop of Windows word processors. (The programs that were not available for review have been included in the Windows Word Processors Summary chart on page 53.)

Word's Object-oriented Word Processing

Microsoft Word for the Macintosh was a very successful product; it introduced users to a ruler bar to adjust margins, indents and tabs easily. Also there were simple-to-use pull-down menus, on-line help, instructional dialog boxes, the ability to import graphics, and many other features. So it was natural that Microsoft ported Word onto the PC, when the Windows environment was created. Word for Windows' innovations, like hypertext help and multitasking, became standard gear for all Windows word processing wannabes.

Word for Windows also managed to transfer the power features of its character-based mother, MS Word, to its new interface, i.e., stylesheets, outlining, merge, macro record. A feature that Word for Windows is still paramount in is their macro language, thus, for power users/programmers, Word for Windows is still considered the best investment.

MS Word for Windows v. 2.0 is in beta test now, and although the opportunity to see a demo at Microsoft came too late for the October deadline, the new version is reported to contain object-oriented word processing. By object-oriented word processing, I mean that words that needed to be cut and pasted back in again through the Clipboard will now be selected with the mouse and then dragged into the desired position in the text.

Ami Pro 2.0 Outstanding

Lotus' Ami Pro 2.0 for Windows has a headstart on the soon-to-be released new version of Word for Windows. What was once a sparse program is now reborn as an outstanding, decorative and powerful tool. Original features, plus the inclusion of Adobe Type Manager with this program, make it great value for your $500. Some of the many highlights are:

Smart Icons & Power Fields

The icon palette can be placed on the top, bottom or to the side of the screen, or can hover about the screen in a floating menu. The icons are tiny 3-D chips that can execute functions with a click of the mouse button. Lotus calls these mini icons picons, and I agree that they are more like pictures than the icons found in other Windows applications. If you can't find that perfect icon for your macro, you can also create your own BMP file then import it and Ami Pro scales the image down to icon size automatically.

There is a subset of icons called Smart Icons that are ready to be assigned to macros, either from the collection of over 500 macros Ami Pro 2.0 provides or to one of your creation. Perhaps, Ami Pro's multi-purpose icons are also a move in the direction of object-oriented word processing.

Power Fields in Ami Pro are more powerful than the bookmarks, templates and annotations of previous Windows word processors, as they can be cross-referenced with text, they can perform sorting, and keep track of automatic numbering. For power power fields you can assign the power fields to macros.

Equation Tool

The most exciting feature in Ami Pro was the equation editor included with this program. Derived from the ultra challenging typesetting program TeX, this equation editor solves the problem of entering the formulae, Greek letters, and symbols on multi-levels that mathematicians, engineers and other scientists need to do without having to leave the word processor.

Each symbol has its corresponding picon, which is simply clicked on and the summation, radical, integral, upper- lower-case Greek letter, etc. are inserted into the body of the text.

Charts, Drawing Tools, Clip Art

Ami Pro's chart feature is very impressive. The only other word processing package that includes charting is MS Works for DOS that makes bar graphs, graphs, and pie charts, but MS Works is more an integrated office package than a true word-processor and certainly could not create the professional results that Ami Pro now can. Twelve types of charts can be made from your data: column or stacked column, bar or stacked bar; line or area; line and picture; pie or expanded pie; and picture or stacked picture.

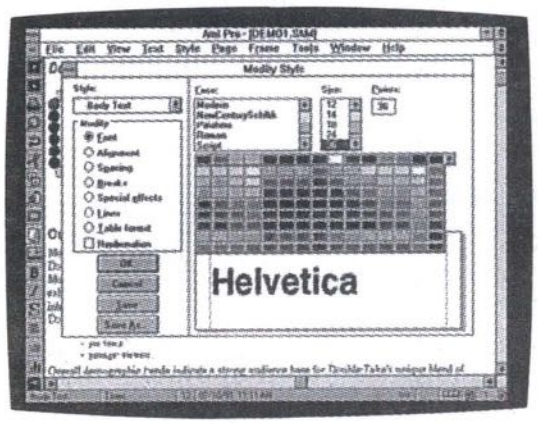
If you wanted to do a quick pic in Ami Pro, then you could just select the drawing tools and go for it. Ami Pro has some rudimentary lines and even a Bézier curve in its toolbox.

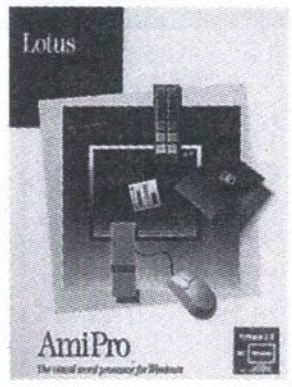
Ami Pro also comes with 100+ Clipart pictures. I found a wonderful leaf motif for

Continued on page 50

Ask About The Lotus Double Up Offer

Ami Pro 2.0 Brings Visual Word Processing to Windows.





Visual Word Processing lets you create documents the way you think - with words, pictures, graphs, symbols, drawings, and colours. In fact, Ami Pro is the only word processor exclusively designed to work from the ground up with the rich graphic opportunities of the Windows environment.

You get true *WYSIWYG*, which lets you edit in any view, and print out anytime - whether you're zoomed in or out on the page. Ami Pro 2.0 also comes with dozens of pre-formatted Style Sheets for professional letters, expense reports, memos, reports, and presentations in half the time it takes you now. Other features include spell check, thesaurus, a full macro language, two-way DDE support, merge, tables, and so much more - including the ability to read and write most popular word processing file formats.

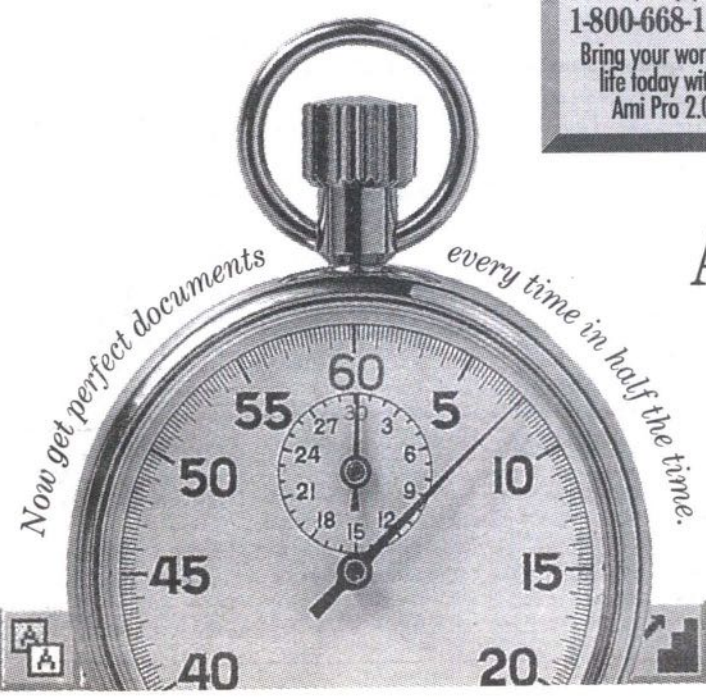
Naturally, Ami Pro 2.0 is integrated with the entire suite of Lotus Windows™ applications. In fact, it enables you to launch into two of the world's leading business applications: 1-2-3® and cc: Mail™ - right from Ami Pro. As with all Lotus Windows products, complicated keystroke commands are a thing of the past. Ami Pro 2.0 offers on-screen SmartIcons™ giving you one-click access to every word processing command.

Call for more information on how to upgrade from your current word processor to Ami Pro 2.0 for only $149*, or for a free working model.

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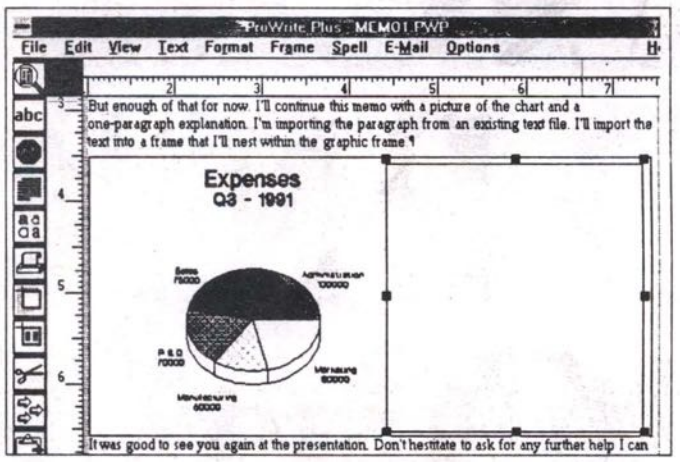
my Fall newsletter to family and friends. By the way, there is a broad selection of professionally designed sample documents included in the program. I was able to use a very attractive sample sheet to make a multi-columned newsletter with the graphic of a fountain pen on the top.

Outlining

The outlining feature of Ami Pro should be mentioned as it is easier to use than the competitive packages. To create an outline, the user can select the title entry level from a pull-up box on the bottom status line, and then press on the numbered picons to indicate which level you would like the title to have.

Professional Write Plus: Sister to Ami Pro

You'll notice that Professional Write Plus for Windows looks very similar to Ami Pro v. 1.0. The reason for the family resemblance is that Software Publishing made an arrangement with Samna (before they became part of Lotus), to use the code of the program as a starting point for ProWrite Plus. Software Publishing was not eager to discuss this with me at a club meeting, but I believe that is what happened. Well, relations aside, ProWrite Plus is a good program (see review in *The Computer Paper* May '91).



Professional Write Plus has a nice icon bar and a real professional look about it from its interface to the ample sample documents. I really appreciated that Grammatik for Windows was included with this product and could be executed from the program. ,I suggest that all other Windows word-processing developers take note and include a grammar-checker in their next version, as I hope that it becomes standard like including a dictionary, spell-checker, thesaurus, and hyphenation dictionary.

Just Write For the Smaller Budget

Symantec's Just Write was featured in *The Computer Paper* in August '91, where I pronounced the program as being "just right." At less than half the price of the other commercial packages, you do get a full word processor. True, it's short on the deluxe features such as a macro language, but it does include auto TOC and auto indexing, table-making, auto hyphenation, auto foot/endnotes, outlining all for only $199.

The Winner Is...

I used to recommend MS Word for Windows as the best Windows word processor, but now I have to say the winner of this bumper crop is Ami Pro 2.0—for the moment—as there are some exciting programs about to be released that may be even better. But then everyone has different needs, for instance, my cousin, Kathy Carney, who recently migrated from her Rainbow computer to a 386. While Kathy wants to be progressive and use her Windows 3.0 environment, she finds Word for Windows difficult. WordStar for Windows may be a better choice for her as she has used WordStar on the Rainbow for years. Have a look at all the Windows word processors you can before you buy, as there is now more than one or two to suit your needs and budget.

Here is a list of what to expect by the end of this year from developers and tidbits about them:

WordPerfect for Windows—The long years of gestation are nearly over for this elephantine company. WordPerfect for Windows is advertising an upgrade from WordPerfect 5.1 for $19.50 (manuals are $50 extra). The advertisement also claims that there will be no need to convert your 5.1 files into the Windows version, as it will be a direct transfer. The interesting feature that I saw on an alpha version of WordPerfect for Windows is the Button Bar that you can customize and place where you want. WordPerfect for DOS is still selling enough to rank in the top three retail software packages, so it looks as if WordPerfect have a dominant and eager market that could soon eclipse Microsoft Word for Windows.

Microsoft Word for Windows 2.0—As mentioned above, this version will have special text dragging and probably a whole lot of cool stuff that they haven't leaked yet.

Wordstar for Windows—Wordstar adopted Legacy as their interim Windows word processor. The new version will have more WordStar compatibility. Users comfortable with the key codes of WordStar will appreciate the addition of those in the Windows version. Also, the company hopes to include a macro language, which would bring it up to speed with Microsoft Word for Windows and Ami Pro. ❐

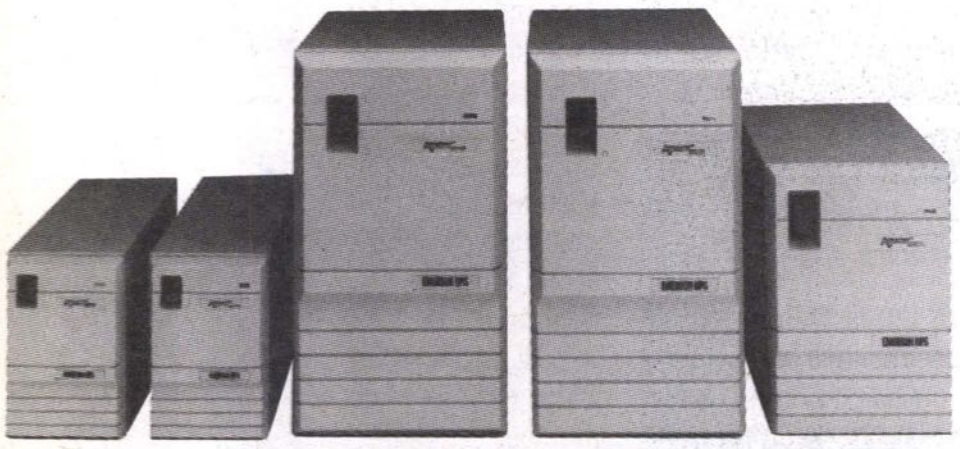
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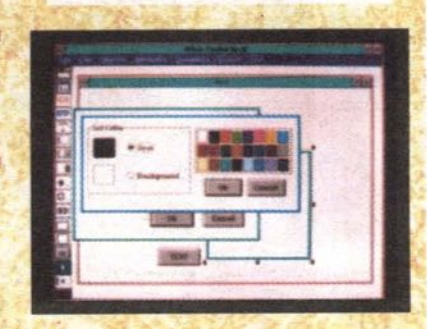
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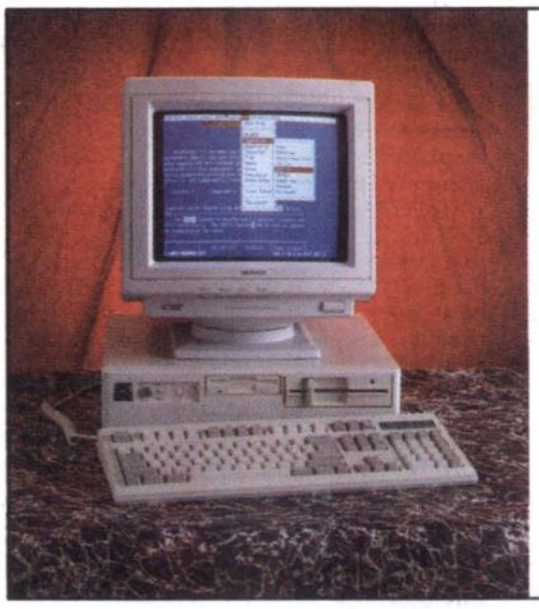
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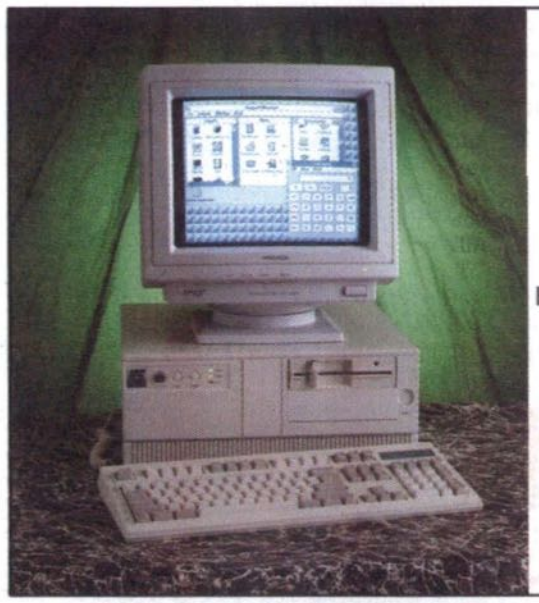
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Monitor: 14" Paper White VGA (not as shown)

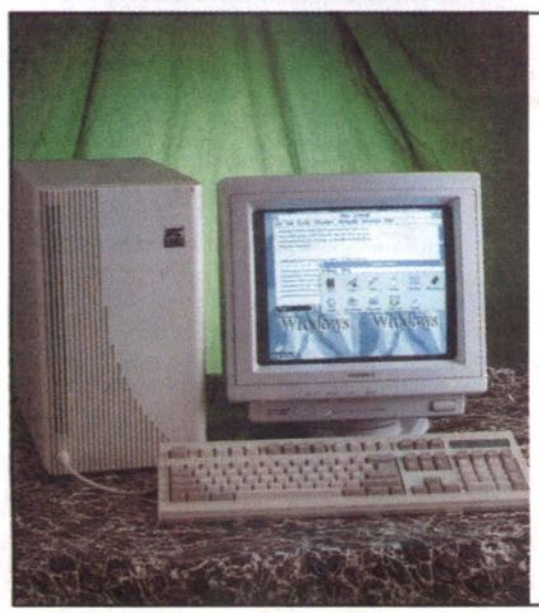
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Video Card : 800 x 600 VGA
Monitor : 14" Colour VGA

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Operating Speed : 25 MHz
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Floppy Drive : 1.2 MB
Video Card : 800 x 600 SVGA
Monitor : 14" Colour SVGA

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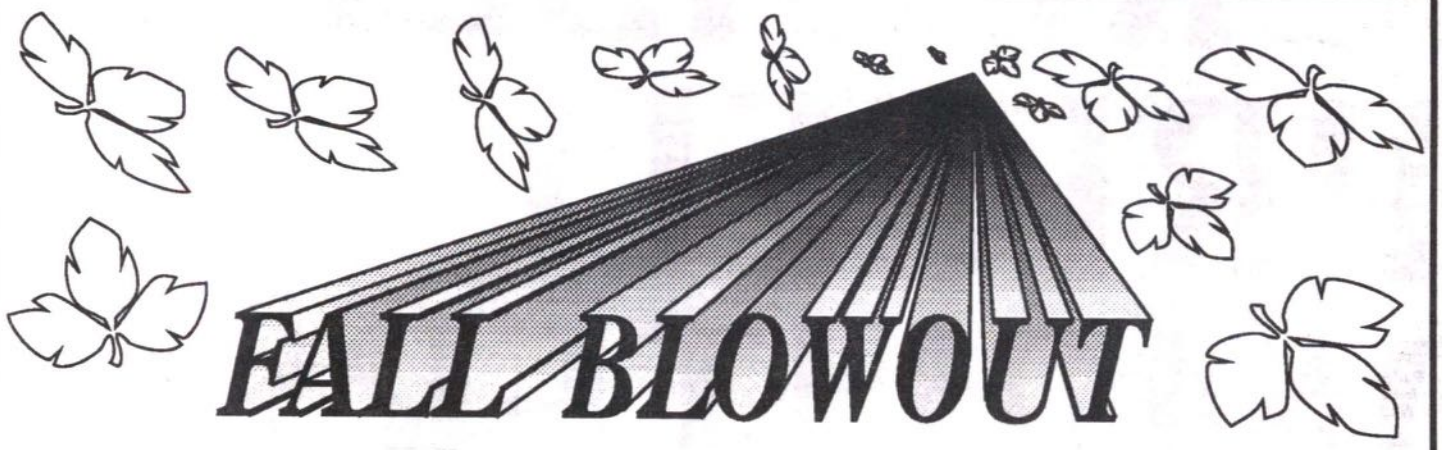
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SHAREWARE

Shareware: Word Processing and Windows

by Gordon Young

In keeping with this month's theme of word processing and Windows, we present a selection of the best, most popular word processing and Windows shareware. This list is not exhaustive, but every product listed is of high quality. Evaluation copies are available from shareware vendors and telephone electronic bulletin board systems (BBS's) in Vancouver and throughout Western Canada.

What is Shareware?

Shareware is software distributed on a "try before you buy" basis. Buyers get an evaluation copy from a friend, mail-order or store vendor, or electronic BBS. After a trial period they decide if they want to keep using the product. If so, they should register it, a polite way of saying pay for it.

Shareware is usually less expensive than commercial "shrink-wrapped" software. Shareware allows independent programmers to market their work. Unfortunately the shareware market is cluttered with a lot of junk, plain and simple. Sorting wheat from chaff is an annoying chore.

To solve this problem *The Computer Paper* presents this short catalogue of good, reasonably priced shareware. Prices are current as of this writing but subject to change without notice.

Word Processing Shareware

PC-WRITE 3.0 by Quicksoft, Inc. Registration $129US + $5US postage and handling. Registration brings latest update, technical support and a manual. Quicksoft offers you a $25US rebate for new registrations quoting you as their initial source.

A large, powerful, popular, full-featured word processor. Menu driven with a 110,000- word spell checker. Special features include mail merge, typewriter mode for addressing envelopes. Competitive with MS-Word, WordPerfect, and other major word processors, but for much, much less.

PC-WRITE LITE 1.01 by Qwicksoft, Inc. Registration $79US + $5US postage and handling. Registration brings latest update, technical support and a manual.

Smaller version of PC-Write. Good for users with a main computer and a portable who want a smaller version of their word processor on the portable, or for users who don't need all the features of a full package.

PC-OUTLINE 3.34 by Brown Bag Software. Registration $49.95US. Registration brings a manual.

Excellent! This package makes outlines. Its flexible, interactive operation turns a computer into a powerful brainstorming tool. Organize and develop ideas, make outlines for writing, make lists or plan activities. Then output detailed hard-copy outlines, or cut and paste outlines into your word processor. Can run memory-resident.

QEDIT ADVANCED by SemWare. Registration $44US + $3.00US handling. Registration brings technical support, low-cost updates, and a manual.

QEdit is a text editor for editing files. Features a full range of text-editing functions, including macros editing and split windows allowing work on more than one file at a time. Pull-down menu driven. Very popular.

Continued on page 57

SUMMARY OF THE TOP WINDOWS WORDPROCESSORS

PRODUCT	PRICE	MIN. RAM /HDD SPACE	OTHER VERSIONS	FILE FORMATS SUPPORTED	SPECIAL FEATURES
tus (Samna Division) ni Pro 2.0 for Windows	$495	1 MB/10 MB	NewWave	ASCII CGM, DCA DisplayWrite DBF, DIF, EPS Excel, HPGL Multimate PCX, PIC, RTF SuperCalc Word & Word for Windows WordPerfect WordStar, Works WKS, WK1, WK3 WMF, TIFF	Smart Icons, 500+ macros, power fields, multi-page tables. Scientific & mathematical equations editor based on TeX. LAN capability. Charts, draw & paint tools, graphics-scaling, image-processing. Adobe Type Manager. Master document, stylesheets, and impressive sample documents.
crosoft ord for Windows	$495	1 MB/3.2 MB		Mac DisplayWrite HPGL, Multimate PCX, PIC, TIFF Word,WordPerfect WordStar, Works WKS, WK1, WK3	ASCII Basic-like macro language as yet unequalled by other Windows word processors. Outlining, indexing, style sheets, columns, mail merge, TOC, Auto footnotes. Bookmarks, annotations.
ftware Publishing oWrite Plus	$299	4 MB/6 MB		ASCII CGM, DCA, EPS Excel, Multimate OfficeWriter PCX, PIC Professional Write DOS & Plus RFT, SuperCalc TIFF, WMF Word, WordPerfect WordStar WordStar 2000	Grammatik for Windows included.
Symantec Just Write	$199	2 MB		ASCII, dBase Excel, HPGL Lotus 1-2-3 PCX, Q&A 3.0 RTF, TIFF Windows Metafile Word WordPerfect	DDE. Columns, TOC, Indexing. Document templates. Mail merge. Bookmarks, endnotes. Network version compatible with Novell Netware, IBM Token Ring & Banyan vines. Outlining.
Wordstar Inter. Inc Legacy	$495	2 MB/4.3 MB		ASCII, BMP, CGM DCA, DRW, DIF EPS, HPGL MultiMate, PCX PFS: First Choice PIC, Professional Write, RFT, TIFF WMF, WordPerfect WordStar WordStar 2000	Professional typesetting features.
DeScribe DeScribe 3.0 for Windows	$495	2 MB/8 MB	PM (OS/2)	ASCII, CGM, DCA DisplayWrite Excel Framework 3, GEM MultiMate, PCL PCX, PFS: First Choice & First Write Professional Write, PIC, PIX, TIFF WMF, WK1, Word WordPerfect WordStar XyWrite	Network version. Curve-handling. Macros.

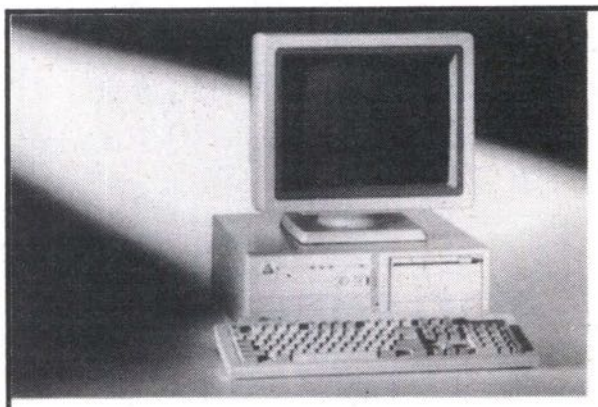
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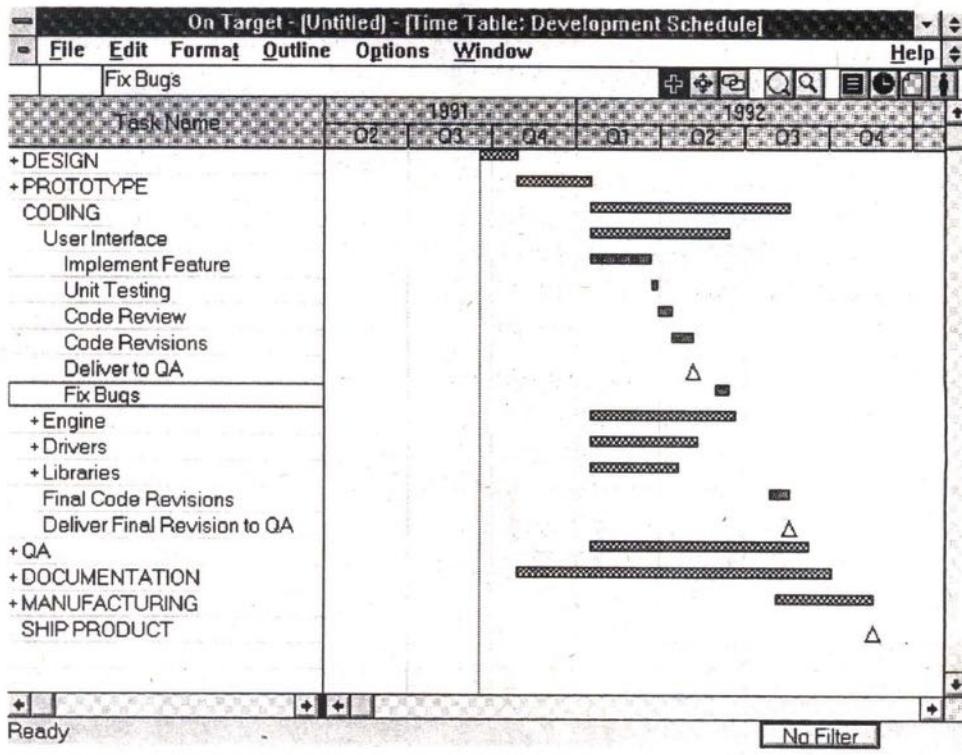
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SHAREWARE FUD

On Target

by Steve McIlwain



Product: On Target Project planning
Publisher: Symantec Corporation, 10201 Torre Avenue, Cupertino, CA 95014-2132 (408)253-9600 (604)737-0214
System Requirements: IBM or compatible with 286 or higher processor, MS Windows 3.0 or higher, 1 Mb memory (2 Mb recommended), DOS 3.1 or higher, monochrome or colour monitor (CGA, EGA, VGA, MCGA, Hercules), mouse is recommended.
Price: MSRP $399

Of Interest To: Windows users in need of a project planner that is quick and easy to use.
Key Features: Starter Schedules; custom viewing windows; automatic or manual recalculation and rescheduling of tasks, costs and resources; manage resources and costs; keep notes on tasks; custom fonts, text color, background, headers, footers, borders and labels on reports; import and export .WK1, .TXT and .CSV files; copy presentations to other Windows applications; supports file locking; use on single computer or install as a network server (LAN nodes extra); no-charge support.

Overview

On Target creates project plans from an outline of tasks that you enter on a spreadsheet. Multiple projects can be entered in a master plan so you get a complete picture of what needs to be done. Plans can be viewed two different ways, Time Table and Work Flow. Individual tasks can be linked with other tasks or to resources. Resources related to projects (people, costs, etc.) are stored in the Resource Spreadsheet. When a task is changed, On Target can automatically recalculate and reschedule every relevant task or resource that the change affects. The reports include flow charts, graphs, spreadsheet data and calendar reports.

Not Bad for the First Try

On Target uses many standard features found in personal information managers, which makes the program easy to use. It features connections between items, easy sorting and finding of tasks, and allows for a personal or custom feel to the program. On Target is not a personal information manager, though: it specializes in managing projects. It combines these features with project outlines that organize your plan. Most features are easy to figure out. For instance, all you have to do to lengthen a task time is stretch the task bar on the graph.

On Target's performance on a 386SX was good but I do not recommend running this on a 286. Many Windows applications cannot be run efficiently on a 286 and On Target was much too sluggish when tested on a 10 MHz 286.

The key to On Target is its links between tasks and resources and its rescheduling and recalculating ability. On Target can automatically or manually reschedule and recalculate relevant tasks when one task is changed. Plans always change, and revising a schedule in On Target is simple. Linking tasks and resources also allows you to manage resources such as people and costs. For example, you can assign tasks to people and then get an individual's schedule to see how their workload is and whether you can assign them any more tasks.

Presentations are professional looking and are clear even with black and white printers where colors cannot be used to distinguish certain parts of the report. But to get the most from reports, a color printer should be used. Reports can be oversized (e.g., 2 pages by 3 pages), such as the monthly wall calendar. The print preview is makes it easy to view large presentations before printing.

Does On Target make project planning easier and faster? I don't see how it cannot. All you do is enter the task information and create relationships between the tasks and resources and On Target does the rest. For a first try—this is Version 1.0—On Target is missing very little. I look forward to seeing what future versions have in store. ❐

Steve McIlwain is a senior partner in ISR Software Review Corporation, a company specializing in independent testing, evaluation and review of DOS-based products. For further information phone (604)538-0517.

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THE COMPUTER PAPER Reader Survey

Who are you?

How old are you?
- ☐ Under 14
- ☐ 14-18
- ☐ 18-24
- ☐ 25-29
- ☐ 30-34
- ☐ 35-44
- ☐ 45-54
- ☐ 55-64
- ☐ 65+

Are you...
- ☐ Male
- ☐ Female

What is your highest level of education?
- ☐ High School
- ☐ Some/completed post-secondary
- ☐ University degree(s)

What is your combined household income?
- ☐ Under $30,000
- ☐ 30,000-39,999
- ☐ 40,000-49,999
- ☐ 50,000-59,999
- ☐ 60,000-69,999
- ☐ over $70,000

Who do you work for?

Are you employed?
- ☐ Yes
- ☐ No – If you are not employed, please skip to the next set of questions "How do you use a computer?"

My business organization is focused on markets that can be described as primarily:
- ☐ Local
- ☐ Regional
- ☐ National
- ☐ International

Which of the following best describes your company's primary business?
- ☐ Agriculture
- ☐ Construction
- ☐ Finance, Insurance, Real Estate
- ☐ Government
- ☐ Health Care
- ☐ Manufacturing
- ☐ Mining
- ☐ Retail
- ☐ Services
- ☐ Transportation, Communications, Utilities
- ☐ Wholesale

What kind of firm do you work for?
- ☐ Business firm
- ☐ Local, Provincial or Federal Government
- ☐ Private School, Private Hospital or Private Institution
- ☐ Professional firm/practice
- ☐ Self-employed in own business

What was your company's total gross sales volume or revenues for 1991?
- ☐ Under $100,000
- ☐ $100,000 - $500,000
- ☐ $500,000 - $1 million
- ☐ $1 million - $9 million
- ☐ $10 million - $49 million
- ☐ $50 million - $99 million
- ☐ $100 million - $249 million
- ☐ $250 million - $499 million
- ☐ $500 million - $999 million
- ☐ $1 billion+

How many people are employed full-time at your location?
- ☐ Under 10
- ☐ 10-19
- ☐ 20-49
- ☐ 50-99
- ☐ 100-499
- ☐ 500-999
- ☐ 1000-2,499
- ☐ 2,500-4,999
- ☐ 5,000-9,999
- ☐ 10,000 or more

What is your exact title or job function?
- ☐ Chief Executive Officer/President/Owner/General Manager
- ☐ Vice President/Assistant Vice President
- ☐ Treasurer/Controller/Chief Financial Officer
- ☐ Director/Assistant Director/Section Head
- ☐ Manager/Assistant Manager
- ☐ Supervisor/Assistant Supervisor
- ☐ Administrative Support/Clerical person
- ☐ Doctor
- ☐ Lawyer
- ☐ Salesperson
- ☐ Consultant
- ☐ Educator
- ☐ Professional (other than above)
- ☐ Other _____

In what professional or administrative area do you primarily work?
- ☐ General Management
- ☐ Sales
- ☐ Marketing
- ☐ Distribution
- ☐ Manufacturing
- ☐ Research & Development
- ☐ Production
- ☐ Office Services
- ☐ Customer Service
- ☐ Purchasing

cont.

- ☐ Finance/Accounting
- ☐ Administration
- ☐ MIS/Data Processing Services
- ☐ Personnel
- ☐ Other_____

Approximately how many micro-computers does your company have?
- ☐ Don 't know
- ☐ 1
- ☐ 2-4
- ☐ 5-9
- ☐ 10-24
- ☐ 25-99
- ☐ 100-499
- ☐ 500 or more
- ☐ None

How do you use a computer?

Do you use a computer:
- ☐ At work
- ☐ For homework
- ☐ For recreation
- ☐ My own creative work (writers, designers, etc)
- ☐ All of the above
- ☐ None of the above

What type of computer do you have :

	Home	Work
Genuine IBM Brand	☐	☐
IBM compatible	☐	☐
Any PC running Windows	☐	☐
Any PC running OS/2	☐	☐
Mac	☐	☐
Unix	☐	☐
Atari ST	☐	☐
Amiga (Commodore)	☐	☐
Other_____	☐	☐

- ☐ None

How long have you used a computer?
- ☐ less than 6 months
- ☐ 6 months to 1 year
- ☐ 1 year to 2 years
- ☐ 2 years to 5 years
- ☐ more than 5 years

What do you plan to buy?

In the coming year, what is the value of intended purchases for your company or organization of microcomputer hardware and software?
- ☐ $0
- ☐ under $1,000
- ☐ $1,000-$2,499
- ☐ $2,500-$4,999

Cont.

- ☐ $5,000-$9,999
- ☐ $10,000-$19,999
- ☐ $20,000-$49,999
- ☐ $50,000-$99,999
- ☐ $100,000-$249,999
- ☐ Greater than $250,000
- ☐ Other _____
- ☐ Don't know

What level of influence do you have over these purchases?
- ☐ No input
- ☐ Specify
- ☐ Recommend
- ☐ Approve
- ☐ Purchase
- ☐ Influence
- ☐ All aspects of decision are mine
- ☐ Other_____
- ☐ N/A

In the coming year, what is the value of intended purchases for you personally of microcomputer hardware and software?
- ☐ $0
- ☐ under $1,000
- ☐ $1,000-$2,499
- ☐ $2,500-$4,999
- ☐ $5,000-$9,999
- ☐ $10,000-$19,999
- ☐ Greater than $20,000

How willing are you to travel anywhere in the city for a microcomputer product or service:
- ☐ Not Willing
- ☐ Willing
- ☐ Very Willing

What do you think of us?

Pass-on rate: How many other people see your copy of *The Computer Paper*?
- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6

How much time do you spend reading *The Computer Paper* each month?
- ☐ less than 5 minutes
- ☐ less than 30 minutes
- ☐ 30-45 minutes
- ☐ 45-60 minutes
- ☐ more than 60 minutes

How many of the last six editions have you read?

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6

What other Vancouver-based publications do you read?

	Freq.	Occas.	Rarely	Never
Vancouver Sun	☐	☐	☐	☐
Vancouver Province	☐	☐	☐	☐
Georgia Straight	☐	☐	☐	☐
West Ender	☐	☐	☐	☐
Vancouver Courier	☐	☐	☐	☐
Business in Vancouver	☐	☐	☐	☐
Equity Magazine	☐	☐	☐	☐
BC Business Magazine	☐	☐	☐	☐
BC Discovery	☐	☐	☐	☐
Other _____	☐	☐	☐	☐

☐ None of the above

What other computer magazines do you read?

	Freq.	Occas.	Rarely	Never
PC Magazine	☐	☐	☐	☐
PC Computing	☐	☐	☐	☐
MacWorld	☐	☐	☐	☐
MacUser	☐	☐	☐	☐
Byte Magazine	☐	☐	☐	☐
Computing Canada	☐	☐	☐	☐
Computing Now	☐	☐	☐	☐
Input	☐	☐	☐	☐
Toronto Computes	☐	☐	☐	☐
Computer Dealer News	☐	☐	☐	☐
Direct Access	☐	☐	☐	☐
Other_____	☐	☐	☐	☐

☐ None of the above

Do you act on things you see in *The Computer Paper*?

	Freq.	Occas.	Rarely	Never
Events	☐	☐	☐	☐
Courses	☐	☐	☐	☐
Services	☐	☐	☐	☐
Hardware	☐	☐	☐	☐
Software	☐	☐	☐	☐

☐ None of the above

How do you rate *The Computer Paper* as a publication?

- ☐ Excellent
- ☐ Good
- ☐ Average
- ☐ Fair
- ☐ Poor

What do you like best about *The Computer Paper*?

	Poor	Fair	Average	Good	Excellent
Feature articles	☐	☐	☐	☐	☐
Newsbytes	☐	☐	☐	☐	☐
Local News	☐	☐	☐	☐	☐
Advertising	☐	☐	☐	☐	☐
How-to-tips	☐	☐	☐	☐	☐
Overall	☐	☐	☐	☐	☐

Suggestions for improvement:

_____

_____

_____

_____

_____

Do you have any other comments on the publication?

_____

_____

_____

_____

_____

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2. FOLD ALONG LINE

WINDOWS WORLD

IS WINDOWS A THREAT to your computer system?

The Windows 3.0 environment, with its greatly improved interface, memory management, and developer and user capabilities, gained near-universal acclaim when it was released by Microsoft on May 22, 1990.

But now, thousands of users around the country are asking the question: What is the REAL price of using Windows 3.0? In addition to the more mundane problems affecting any major new software release, some users are reporting serious difficulties with Windows 3.0. And some have had disk failures and file losses because of severe incompatibilities between Windows and certain large hard disk drives and disk formatting programs.

The underlying reason for these problems is that some routines in Windows, for performance reasons, bypass DOS disk services (and associated disk utilities like Disk Manager and SWBIOS which change the way disk writes occur in normal operation) and write directly to disk through BIOS. Symptoms of the resulting discrepancy range from mild to severe, with file systems damaged and data lost.

Yet, in its general publicity and documentation for Windows, Microsoft has utterly failed to warn hundreds of thousands of affected users that their programs and data are vulnerable to these problems.

Nowhere in the Windows 3.0 manual or in associated literature (such as the Hardware Compatibility List) are these limitations mentioned. For example, the Windows 3.0 manual (pp. 513-514) strongly encourages optimizing hard disk interleave, which "can drastically improve your system's speed." But there is no warning about the

The publisher of Disk Manager software, Ontrack Computer Systems, is reported to have determined the following to be true and verifiable: 1. If Windows 3.0 is used on a 386 computer which has a hard drive with more than 1024 cylinders and our DMDRVR.BIN is being used to allow DOS (and of course Windows) to access that portion of the disk, then the "[386enh]" section of the SYSTEM.INI file in Windows must contain the following line: VIRTUALHDIRQ=OFF See pages 528-9 in the index of the Windows Users Guide for examples on how to modify SYSTEM.INI.

NOTE: Many ESDI drives exceed the 1024 cylinder barrier but due to a translating controller card, appear to the operating system to have fewer than 1024 cylinders. Such a drive is not considered to have more than 1024 cylinders and does not fall into the category described above. This is because our SWBIOS.COM utility is not required to set up the drive and the DMDRVR.BIN will also not utilize that portion of the driver.

2. The Swapfile program, which is used to set up a permanent swap file on the disk, checks for ANY partitioning device driver including the DMDRVR.BIN in the CONFIG.SYS file and will not run if it exists. The swap files are hardcoded to use a 512 byte sector and in DOS versions earlier than 4.0, Disk Manager increased the logical sector size to allow access to partitions greater than 32 megabytes. Since this is the case, a permanent swap file cannot be used on a disk using the DMDRVR.BIN device driver though temporary swap files will work just fine.

Using a temporary swap file instead of a permanent one should not degrade performance on a disk that has an optimization utility run on a regular basis. Running such a utility is a good idea anyway for general system performance as well as for increasing the possibility of recovering data should your system encounter some sort of problem.

3. Finally, on page 53 of the Windows User's Guide, users are cautioned against running CHKDSK /F as well as any utility that will modify the file allocation tables (FAT). The utilities mentioned in this section of the Windows User's Guide are designed to operate in a single-tasking environment and include such things as undelete or optimization utilities.

In the multi-tasking environment created by Windows, there may be many programs creating, manipulating and deleting files. While these operations are in process, the FATs will not be accurate. When the operation is complete, the FAT will accurately reflect that operation.

Since the file structure is constantly in a state of flux, any utility that assumes the structure to be static (unchanging) could cause problems if run in this multitasking environment. Be safe, run your applications from within Windows and your utilities before entering or after exiting Windows.

NOTE: These utilities can be run successfully after exiting Windows or before running Windows; the caution only applies while Windows is running. Going to the DOS prompt from within Windows is not the same as exiting Windows and the caution will still apply.

Continued on page 58

SHAREWARE

Continued from page 52

PC-TYPE II by ButtonWare. Registration $89.95US + $5US postage and handling. Registration brings the newest update, manual and technical support.

Another full-featured word processor with 120,000-word spell checker. Menu-driven with a straightforward screen display. Comparable with far more expensive commercial products.

PC-STYLE 1.1 by ButtonWare. Registration $29.95US + $5US postage and handling. Registration brings latest update, technical support and a manual.

A writing style rating program. Checks writing for readability and style; produces a graphical report. Counts words and sentences. Internally compatible with PC-Type, compatible with most word processors and handles ASCII text.

NEWKEY 5.3 by FAB Software. Registration $43US. Registration brings the newest update, a manual and technical support.

A keyboard enhancer allowing users to interactively program keyboard macros. Keyboards can be customized to users' liking, speeding up typing or allowing a series of commands to be summarized by a single stroke. NewKey runs as a memory-resident program. To save RAM most of it loads above the 640K DOS barrier. Comes with a boilerplated macro for converting standard QWERTY keyboard layout to the faster and more efficient Dvorak alternate layout.

Shareware for Windows 3.0

FRACTOPAINT by ComputerSmiths. Registration $25CDN. Registration brings an original disk and access to ComputerSmiths' BBS. The BBS provides technical support for Windows and fractals with access to Windows shareware and trading of fractal drawings.

Fractopaint is a drawing program allowing incorporation of fractals, patterns of geometric design, into color drawings. Evaluation copy available from ComputerSmiths BBS (224-5247). Produced by Stephen Smith, Vancouver software developer.

COMMAND POST by Wilson Window Ware. Registration $49.95 US.

Personalize file and program management. Alternative to the file and program manager built into Windows 3.0.

ACTIVE LIFE by 1Soft. Registration $149 US.

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ICONDRAW by Phillip Eskelin. Registration $15US. Allows design and drawing of your own color icons or editing of existing icons. Comes with eleven icons pre-made to get you started. (Note: many collections of existing icons are available at very low cost.)

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WINDOWS THREAT?

Continued from page 57

Windows has brought to the PC environment power that has previously only been available in mainframe and mini computer environments. Even though Windows makes it look like computing just got simpler, with this increased power comes increased complexity. As users we need to be aware of this and take precautions such as backing up our data before we get on with 'business as usual.'

FURTHER INFORMATION

The two main sources of information on this topic are the Microsoft Windows forum on CompuServe and the Ontrack Systems BBS (612/937-0860).

Reprinted courtesy of STReport No.7.03. ❐

WINDOWS WORLD

Looking Through Windows

(Welcome to the Dark Side)

by Bob Loblaw

Windows 3.0 is supposed to be easy, right? Well, my used-to-be-hot-stuff 20MHz '386 (a Kaypro) thought it was an XT. Windows was running in "real mode," like a "real" slug, and I couldn't get it to run in Standard mode or 386 enhanced mode.

It had lots of memory that it wouldn't even use. I couldn't even get Windows to start up unless I configured the Extended memory to emulate Expanded memory. (This problem magically disappeared when I installed DOS 5.0) I won't tell you how long I spent installing it (or how many times!) And yes, I made sure that the CONFIG.SYS file was loading the necessary HIMEM.SYS driver that should have make this puppy run.

So, I installed Digital Research's DRDOS 5.0, which was supposed to have improved memory management. The result? Still no Standard mode Windows, but some of my other applications (like Geoworks) stopped working. Plus, after running Windows and returning to DRDOS's GEM shell (renamed ViewMax, for some reason, in its current incarnation), the system consistently crashed so thoroughly that even the CTRL-ALT-DELETE three-fingered salute couldn't revive it. Goodbye, DRDOS.

So, was my graphics card conflicting with something else? That would explain why my screen went dead right after the Windows title screen, wouldn't it? Was my EGA.SYS FUNC supposed to be 00 or FF, or something in between? Hmm. Would that information be in the Windows, DOS, graphics card, or Kaypro user's manual? Or perhaps the Kaypro isn't compatible with Windows 3.0 in "386 enhanced mode" at all! There is, after all, quite a sizable list of 386-class machines known to need "special treatment" to run Windows properly, including big names like AST, Zenith and Everex. And why does a low-end (8 MHz) Macintosh subjectively seem faster than my 20 MHz DOS screamer running Windows?!

Ah, well, at least I'm not alone. When I called Microsoft's HELP line, a recorded message warned me that I could expect to be on hold for approximately half an hour! And the funny thing is, I know what I'm doing on DOS machines. (At least I thought I did until this humbling experience.) I pity the poor souls that think that AUTOEXEC.BAT files are the first things that run when they boot their machines. Will they be able to edit their CONFIG.SYS file? What are all those things in there, anyway?!

There is, of course, a happy ending to this story, but only because I never threw up my hands in despair before trying yet another flavor of DOS and memory manager. When MS-DOS 5.0 came out. I installed that on the 386 From Hell, and lo and behold—it worked! Windows 3.0 ran in Standard mode, 386 Enhanced mode, you name it.

Being the eternal twiddler that I am, I tried one more tweak. I had read about Quarterdeck's highly-touted QEMM386 expanded memory manager. (It's in this issue, as a matter of fact, in the Newsbytes section.)

Sure, QEMM386 gave me more "low memory" (the $79 it cost bought me a measly 12K), but with a bizarre side-effect—it nuked Standard/386 Enhanced mode Windows (again!) So, after all that, I was back in "Real mode!" Needless to say, QEMM386 didn't last long on my system.

Thinking this may have been another symptom of Kaypro Problemitis, I tried this entire (boring!) excercise on another computer; this time, a 386SX with 2 megabytes of RAM. QEMM386 did the same thing to Windows on it, too. Sayonara, QEMM.

I find it interesting that the Macintosh's direct equivalent of all this nonsense is to simply drag an icon representing the system startup file(s) into a place known as the System Folder. Uninstalling something is just as easy. (What a concept!)

I have yet to see a single example of a Macintosh motherboard or "Nubus" card needing configuration switches set. No need to configure "extended" or "expanded" memory. The Mac just sees the RAM as one contiguous, all-the-same bank of available memory. Surely a PC equivalent of this is what users want. . . or is it?

So, did you hear that Windows offers PC users the ease-of-use of a Mac? I know I did. ❐

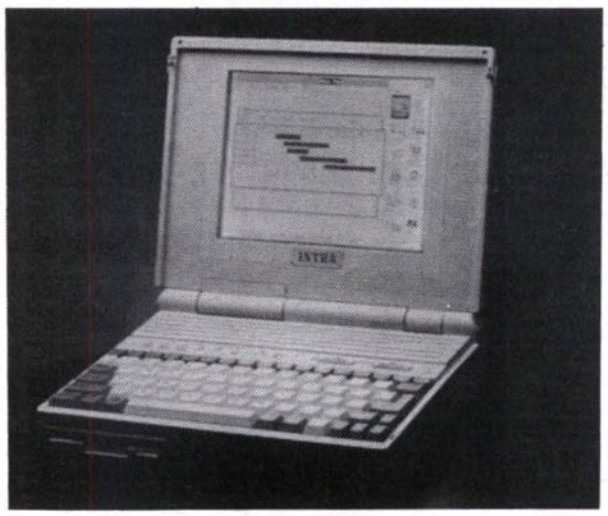
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WINDOWS WORLD

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Windows 3.0 has three separate modes of operation, each of which is designed to take advantage of specific hardware conditions.

- 386 Enhanced Mode
- Standard Mode
- Real Mode

Following is a discussion of the various modes, and suggestions for optimal configuration of your system.

386 Enhanced Mode vs. Standard Mode

386 Enhanced mode provides optimum functionality for DOS-based applications running under Windows. However, Windows applications operate equally well in Standard Mode.

The main difference between Standard Mode and 386 Enhanced Mode lies in the way that non-Windows applications are handled. 386 Enhanced Mode allows more sophisticated operation of non-Windows applications, including multitasking, and running in a window (as opposed to "full-screen"). These advantages cost additional processor time (devoted to Windows housekeeping tasks), and result in a decrease in speed.

Another benefit that 386 Enhanced Mode provides is Virtual Memory support, which is the ability to use a portion of your hard disk to simulate additional RAM. Normally Windows keeps all applications in RAM, each in its own partition. When you run out of RAM, you cannot load additional applications. With 386 Enhanced Mode, virtual memory allows you to swap portions of RAM out to the hard drive and back again. If you like to run numerous applications all at the same time, you will want to use this option.

Choose 386 Enhanced mode if you typically use a combination of DOS-based and Windows-based applications, and if you use a computer system with more than 2 megabytes of RAM available for internal processing, and if you want to use virtual memory.

NOTE: Windows applications operate essentially the same way in all three modes. Windows 3.0 can handle multiple applications and multitasking in 386 Enhanced Mode, Standard Mode, and even (to a limited degree) Real Mode.

A SPECIAL NOTE FOR 386SX SYSTEMS

On some systems the additional processing overhead associated with 386 Enhanced Mode may cause a noticeable drop in speed and performance. This is especially true on machines with 2 Meg of RAM or less, and on 386SX machines. For these systems, we highly recommend you use Standard Mode.

The problem is that 386 Enhanced Mode requires more complex processing overhead (as discussed above). The 386SX uses the same 16-bit BUS interface as on the 286.

If you own a machine based on the 386SX chip, you will most likely want to run Windows in Standard Mode. If you own a 286 with 2 megabytes of RAM or more, you should run in Standard Mode.

286 systems with less than 2 megs of RAM must run in Real Mode.

Here is a summary of the advantages and disadvantages:

STANDARD mode:

Advantages

—You can run DOS applications that include "DOS extender" technology.

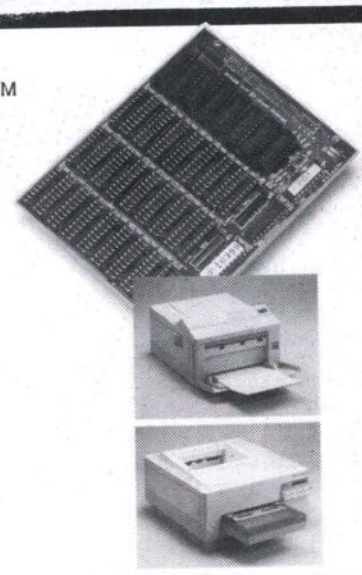
—Takes advantage of the protected mode of the 286 and 386 microprocessor.

Disadvantages

—You must run non-Windows applications full-screen.

—All DOS applications are suspended while any Windows application is running, and all Windows applications are suspended while any DOS application is running. This means multitasking is restricted to Windows applications only.

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386 ENHANCED mode:

Advantages

—DOS applications can be run in an application window (not full-screen), to take advantage of the graphical environment.
—Other applications will continue to process in the background while you work with the current application.
—You can Cut and Paste information between non-Windows applications.
—Virtual memory: uses your hard disk to simulate RAM.

Disadvantages

—Background processing of other applications means a loss in speed of the current application, since it is sharing the processor with the other, background, applications.
—386 Enhanced Mode requires considerably more overhead processing. On certain systems, such as the 386SX, this can lead to a significant loss of speed.

INCREASING PERFORMANCE WITH SMARTDRIVE

SMARTDrive is a disk-caching program that sets aside an area of RAM to use as temporary storage for frequently accessed pieces of information. Getting this information from RAM is much faster than retrieving it from the hard disk every time you need it. There are costs that go along with the benefits. The primary cost is memory; the disk cache uses RAM. If your machine has only 1 or 2 Meg of RAM, a large cache may hurt more than it helps.

Below are some sample machine types, along with suggestions for configuration. Remember that there may be other factors to consider with your own machine; these examples are useful as a starting point.

1) 286-12MHz, with 1M RAM

Don't use SMARTDrive. You need the RAM more than you need the disk cache. (Windows needs at least 1Meg RAM to run in Standard Mode, and if SMARTDrive is taking up part of it, Windows will possibly refuse to start in Standard Mode.) Instead, set BUFFERS=32. This is the optimal setting for DOS BUFFERS to do essentially the same thing as SMARTDrive, albeit somewhat less efficiently.

2) 286-12MHz, with 2M RAM

Your system has enough memory that Windows should definitely start up in Standard Mode, but you will probably want to conserve memory for multiple applications. Try setting up SMARTDrive like this with the following line in your CONFIG.SYS file:

```
DEVICE=C:\WINDOWS\SMARTDRV.SYS 256 128
```

3) 286-16MHz, with 4M RAM

Your system has enough memory to go around (for Standard Mode), and a decent-sized cache will help a good deal. We suggest perhaps 1 Meg, set up in your CONFIG.SYS like this:

```
DEVICE=C:\WINDOWS\SMARTDRV.SYS 1024 512
```

4) 386SX, with 2M RAM

On this machine you will most likely want to run Windows in Standard Mode (for reasons described earlier), using the command line "WIN /S". In that case you will want to conserve RAM for use by multiple applications, since virtual memory is only available in 386 Enhanced Mode. You will probably want to set up a fairly small SMARTDrive cache, like this:

```
DEVICE=C:\WINDOWS\SMARTDRV.SYS 256 128
```

5) 386-20MHz, with 4M RAM

Either Standard Mode or 386 Enhanced Mode are options on this system. If you run many DOS applications, you will want to use 386 Enhanced Mode; if you run chiefly Windows applications, you may want the simpler but faster Standard Mode.

We suggest a 1 Meg SMARTDrive cache, set up like this:

```
DEVICE=C:\WINDOWS\SMARTDRV.SYS 1024 512
```

6) 386-33MHz, with 8M RAM

This machine is big enough and fast enough that 386 Enhanced Mode won't slow it down much; go ahead and use it. Set up SMARTDrive like this:

```
DEVICE=C:\WINDOWS\SMARTDRV.SYS 2048 1024
```

With 8M total, considering the performance gain, you can definitely afford a 2 Meg cache! However, if you typically run many non-Windows applications simultaneously, you may want to consider reducing that to "1024 512." This will give you the power of one extra virtual 8088 machine to run a DOS application in, at a slight decrease in cache performance.

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OTHER GENERAL OPTIMIZATION TIPS

1) Set FILES=30 in your CONFIG.SYS. Thirty is more than enough in most cases, and additional FILES use conventional memory.

2) If you are running SMARTDrive, reduce the number of BUFFERS to 10. If you decide to not use SMARTDrive, for optimal performance set BUFFERS=32.

3) If you are running DOS version 3.3 or higher, be sure to include in your CONFIG.SYS the line: STACKS=0,0. This allows applications to dynamically allocate STACKS as needed, saving some conventional memory.

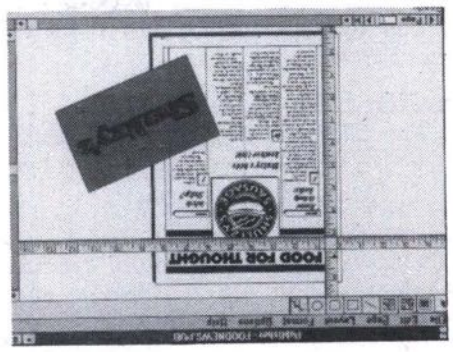
4) Specifying the command LASTDRIVE=E: (for example; otherwise, anything short of "Z") limits the number of logical drives available to your system, and saves a small amount of conventional memory.

5) Don't forget to include HIMEM.SYS in your CONFIG.SYS file. This device driver is necessary to take advantage of extended memory in Standard or 386 Enhanced Mode. Windows usually installs it for you automatically.

6) For 386 machines, there are some third-party memory managers that do the same thing as HIMEM.SYS, only more efficiently, and with extra features. You may wish to consider using one of these utilities—for example, QEMM v.5.1 or 386MAX—in place of HIMEM.SYS. (Similar utilities exist for 286-based machines, but none of them are any more efficient than HIMEM.SYS. Only use one of them if you want the extra features it provides.)

- More detailed information concerning optimization of Windows 3.0 is available in the Windows 3.0 User's Guide, especially Chapters 11, 12, and 13. ❐

Microsoft Intros Low-End DTP Package



REDMOND, WASHINGTON, U.S.A., SEP 18 (NB) — Microsoft Corporation has announced Publisher, a $199 low-end desktop publishing program running under Windows.

Publisher was announced in New York this week along with a Windows version of Microsoft Works and Money, a home and small business financial management program not unlike Quicken, as part of Microsoft's Solution Series.

Continued on page 63

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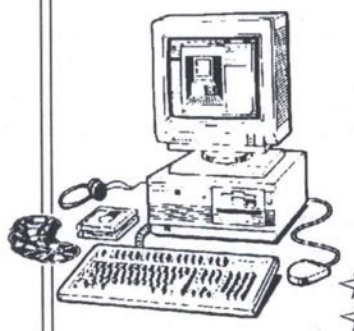
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Bases Loaded—Norton at the Bat

by Graeme Bennett

Product: Norton Desktop for Windows 1.00
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Price: US$149, C$179 ($79 for registered owners of Norton Utilities 6.0 or Norton Commander till October 31, 1991).
System Requirements: IBM AT/PS/2 (286 and up) or 100% compatibles, Windows 3.0, DOS 3.1 or higher, 1MB or more RAM (3MB or more recommended), 5.5MB free disk space for full installation. Six 3.5-inch disks included. 5.25-inch format available free by exchange.

Summary: NDW integrates the File Manager and Program Manager functionality of Windows 3.0, and adds a bevy of useful—some might say essential—file management tools designed especially for the Windows graphical environment.

As a reviewer, I look forward to new releases from Peter Norton Computing (now a division of Symantec). The Norton line of products, (Utilities, Commander, Backup, Editor) are generally excellent and the newest addition to the Norton family is no exception.

Norton Desktop for Windows (NDW) improves what many consider WIN3's weakest feature—its arbitrary separation of file management and program management functions. Unlike the Mac, Amiga, Atari and virtually any other graphical user interface (including GEOS and GEM for the PC), Windows has never used the metaphor of a single work environment (usually termed "the desktop" where various icons and menu options let you simply copy files and launch programs by dragging or clicking icons that represent the application(s) or files in a consistent fashion.

This lack of consistency is perhaps only a minor annoyance, but the extra step of opening a special file management program was also slow and clumsy. Strikes one and two, Windows!

Switch-hitter

What NDW does is provide WIN3 with a completely new shell, switch-hitting for both the Program and File Managers. (The old files are left on your drive and are used in cases where NDW cannot run, such as when WIN3 is run in "real mode" to use PageMaker 3 or other Windows apps designed for previous versions.)

You can drag and drop documents directly to the desktop for faster access, or drag and drop on icons like printers, backup or a file viewer. There's also a hierchical Launch submenu that makes switching between applications easy.

The viewer—based on Norton's DOS product, Commander—is one of my favorite parts of NDW. Over 30 file formats are supported, allowing you to view most popular spreadsheet, wordprocessor, database and graphics files, Windows and DOS.

When used in conjunction with NDW's excellent SuperFind utility, files can be opened or viewed with ease, even with multiple drives. For example, I searched for *.BMP. In a couple of seconds, SuperFind showed me the location and file specifics for all Windows .BMP (bitmap) images that matched that file specification. By selecting one and clicking on VIEW PANE, the image is shown. If I then wanted to work on that file, I could simply press ENTER or click a button to launch the appropriate application—in this case, the Windows PAINTBRUSH application.

Bases Loaded

In case you hadn't noticed, many of the features I've mentioned so far closely resemble the way the Macintosh handles similar functions. This Mac-like trend extends to other utilities included with the package. There's Keyfinder, which helps you to locate unusual characters or symbols from any Windows font and cut and paste them into your documents; Sleeper, which is a first-rate clone of multi-option Mac screen savers After Dark and Pyro; and (at last!) an icon editor and librarian with over 300 included icons.

I found it mildly amusing that the NDW disks (six 720K disks in all) state that the product's system requirements are for "IBM-PC or 100% compatible." NDW doesn't even run under WIN3's "real" mode, which is all that 8088- and 8086-based IBM-PCs are capable of. The absolute minimum requirement is an 80286-based AT or higher. Perhaps the disk label designers should read the manual, which correctly states the AT-or-better environment that NDW requires. The full product installation requires 5.5MB of hard disk space, although partial installations are possible.

In addition, NDW provides a suite of the type of utilities that made Norton famous. Graphical versions of data recovery utilities include Disk Doctor for automatic disk diagnosis, and SmartErase for recovering deleted files. The package also includes an "emergency diskette" which allows you to recover data, even when you can't access Windows.

Interestingly, the copy of Norton Disk Doctor included here works better on some machines than the one found in Norton Utilities 6.0, although they both appear to be based on the same version. (The NU version reported a "Memory Allocation Exceeded" error when running on one of our systems loaded up with several TSRs and other memory-resident goodies. When the version from NDW is run in the same environment, everything works fine. Strange.)

Also included is another Norton standby, Backup. NDW includes the full implementation of the Windows half of another Norton product for DOS and Windows, the US$129 Norton Backup.

This utility is considerably more sophisticated than DOS' implementation, including options for scheduled backups, network support and improved reliability and speed. Users familiar with Norton Utilities for DOS will be glad to see improved versions of Windows diskcopy and format functions and the 14 or more screens of information about your system offered by System Information, a Windows-friendly version of the old standby, SI.

There's other goodies, too, including a batch file builder for Windows, the ominously-named Shredder and SmartErase, scientific and printing calculators and an appointment scheduler. Something for everyone, I expect.

Joy in Mudville

The only portions of the program that did not work as expected on a one-meg test machine (a 386SX) were the Fish module of the Sleeper application (all twelve other modules worked fine)—which aborted with an error message that the application could not run, and the Viewer, which was unable to display the larger color bitmaps it found in my earlier-mentioned example. Neither of these are bugs per se, for, like everything else in the world of Windows, NDW is happiest with 3MB or more RAM.

Symantec offers a 60-day money-back guarantee on the product, a trend I would like to see more of in the world of computer software. Especially for registered Norton users taking advantage of the $79 upgrade promotion, NDW is a great deal.

Conclusion

It's hard to imagine that anyone who uses Windows could not like this product. From its Short or Long Menus options to

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customizable menu items and key equivalents, NDW is clearly an improvement over the stock Windows interface. Best of all, it doesn't require you to change the way you use Windows.

NDW is the kind of product that significantly improves the way that Windows works. Like other Windows add-ins such as HP NewWave, it enhances the environment by increasing the intuitive nature of the interface, and enhancing the functionality of the environment. Even if Windows 3.1 offers some of the user interface improvements found here, when it comes out (and according to Microsoft, that won't be until sometime in 1992), NDW still adds enough value to make it a must-have for any serious Windows user. ❐

WINDOWS WORLD

Continued from page 61

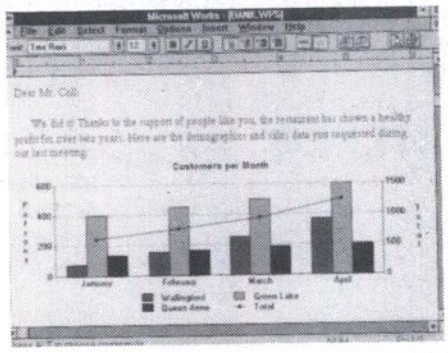
Microsoft says one feature of Publisher that makes it easy to use is PageWizards, a tool that automates the design process.

Users select options and answer questions,then PageWizards do the design and layout of the publication, according to Microsoft. PageWizards walks the user through the creation of 12 custom publications such as newsletters, calendars, greeting cards, four-fold invitations and various business forms, including invoices, fax sheets and expense reports.

A user wanting to create a newsletter would answer such questions as how many columns are needed. If you select a four-column format, PageWizard will tell you that a four-column layout will provide the most flexible format, but will take more time and effort than fewer columns. You can then continue with the four-column layout, or choose something different.

Users can create graphics in other programs, save them in one of seven fonts, including TIF, EPS, PCX, DRW, then import them intoPublisher. After placing the graphics in the document, text will flow around the rectagular box containing the graphics. Publisher includes a spelling checker, but no thesaurus. The program also includes a clip-art library and scalable borders. Nineteen fonts are supported, including the Windows fonts.

Microsoft Intros Works for Windows, Money



REDMOND, WASHINGTON, U.S.A., SEP 18 (NB) — Microsoft has announced Works for Windows, a $199 Windows 3.0 version of its integrated software package.

Works for Windows contains a word processor, spreadsheet, charting tool, database and drawing capabilities, and is targeted at the small business or home user.

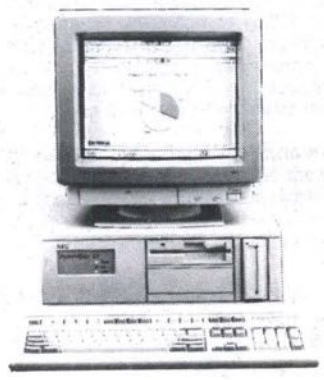
Works for Windows, part of Microsoft's Solution Series, was announced in New York this week along with two other low-end programs for the small business or home user: Money, a financial management program; and Publisher, a desktop

Continued on page 87

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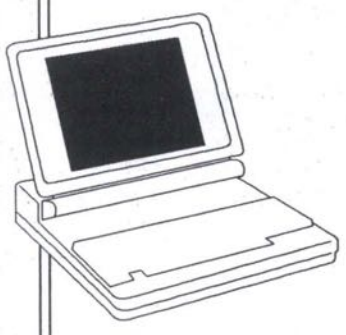
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Ersatz Windows: The Future of DOS?

by Graeme Bennett



I recently read an article in a major PC publication where the author complained about the changes to the user interface of Microsoft Word version 5.5 for the PC. He griped that the company had ruined the interface, and by changing all of the command keys, was forcing him to relearn—or abandon—the program.

I, for one, think the new version is a dramatic improvement over the older one, especially if the user is familiar with the "Windows standard" set of commands. Microsoft, in a bold move that has generated significant amounts of criticism, dropped the old Word's confusing command structure and interface for a more elegant and consistent one known as IBM Common User Access (CUA). New users will definitely find it easier to learn than the old version, and many of the skills they acquire are transferable to other programs (a strategy that has served Macintosh users well). Experienced users can opt to use Word 5.0's keyboard shortcuts instead of version 5.5's, if they prefer.

It is a shame that more PC programs don't take a nod from Borland's popular Quattro Pro spreadsheet, which can completely adapt its menu structure to emulate different command modes (and one of the reasons Lotus is upset over Quattro's inclusion of a file that turns it into a 1-2-3 look-alike.)

Another article on the perennial debate of which GUI is best, forwarded the statistic that over 50% of PC mouse-and-menus programs will use what the writer referred to as "ersatz Windows." Why wouldn't these applications just use the real thing?

In a word, speed. The performance hit is just too great for average users to accept. Even those with 386SX machines or better may still find Windows dog-slow. Take a look at any side-by-side comparison: WordPerfect and the character-based Word easily outperform all Windows-based competition in performance tests.

I venture the opinion that the character-based Windows-like user interface found in MS-DOS 5.0's DOS Shell, QBasic and MS Word 5.5 (etc.) represents the wave of the future of DOS-based products—at least until average CPUs and video systems are better able to cope with the heavy demands of a full "high-res" GUI (which probably shouldn't run "over" DOS, anyway). Character-based displays with mouse support and a familiar user interface offer the best blend of performance, ease-of-use and command compatibility with environments like Windows, OS/2 and, to a lesser (but still significant) extent, other graphical environments with strong user interface design guidelines such as PC/GEOS (Open Look) and Macintosh.

While there are obviously circumstances where a true WYSIWYG display is preferable, I'll even go so far as to say that this so-called CUA standard application interface found in MS-Word 5.5, the new DOS 5.0 editor and Shell represents the best of the character-based windowing environments found in Norton Editor, Norton Utilities 6.0, Quattro Pro, Q&A 4.0, WordPerfect 5.1 and numerous other non-Windows products that have drop-down menus, mouse support, and a similar user interface. Not only are its commands (and hence, the user's skills) generally transferable to Windows 3.0 (Microsoft's plan, I'm sure), but overall, it feels better (at least to me) than Norton's similar attempts. Hopefully, future generations of CUA-compliant character-based environments will begin to duplicate key features of Windows and other robust GUIs such as cut-and-paste between applications, dynamic data exchange, and multitasking.

Mouse support makes these products appealing to beginners and others who enjoy the "point-and-shoot" approach, and the speed of a character-based screen contributes greatly to the perceived performance.

Macintosh fans who categorically scorn Windows (i.e., most of them) would do well to discover how pleasant it is not to have to hold down the mouse button to keep menus displayed. In Windows and its character-based clones, it's an option—as it should be. (A Mac program called Lazy Menus partially alleviates the problem by making Mac menus drop down and stay down, but not as elegantly as the Windows method, which works either way, depending on whether the user simply clicks to "drop down" a menu, or clicks and drags, to "pull down" a menu.) And Mac owners who have heard how slow Windows is compared to their Macs might be surprised to see how pokey their machines seem next to a comparable PC's character-based environment. The redraw speed of a typical PC's 80 x 25 (rows and columns) screen—a mere 2K of data—is vastly greater than a Mac's. With their 512-by-342 element (or larger) screens permanently in bitmapped graphics mode, Macs must push around 21K of data or more. It's no wonder that a PC in character mode pushing 80-by-25 looks like greased lightning by comparison. This is, of course, especially important on older, less powerful machines.

Unlike the Mac, which has no command line interface (CLI), non-graphics modes, or standard batch file capabilities, a PC offers an ideal platform for users who want a GUI and a CLI. (Unix-based and Amiga computers also offer a CLI as a standard option.) As John Udell said in *Byte*'s June 1991 issue, "we need both." (A new program called Frontier provides the Mac with scripting and batch file capabilities much like those found in DOS machines.)

After all, isn't it about time PC owners got to brag to Mac users about their user interfaces? ❐

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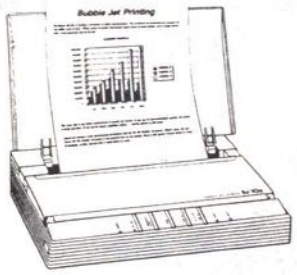
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ObjectVision

Visual Data Entry Application Generation for Windows

by Chem Cohen



ObjectVision combines aspects of a forms design program, a spreadsheet and a drawing program.



Product: ObjectVision: Version 1.0.
Publisher: Borland International Inc. 1800 Green Hills Rd., Scotts Valley, CA 95066, (408) 438-8400.
System Requirements: Requires any IBM or Compatible system running Windows 3.0.
Price: US $495.00, for a limited time US $99.95. Run time: US $495.00.

ObjectVision is an innovative development tool for the end user that combines aspects of a forms design program, a spreadsheet, and a drawing program. Yet ObjectVision is really none of the above.

It will mostly resemble a form design program for data entry applications, but it has the power to do a lot more than a form design program. It does this by allowing the developer to build an application that can guide the end user on each step of the data entry process with help screens, links to other forms, links to external databases and very sophisticated default selections.

ObjectVision is an important product in Borland's product line. It runs under Windows, thus it will work on all networks that support Windows. Data, applications

Continued on page 90

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- Focus 2001 101-keys enhanced tactile keyboard

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- Darius 1024 SVGA monitor (1024x768, .28 mm dp)
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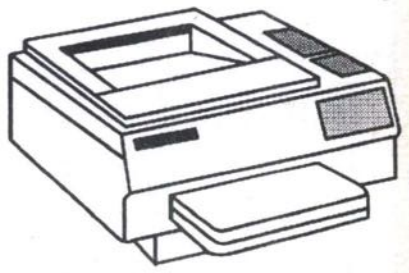
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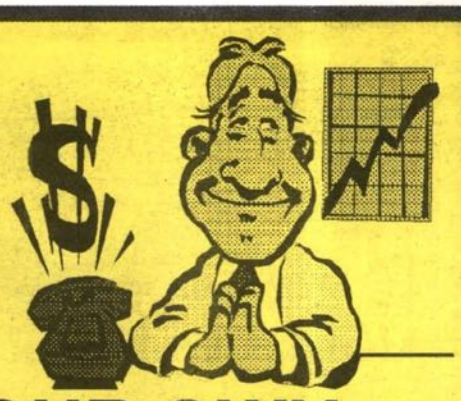
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- Quantum 52 MB (17 ms) V.C. IDE hard drive — add $168.00
- 1 serial, 1 parallel, 1 game ports
- Oak 16-bit SVGA card w/512K
- Desktop case w/LED Display
- 200W CSA Approved power supply
- Darius HRV1024 SVGA monitor 1024x768, .28mm dp.
- 101-keys Tactile enhanced keyboard

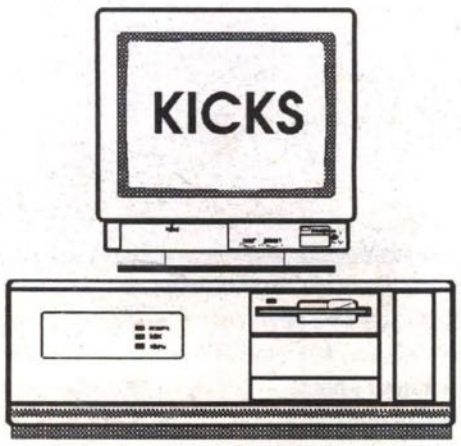
Smart 386DX-33 Cache System

- True Intel 386DX-33 CPU, AMI Bios — $1,689.00
- 64KB Cache memory, 128KB optional
- 1MB memory, exp. to 32MB on-board — w/4MB memory
- Teac 1.2MB or 1.44MB floppy drive — add $168.00
- Western Digital 84 MB (15 ms) V.C. IDE hard drive
- 1 serial, 1 parallel, 1 game ports
- Trident 8900 SVGA adapter 1 MB
- Desktop case w/ LED Display
- 200W CSA Approved power supply
- Darius HRV1024 SVGA monitor 1024x768, .28mm dp.
- 101-keys Tactile enhanced keyboard

Smart i486SX-20 Cache System

- Intel i486SX-20 CPU, AMI Bios — $1769.00
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- 1 MB memory, expandable to 32MB on-board — w/4MB memory
- Teac 1.2MB or 1.44MB floppy drive — add $168
- Western Digital 84 MB (15ms) IDE hard drive
- 1 serial, 1 parallel, 1 game ports — w/64K cache
- Trident 8900 SVGA adapter 1 MB — add $109
- Desktop case w/LED Display
- 200W CSA Approved power supply
- Darius HRV1024 SVGA monitor 1024x768, .28 mm dp
- 101-keys Tactile enhanced keyboard

Please refer to preceding page Super Deals on 386DX-40 and 486DX-33 Cache Computer Systems.



80386SX-16/25 System

- Intel 80386SX-16/25 CPU — 16 MHz $485
- 1 MB RAM memory — 25 MHz $579

80386DX-25 System

- Intel 80386DX-25 CPU; AMI Bios
- 1 MB RAM exp. to 8 MB — $ 699

80386DX-33 Cache System

- Intel 80386DX-33 CPU, AMI Bios — $ 859
- 64K cache; 128K optional — w/ AMD-40
- 1 MB RAM exp. to 32 MB — $ 888

i486SX-20 System

- Intel 80486SX-20 CPU, AMI Bios — $ 939
- 8K internal cache — w/ 64K cache
- 1 MB RAM exp. to 32 MB — $1045

i486DX-25 Cache System

- Intel 80486DX-25 CPU, AMI Bios
- Built-in math coprocessor
- 8K internal cache
- 64K cache; 256K optional
- 1 MB RAM exp. to 32 MB — $ 1329

i486DX-33 Cache System

- Intel 80486DX-33 CPU, AMI Bios
- Built-in math coprocessor
- 8K internal cache — $ 1419
- 64K cache; 256K optional — w/ 256K cache
- 1 MB RAM exp. to 32 MB — $ 1479

All Bare Systems include the following configurations:
1 MB RAM (80 ns or faster)
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1 serial, 1 parallel, 1 game ports
Desktop case w/ LED Display
200 W CSA approved power supply
101-keys enhanced tactile keyboard

2 YR. Warranty

All systems come with a full two year parts and labour depot service warranty.

(two year labour / one year parts warranty for 386SX systems.)

Prices may change without notice. Please call for the latest pricing.

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Intel 387-33 Math Co-proccessor	$269.00
Cyrix 387-33 Math Co-processor	$249.00
Cyrix 387SX-16 Co-processor (repack, 1 only)	$115.00
Cardinal 9600 Send/receive Internal Fax Modem	$129.00
Lotus Works (1 only)	$ 95.00
PC Tools Version 7.0 w/o Anti Virus (1 only)	$ 79.00
PC Tools Version 7.0 w/ Anti Virus	$109.00
Notron Utilities V6.0	$119.00
Sound Blaster	$149.00
Sound Blaster Professional	$259.00
Microsoft Hi-Res Serial or Bus Mouse w/ Windows 3.0	$159.00
WordPerfect Office Version 3.0 (1 only)	$ 89.00
Raven Script (Postscript Emulation Software, 1 only)	$ 99.00
Hewlett Packard HP III Laser Printer (Demo, 1 only)	$1750.00

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Gold Star 14" Grayscale VGA monitor 800x600	$179.00
Samsung 14" Grayscale VGA monitor 640x480	$139.00
Darius 14"VGA monitor 640x480, .28 dp	$325.00
Darius HRV-1024 SVGA monitor 1024x768, .28 dp	$349.00
Legend-2 14" Tri-sync VGA Monitor 1024x768,.28 dp	$365.00
Legend-2 14" non-int. VGA monitor 1024x768,.28 dp.	$479.00
ViewSonic 6 non-int VGA monitor 1024x768,.28mm 70Hz	$569.00
Seiko 1450 non-int. VGA monitor 1024x768,.25 dp	$829.00
Sony 1304 Multiscan Monitor w/ cable	$859.00
IDEK M5117 17" non-int. SVGA monitor 1024x768, .28 mm dp	$1295.00
PC Magazine Editor's Choice	
IDEK M5217 17" non-int. monitor 1024x768, .28 mm dp, 70Hz	$1395.00
IDEK M522121" non-int.monitor 1024x768, .31 mm dp 70Hz	$2599.00

Video Graphics Adapter

Monochrome graphics adapter	$ 20.00
16-bit OAK VGA adapter 256K (800x600)	$ 59.00
16-bit OAK VGA adapter 512K (1024x768)	$ 79.00
Trident 8900 SVGA adapter 512K exp. to 1MB	$ 95.00
Tseng Labs 4000 SVGA adapter 1MB (1024x768, 256 colours)	$ 149.00
OEM VGA Wonder Plus adapter 512K exp. to 1MB	$ 155.00
ATI VGA Wonder XL adapter 512K exp. to 1MB w/Bus Mouse	$ 259.00
ATI Graphics Ultra Plus VGA adapter 512K VRAM exp. to 1MB	$ 549.00
ATI Graphics Ultra Plus VGA adapter 1MB VRAM w/Mouse	$ 725.00

Mice

Microsoft hi-res bus or serial mouse w/ MS Paint	$109.00
Microsoft hi-res bus or serial mouse w/ Windows 3	$159.00
Logitech serial Mouse Man	$75.00
Logitech bus Mouse Man	$89.00
Logitech serial Mouse Man w/ Windows 3	$145.00
Legend 3-button serial mouse (400 dpi)	$25.00

Floppy & Hard Drives (Bare)

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Quantum 52 MB (17 ms) V.C. IDE w/ 64K cache	$255.00
Western Digital 84 MB (17ms) V.C. IDE w/ 64K cache	$349.00
Quantum 105 MB (17ms) V.C. IDE w/ 64K cache	$419.00
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All other brands, SCSI and ESDI hard drives please Call.
(All hard drives have a minium 2yr warranty.)

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Colorado DJ10, 60/120MB capacity w/ DC2120 tape	$335.00
Colorado DJ20, 120/250MB capacity w/ DC2120 tape	$399.00
Colorado AB-10 tape adaptor (2.2MB/min)	$75.00
Colorado FC-10 tape adaptor (4.4MB/min) for DJ20	$105.00
cable for connecting Colorado tape B/U for 2-floppy system	$25.00
Colorado External Kit for Jumbo 120 & 250	$139.00
3M DC2000 Tape Cartridge	$25.00
3M DC2120 Tape Cartridge	$29.50

Miscellaneous

AT Multi I/O card (1S, 1P, 1G)	$14.00
AT Multi I/O card (2S, 1P, 1G)	$20.00
Sound Blaster	$149.00
Sound Blaster Professional	$259.00
Gravis Joystick	$45.00
Y-cable for game port	$9.50
Shipping Box	$15.00

Memory Chips & Module

256K Video memory (4464-80ns)	$20.00
256K Video memory (44256-80ns)	$14.00
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Each 1MB upgrade using 1MB 80ns DRAM or SIMM	$59.00
Each 1MB upgrade using 256K 80ns DRAM or SIMM	$69.00

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Zoom (OEM) 2400 bps internal modem w/Procomm	$79.00
Cardinal 2400 baud internal modem w/ Flashlink	$89.00
Cardinal 2400 baud external modem w/ Cable	$130.00
Cardinal 9600 Sendfax internal modem w/ Flashlink	$109.00
Cardinal 9600 Send/recieve int. fax/modem w/ Flashlink	$129.00
ATI 9600 bps external modem V.42 Bis w/cable	$459.00
US Robotics HST 14.4 internal modem w/V.42 bis	$669.00
US Robotics HST 14.4 external modem w/ V.42 bis w/ cable	$709.00

Math Co-proccessors (Special HOT Prices!)

Intel 80287XL	$109.00
Intel 80387SX-16	$159.00
Intel 80387SX-20	$179.00
Intel 80387-25	$269.00
Intel 80387-33	$269.00
Cyrix 80387SX-16	$149.00
Cyrix 87SX-20	$165.00
Cyrix 80387-25	$239.00
Cyrix 80387-33	$249.00
Cyrix 80387-40	$299.00

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KPT Enhanced Keyboard	$39.00
Datacom DFK-191 Enhanced Keyboard	$53.00
Focus 2001 Enhanced Keyboard	$54.00
Focus 3001 Enhanced Keyboard	$85.00
Focus 5001 Enhanced Keyboard	$119.00
Fujitsu 4700 tactile Enhanced Keyboard	$59.00
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Citizen GSX 130 24-pin printer	$ 329.00
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Citizen GSX 145 24-pin wide-carriage printer	$ 519.00
Citizen GSX 145 colour kits	$ 75.00
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Fujitsu DL 110 24-pin printer w/color kit	$ 389.00
Fujitsu DL 1100 color kit	$ 65.00
Roland Raven 91019-pin printer	$ 199.00
Roland Raven 2416 24-pin printer	$ 299.00
Roland Raven 2418 24-pin printer	$ 399.00
Roland Raven 246 24-pin wide carriage printer	$ 485.00

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Epson EPL7000 Laser w/ 65-in-one font cartridge	$1095.00
Hewlett Packard DeskJet 500, 512K, 3 PPM, 300 dpi	$665.00
Hewlett Packard LaserJet IIIP Laser w/ scalablefonts	$1425.00
Hewlett Packard LaserJet III Laser w/ scalable fonts	$1999.00
NEC Silent Writer II Model 90 Post Script 6PPM	$1899.00
Pacific Data 4 Memory for HPLJIIP/IIIP/III/IIID w/ 1 MB	$149.00
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Raven LP-1100 11 PPM, HP series II compatible, parallel	$1825.00
Raven LP-1170PS 11PPM, Postscript, HP series Compatible	$2625.00

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ACCPAC Bedford Intergrated Accounting (GST) 3.4	$135.00
Adobe Type Manager for Windows	$85.00
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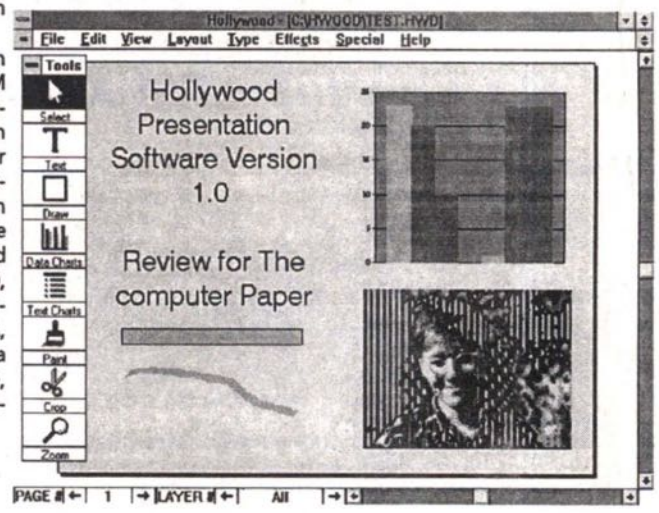
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Hollywood

by Daniel Werger

Product: Hollywood presentation software Version: 1.0
Manufacturer: IBM Corporation
System Requirements: IBM DOS/MS-DOS version 3.3 or higher and Microsoft Windows version 3.0 Hardware: IBM or PS/2 or compatible system with a 286 processor or higher, 1-1.44MB 3.5in or 1-1.2MB 5.25in floppy drive and a minimum of 8MB of fixed disk space (+ 1MB temp space), display adapter capable of supporting Windows 3.0 at EGA, VGA or higher resolution, a Microsoft compatible mouse, 1.6MB RAM memory (2MB recommended)
Price: C$590.



Overview

To quote the reference guide, "Hollywood is a presentation graphics software package, designed for the Microsoft Windows 3.0 environment, to help presenters in business, government and education create star quality presentations with ease." It can be used to make slide-show presentations on your computer screen, create output files for creation of slides through a service bureau or with your own film recorder (it outputs to a laser printer), speakers' notes, handouts, charts or slide duplicates for distributing with your presentation.

Before getting into any detail about this product, it needs to be said that software products in general have reached a bit of a plateau. That plateau is one of complexity. Many products today require a fair amount of commitment from the user before all their features can be taken full advantage of.

In an age of "do more with less" even government agencies have a hard time finding staff resources to commit to learning a package such as Hollywood. This means that if a software package is going to be used to the extent it should be, either the user "must work smarter" (to quote BC TEL), or the software "must work smarter." For the software to work smarter, it must anticipate and learn what the user is interested in using the product for, not just try to pack as many features into as many layers as possible.

Expert systems and AI technology such as neural nets have progressed to the point where "smart" software must be possible. In other words, make the software intelligently trim down the choices the user must make to get the results needed. Many larger products today force the user to make a career out of producing such things as slides, overheads, spreadsheets and databases. The user should be free to concentrate on the content, not the tool.

Having said all that, surprise, the biggest criticism of Hollywood is the complexity of the software. It's not IBM's fault, however. Just as in producing a storyboard for a movie, presentations and slide production involve mapping "things happening" over time, and time adds an extra dimension of complexity. As with all IBM products, this one is jammed full of features and very well produced, with no half measures.

Installation

The first test of a software package is the installation. Hollywood comes on four 3.5in 1.44MB floppies (5.25in 1.2MB floppies available), and if you choose to install all the optional files (templates, clip art, country flags, country maps, tutorial and MAGICorp slide service software), you are looking at an install time of 21 minutes. Installing everything adds up to more than 8MB of disk space plus 1MB or so for temporary file space. Install happens from inside Windows, using the "run" command under "file" in the Program Manager. For the purpose of this review, Hollywood was installed on a 386/25MHz machine, 4MB RAM, 95MB of disk space, Hercules Graphic Station card, and Mitsubishi monitor (no co-processor or cache present). Overall, installation was simple, with no problems, other than being a bit slow.

Performance

First time running the program resulted in a moderately slow response time on file opening and saves, feature selections, etc. This would improve with a faster hard drive and more memory, but it still seemed like it may be a little frustrating for real world production. Loading bitmap graphics and drawing diagrams took little effort, and moving objects around was easy.

One area that needs attention is the storyboard window (a window showing you multiple little boxes representing each slide or presentation screen in order of appearance). Designing each slide is relatively easy, but the challenge of a boardroom presentation is to make the entire sequence of slides make sense. Hence, as you are designing your project, you are often calling up the storyboard to see how the slides are progressing, and here Hollywood is fairly slow, going to the disk and painting the slides one at a time. There must be a faster way of scaling and painting the screen than this. Again, though, a screamingly fast graphics card and hard drive would probably help a great deal.

Features

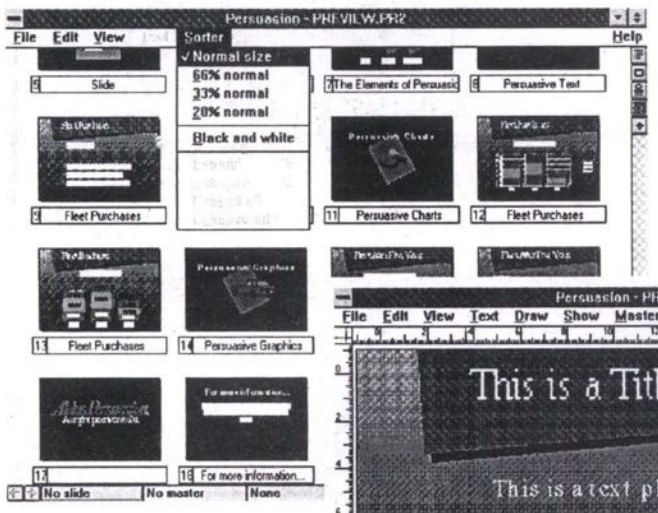
Hollywood has more features than you could shake a stick at. Starting with a good indexed, hypertext, context-sensitive on-line help, it comes with a small number of templates and an outliner for building the basic structure of your presentation. A data manager lets you enter or import data from spreadsheets, word processing programs and retains "warm" links to your data sources. For charting, there are eight data chart types (bar, line, scatter, pie, etc.) with 3-D effects, exploded pies, combination charts, etc. Text charts include trees with different box types, word tables, bulleted/simple list and many other types.

Drawing tools are available from the tool box for lines, rectangles, circles, Bezier curves, and much more. Color can be used in three of the common color models, RGB,

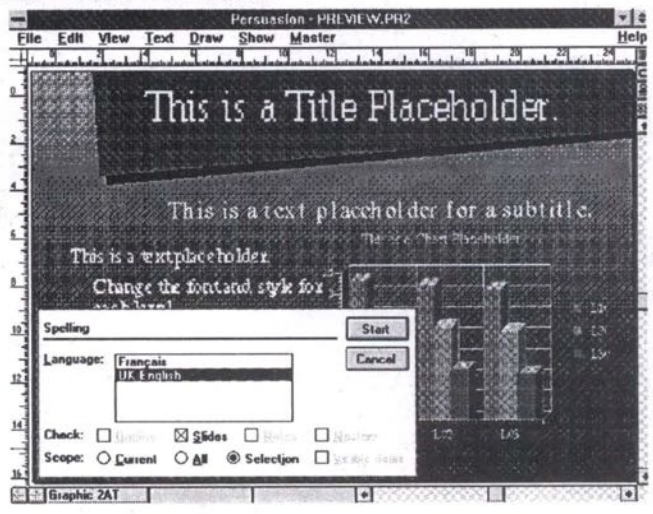
Aldus Persuasion Version 2.0

by Steve McIlwain

Product: Desktop presentations package
Publisher: Aldus Corporation, 411 First Avenue South, Seattle WA 98104-2871 (206)622-5500
System Requirements: DOS 3.2 or higher; MS Windows Version 3.0 or higher, 286-based DOS compatible computer (386 recommended), 2 MB RAM, 20 MB hard disk or larger, EGA graphics adapter or higher, mouse.
Price: $695 Cdn



Persuasion uses your presentation outline and creates the slides from a template the same way that a desktop publishing program formats a long document on a style sheet.



AutoTemplates are provided to make designing a new screen painless. Note that many of the slides shown above are based on this template's design. Also shown here is the spelling checker dialog.

Of Interest To: Windows users in need of a full-featured desktop presentation package.
Key Features: 36 AutoTemplate formats; outline processor; word processor; spell checker; import text from most popular word processors and outliners; format text features: spacing, font, shadows, underline, etc.; custom chart formats; editable clip art; custom color schemes; import data from most popular spreadsheets; import color TIFF files and graphic files from popular graphics packages; WMF graphic export; slide show feature; speaker notes and handouts for presentations; Adobe Type Manager included; Autographix and MAGICorp Slide Service drivers included.

Overview

Presentations are made directly from a presentation outline using AutoTemplates that automatically format text and data to each slide. You can enter your text in Persuasion or import it from other word processors or outliners. Drawing tools and custom color schemes allow you to enhance your presentations or you can import art produced in other programs. Persuasion has ten chart formats (pie, bar, area, table, etc.) to present data with, and you can customize chart formats. Data for charts can be entered in Persuasion or imported from other programs such as Excel or Lotus 1-2-3. Persuasion is designed for output in one of three formats: 35mm slides, overheads and on-screen slide shows.

Installation

Persuasion installs very easily onto your hard drive. But make sure you have at least 6 or 7 MB of free room—the program is huge. In testing on a 16 MHz 386SX performance was acceptable but a little sluggish in places. You could run the program on a 286 but you would have to be a patient person.

Persuasion takes a unique approach to creating presentations. You don't need to create slides individually. Persuasion uses your presentation outline and creates the slides from a template the same way that a desktop publishing program formats a long document on a style sheet. Also, the program links your presentation with its support materials (outlines, etc.) so that changes made in one are transferred to the other automatically. This makes it easy to create quality presentations in no time and you can change the look of your presentation without much fuss.

Persuasion's word processor is powerful for a graphics and presentation package, making it a good choice if you need detailed notes or handouts for your presentations. The word processor includes a spell checker—a feature that is omitted in too many packages. Programs like Persuasion that are used in the last stage of production should always have a spell checker. You should be able to check spelling on the entire presentation once you have all the files in from the other programs you might have used.

Persuasion's slide-show feature is excellent. It includes a number of special effects for transition from slide to slide and it also includes slide builds that allow you to introduce points one by one. It lacks one major feature though: stand-alone slide shows. You cannot present a show on a PC without having Persuasion installed on the PC.

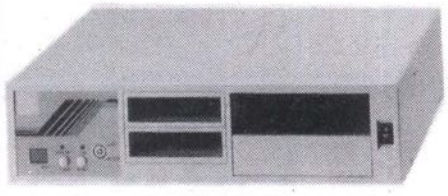
Conclusion

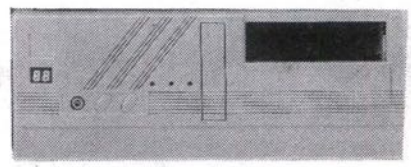
Aldus Persuasion has everything the others have, but the idea of using templates to create presentations stands out. It successfully specializes in producing quality slide shows fast and easily and doesn't skimp on the other aspects of drawing, text and charts. This full-featured package should be considered by anyone doing this type of work.

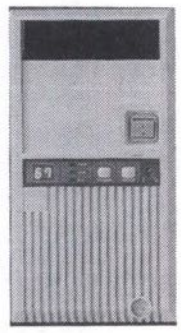
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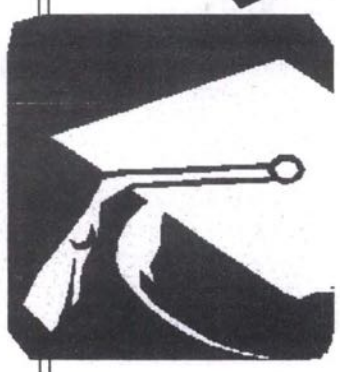

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Arts & Letters
Graphics Composer

by Daniel Werger

Product: Arts & Letters Graphics Composer Version 3.0
Manufacturer: Computer Support Corporation
System requirements: IBM PC/XT or 100% compatible, DOS 3.0 or higher, Microsoft Windows 3.0, hard disk, 1MB RAM, pointing device recommended.
Price: not available at press time.

Overview

Graphics Composer is a software tool for creating diagrams, illustrations, signs, posters, etc. It comes with over 5000 images and 80 outline typefaces. It allows you to design graphics in black & white, gray scale and color. Useful for both the graphic artist and the business user for designing reports, bulletins, business cards, data sheets, and more.

Installation

Installing Graphics Composer is a snap. It has its own install program which runs under Windows 3.0. Be prepared though, there are a total of 12 floppy disks to shuffle in and out of the drive. It took about 30 minutes to install all the files and the programs! One can only hope that optical technology gains much wider acceptance, and allows us to install software from CD-ROM disk (12 floppies is a bit much!). Also, be prepared to give up 8MB of disk space or more. Once everything is installed, though, the hard part is done.

Performance

The biggest problem with this package is that it's a little slow on the screen redraws. Opening some of the sample files can take a minute or so, and that's too long. One would guess that since the files are mostly vector format (XY coordinates—which need to be recalculated each time the screen is redrawn), that a faster machine would speed things up a bit. A co-processor may help a great deal, but there is no mention of this in any of the material. Overall, you need patience to work with this program.

Features

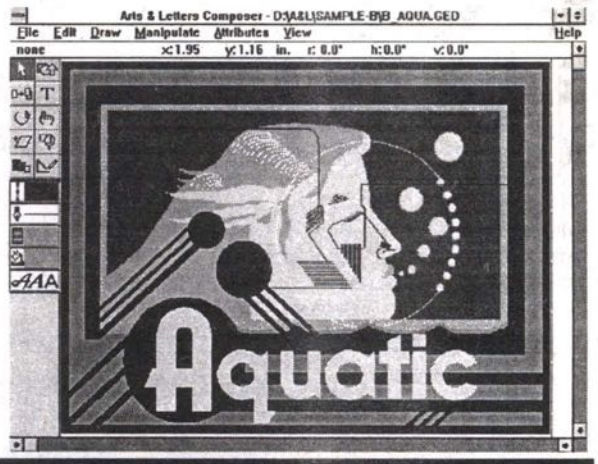
Graphics Composer has a full complement of graphics tools. Since it runs under Windows 3.0, it has a familiar user interface, such as an icon-based toolbox and on-screen help. You can combine the clip art that's provided with your own drawings or scanned images. It will import and export a number of different formats including ANSI, ASCII, CGM, CSP, PIC, Postscript, SCODL, TIF, and WMF.

Graphics Composer is basically a vector drawing program and has many features for sizing, rotating, slanting and positioning text. One can create drop shadows, distributions, 3-D and other common visual effects. The quality of the clip art in this package is one of its greatest accomplishments. Along with the user manual, there is a clip art handbook, which shows examples of the files included, and how to identify the file groups. The range of clip art is significant. It goes from very basic designs of objects through quit detailed drawings of space craft, for example. Animals, body parts, cartoons, maps of the world, all are of the highest quality.

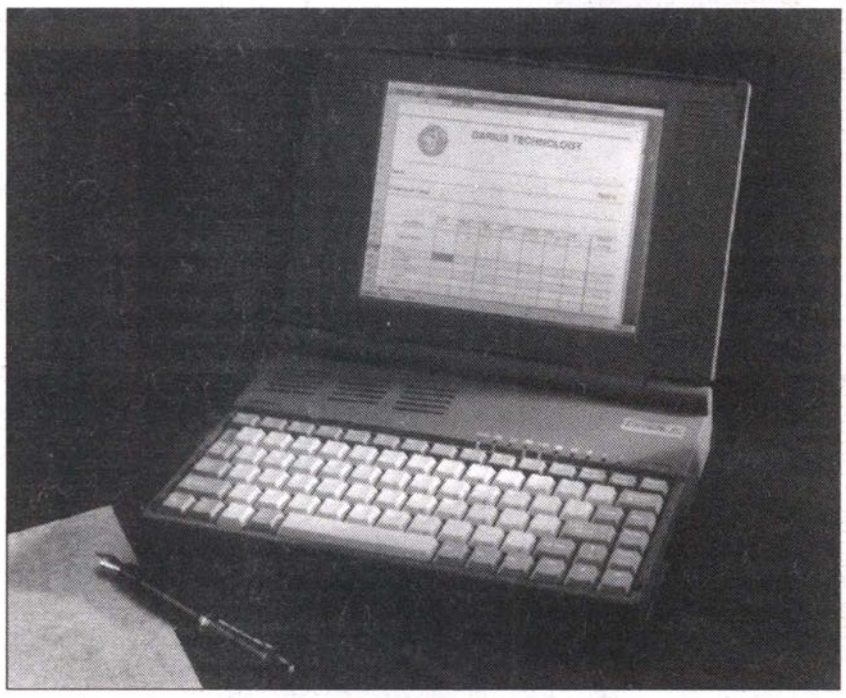
The main feature of Graphics Composer is that it provides the user with the ability to create their own graphics from scratch, or to use pre-designed clip art to produce designs quickly.

Conclusion

Graphics Composer is a good, solid product with no glaring problems, other than being a bit slow to work with. Its most outstanding feature is the quality, quantity and variety of clip art. The drawing tools are more than adequate for most general users, although for serious graphic production, it may be a bit limiting. There is no section of the program which would cause difficulty for even the most basic user, especially since it runs under Windows 3.0, which takes away a large part of the initial learning curve. All in all, a good package, not inspiring, but good. ❐



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WINDOWS WORLD

Correct Grammar for Windows

by Daniel Werger

Product: Correct Grammar for Windows V 1.0
Manufacturer: Writing Tools Group, Inc. (a subsidiary of WordStar International Inc.)
System requirements: IBM PC or 100% compatible, DOS 3.0 or higher, Microsoft Windows 3.0, hard disk, 640K RAM, mouse recommended.
Price: US$99

Overview

Of all the uses for computers, writing is the one which has been most affected by this technology. From very basic word processing to advanced desk top publishing, computers have influenced, if not completely changed, the way we communicate with text. Further evidence of this evolution in writing resides in this software tool called Correct Grammar, which assists the writer in eliminating mechanical errors. It checks the grammar, usage, punctuation, spelling and style of documents created in word processing programs running under Windows 3.0.

Installation

Installation of Correct Grammar is simple. Start windows as you would normally, go to the File Manager "File" menu and draw down to "Run." Enter the floppy drive letter and "Install." This runs the Correct Grammar install program and installs itself inside Windows. No problems should be encountered.

Performance

Correct Grammar is designed to act like a desk accessory on a MacIntosh. No matter which word processor you use, Correct Grammar is there to run. Unfortunately, the memory limitations of DOS tend to dampen the thrill of this handy accessory. Correct Grammar runs fine, but eats up about 20 percent of your memory. You can get around that by only running Correct Grammar when you need it, but that defeat's the basic premise. Still, it does run fine, and really provides great service, especially to the part-time writer, who needs to concentrate on the contents, not the formal elements. For those of us who write like we eat—with gusto—it is a handy tool.

Features

Correct Grammar is based on the CorrecText grammar correction system developed by the Houghton Mifflin Company. It can work on a whole document or selected parts of a document. It corrects standard writing problems and spell checks. It works directly with Word for Windows, Windows Write, Ami Professional, PageMaker and Legacy. It can also work with any ASCII file, including files produced by: WordPerfect, WordStar, WordStar 200, Microsoft Word, Microsoft Works, pfs-Write, Professional Write, Sidekick, PC-Write, XyWrite.

One good feature of Correct Grammar is, when you start the program for the first time, it asks you for the dictionary of your choice. This shows forethought, since most writers build fairly lengthy custom dictionaries in the word processor they use most regularly.

Other aspects of this software include separate programs for "touring" and "practice." This is handy, since it has fairly extensive customization features, and takes a bit of exercise to set it up to your personal taste. In fact, you can go as far as writing your own rules, which the program will then use each time you check a document. This

Continued on page 86

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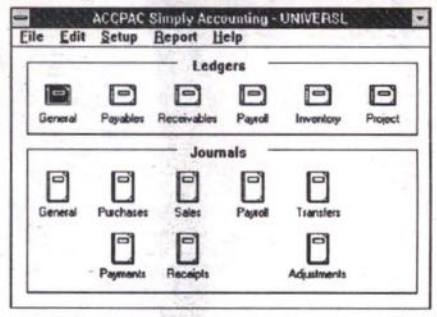
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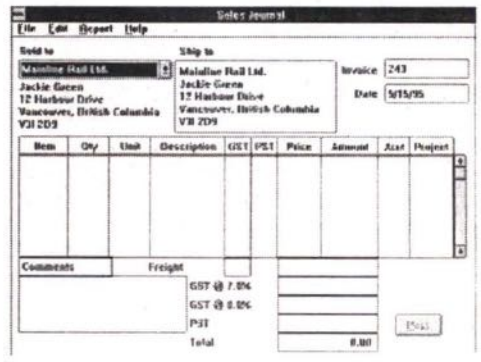
Product: Integrated accounting package for small businesses.
Publisher: Computer Associates, 1770 Burrard Street, Vancouver, B.C. V6J 3G7 (604)733-2343
System Requirements: IBM PC or compatible that can run MS Windows Version 3.0 or higher; EGA, or higher monitor; minimum 1 MB RAM.
Price: $225 Cdn.
Of Interest To: Small businesses with simple accounting needs.

Key Features: Automatic transaction posting, pop-up reference lists for data entry, full integration among all accounting modules, security, automatic or manual payroll deduction calculations, track revenues and expenses to various jobs or projects, inventory control, import general journal entries from other programs, export any report, GST compliant.



Overview

ACCPAC Simply Accounting stores your accounting data in separate company files that you open when entering the program. The program has six ledgers containing records of accounts, etc. (General, Accounts Payable, Accounts Receivable, Payroll, Inventory Control and Project) and eight Journals that contain all the transactions for the ledger records (General, Purchases, Sales, Payroll, Transfers, Payments, Receipts, and Adjustments). User-defined "Integration" between accounts updates all relevant ledgers automatically when a transaction occurs in a ledger. There is a full range of financial reports, journal reports, employee reports, inventory reports, GST report, invoices, customer statements, cheques, T4 and other forms and mailing labels.



"Accounting? Do it myself by computer? Forget it, pal!" That is usually the response people give when someone advises them to try to do their accounting by computer. Most accounting packages are partly at fault with their unfriendly approaches that only accountants can understand. I hope ACCPAC Simply Accounting represents a shift, at least with Computer Associates, to accounting software that the average Joe (that doesn't know the first thing about accounting) can understand.

ACCPAC Simply Accounting is easy to use and assumes the user knows very little about accounting. In only 5-10 minutes you are up and running. Sample data is included to practice on. There is "starter data" for different types of companies that you can match to your company's needs or you can start from scratch. The documentation is worth mentioning because it is surprisingly easy to understand. It contains a glossary of accounting terms and a tutorial and workbook. An Accounting Manual is also included. Thus you are furnished with everything you need in one package to do your accounting by computer.

The key to Simply Accounting is its integration between accounts. For example, say you issue a cheque in the Payments journal. The program automatically makes a journal entry crediting a bank account in the General Ledger and debiting an Accounts Payable account. Time is saved because the program updates all relevant ledgers automatically.

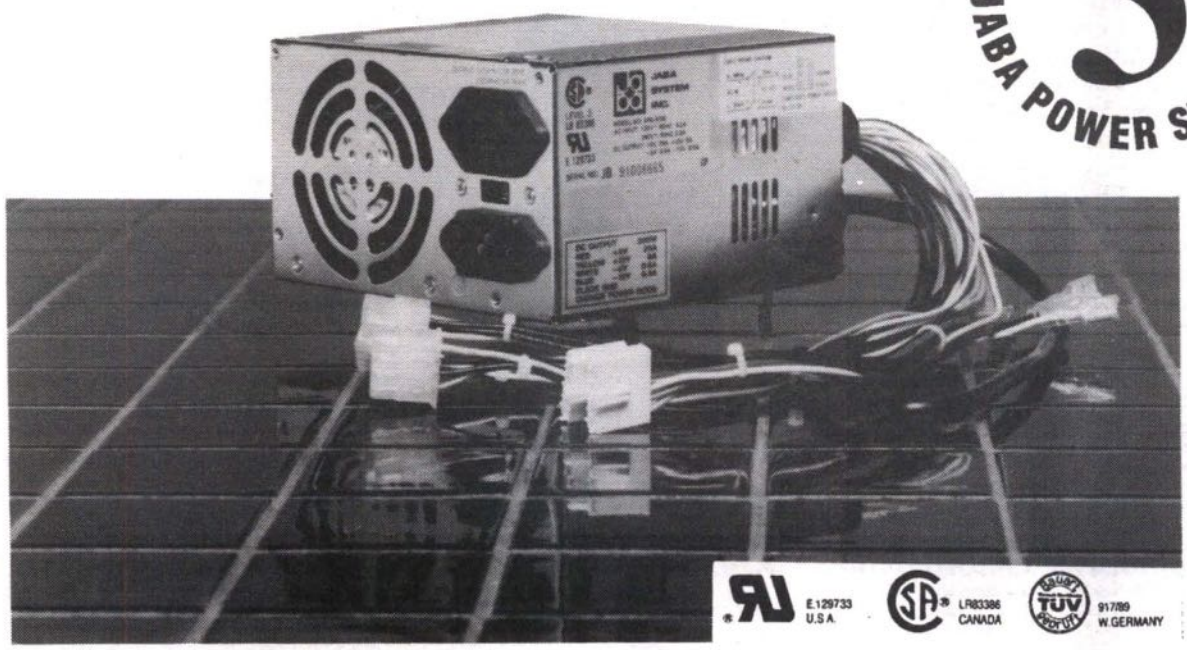
Simply Accounting combines into one program all the accounting modules (General Ledger, Accounts Receivable and Payable, etc.) that most small businesses would need. But the program has limitations when compared to the much larger modular accounting packages, such as ACCPAC Plus. For example, the reports cannot be customized to any extent. Cheques are printed in a standard format that cannot be changed to fit different cheque formats.

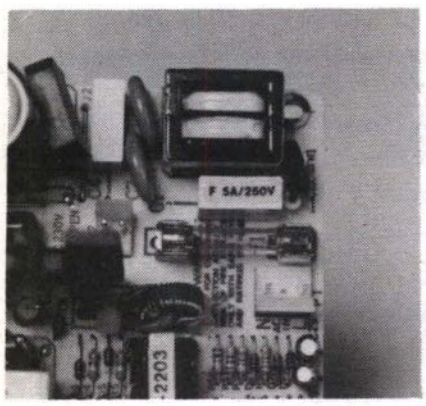
Support

A major consideration for an accounting software package is support and updates. Having your word processor crap out is not quite as serious as having your accounting package crash. You want to be assured that the company will be there when you need help. It is safe to say that Computer Associates, a very large software manufacturer, will be around for some time. With Simply Accounting you get 20 minutes free support and you can subscribe to the

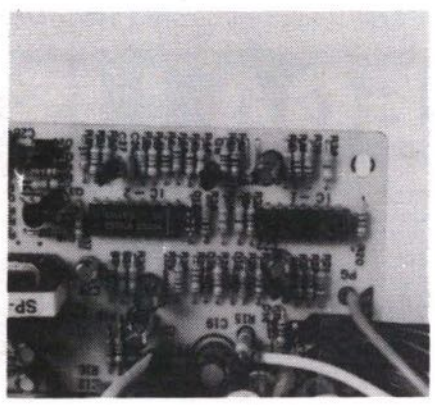
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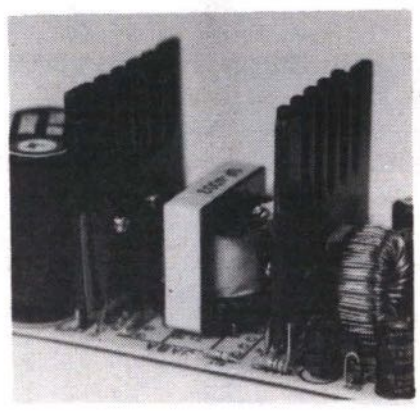




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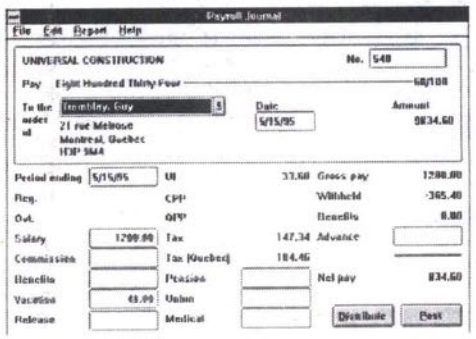


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Support Plus program for further support and updates.

A Good Start

Simply Accounting is a solid, affordable entry-level accounting package that has all the features that most small businesses would need. ❐

Steve McIlwain is a senior partner in ISR Software Review Corporation, a company specializing in independent testing, evaluation and review of DOS-based products. For further information phone (604)538-0517.

Hollywood *Continued from page 70*

CYM, HSV with up to 256 colors simultaneously. As well, the supported fonts include Windows fonts, Bitstream and ITC (including DingBats). All the common attributes are included, such as bolding, italics, outline, etc. Vector fonts rotate in one-degree increments and type sizes range from 6 point to 360 point.

Aside from the graphic files included, you can Import and export Windows BMP, Compuserve GIF, Paintbrush PCX, TIFF, DXF, HGL, PIC and many other bitmaps and vector file formats.

Output options include all those devices supported by Windows 3.0, including HP, Apple, Epson laser printers and a variety of color printers. Slidemaking software is included as well as output file formats (SCODL) used with Matrix film recorders and others (fairly common). IBM has once again done something that is very strange. To take full advantage of the slide-making capability of Hollywood, you are forced to send your output to MAGICorp Ltd. in Tarrytown, New York. Sure, you can output in SCODL format and take the files to your local service bureau, but you lose some of the resolution along the way. Why do they do that?

Hollywood is not fully network compatible. It can use network drives and printers on LANs supported by Windows 3.0, and can be run singularly off a network drive, but is not designed for full network ability.

Conclusion

One of Hollywoods great advantages is its completeness. It has all the tools, supported formats, and customization features for production of screen slide shows, slide slide shows, and accompanying printed matter. The disadvantages of Hollywood is that to achieve this "completeness," the user is required to become very dexterous at design and slide production to achieve that "Star Quality" in their presentations. The learning curve for this package may be a little too long for the harassed and hurried administrator or executive, but if one had a period of time for self-teaching, it could be mastered and used to full advantage. As far as quality of the product is concerned, it rates very high. Overall, if the need for in-house slide production and presentations is great, Hollywood would definitely fit the bill, and deserves a good close look. ❐

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EDUCATION

Home is Where the Campus Is

by Cathryn Conroy

Think of school and you probably think of a building—with walls, a floor and ceiling.

Of course, such schools exist—with students sitting at desks and teachers standing in front of blackboards—but there is a trend taking shape as adults and children pursue education beyond the walls of a school building.

"Every one of us is interested in finding out more about the world and why things happen," says Paul Levinson, who heads the world's first online university, the New School for Social Research's Connected Education. "We want to find out what makes things tick, and how our universe and lives are changing because of new developments. Most of the time it's hard to scratch that itch, that deep-down quest for knowledge. Taking a course is one way to scratch."

Scratching the educational itch for kids and adults has never been easier. The online connection offers opportunities today that just a decade ago were little more than high-tech dreams.

"The boundaries between home and school have always been rigid, but that is changing as those boundaries become more permeable," explains Chuck Lynd, director for information services for LINC Resources, a Columbus, Ohio-based educational consulting firm. Lynd, a former classroom teacher, is also manager of the Education Forum (GO EDFORUM).

One reason those boundaries are becoming hazy is the easy access to information. Take, for example, a kid with a science fair project—something few children have been able to master alone. Today, many parents just flick on the computer rather than moaning and groaning all the way to the library. And, instead of modeling anthills, students can create three-dimensional models of the universe using computer-aided drawing.

Ken Love, a professional free-lance photographer, told his 13-year-old son, Bobby, that after he won the Nobel Prize for science, he could pay back the bill he incurred using IQuest to research a science fair project. Bobby achieved a second place finish for the project and was recognized as his school's best science student.

While using IQuest won't guarantee a science fair prize, the rewards for parent and child will be even more valuable. "There is a lot of research showing that if a parent is involved in a child's education, it makes a big impact on that child's success," says Lynd. Using CompuServe to get involved serves two purposes: It gives the parent and child a chance to work together, and it teaches the child online research skills.

What can you do online? First, consider your child's special interest—literature, science, math, history, art—and capitalize on it by exploring the online resources relevant to that area. Most kids will be thrilled with the special time they spend with their parents as well as with sharing in the grown-up online world.

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Younger children can benefit from electronic pen pals in different parts of the world. Not only will they learn about other cultures and lifestyles, but also they will get a chance to practise their writing. Pen pals can be found in the Student Forum (GO STUFO), the Foreign Language Forum (GO FLEFO) and many of the special-interest forums.

NewsGrid (GO NEWSGRID) is a fun way for an older child to learn his or her place in the world by keeping up with current events. Students can also electronically "clip" news articles about special topics in the Executive News Service (GO ENS), which could help them develop expertise in various areas. A collection of the articles might one day serve as a valuable resource for a research project.

While young children can research projects with Grolier's Academic American Encyclopedia (GO AAE), middle- and high-school students will benefit from searching Magazine Database Plus (GO MAGDB), especially by learning how to define key words and phrases. Such an exercise forces students to focus on a project's specific topic, something that may not be done as effectively using traditional research tools.

The forums offer a special resource available nowhere else. Leave a question about black holes in the Astronomy Forum (GO ASTROFORUM), for example, and chances are the answer will be provided by a professional astronomer. "You can easily find people online who have a special expertise and who are willing to share that with young people. This is, perhaps, the best benefit of the online medium," says Lynd. Fourth-grader Patrick Olson turned to his father, Douglas, for help with a science assignment that required him to build a model of the solar system. (And he didn't want styrofoam balls suspended with string from a shoebox.) With his dad by his side, Patrick used a Macintosh computer to create an interactive model.

"Our problem was that we needed some nice graphics and sounds, and we had only a couple of hours to put the model together. CompuServe to the rescue!" says Douglas. He showed Patrick how to access the service with CompuServe Information Manager, and together they downloaded space-related graphics from the Graphics Support Forum (GO GRAPHSUPPORT) and space sounds from the Macintosh Entertainment Forum (GO MACFUN).

"Our ability to access CompuServe on a whim made the project. Of course, Patrick wasn't all that impressed. He has grown up assuming such things are possible so it's no big deal to him," says Olson.

When children pursue research in areas that hold a special interest for them, they are more likely to retain that knowledge over a longer period of time. "Kids can do independent research online, asking questions that matter to them. Because of the technology, those kids then become independent learners," says Lynd.

Schooling at Home

The ultimate independent learner is the child who is being schooled at home. For a variety of reasons—including religion, the belief that parents know best how to teach their own children, frustration with local school systems, as well as the fear of drugs and gun-toting classmates—some parents are choosing not to send their children to school and are instead educating them at home.

This do-it-yourself approach is gaining converts. In the early 1970s, there were an estimated 10,000 to 15,000 students being schooled at home. That number rose to between 150,000 and 300,000 by 1988, according to Patricia Lines, a visiting associate professor at Catholic University in Washington, D.C., and a contributor to the first textbook published on home schooling, Home Schooling: Political, Historical and Pedagogical Perspective (edited by Jane Van Galen and Mary Anne Pitman, Ablex Publishing Co., 1990).

> The biggest advantage of home schooling is that it shows the child that learning is not separate from the rest of life.

Although home schooling was the only way to get an education in bygone times, today it is often viewed as a radical move. Parents who choose this option are bucking society, so none of them reach the decision lightly.

Nearly half of home schoolers say they chose home education so their children could follow special interests and work at their own pace, according to Patrick Farenga, president of Holt Associates, a Boston-based company that offers resources to home schoolers. Nearly one-third cite religious reasons, believing home schooling is the best way to control their child's moral and spiritual environment.

Perhaps the biggest advantage of home schooling is that it shows the child that learning is not separate from the rest of life. "Home schooling is different from traditional schooling in that it places the emphasis on the learning process rather than the teaching process," explains Farenga. "Parents who home school let their children follow a project. They don't break life and learning into little sections called subjects."

Ken and Carrie Loss-Cutler, home schooling parents from Dallas and section leaders of the Education Forum's Section and Library 16, "Home/Alternative Ed," believe in this approach. Their 9-year-old daughter, Rachel, has never attended a traditional school. Carrie, who serves as the primary teacher, deals with subjects in broad ways. For instance, when Rachel started asking questions about dinosaurs, Carrie not only taught her the basic facts, but also used the ancient creatures to embark on math, geology, literature and history lessons. "I bring it all together so it is received as a whole by Rachel," she says.

This spring Rachel participated in a model United Nations program. The day after it concluded, she and her father logged on to CompuServe and exchanged messages in real-time with children from around the world, including Norway, Iceland and Japan, as part of the KIDS 91 Global Networking Project. "This is the kind of resource telecommunication can make available to families," says Ken.

One of the challenges of home schooling is to be aware of a child's interest in a topic and respond accordingly. Meeting that challenge is where CompuServe fits in. When parents are stumped—"Mommy, what's the difference between a black hole and a quasar?" —they can log on to CompuServe with their child and find an answer together. In this way, a young student also learns self-sufficiency, by depending on himself in finding answers to questions.

Many home schooling parents find CompuServe to be more than a resource for quick answers. It is also a support network that helps buttress them against naysaying family and friends. Speaking about the Education Forum's Alternative Education Section, Carrie says, "It is a place where

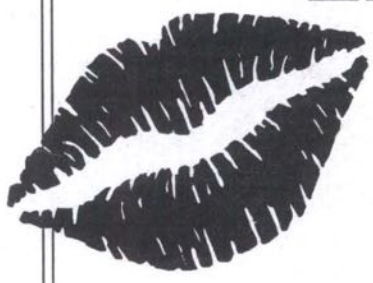
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EDUCATION

ideas are exchanged rather than specific answers found. This kind of resource sharing is important."

Parents considering home schooling also can check out pertinent state education statutes and requirements in Section 16. They vary widely, as does the support offered by local school officials.

There are school administrators who appreciate the benefits of home schooling. Kurt Harper, an assistant principal at Perris High School in Perris, Calif., believes that some students, especially those who are gifted, don't do well in a traditional schoolroom setting. "For students whose parents want to take it on, I think that home schooling is a valuable, valid option."

Harper is not just talking theory. His school system actively provides assistance to help home schooling families succeed. For instance, students can go to school one day a week for independent study and take advantage of the wider resources the school offers. "Considerable personnel and material resources are made available to parents for the success of this modified home schooling approach," Harper says. Extensive adult education courses also are offered to home schooling parents to help them upgrade their skills and better teach their children.

"The parents' and the school's goal is the same: To help more kids do better schoolwork, whatever Gestalt that schoolwork may take," he says.

Harper advises parents to work cooperatively with the local school system, seeking a consensus approach rather than a confrontational one. It behooves home schooling parents to establish a good working relationship with the school so they can take advantage of the system's resources.

One of the main reasons schools fight—sometimes tooth and nail—home schooling is that they do not receive money for students who are being educated outside the confines of the school building. Local schools receive funding based on the number of enrolled students.

Parental attitude can make a difference. Harper encourages parents to meet local school officials with this approach: "Begin by saying, 'These are our needs. They are not negotiable. These are our wants. They are negotiable. Tell me your wants and needs, and let's work toward consensus so we all win'."❐

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EDUCATION

Running Class in the Family

by Cathryn Conroy

When pressed to answer that all-too-common question, "Why are you home schooling? Leslie Ayre-Jaschke says it all comes down to phonics. As a high school social studies and language arts teacher, she didn't like the way children were being taught to read. she believed a phonics-based program would produce better readers. Besides, she thought a six-hour school day was too long for first graders.

So in 1986, Ayre-Jaschke joined the growing rank of home schoolers as she set up her one-room schoolhouse-or is it a houseschool?- for her two boys, Paul, now 12, and Mark, 9. Her husband, Eric Jaschke, is an accountant.

Living in Peace River, Alberta, a small town of 6,000, the family's life quickly became centered around the home school. "We didn't realize the impact it would have on our lifestyle," she admits. She cannot be employed full-time, although she tries to work part-time from her home as a lactation consultant, helping solve breastfeeding problems for new mothers.

Although the teaching and learning approach in the Ayre-Jaschke home school is unstructured, much is accomplished in a day, and all of it is geared toward each child's individual learning needs and style. Typical activities include journal writing and drawing, reading aloud, working math problems and visiting friends who are also home schooling.

But no day is really typical. One structured lesson, such as reading from a novel, can often spark other ideas and issues that need to be explored. For instance, when reading The Devil's Arithmetic, a novel about World War II and Hitler's concentration camps, Ayre-Jaschke realized how little any of them knew about Jews, their history, religion and culture.

Together they explored the topic at the library. She shared selectyed photographs of the concentration camps with Paul, while helping Mark read about them in an encyclopedia. They also learned about Jewish holidays and read about the unique way the Danes helped Jews in Denmark escape Hitler's forces.

Because so many Canadians live in isolated spots, there is a long history of home schooling in Canada. But depite this precedent, Ayre-Jaschke has had to be more than a teacher; she has also had to be an activist.

Local school systems in Alberta (as in B.C.) receive funding from the province for students who are being home schooled. The idea is that parents can then selectively use the resources of the school. However, Ayre-Jaschke found the school board to be unsupportive of home schooling. To get what she was entitled to, she had to lobby for support. "We persisted and kept agitating for our rights," she says. "I had an advantage over other home schooling parents because I had been a teacher in the school system. I had the confidence to deal with the school board."

The effort paid off. It has taken five years, but the 20 home schooling families in Peace River can now use the school's library, rent text books and buy work books, borrow video tapes and computer programs from the media center and even attend selected classes.

Ayre-Jaschke is confident her home school has been successful. Paul, who enjoys the same activities as most boys his age-video games, soccer and hockey- is a good reader and an excellent writer. She admits that Mark is not reading on grade level yet, but he is catching up.

"Home schooling allows children the freedom to develop and learn when they are ready. Some kids are ready to read when they are 4 years old, and others learn when they are 10," she explains, noting that if thelate readers are home schooled they avoid the label "learning disabled" that would be applied to them in an institutional situation.

An active member of the Education Forum on CompuServe, Ayre-Jaschke often turns to Section 16, "Home/Alternative Ed," as resource network. She also uses other CompuServe forums and databases, such as the Medical, Working From Home and Good Health Forums, for ideas. In addition, Paul learned about American culture from a Boston-based electronic pen pal.

"A crucial component of home schooling is parents who like to learn," she says.

Cathryn Conroy is a contributing editor of CompuServe Magazine. This article was originally published in the September 1991 edition of CompuServe Magazine. To subscribe to CompuServe, you will need a CompuServe starter kit, as well you will of course need your computer, a modem and a telecommunications software package. The CompuServe starter kit is available from many software retailers.

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The AmUsEd organization was founded three years ago with the following objectives: to make information available regarding the use of Amigas in education, to make public-domain software available to educators, to organize a yearly workshop for training, and to make resources available for workshops within any school district. To date, there are over 100 members.

Each year a location outside of the main urban centres is selected. This creates a relaxing environment and teachers often bring their families as part of their vacation. This year, over 60 educators from across the province attended the summer workshop. They experienced a mixture of hands-on computer training and interactive discussions.

Continued on page 90

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System Requirements: Macintosh II family computers, Apple 13-inch color monitor.
Price: C$1,549

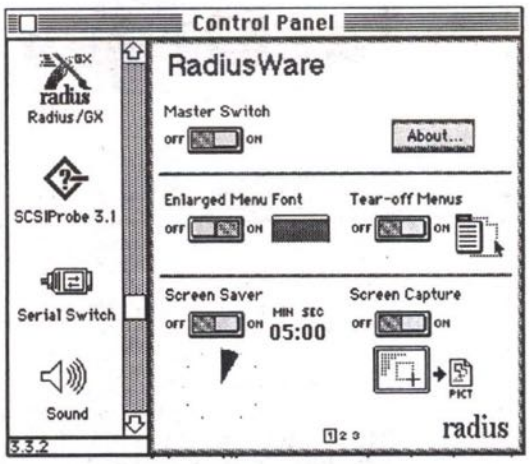
More Color

Not everyone needs 16 million colors on their screen. But for graphic artists, designers and publishers venturing into the brave new world of desktop photo retouching, color separation and prepress, having a display with millions of colors allows them to view a much truer representation of scanned or drawn images. They already have enough obstacles, without having to imagine more colors than they can see on-screen.

The larger issue of color fidelity, comprising various true-color calibration techniques and mechanisms, is a topic to itself, and shall not be attempted here. For more info on color photo-retouching and painting software, see the Oct. 1990 issue of The Computer Paper.

The original Mac standard color model was what is known as 8-bit color, where 2x2x2x2x2x2x2x2=256 colors, roughly equivalent to the VGA standard on PC-compatible machines. First-generation Apple video cards, and the built-in video on the Mac IIci and LC models support the 256 hues provided by 8-bit color graphics.

Within a few years, a few third parties had created advanced display hardware capable of creating more on-screen colors. Every additional "bit" supported by a graphics adapter allowed it to double the number of colors displayed.



Apple soon developed a standard for these "true color" display systems. Called 32-Bit QuickDraw, it allowed for 24 bits worth of color, while reserving 8 bits for future use. (Again, refer to the Oct. '90 issue to see how some programs utilize these extra "alpha channel" bits.)

Enhanced QuickDraw

While this extension to the Macintosh operating system is called "32-bit QuickDraw," it probably should have been called "Enhanced Color QuickDraw" because it doesn't require 32-bit hardware to function. If the Mac has a 4-bit, 8-bit, 16-bit (etc.) color or gray-scale boards, it "dithers" the shades available to create requested intermediate ones—automatically. It comes free with system 6.05 or newer (it's on the "Printer Utility" diskette in a folder called "Color"). Sorry, but Mac Plus and SE owners can not use 32-Bit QuickDraw. It is for color-capable Macs only.

Radius' renowned RadiusWare software is included with the DirectColor/GX. RadiusWare includes a control panel where all of its many features may be controlled. It features a screen saver, snapshot utility and Radius' unique tear-off menus. RadiusWare does not work on Macs without a Radius card installed, but is not required to use the GX's 24-bit color or graphics acceleration features, which are controlled via a separate INIT.

Other RadiusWare features allow changing, via a pop-up menu, the number of colors displayed (black and white, 4, 16, 256, thousands or millions), large-or-small menu fonts and the automatic centering of dialog boxes (useful for large-screen monitors) and Radius MATH, a replacement for the standard Macintosh SANE (Standard Apple Numeric Environment) math library routines that speeds up math functions considerably. For the record, Radius MATH does not require the Radius graphics hardware to work.

Installation

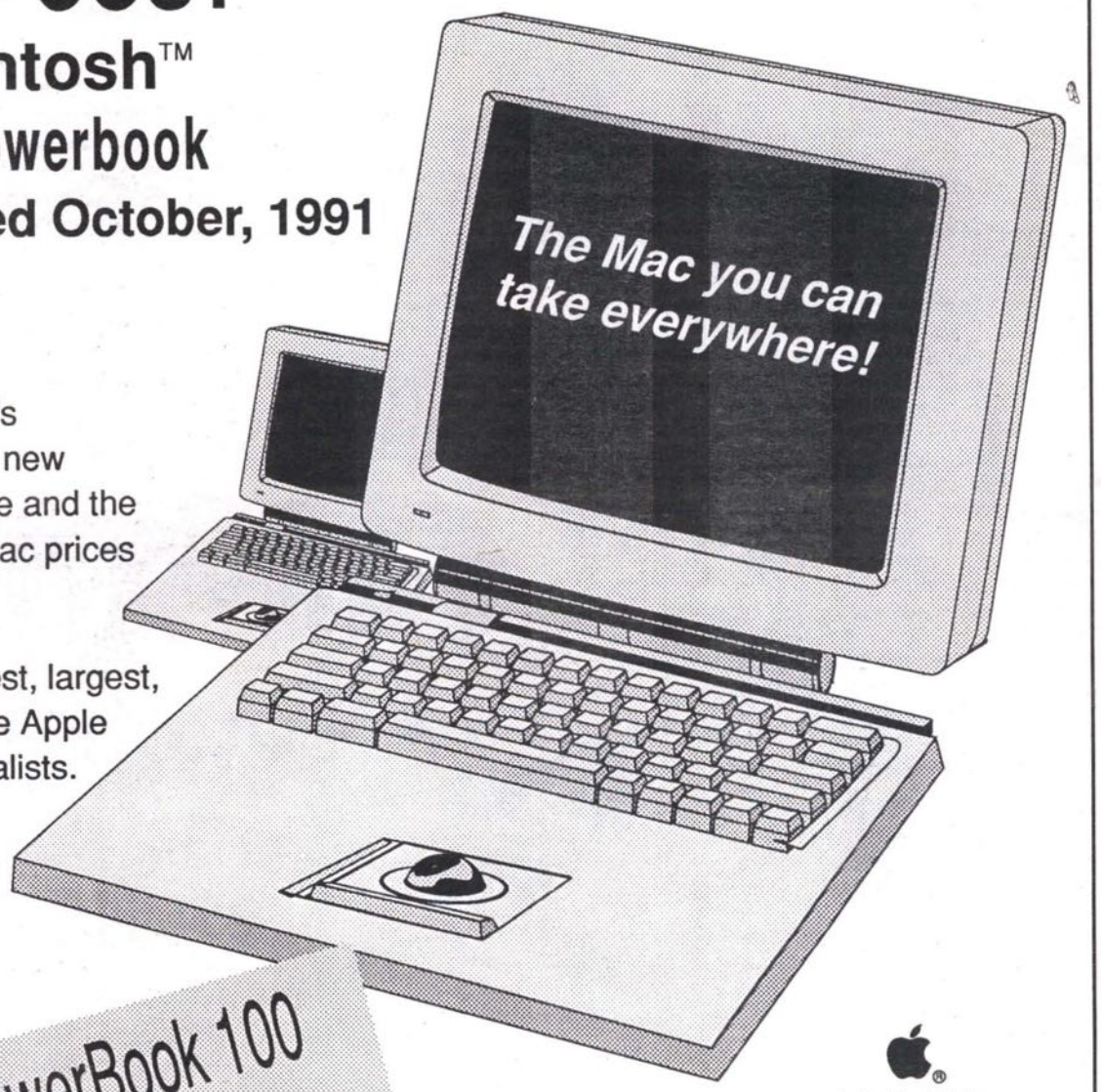
As with other Mac NuBus boards I have installed, setting up the DirectColor/GX is a breeze. The package comes with an anti-static wrist-band and clear instructions on the procedure, which should not prove too daunting to even the most timid novice. Unlike many IBM display adapters, which require dip-switches or jumpers to be fiddled with, the DirectColor/GX simply plugs into any available slot, and auto-configures.

Few Problems

The only real problem I had with the board was a slight, but noticeable interference pattern in the standard black-and-white background dot pattern of the Mac's desktop. The manual advises setting the background to a solid color. Once

Continued on next page

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MacDraw goes Pro

by Graeme Bennett

Product: MacDraw Pro 1.0v1
Publisher: Claris, (408) 987-7000
System Requirements: Mac Plus or later, hard disk drive (1500K-1700K required for installation), 2MB RAM (4MB RAM for millions of colors or System 7), System 6.05 or later.
Price: US$395. Upgrades from MacDraw II US$99.

If there ever was a graphics look that defined the early 1990s, it's the smoothly fading, airbrush-like textures of the gradient color blends made possible by computer graphics programs like Corel Draw on the PC, and Aldus Freehand on the Mac. Slightly "retro," (as if an entire generation of art directors might cite Maxfield Parrish as their prime influence), but very slick. Take a look around, and you'll see gradients everywhere.

Nature, too, shows us gradient blends almost anywhere we look—in the skies and everywhere else where light and shadows play.

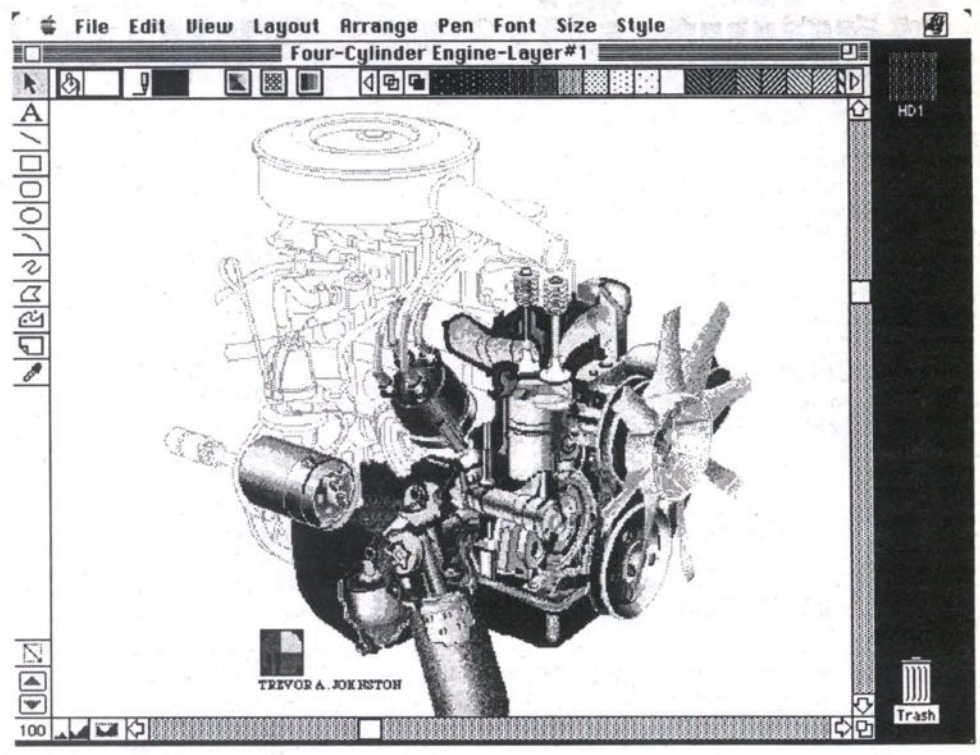
So, for many Mac graphics enthusiasts, the biggest news about MacDraw Pro is its slick gradient fills. Other programs, too, are starting to pick up on the gradient bandwagon. The forthcoming version of Quark XPress 3.1 will also include a gradient blend capability, as will Aldus' SuperPaint 3.0.

Ever since MacDraw went from version 1.x to MacDraw II, the program has moved away from mere illustration, becoming a tool for presenting, publishing, designing and illustrating. This "Swiss army knife" approach to business graphics has helped MacDraw become the top-selling graphics program of at least one major distributor.

Now, Claris has again upgraded the program's features and dubbed the latest version MacDraw Pro. Luckily, you don't have to be a graphics pro to use it.

Unlike competitors Adobe Illustrator and Aldus FreeHand (reviewed in Dec. '90 and May '91, respectively), MacDraw Pro is well-suited to casual use, and versatile enough that you don't have to be an artist.

Text—long the Achilles heel of graphics software—is handled and formatted using



tools not unlike Claris' word processor, MacWrite II. The included 100,000-word spelling checker can even check your spelling as you type.

MacDraw Pro imports and exports a wide variety of graphics and text formats, including MacDraw and MacDraw II, PICT, text, EPSF, TIFF, MacPaint 2.0, MacWrite II, Microsoft Word 4.0 and more. The spelling checker and import/export translators can be used with other Claris programs and a growing body of third-party products that use its XTND system for reading foreign file formats.

Taking a nod from other graphics heavyweights, MacDraw Pro now has Bézier curves, Pantone colors, custom palettes and other advanced graphics capabilities.

Especially nice for users with 8-bit video cards is the program's ability to display over 2,000 colors with a special color approximation technique.

A Slideshow, too

If you want to present information to your co-workers, you can hide MacDraw Pro's menus and tools and set it up as a slide show you can control from the keyboard, or remotely, with a click of the mouse.

Clearly, MacDraw Pro has enough versatility to perform simple DTP and presentation tasks in addition to creating knockout illustrations.

The program's color support has also been much improved, finally supporting the

Continued on page 83

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Radius GX *Continued*

done, the interference disappeared. When I spoke with Radius tech support, they thought I must have a defective card. Sure enough, when I tested another card, it was free of this interference.

All but the newest GX cards require a ROM and 2.0 software update to work with System 7. I found Radius tech support to be extremely helpful and friendly. A Radius rep arranged for my ROM update to be ready for pick-up the very next morning, a vast improvement over the 10 to 14 day wait that two dealers quoted me. In addition, the dealers wanted to charge me between US$40 and $50 for the updated ROM and software, but Radius gave me the update free, as the card was still under warranty. I installed the new chip myself in a minute or two with nothing but a screwdriver.

Acceleration

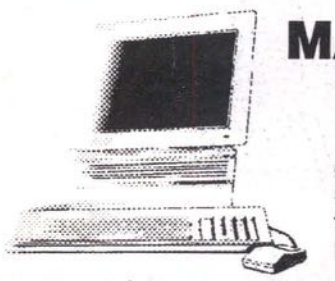
The on-board graphics accelerator is significant to anyone who has used 24-bit boards sans acceleration. My tests showed approximately a 600% improvement in scrolling through full 24-bit color images with Adobe Photoshop. The Radius software includes an option to toggle the acceleration on and off with the Caps Lock key, making it easy to see just how much it improves screen updating. There is no question about it: if you want to use 24-bit color, a graphics accelerator makes it a lot more pleasant. Even in 8-bit or 4-bit modes, the acceleration produces a noticeable improvement in scrolling and screen redrawing.

Options

A unique Macintosh feature is revealed if more than one video card and monitor is connected at the same time. Windows and the mouse pointer can pass freely from one screen to the other, as if the displays are separate views of a larger virtual desktop. You can even run different programs on each display and move windows or other information between the two screens. I tested this feature with the Radius and an Apple video card and found no interference or other problems with the two side-by-side displays. Using the tear-off menus feature of RadiusWare, you can place commonly-used menus on the second screen for convenient access while you work.

The DirectColor/GX is compatible with an exciting product called Radius TV (US$2795). A Mac equipped with Radius TV can receive TV (cable or other) video signals and sound, and display them in a window while you work. Included software allows various special effects and the capturing of high-quality 24-bit images for use with other programs. But the most innovative feature of Radius TV is its amazing ability to save a text transcript of TV broadcasts. How is this possible? The Radius TV software/hardware combo acts as a Closed Caption decoder, and can display or save this normally hidden text information from the many broadcasts that support it.

Someday, the TV sets in our living rooms will probably do all this and more, but for now, Radius gives us an enticing taste of the future. ❐



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14 Aldus FreeHand 9:00-3:00PM	15 System 7 9:00-12:00 1:00-4:00PM	16 Intro to Mac 6:30-9:00PM	17 Intro to Word 9:00-3:00 Intro to Mac 6:30-9:00PM	18 Intro to 4D 9:00-3:00PM
21 Illustrator 9:00-3:00PM	22 Advanced Word 9:00-3:00PM	23 Intro to Excel 9:00-3:00PM Intro to Word 6:30-9:00PM	24 PageMaker 9:00-3:00 Intro to Word 6:30-9:00PM	25
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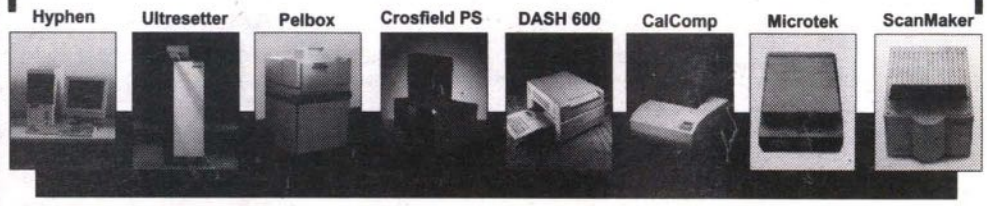
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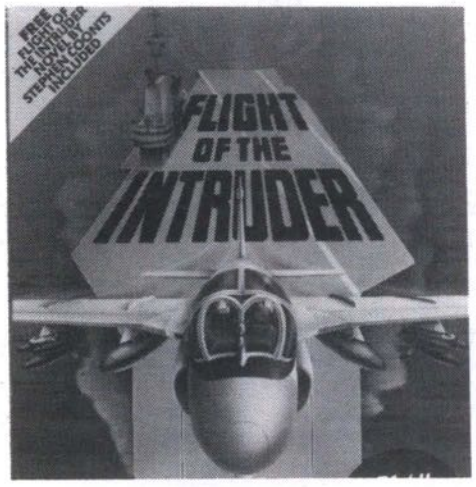


GAME REVIEW

Flight of the Intruder

by Tyler Thacker

Product: Flight of the Intruder
Publisher: Spectrum HoloByte
System Requirements: IBM PC or compatible, display: Hercules, CGA, EGA or VGA, joystick or mouse, sound support: Adlib/PC speaker tones/digitized.
Price: $60 Cdn.



You, the player, are flying your choice of an A-6 Intruder of an F-4 Phantom jet in this simulation. You will be sent in search of enemy targets from your base, the aircraft carrier USS Shiloh. The game's action takes place during the 1972 Linebacker campaign over North Vietnam.

According to Spectrum HoloByte, they received and used many valuable ideas from a variety of Vietnam naval airmen, including *Flight of the Intruder* author Stephen Coonts.

Flying this simulation is like flying the real thing in Vietnam.

Using a direct cable link, players can connect two IBM machines for tradtional dog-fighting action or two players can team up against the enemy. In joint missions, with both players on the same team, you can work together as each other's wingman, by both piloting A-6s or F-4s. Alternately, one player can choose to pilot the F-4 Phantom and patrol the area for bandits, while the other player takes on the bombing role in the A-6 Intruder.

Flight of the Intruder features 13 different operations to choose from including Alpha Strike, Deck Alert, Iron Rain, Hunter KIller, and July 4th Day. The operations are composed of up to four separate missions, with a total of 36 in the game. Each operation yields different targets, strategies and adventures. To be successful, a player must plan the operation carefully, such as selecting the ammunition and charting waypoints.

The operations build on one another, making up the larger overall campaign. The outcome of an operation determines the pilot's position in future runs. Following each operation, the player is given detailed analysis of his/her successes and failures in the debriefing room. The success rating is based on factors such as the number of targets hit and missed, weapons used and MiGs and SAM (surface to air missiles) sites destroyed. The player receives points at the end of each mission which are displayed and also averaged into an ongoing overall score of all operations ever flown by that pilot.

Typical bombing targets over enemy territory include bridges, power supply plants, docks, and shipping facilities. Some can be examined on a recon photo before

Continued on page 84

MACINTOSH

MacDraw Pro *Cont. from pg. 81*

Mac's full 16.7 million-color palette. It is compatible with System 7, but lacks Balloon Help, Publish/Subscribe and other visible attributes of 7-savviness.

The program comes with a hypertext-based Help system, and several good perfect-bound manuals. (What's with this trend away from more convenient spiral binding?!) There's also a "Hypertour" of the program that might be useful to those unfamiliar with Mac graphics programs and what you can do with them. Users with a little experience in the usual Mac toolbox items and conventions will find MacDraw Pro a breeze.

A README file on one of the program's six disks describes a problem if the program is used on a System running Adobe's Type Reunion (an extension that creates a hierchical font menu), and advises holding down the shift key when starting MacDraw Pro, to temporarily disable ATR.

However, even if this is not done, the problem appears to amount only to a slight slowdown of the operation of the program's menus, so ATR devotees need not worry too much. I found no other bugs or problems in MacDraw Pro, except the ever-present performance issues that plague users of all but the most powerful Macs.

Speed Issues

MacDraw Pro is not a terribly speedy program, especially if used on a color system with complex images and millions of colors displayed on-screen. This, of course, is hardly a surprise to users of any high-end graphics program on any computer platform.

Nevertheless, the program is feature-rich and easy to use, and, as such, is well worth checking out. ❐

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AD #10

GAME REVIEW

Intruder *Continued from page 83*

taking off on the operation. The player must be prepared to run the gauntlet of both air and ground defenses. In the air, the enemy has MiG-17, MiG-19, MiG-21 jet fighters which are armed with cannon and Atoll heat-seeking missiles. The ground's major threats are SAMs and flak.

I rate this game as about a 7 out of 10. The graphics on a CGA monitor are about 5 out of 10, they get better on EGA and they are quite good on a VGA monitor. The sound is not great.

Tyler Thacker is a home schooled teenager who runs his own BBS system.

UTILITIES

The Norton Utilities
Version 6.0

by Stephen Smith

Product: The Norton Utilities Version 6.0
Publisher: Symantec Corp., 10201 Torre Ave., Cupertino, CA 95014, USA. Telephone: (408) 253-9600. Vancouver office: 737-0214 Contact Person: Stephen Dewitt.
System Requirements: IBM PC XT, AT, PS/2 and 100% compatibles. DOS 2.0 or higher (with special support for DOS 5.0). 512K memory.
Key Features: Damaged disk recovery. Disk optimization. DOS Enhancement Utilities. Data Protection.
Price: US$179. Upgrades US$39.

This is the latest release of the popular Norton Utilities for the PC. It is a collection of programs designed to greatly enhance MS-DOS. All the utilities are useful, easy to use, have good documentation and good online help. They work with all versions of DOS above version 2 including version 5, they also work with Windows 3 (but not as true Windows applications), icons are provided to make them easy to run from the Windows Program Manager.

Data Recovery

Norton became famous for its routines to restore damaged disks and unerase files. These functions have been enhanced with an unformat command, greater ability to unerase files, automatically repair common disk problems with the Norton Disk Doctor and automatically repair damaged spreadsheet and database files (Lotus 123, Symphony and dBase. There is a program called "image" which you run from your autoexec.bat file, which copies important information about your disk to a special file that unformat, unerase and disk doctor can use to help recover your data. There is also the Norton Disk Editor, which allows you to edit any data on your hard disk, including directories and the file allocation table.

Speed Disk

Norton speed disk has always been a favorite, it reorganizes the physical layout of all files and directories on a disk so as to minimize movement of the read-write head. That makes it faster for data to be read off the disk. Speed disk is much faster now and automatically detects if you are running under Desqview or Windows and refuses to run in such an environment (DOS multitaskers maintain open files that could cause disk corruption if speed disk re-arranged the disk on them).

Benchmarks

The system information program has been greatly enhanced, it gives much more detail of your system configuration and compares the performance of your system to a 286 and 386 as well as the old comparison to the original IBM XT.

NDOS

There is a DOS enhancement shell NDOS to add features to the existing DOS commands. NDOS expands the wildcard capabilities of DOS so you can enter commands such as "DEL *.TMP *.BAK" (normally DOS only accepts one wildcard). It also keeps a command line history similar to DOS 5, allowing you to recall, edit and re-execute previous commands. It also features faster, more powerful batch files.

ANTI-VIRUS

There are some new utilities to protect you from virus' and unwanted people accessing your computer. There is a program "diskmon" which can protect your system areas, your files or your whole disk from any form of writing. This doesn't provide complete virus protection, for better protection from virus' Norton has a program called "Norton Anti-Virus" sold separately. There is a file encryption program so nosy people can't read you files, a keyboard and screen lock to protect you computer while you're not there. There is also the old "wipeinfo" program which deletes a program completely, overwriting it so that the data is completely obliterated (can't be unerased, or read with Norton's Disk Editor).

UNBEATABLE COMBO

Norton provides a very good balanced set of utilities. Perhaps individually you can find better utilities, but the total combination is very hard to beat. Such a set of utilities is a must for any PC owner and if you use your computer a lot, you will greatly benefit from their use. The Norton Utilities are also available for the Macintosh and for some versions of UNIX. ❐

Late-breaking news: Symantec has upgraded Norton Utilities to version 6.01. The new version is said to address **all** reported incompatibilities. A new set of disks is being sent free of charge to all registered Norton 6.0 users.—Ed.

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UTILITIES

Norton Editor 2.0
Advanced Text Editing

Product: The Norton Editor 2.0
Publisher: Symantec Corp., 10201 Torre Ave., Cupertino, CA 95014, USA. Telephone: (408) 253-9600. Vancouver office: 737-0214 Contact Person: Stephen Dewitt.
System Requirements: IBM PC XT, AT, PS/2 and 100% compatibles. DOS 2.0 or higher (with special support for DOS 5.0). 130K memory.
Key Features: Easy to use character based text editor with mouse support, pull down menus, dialog boxes, on line help, edits large files, features for programmers.
Price: US$99. Upgrades US$29.



The Norton Editor has always been a popular simple to use text editor for editing ASCII files (unformatted text files). Before DOS 5, everyone needed a simple text editor, since EDLIN which came with DOS was terrible to use. Now DOS 5 comes with a decent full screen text editor, greatly cutting into the Norton Editor's market. The most common use for such an editor is to edit your AUTOEXEC.BAT and CONFIG.SYS files.

You can accomplish the same job with most word processing programs, however word processors are encumbered by many features not needed for simple jobs. They tend to be slow to load, and require you remember additional commands to save in simple ASCII format. Also word processors are usually geared to editing files where carriage returns end paragraphs and the word processor automatically inserts the line breaks where necessary. When editing BAT files or program source files, it is important to put a carriage return after each line.

The Norton Editor is very full featured now, but retains its ability to load quickly and is still simple to use. It also comes with a TSR version, so you can access the editor even quicker. There is also a small version which will edit files in situations where you have very little memory.

There are many more powerful editors on the market such as Brief and Emacs which incorporate powerful macro languages, but these editors tend to be bigger and not quite as easy to use right out of the box.

The Norton Editor features: pull down menus, dialog boxes, online help, mouse support, ability to edit two files at onces, edit files of any size, some programming features, some word processing features, access to DOS commands, use of various display modes (such as VGA 43 line mode).

The Norton Editor is a nice product that fits in-between the editor which comes with DOS 5 and more complex programmable editors. If you don't have DOS 5, then getting an editor such as this can be very useful. ❐

Stephen Smith is a Vancouver area computer consultant specializing in programming for the Microsoft Windows environment.

REVIEW

Intra NB-320S 386SX Notebook

by Graeme Bennett

Product: NB-320S 20MHz 386SX notebook computer
Manufacturer: Intra. Distributed by Computer Express, (604) 279-8731.
Price: from C$2589. Docking station $650; RAM to 5MB $530; sendfax $360
System configuration tested: 40MB hard disk, 3.5-inch disk, 1MB RAM (SRP $2889)
Weight: 6.38 lbs.

Pros: Intelligent power management contributes to improved battery life on this speedy notebook. Good LCD screen display and excellent keyboard feel. Ports for serial, parallel, external keyboard, external CRT monitor and optional 4-slot "docking station" expansion base add versatility.
Cons: 16-color VGA display is smaller than some competing notebooks, "L" layout of cursor keys may prove awkward for some. Proprietary slots for expansion RAM, external floppy, COM2 port.



Readers who recall my Jan. '91 review of Intra's then relatively state-of-the-art 10 lb. 386SX offering will probably not be surprised that the company has a new model that is both lighter and faster.

The NB-320S appears to use the same 5-by-7-inch (8.5 inches when measured diagonally) VGA display that its heavier sibling used, and like it, also folds all of the way back. This, combined with the unit's external VGA monitor port, facilitates an external CRT (cathode ray tube) display. Screen refresh of the LCD (technically, a cold cathode fluorescent tube or CCFT) is on the slow side (expect to lose the mouse pointer frequently during Windows sessions), but this is typical of most backlit LCD displays, with some ghosting and distracting lines when large contrasting areas are displayed.

The display was stable and "pure" without the mottled texture that marred the appearance of the Darius (reviewed this issue) notebook's screen. Although the manual refers to it as "paper-white," the Intra's screen tends towards blue-on-gray at most viewing angles and contrast/brightness settings. Let's just say I wouldn't want to use this display all day, every day.

The keyboard has a very good feel, with deep key travel, a pleasant tactile response and it is reasonably quiet. The backslash key is conveniently located and a lighter color than the surrounding keys—a nice touch.

I didn't, however, like the too-small Esc and function keys or the placement of the cursor keys in an "__|" shape. Many other notebooks use the much preferable "inverted T" layout that is the desktop standard. At least the cursor keys aren't stuck up in the rear corner, like the earlier Intra laptop.

I also don't care for the all-too common use of dozens of Fn function key equivalents to simulate missing keys. (The Intra uses the Fn key to allow its 80 keys to simulate 101.) The extra-large ENTER key was a nice addition, though.

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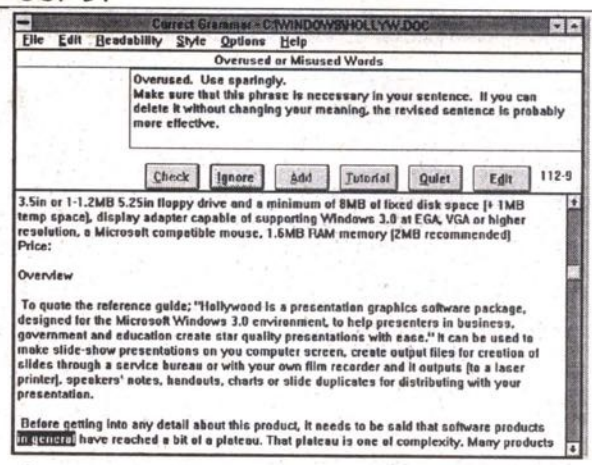
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Correct Grammar

Continued from page 73

Correct Grammar works directly with Word for Windows, Windows Write, Ami Professional, PageMaker and Legacy. It can also work with any ASCII file.



could be invaluable for technical or legal writers, who need to exclude certain words or phrases from documents created in a number of different formats.

Conclusion

Correct Grammar has the initial feel of a very handy tool for both the occasional writer and the semi-pro. It may be a little stifling for the professional, although they may find it useful for checking the "dumb" mistakes which we all make from time to time. Overall, a good product, with the only real problem being the amount of memory it requires. ▮

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REVIEW

ObjectVision *Continued from page 66*

and executable files can be stored on a server for common access. A special network version of ObjectVision is unnecessary. Recently Borland signed a technology exchange agreement with IBM. As part of this agreement Borland will develop a 32 bit version of ObjectVision version 2.0 that exploits the features of IBM's OS/2 version 2.0. This version will allow developers to access OS/2 Database Manager, link to the REXX interpreter and use multiple threads for multitasking. IBM in turn will incorporate ObjectVision into its overall marketing strategy for OS/2.

What does that mean to the end user or developer?

Because ObjectVision files will be compatible with both the OS/2 and Windows versions, developers will be able to write one application and deliver it on two platforms without any modification of the code. So if you, the end user, are not sure which of the two environments you want to use and are afraid of backing the wrong horse, with ObjectVision your decision can be changed in the future with minimal conversion cost.

What does ObjectVision not do ?

If you need to sort or index your database, select record sets, and generate reports, ObjectVision does not perform those tasks—you will still need a traditional database to do this. But the good news is that ObjectVision can work in conjunction with any xBase database (i.e., any dBASE compatible file format), Paradox or Btrieve package. Once dBASE or Paradox come out with a Windows version it will be easier to combine ObjectVision with any of them.

How does ObjectVision work ?

An ObjectVision application is based on the "form" metaphor. An application is constructed by placing building blocks called "objects" in a blank form. There are many different kind of objects such as text, graphics, ruled lines, patterns and value fields. Behind each object you can create a decision tree with spreadsheet-style @ functions. This is very good for if-then kinds of programming choices, such as giving 10% discount for orders over $1,000 and a 20% discount for orders over $5,000. These decision trees can be very elaborate. Each Object can be enclosed in a filled rectangle, or a rounded rectangle. As an object can be a graphic object, you could display your company's logo or any other picture as part of your form, thus the form produced can look very fancy.

Why should you use ObjectVision ?

In the past I have seen end users produce amazing programs in Lotus 1-2-3, the users did not think of themselves as programmers; as they learned 1-2-3 they started using the macro facility of 1-2-3 and as they got better using it, without really knowing it they were producing elaborate programs. ObjectVision would be a very good tool for those end users who are interested in customizing their working environment without programming.

An environment like this lends itself to:

- Prototyping: If you want to build an application fast end experiment with it.
- Incorporating business knowledge into the forms "Artificial Intelligence": ObjectVision's use of decision trees and logic allows the user to easily understand how the application works.
- Incremental Development: If you have a changing environment and you want the end users to be able to change the decision trees on an ongoing basis.

Continued on page 90

Intra *Continued from previous page*

I'd recommend carefully considering the keyboard layout/feel and display quality as the prime considerations in your choice of a laptop or notebook.

The power supply died during my 10-day test of this notebook. While the distributor was willing to replace it on the spot, it is worth noting that the previously-reviewed Intra Laptop *also* had a hardware failure during its tests. Could a pattern be emerging here?

Conclusion

There are laptops with better keyboard layouts, more keys and bigger screens (the IBM PS/2 Laptop, one of the many notebooks reviewed in our May '91 issue, has 84 keys and a 10-inch diagonal display). Some have more storage and more RAM, and/or more shades of gray, etc., but the Intra notebook is a solidly-built, respectable performer half the price of IBM's offering.

With an external keyboard, CRT display, some more RAM and the addition of the optional expansion base, which features 4 ISA slots, plus bays for floppy and hard drives, the Intra NB-320S could suffice as many users' only computer, although I wouldn't recommend this if cost was a prime consideration. With today's graphically-intensive applications, I wouldn't recommend anything less than the 20MHz speed of this unit. ❐

Darius
386SX Notebook

by Graeme Bennett



Product: Darius 20MHz 386SX notebook
Manufacturer: Darius
Price: C$2950 (40MB); $3200 (60MB). Expansion RAM: $120 (to 2MB); $400 (to 5MB).
System Configuration tested: 60MB hard disk, 3.5-inch disk, 2MB RAM
Weight: 7.05 lbs.

Pros: Attractive, well-designed unit with quiet keyboard. Inverted "T" cursor key layout and convenient Fn key functions. 2 serial ports, parallel, external keyboard, external CRT monitor and user-installable 80387 math coprocessor. System comes with adapter cables for attaching external AT keyboard, external 5.25-inch floppy disk, 2 serial devices.
Cons: Very shallow key travel. 16-color VGA display has slightly mottled appearance. Proprietary slot for expansion RAM, other expansion possibilities limited.

First, let it be said that the Darius Notebook is a very, very good-looking notebook. The slightly-textured case has an interesting velvety look to it and completely hides fingerprints and small scuffs. Ergonomically and aesthetically, it appears well-designed, as long as you don't mind the deeply recessed power switch on the back.

The product's manual is also very good, with color plates, a complete glossary and pinout charts. It appears to be free of typos and reasonably beginner-friendly.

DOS is not supplied with the system, hence the notebook will not boot from the internal hard drive until the user (or dealer) has formatted it and installed DOS on it. A total of four accessory cables came bundled with the system, for attaching an external AT keyboard, external 5.25-inch floppy disk, and COM1 and COM2 serial devices, such as a modem and mouse.

The unit's hard disk (I tested the 60MB version) is speedy, and automatically shuts off after a few seconds of inactivity to conserve battery life. The system uses an Award BIOS and has a full suite of onboard diagnostics and configuration options.

The floppy drive is on the unit's right side, as are recessed brightness and contrast controls for the display.

The non-glare, CFL backlit LCD display measures 9.5 inches diagonally and folds all of the way back—ideal for systems where an external CRT is used. The LCD on the unit I tested appeared to have slightly uneven solid (dark) areas, as if there were a thin layer of clouds visible, or one of those backgrounds that photographers use to add drama to a portrait scene. It was also perceptibly brighter on the right side of the screen. A small amount of horizontal interference was visible when the screen displayed a large white area. None of these problems were serious, or particularly unusual for LCD displays.

Only five Fn keys are used as substitute keys. The remainder (and there are a bunch!) are used to set up and control various LCD screen display options, such as reversing the video text, shutting off power to the screen, etc. There's even a Help command that shows what each one does.

Although the keyboard layout itself is good, and the keys quiet enough to take notes at a meeting without causing much distraction, I found the key-travel to be too short for my liking. I preferred the touch of the Intra's keyboard, although such keyboards are almost invariably noisier.

The Darius keyboard has a clever design for the corner where the Esc key is. The Tab key has its upper portion recessed, making Esc much easier to hit. Good idea.

In many ways, the Darius is a thoughtfully-designed unit inside and out. Although I have reservations about the feel of its keyboard and the uneven screen display, it represents a good value, and performs well. It's definitely worth checking out. ❐ *(This notebook is also available under the brand names Chicony and Megacom.—Ed.)*

Works for Windows

Continued from page 63

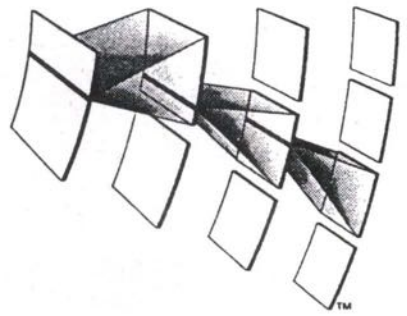
publishing program.

Works for Windows uses object linking and embedding to allow users to transfer charts, art and other graphical files from other applications into the document they are creating. Like Publisher, Works for Windows comes with several Wizards, which help create address books, form letters and mailing labels. Using Wizard, the user answers questions which help the program automatically create the format desired.

The Works For Windows database can handle up to 32,000 records, compared to the 4,096 record maximum in the DOS version of Works. Reports can be sorted in several ways, and are created after the user selects titles, fields and calculations. Results can be viewed and printed, and the program can write dBase III and dBase IV files.

Thesaurus and spelling buttons have been added to the toolbar, which had its origins in Word for Windows. A customizable ruler is also available. Works for Windows is available in several foreign languages. ❐

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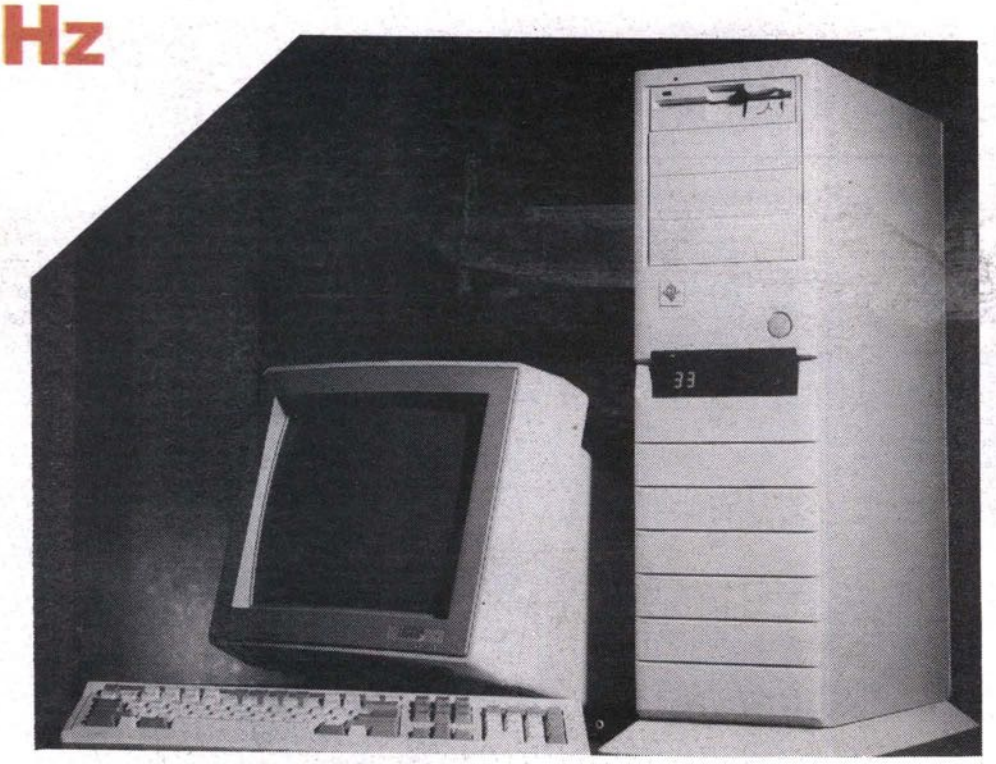
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ObjectVision *Continued from page 86*

- Capturing data: If your business is currently using forms. Different-looking forms can be generated to capture data into one dBASE, Paradox or Btrieve file.

What do I use it for?

Running a small consulting business, needing to keep up with this fast-changing high-tech world, and wanting to spend time with my family, I find time to be my most valuable commodity. I will do anything to use my time more effectively. Combining ObjectVision with the Fax Gateway on the LAN allows me to fax good-looking invoices to my clients directly from my PC. As my client base is changing I can add new rules to the invoice-generating process with a minimum of effort. At the same time I can capture the data for further processing into a dBASE file in the background .

What I like and do not like

Bearing in mind that ObjectVision is in its first version and that improvements are surely to come in future versions, **I like:**

- ObjectVision's performance, which is better than Asymetrix's ToolBook and other comparable products.
- The documentation and tutorial, which do a good introduction job for novice users.

I do not like:

- ObjectVision's drawing tools are limited to its own pull-down menu capabilities, two types of rectangles. This could be improved by allowing the user to scan a form in and then have a scan mode converting the form into an ObjectVision form. This is similar to the Corel Draw scan program. Another way to achieve the same result is to allow a user to scan an existing form, like Delrina's Perform Pro tracing capability.
- ObjectVision could do a better job in locating existing records.
- ObjectVision could add support for more existing Database formats.

Chem Cohen is the president of RainBow Software Inc. The firm is a Vancouver microcomputer consulting firm specializing in solutions for Business based on LAN and Gateway technology. (604) 732-8027. Fax (604) 732-8043.

AMIGA

AmUsEd *Continued from page 79*

Teachers learned to apply the Amiga to specific curriculum goals and obtained information on such diverse technologies as Laser Disk, CD-ROM, video genlocks, MIDI equipment, video digitizers, sound digitizers, and, of course, computers.

This year's workshop was entitled VISION 2000. This theme stimulated teachers to envision the Amiga in terms of its fit into the goals of the B.C. Ministry of Education.

It became readily apparent that the Amiga was able to meet the demands of the new curriculum (outlined in the ministry's Year 2000 Document) in unique ways among microcomputers. The other aspect of the "Vision" theme was the seminars and training on AmigaVision, the new multimedia authoring system for the Amiga. AmigaVision, unlike other authoring systems, is totally icon-based (graphic elements representing functions) and provides a simple means for teachers and students to make interactive presentations or courseware.

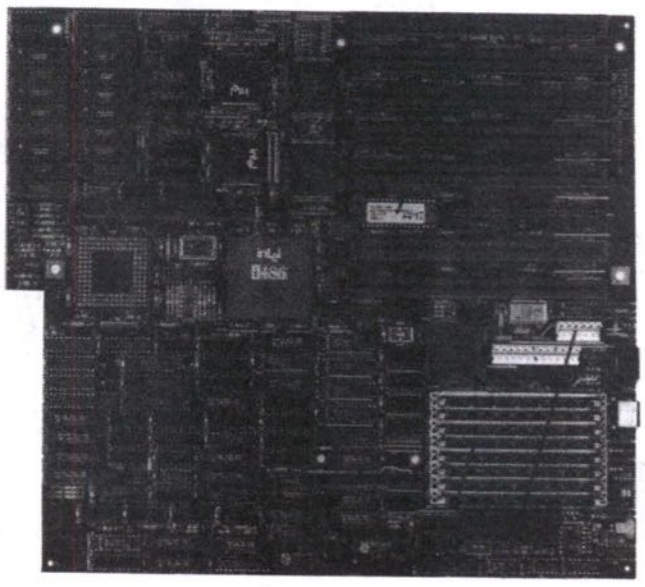
The real joy of the workshop every year is the friendships established. We look forward to next year's workshop.

For more information about AmUsEd, please contact Bob Herbison, School District #70, (604)-723-3565. ❐

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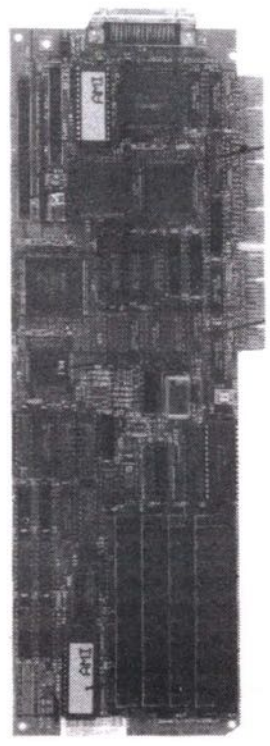
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REVIEW

OkiLaser 400

by Graeme Bennett

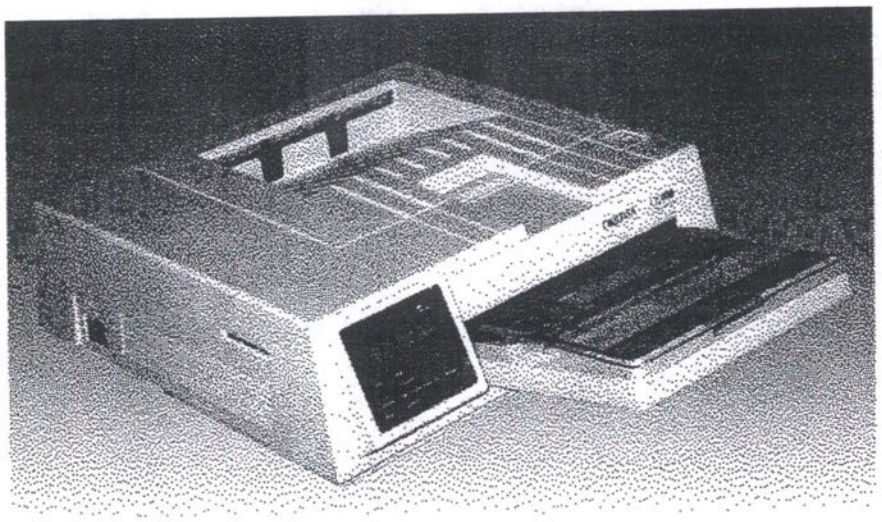
Product: OkiLaser 400
Manufacturer: Okidata
Price: $799

Pros: Inexpensive, good print quality, many fonts, "sleep" mode reduces noise when not in use.

Cons: Expensive to upgrade RAM.

Personal Laser

With the dramatic decreases in the cost of "personal laser printers" recently, I picked up an OkiLaser 400 for under $800, and am happy to report that I am impressed. This diminutive (5.25x17.5x22.5-inch) printer (laser is actually a misnomer, as the OkiLaser 400 uses what is known as an LED array as opposed to a laser to image the data onto the drum) was the smallest of the nine low-cost lasers tested by *PC Magazine* in their June 12th, 1990 issue, and won their Editor's Choice award at a US retail price of $1395. At its current Canadian street price of less than half that, it is hundreds of dollars cheaper than its main competition, the Hewlett-Packard LaserJet IIP (another *PC Magazine* Editor's Choice). The 4 ppm OkiLaser 400 was judged by that magazine to beat the IIP in graphics and text quality, and, with 17 built-in fonts, outnumbered all eight others tested in that area.



Setup

I found the printer to be easy to set up (it will connect to virtually any brand of computer's parallel or serial port) and was impressed with features like its internal fan that goes into "sleep mode" when the unit has not received any data for several minutes, and swing-down panel at the rear of the unit that allows heavier stocks to travel a straight paper path. Envelopes and legal-size pages can be manually fed, and a 200-sheet paper tray is included, too.

Fonts & Graphics

Equipped with 512K RAM as standard, more memory (required for creating full-page graphics) can be added later, though not by the end-user, and not at all cheaply (see drawbacks, below). Various settings, like paper length and font styles, can be viewed on a 16-character LCD panel on the front of the unit, and changed by means of a panel of membrane buttons. The OkiLaser's $50 toner cartridges are no fuss to change and the manuals are clear and helpful. The HP LaserJet series II-compatible unit features seventeen built-in fonts (the equivalent of six HP font cartridges), including Times, Helvetica, Line Printer as well as the obligatory Courier. Both portrait and landscape printing is supported (though not by all font styles).

More Font Options

I also tested the unit with the new Adobe Type Manager (ATM) software, and was able to successfully print a full page of Adobe Type 1 Postscript fonts in several sizes and styles, although printing speeds slowed substantially. Using the printer's built-in Courier (monospaced) font, a page of text printed in 14 seconds. Using built-in Times (Proportional), printing began after 46 seconds. With ATM, my multi-font test page took over four minutes to print. However, the benefits of scalable fonts, not to mention true WYSIWYG on-screen font rendering in any Windows application, are undeniably attractive features of ATM. HP soft fonts may also be used, or proprietary OkiLaser 400 font cards added.

Drawbacks

The $350 cost of upgrading the OkiLaser's memory is simply outrageous, and presents the only significant drawback to the printer.

Summary

Aside from the fact that I find it slightly obnoxious that Okidata can dare to call an LED-based printer a "laser" (it isn't!), this fact is, in the final tally, insignificant. If it looks and quacks like a duck, as they say....

The OkiLaser 400 is a tremendous value until you figure in the $350 cost of one megabyte of RAM, which anyone printing full-page graphics needs. But for straight-ahead word-processing, it is hard to recommend a 24-pin dot matrix printer or ink jet printer when you can have laser-printer quality for a hundred or two more. And doesn't everyone want great-looking output? ❐

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Computing for Beginners

by Graeme Bennett

Even if you are not a beginning computer user, you probably know someone who is. Show them this article! It is guaranteed 99% "jargon-free" and should provide an appetizing introduction to the Power Users' wonderful world of you-know-what...

Having taught a course offered by the Vancouver School Board for the last few years called *Computers made Ridiculously Easy*, I have heard much of what novices do and don't find easy. During these classes, I have also listened to seemingly countless questions posed by beginners and after a while, certain patterns become evident...

This article will attempt to distill some of the information that these students have told me was useful, practical knowledge. I hope that even expert readers can take a moment to think back to the earliest days of their inexperience. (It wasn't that long ago!) I rather fondly recall the days when... heck, I used to read the manuals!

The ten guidelines below are just that, and may or may not all apply to your particular use for the machine. Obviously, if I say that you don't need to be a programmer to use a computer, the would-be programmers are going to get confused...

1) **Jump right in.** Don't start by reading that bunch of programming and DOS books that came with your computer. Invite a friend or co-worker who knows so much about computers over and get him or her to help you set the thing up. Those books will only confuse you if you read them now. Wait until you need to do something that you can't figure out. Then, refer to item 3, below. If you really want to read something, look up the precautions section in the index. The parts about plugging in things with the power on (don't!) and what not to do with diskettes are important. Most of the rest isn't. It's mostly written by programmers for programmers. You don't need to be a programmer to use a computer any more than you need to be an auto mechanic to drive a car. (It can be helpful, of course, if only to decipher the manuals!)

2) **You don't need to know math either,** for the same reasons as above. Rocket science degrees, in general, are not required to use a computer, just a little common sense and the ability to look up things occasionally in the indexes of software manuals.

3) **Try starting at the back of the manual.** I'm not kidding, either. Virtually every manual has a quick reference guide, troubleshooting tips and the other important stuff right before the index. Believe it or not, but this tip really works for me.

4) **You can never have too much speed.** I know this sounds elitist and power-crazy, but buy as much computing horsepower and capacity as you can afford. If you think that you don't need it, you're wrong. Nothing makes a computer feel more obsolete than being too slow and/or small. A fast hard disk is a relatively cheap way to increase the apparent speed of a system, also a faster processor makes a big difference. Absolutely everyone who has used a slow system , then upgraded to a faster one will immediately become more productive. And nobody wants to go back to a slower one. This goes for printers and hard disks, too. Get more than you think you need. You grow up fast in this world.

5) **Software never works right.** If there are any perfect programs out there, I haven't seen them. Work-arounds for software bugs or design flaws are normal procedures in all but the simplest programs. This seemingly alarming fact is not meant to discourage you, it is merely a fact of life. These days, major applications (programs) for computers are huge, immensely complex undertakings written by teams of people. Most of the time, the software has been sufficiently tested that it does the important parts of what it's supposed to do. It's just that it usually doesn't do a few of the other parts properly. Your only hope is...

6) **Read Magazine Reviews.** A "Buyer's Guide" or "Comparison Chart" type of review is usually an ok place to find out general features, but if you want really specific dirt on what any given program's Achille's heel is, you need to read a full-length review. Luckily, there are plenty of computer "brand-specific" mags out there that cover virtually every major product within a few months of its release. I would almost go so far as to say never buy anything until you've read a good review of it, but few people can afford the time to read all those reviews! It's worth a try, though.

7) **Never buy the first version of anything.** Ask a Pinto owner, ask an original 128k Macintosh owner, ask anybody that bought v1.0 of any software before they read a review of it. Many companies quickly come out with a version 1.01 or 1.1 update because they know that smart folks wait till "the bugs get ironed out" before buying. Be smart, folks.

8) **Beware of false economy.** Buying a slow modem (uh-oh, jargon attack!) may have cost our friend Joe Consumer less initially than a twice-as-fast model, but when he telecommunicates over long distance phone lines, he pays twice as much for the long distance. These, and countless other jargon-filled examples, are short-term bargains, but long-term headaches. Another classic example is having a total of 2 megabytes of RAM in your new computer. Most models these days have only 8 sockets for plugging memory into, and all eight are filled up with low-capacity memory modules called 256K SIMMs. (8 x 256K = 2 megabytes). Unfortunately, when you want to upgrade to more RAM (and you will!), you'll find that you can't use some or all of the old SIMMs, and *nobody* wants to buy them. If you'd asked your dealer for 4MB of memory when you bought the computer, there would still be sockets free, because the type of memory module used would be a higher-capacity version called one meg SIMMs, which—as you might have guessed—only require four sockets to equal four megs of RAM, hence, there are still sockets free for future expansion. They have a much better resale value, too. Don't make Joe's mistake. See items 4 and 6.

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COMPUTER USING EDUCATORS OF BC, Horizons 91, Friday, Nov 8th and Sat, Nov 9th, Regency Ballroom, Hyatt Regency Hotel, Vancouver, Contact: Bob Lipschultz, 536-4002 voice/fax.
FALL COMDEX, Las Vegas, Oct. 21,22,23,24,25
INFO, New York, Oct. 1,2,3

USER GROUPS

AMIGA USER GROUP (PaNorAmA), BCIT, Rm 129-1A. Gen. Meeting 2nd Wed 7:30; Programmers 4th Wed 7:30. Bill Wagstaff, 597-1746.
APPLES B.C. COMPUTER SOCIETY. Computer User Group for all Apple users, call 275-4983 information line; for membership info: Kiyo Masuda, 437-9935. Apple/ABCCS Meetings location: Central Burnaby United Church, 5135 Sperling Ave.
Macintosh Owners - ABCCS contact: John Miller 433-1795.
ARCHITECT USER GROUP (Macintosh). Call Glen Schiller or Kal Gill, Byte Computers, 738-2181.
ASTUTE—ATARI ST. Meets 1st Tues., 7:30 Hastings Comm. Ctr. Dennis 420-8710.
ATARI USERS! Vantari, P.O. Box 3614 Main Post Office, Van., B.C., V6B 3Y6. Bill Sutherland 988-1450, Don Hatch 433-8055. Meets 2nd Wed., 7:30, Hastings Comm. Ctr., 3096 E. Hastings.
BEAVER VALLEY COMMODORE CLUB, 1st Tues., Montrose School Library. Call John Vink 367-6426.
B.C. REGIONAL USERS GROUP SOCIETY of Hewlett-Packard Users. Contact Randy Cliff for information 661-8048.
B.C. UNIX USERS GROUP Dinner Meetings. 681-4473.
CHILLIWACK COMMODORE COMPUTER CLUB (C.C.C.C.) - 976, Supporting Commodore Amiga, P.O. Box 413, Sardis, B.C. V2R 1A7.
DATA PROCESSING MANAGEMENT ASSOCIATION, DPMA dinner meetings 4th Tuesday every month, Stanley Park Pavilion. Contact Frances Dickson or Suzette Havens — 660-8668 to register or Gail Nicols — 660-9533 for information.
DESKTOP PUBLISHING USER GROUP — bi-monthly meetings. For information, call Karole Doner, 929-4916.
FORTH-BC meets 7:30, 1st Thurs/month, Rm 1A-324, BCIT main bldg. Discussions, demonstrations and information for programming/applying FORTH (hardware and software).
GREATER VICTORIA PERSONAL COMPUTER USERS' ASSOC., PO Box 5309, Station B, Victoria V8R 6S4. General meeting last Wed. Also, special interest group meetings 382-3934.
INDEPENDENT COMPUTER CONSULTANTS ASSOCIATION, Box 820, Station A, Van., B.C. 682-2747. Fax 925-1336.
KAYPRO USER GROUP/VANCOUVER PORTABLE COMPUTER CLUB, 3rd Mon., at Kwantlen College Richmond (DOS & CP/M) 271-1519.
LABORATORY PC USER GROUP, Rm 2J38, BC Children's Hospital, Vancouver. 7:00 pm, every 2nd Wed. (except July & August) - $10/year 266-7999.
MACWEST COMPUTER SOCIETY, 2 monthly meetings for members, plus PD copy session. General Meetings - 2nd Wed., Contact: Phil Beall 465-8206
7:30 pm. MacWest New User Meeting - 3rd Wed., 7:30 pm, Guildford Pub. Lib., Surrey. PD Copy sessions & meet New User Group.
Computer User Group, 2nd Tues. of every month, M.R. Sr. Secondary 7:30.
NEWVIEWS USER GROUP, 322-6198, POCO, 1379 Laurier, Hyele Creek Centre.
ORACLE USERS GROUP, 1055 W. Hastings 222-1047 Lawrence Clark - every 3rd Wed. of each alt. month
PACIFIC INFORMATION EXCHANGE, P.O. Box 67366, Station O, Vancouver V5W 3T1.
PORT COQ. COMPUTER CLUB—Commodore, Amiga & IBM, 1st & 3rd Tues 7:30, Rm. 104, George Pearkes Jr. Sec. School,
1390 Laurier Ave., Port Coquitlam, Mike Evans 942-4286.
SMART USER GROUP, Brian Wiebe 588-8065.
SOFTWARE B.C., #400-1190 Melville St., Van., B.C. 684-7432. Meetings at Benedict's Restaurant, 1177 W Pender St., Vancouver, 3rd Thurs, 5:30.
T.I. 99/4A COMPUTER B.C. 99er Users Group, Every Thurs 7-10 pm, Cameron Rec Ctr., Bby. Ron: 522-2598. 1st Thurs.
Tutorials, 2nd Thurs. General, 3rd Thurs. Tutorials, 4th Thurs. Copying Prog.
TRACE (Richmond Atari Club), Thompson Comm. Ctre, 272-5789 1st & 3rd Mon. 7:30-9:30.
VANCOUVER ACM/SIGGRAPH Computer Graphics, 1st Wed. Call Susan Mair, 228-3938.
VANCOUVER ACCPAC USERS GROUP, 3rd Tues. Stanley Park Pavilion For Info: phone or fax 325-0353.
VANCOUVER AUTOCAD USERS SOCIETY, BCIT, Bldg. 3A, Room 110, 1st Wed of the month, 7:30 pm. Contact Robert Cheek, 684-9311 for info.
VANCOUVER CLIPPER DEVELOPERS ASSOC., 1st Tues., 7 pm, 800-1190 Hornby St., Van, 685-6645.
VANCOUVER COLOR COMPUTER CLUB, 3rd Tuesday, Discovery Park, 3700 Gilmore Way, Burnaby, Contacts: Jordan Dobrikin 420-6081; Steven La Favor 467-0923.
VANCOUVER DBASE USERS GROUP, 2nd Wed., 7 pm. 800-1190 Hornby St. Van, 685-6645.
VANCOUVER ELECTRONIC PUBL. ASSOC., 1115 W. 11th, Vancouver, V6H 1K4 (mail). For info, call 733-9080 (leave msg).
VANCOUVER NETWARE USERS GROUP, Les Lebbrant 275-8684. Meets 1st Mon.
VANCOUVER NEXT USERS SOCIETY (VNUS), last Wed. 7 pm at TRIUMF Auditorium, 4004 Westbrook Mall, UBC, Lawrence Clark 275-5902.
VANCOUVER PORTABLE COMPUTER CLUB (VPCC), AMO 17, Jay Siegel, 4251 Lancelot Dr, Richmond, B.C., V7C 4S4, 271-1519.
VANCOUVER PC USER SOCIETY, Science World Auditorium, 6:30 pm, 2nd Thurs. $30/yr. 734-0060.
VAN. SINCLAIR USERS GROUP, Timex-Sinclair, 2nd Fri, Killarney Comm. Ctr., Gerd Breunung 931-5509.
VANTARI, Box 3614 Main Post Office, Van., BC V6B 3Y6. Judy Harcus 873-1941; Don Hatch 433-8055; 2nd Wed., Hastings Comm. Ctr., 3096 E. Hastings.
VERSACAD USER GROUP, 2nd Tues. Call CADD Solutions Inc., 681-4686 for info.
WANG SYSTEM USERS, 736-8841 ext 227, J.-P. Doiron.

GETTING STARTED

...*Continued from previous page*

9) Learn how you learn. At the risk of being obvious, by this I mean that not everyone learns the same way. While most people learn by doing, many prefer to learn by example, by watching it done properly first. This can be accomplished in a variety of ways, from taking a class to reading a book or watching a videotape. Many businesses wisely send their employees to courses, instead of simply thrusting a new word processing package at them and saying "learn this." As in most other social environments, a class is largely dependant on the interaction between its members; both teacher/student and student/student compatability is important. By this, I mean that if your teacher is constantly teaching at a different level that you are at, you won't "get it."

Sometimes, the teacher is too technical, too advanced. He or she bamboozles and frightens beginners with complex procedures. This teacher usually speaks a strange language called Computerese. I have found that many private computer consultants, such as those hired by businesses to install and look after their computer networks tend to fall into this trap. Is is easy, after all, to forget that not everyone knows what you know.

Conversely, if a class is comprised of both beginners and intermediate users, the teacher is placed in the unfortunate position of either leaving some of the novice students in the dust, or treating the intermediate class members like simpletons for the benefit of the first-timers. A quote from one of the Star Trek movies comes to mind, and indeed, at least as far as the teacher is concerned, Mr. Spock was right: "the needs of the many outweigh the needs of the few." If the course material isn't suitable for you, get a transfer. Better to do that, then gamble that the teacher will be able to juggle multiple levels of expertise in one class. Often, everyone may suffer in such a compromised position.

If you do find yourself in a course that you realize is not at your skill level, you can nearly always get a refund or transfer into a more appropriate course. Consult with the staff at the place where you pay for the courses. They usually know the refund policies.

10) Remember your spouse/girlfriend/boyfriend/whatever. If you don't know what I'm getting at, ask them. They probably do. Oh yes, and...

10(b) Enjoy! ❐

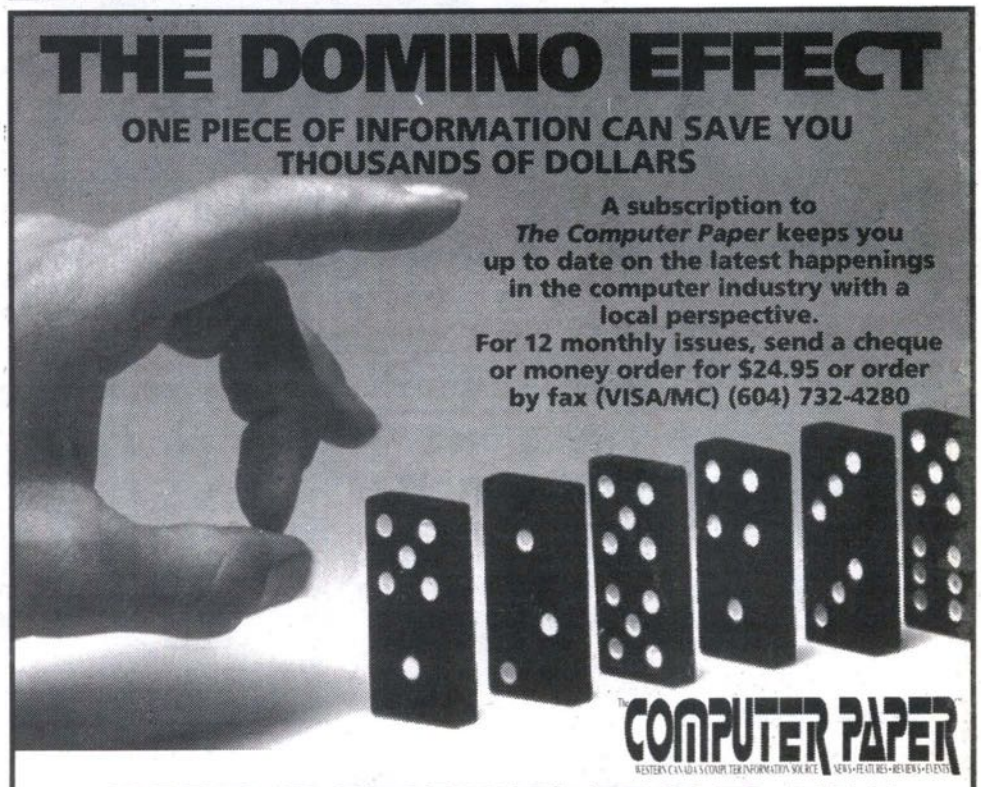
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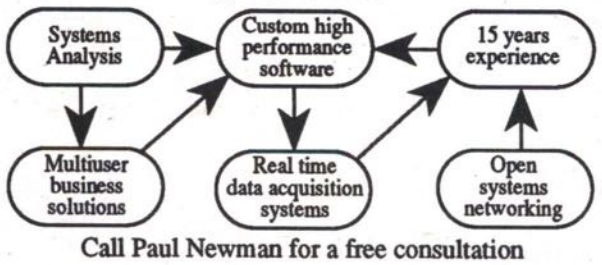
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BOOK REVIEW

DOS 5.0 Complete

Written by Manfred and Helmut Tornsdorf
Reviewed by Jim Mallory

From: Abacus, 5370 52nd Street, S.E., Grand Rapids, MI 49512.
Price: US$34.95
Rating: 3.8 (on a scale 1=lowest to 4=highest)

Summary: A book which not only covers the basics of DOS 5.0, but also shows the reader how to use the latest version of the Microsoft disk operating system. Well written, with numerous screen pictures and specific examples of the DOS commands. Comes with a disk that contains over 100 files which can be used as is to improve your computer's efficiency, or as examples of batch files you can create yourself.

It has been an axiom of computer users for as long as software publishers have produced user manuals that the manual doesn't make sense until *after* you know how to use the software. That has created a market for third parties to market how-to-use-it manuals which are supposed to make the software easier to use.

DOS 5.0 Complete does a reasonably good job of explaining the intricacies of Microsoft's latest edition of the disk operating system before you know how to use DOS. The book uses numerous icons in the margin to flag the reader with warnings, typical errors that might be encountered, notes and hints. This book works best if you have DOS 5.0 loaded on your computer and can follow along with the numerous examples, but even by just reading it, a user can get a lot out of the book.

Webster defines a "tome" as a large or scholarly book, and *DOS 5.0 Complete* certainly meets that definition, with 831 pages plus appendices. However, it's easy to read, with lots of white space and lots of sub-heads.

Some readers may find fault with the organization of this book, since it covers such functions as deleting and copying files in the first section, leaving the setting up and starting, using the keyboard, and working with disk drives, until the second section. However, that's nit picky.

My principal criticism was an inconsistency of target audience. *DOS 5.0 Complete* seemed to me to intermingle beginner level information with more advanced information. I would also like to have seen more definitions the first time a new term was introduced, or else a separate glossary.

Readers of *DOS 5.0 Complete*, especially if they have had some exposure to earlier versions of DOS, will become knowledgeable in those DOS functions that they want or need to know about fairly easily. For those of us who prefer to work from the command line, as well as less experienced users, or those who just prefer some sort of an interface between us and the operating system, this book explains both methods for each of the areas it discusses. I've been at this computer business a long time, and found this book did clarify some features I don't use very much or never had a good understanding of.

RATING

USEFULNESS: 3.8. I took off .2 because of what I considered a somewhat high price. I'd like to see this book priced at about $24.95, but maybe Abacus can't make any money at that price. Yes, there are other books on the market about DOS 5.0, and I haven't read many of them, but I like this book. I think it's a good addition to your library. It's easy to look up a particular DOS function and read that section, and it helps you set up your computer with DOS 5, especially given the myriad of setup functions to consider.

AVAILABILITY: 4.0 Available in local book stores and direct from Abacus, toll free at 800-451-4319, FAX 616-698-0325.

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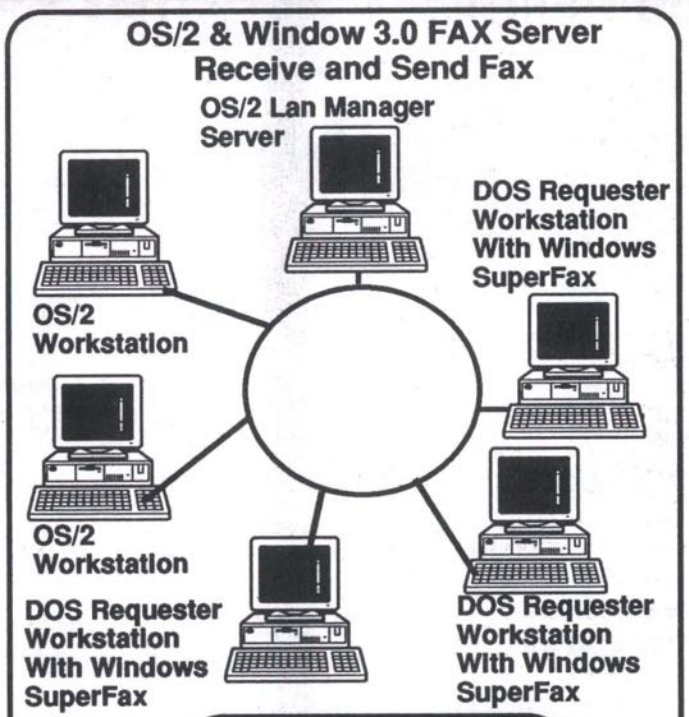
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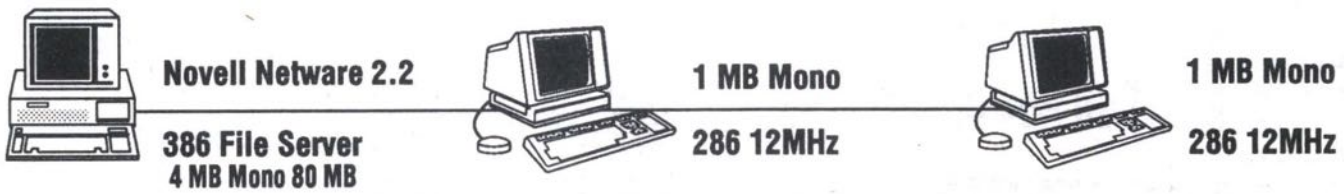
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Eclectic Computer Distribution was displaying Ergoprint 310, an HP InkJet printer stuck on top of seven paper trays. The idea of this unit, according to the salesperson, is for dentists, doctors and lawyers who share a common secretarial service. Instead of having to change paper trays all the time to get the right envelope, the secretary would simply select the paper tray in software before printing to the Ergoprint. For more information, contact Eclectic Computer Distribution (604) 683-2091.

Cicon Research & Development, a Vancouver-based software developer, was there showing off Repcon, their construction Management Software. This program adds a unique twist to the standard PERT and GANTT charts of most project management software. According to the developer, their linear planning charts which highlight conflicts and balance production are unique to the project management field. The program was developed by Alan Russell, a UBC engineering professor. For more information, contact Cicon Research and Development Ltd. (604) 732-4772.

A rejuvinated Promark Software was displaying their snazzily packaged new product offering. Since I last saw it, they have split their products in two. The first is called Mail Base, and it is designed to keep a large mailing list in top shape. Both programs contain Canada Post's entire listing of addresses and postal codes. When you enter your list into Mail Base, it will correct any wrong or missing postal codes. According to their pamphlet that they give out with the product, it costs Canada Post up to $1.25 to deliver an incorrectly addressed piece of 40 cent mail.

Promark also offers Professional Post, a more advanced program for large volume mailers seeking to gain Canada Post's incentive postal rates by doing more advanced Forward Sortation Areas. Contact Promark Software at (604)988-2051.

Canada Portable Computer was their with their usual good selection of the latest laptops. One thing that caught my eye was the new Thingi II, an ergonomically designed copy holder. The new clip allows for one handed paper insertion and removal. It sells for $8.95. Contact: Canada Portable Computers: (604) 534-6441.

Shield Importing was there with their No-Rad Shield. The No-Rad Shield is designed to eliminate or minimize a variety of types of radiation said to eminate from many of today's computer monitors. Apparently a number of corporations are starting to look at retrofitting their existing computers with these units. Contact: Shield Importing (604) 682-5325.

There was lots of other stuff there, but I only got there at 3 p.m. and they kicked me out at 6 p.m. when everything closed down. It was a smallish show, but most vendors I spoke with seemed happy with the turnout. A good start for the new show in town.

—Kirtan Singh Khalsa

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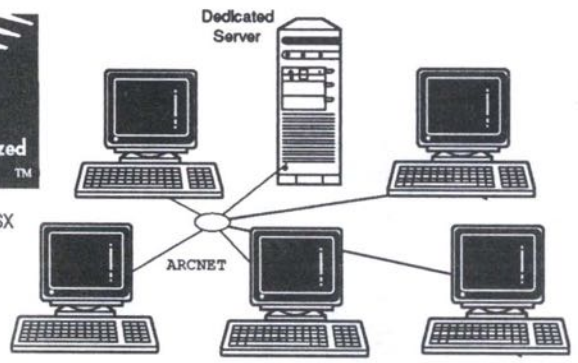
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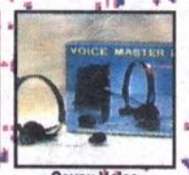
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Calculus for Windows	119	Franklin Dictionary	119	Paradox 3.5 compat Upgr.	199	Symphony Upg. 2.0 Nde to 2.2 Nde French	139
Calendar Creator Plus v4	59	Franklin Dictionary Windows 3	119	Paradox Engine	159	Symphony Upg. Server 2.0 to 2.2 French	139
Carbon Copy Plus v6.0	149	Freelance v4	368	Paradox Network	799	T-MAN V2.0 Point of Sale	599
Career Design	119	Freelance Upg. Server to v4 Server	115	Pascal v4.0 MS	269	Teach Yourself Word Perfect	59
Cash Collector (for A/R)	275	Freelance Upg. Node to v4 Node	91	PC Anywhere IV New	135	ThoughtLine (help think)	169
Catchword v1.1 (OCR Reader SW)	179	French Assistant (WP Translator)	129	PC Anywhere LAN	439	Timeline 4.0 with Graphics	489
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