B.C. Lower Mainland Edition September 1991 Volume 4 No. 9

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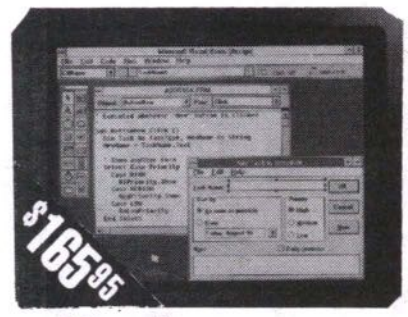

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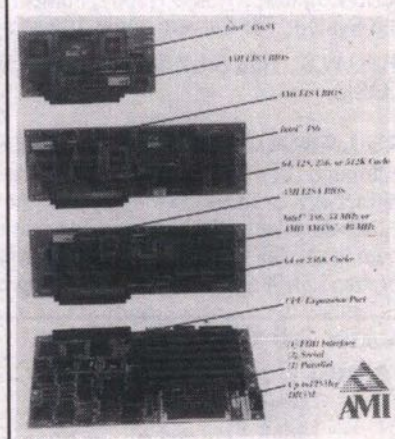

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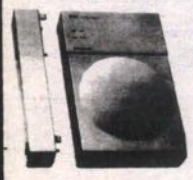

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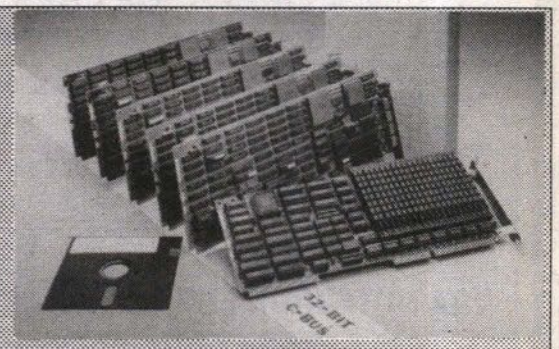

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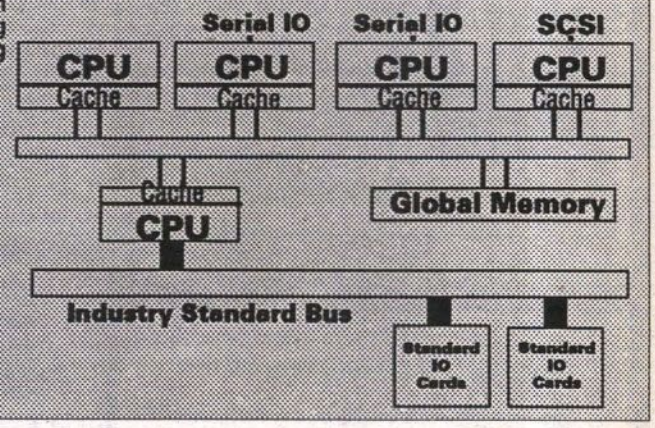

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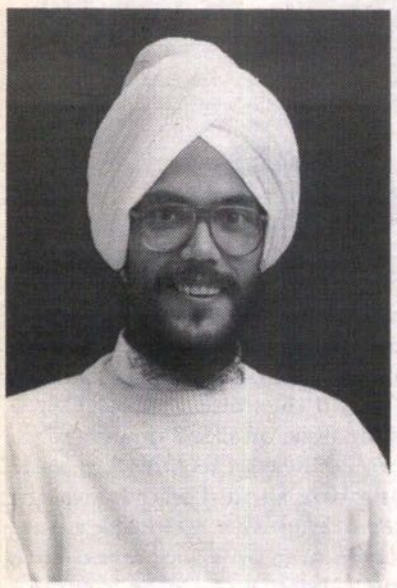
SEE OUR SYSTEMS AD PAGE 92

From the Editor



Teacher, leave those kids alone...

Our cover this month prompted an in-office joke about school being a place where they take bright lights and screw them up.

Computers are changing the learning process and to some, at least, bring into question the very necessity for schools. Just as computers have brought vast changes to corporations and created new options like telecommuting, home businesses and portable offices, the use of computers in education opens up the options of home schooling, using telecommunications in teaching, and brings new meaning to the concept of life-long learning.

CD-ROMs with their vast storage space and very rapid updating may put into question the viability of the old textbook route to learning. Educational software, with its endless patience and sophisticated graphics, can entertain as well as educate, and may well mean a shifting role for teachers and the entire school system.

This month we review three Canadian-developed education packages, *All the Write Type* and *Crosscountry Canada* from Didatech and *SchoolWare* by Quality Learning Systems. These are a few new examples of "fun to learn" educational software. We also bring you an article from School Superintendent Stewart R. Ladyman that highlights what is desirable in good educational software from a teacher's perspective. George Slade offers us "A Tale of Two Dyslexics," a story about how technology was able to provide a solution for adults with learning disabilities.

Life-long Learning

Life-long learning is a topic we tackle in articles on training. Bret Dobbin, a Winnipeg freelance writer, tells us that only the educated will survive. Ron McNutt, a recent graduate of the Infotech program at Capilano College in North Vancouver, gives us the saga of his career search after graduation.

Other Stuff

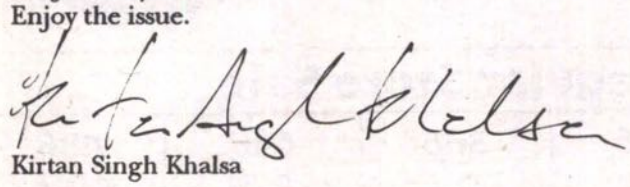
Nelson Ruest takes a look at OmniPage, an optical character recognition package that runs under Windows. The program allows you to scan in text from magazines, books, letters, etc. OmniPage then "reads" the text and converts it from a graphic into an editable text file. Although the technology is still not 100% accurate, he recommends it for anyone with a scanner and modest requirements.

Nelson has recently relocated his desktop publishing training business to the Ottawa valley. We wish him well and hope to see the occasional article from him.

Ace Moves East, Seeks Wild Life

Speaking of relocating, we learned this month that we are losing our ace desktop publisher and advertising production person, Carolyn Howse. She is moving to Toronto to pursue the wild life. Our loss, some lucky employer in Toronto's gain. We wish her only the best. We will be accepting resumés to fill the position for the end of October. If you are skilled at desktop publishing and are able to laugh appreciatively at your employer's occasionally dumb jokes, we may have a job for you.

Enjoy the issue.



Kirtan Singh Khalsa

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(B.C. Edition. Please call for Alberta & Manitoba schedules.)

Issue	Topics	Copy	Camera Ready	Distribution
OCT 91	Word Processing, Windows, Monitors	Sept 16	Sept 18	Oct 4
NOV 91	Unix, Workstations, Hard Drives	Oct 14	Oct 16	Nov 1
DEC 91	Games, Printers, The Best of 1991	Nov 11	Nov 13	Nov 29

Contents

B.C. Edition • Sept 1991

Features

MacWorld Report 14
Product news from the Boston schmooze. *From NewsBytes.*
The IBM-PC Turns 10 32
10 years ago, 64K was a lot of RAM. My, how times have changed. *From NewsBytes.*
Point-of-sale Systems: a Case History 59
After 3 years, did switching to a POS still seem such a good idea? *By Graeme Bennett.*
***The Computer Paper's* POS Survey** 60
Dealers tell which programs they recommend–and why. *By The Computer Paper staff.*
Educational Software: The Heart of Educational Change 72
An educator speaks out about educational software. *By Stewart R. Ladyman.*
Only The Educated Will Survive 84
Training staff pays off. *By Bret Dobbin.*
A Tale of Two Dyslexics 86
A True Story. *By George Slade.*

Articles

You Pay Your Money, You Take Your Chance 44
Determine the likelihood of component failure in your PC. *By Gordon Young.*
An Intro to CAD 53
A few tips on what to look for if you are new to CAD packages. *By Erl Teichroeb.*
Disk Punchers: are they safe? 56
You can turn 720K disks into 1.4MB disks. But should you? *By Graeme Bennett.*
Charles Moore 66
The originator of Forth comes to Vancouver. *By Roedy Green.*
Working With Computers 78
A search for high tech jobs reveals a need for deeper skills. *By R.G. McNutt.*
Microcomputer Research Takes Off at the Abbotsford Air Show 94
A technology Report. *By John Mulvihill.*

Reviews

OmniPage 3.0 46
Top OCR software comes to the PC. *By Nelson Ruest.*
Hitachi CD-ROM 52
It might be the fastest CD-ROM ever. So, what's not to like? *By Graeme Bennett.*
Visual BASIC 57
The Zen of Being Dapper. *By Thomas Fee.*
New Life for Old Macs 64
How to turn an old dinosaur into a raging thunder lizard. *By Graeme Bennett.*
Learning How to Type 73
Hunt-and-peck keyboardists, take heed. *By Peter Noah.*
Summer School 48
How I became a truck drivin' woman. *By Cathalynn Labonté-Smith.*
The Shareware Shelf 52
Try-before-you-buy educational software reviewed. *By Gordon Simmonds.*

Departments

Masthead 6
Mailbox 6
What's New 8
Newsbytes 11
Apple 11
Atari 25
Canadian News 25
Commodore 26
General 27
IBM World 32
Telecom 67
Trends 69
Unix 69
Computer Calendar 88
Computer Classified 89
Computer Directory 91
Index of Advertisers 91

Masthead

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LETTERS

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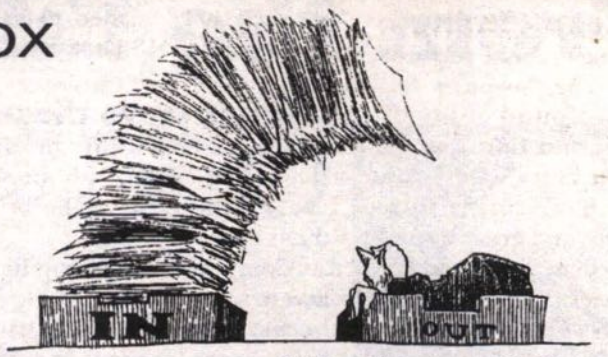

OS/2 For You?

I read Mr. Barr's interesting article on OS/2 in your August issue; it was most informative.

His message is plain enough; buy OS/2 instead of Windows 3.0 and the necessary supplementary programs and save money. Mr. Barr's advice makes a lot of sense for someone who is going to buy a new system when OS/2 is actually available. However, a lot of us have already installed Windows/DOS 5.0 on 386 class computers and purchased those supplementary programs.

My system works to my satisfaction; I use MS Word for Windows and Excel 3.0, together with a number of text-based programs. I do get the occasional lock-up, and it would be nice to have a more "solid" operating system, but I do not see the necessity to buy OS/2 in light of the investment I have already made.

Wasn't OS/2, having a 16 bit structure, primarily designed to work with 286 computers? Wouldn't (we)...be better off to wait for OS/3, which will have a 32 bit structure and will be designed to make full use of the potential of the 386/486 computers? Do you think that the software companies are going to program for OS/2, or will they also wait for OS/3? What is the news on OS/3 nowadays?

There is always the question as to how long one should wait for major advances or...go with technology now, when, like me, one was faced with installing a system so as to be "open for business" on a given date.

I enjoy your paper very much; the material is fresh and useful. It is nice to read opinions from people other than John Dvorak, bless his heart, who seems to slip his little swiftly composed articles into everything from *PC Magazine* to the *Vancouver Sun*.

And bravo for a B.C.-based enterprise! I bought my system from a company whose advertisement caught my eye in your paper.

David P. Bellwood,
Barrister & Solicitor, Vancouver

See Newsbytes for more on the future of OS/2

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LETTERS

Kudos keep coming

Just a fax to say keep up the good work with *The Computer Paper*. I've... 'made a profound study of' the last three issues and find the whole effort excellent in every way: layout; articles (as in good writing); lots of latest product info; and great display ads.

In particular, I enjoyed the series by Mike (Beswick) entitled, "How to Buy a Computer—For Novices;" also Gordon's (Glaze) "Tips & Tricks" fax article will help others enjoy the convenience of the send-fax boards some of us have been using for a couple of years now.

A little aside for Gordon Glaze: Could you recommend a send/fax - cum modem, perhaps that could be used on the road with my Toshiba 1000 laptop? Something that just slips on the 9 pin comm-port, battery/AC operated would be perfect — if the price is around $200! Any suggestions?

William J. Irvine
Vancouver

We've found the MaxLite external portable fax/modem to be a good product. This tiny (3" x 4¼" x 1") unit is an AC- or battery-powered 2400-bps Hayes-compatible modem with error correction and data compression, plus a 9600-bps send and receive fax that works in the background. It is avialable in both PC and Mac configurations and even goes to sleep when not in use to conserve battery power. It's from Macronix, Inc., 408-453-8488. They are lining up local dealers.

AppleWorks for the teacher

I was interested in your advice to reader Fred Houghton, who wanted to transfer his AppleWorks files to various MS-DOS formats. Unfortunately, he will not be able to implement your advice because AppleWorks does not allow you to save files in WKS or DBF formats.

Here is a better solution. A product called CrossWorks consists of a cable to connect an Apple II with an IBM-compatible computer and file transfer software for both machines. During the transfer, CrossWorks can change AppleWorks' word processing files into WordPerfect format and spreadsheet files into Lotus 1-2-3 format. CrossWorks also supports MS Works and is available for US$99 from: SoftSpoken, Inc., P.O. Box 18343, Raleigh, NC 27619. Tel.: (919) 870-5694.

Gareth Jones
Vancouver

Apple talk

I too lived with and loved my Apple IIs over an eight-year period spanning a II plus, IIc and IIGS but found myself coerced into switching to MS-DOS thanks to Apple's negligence of us all. I am now the happier slave of a Zeos 386 DX laptop with a 42MB HD and Super VGA card. This is a fabulous machine..at only C$2,900 (landed) and is the equal of any $5,700 Toshiba laptop with similar options.

Regardless, like Mr. Houghton of Ladysmith, I found myself with approximately 2000 old ProDos files that I wished to have access to via my new MS-DOS machine. I am writing because there is a much simpler solution... CrossWorks..The only drawback that I found was that I had to rename all my files to fit the more restrictive parameters dictated by MS-DOS..

Ross MacDonald
Vancouver

Thanks guys, we knew somebody knew the answer.

More Polish

In answer to Mr. Drozynski's letter (June 1991) you didn't mention 3 simple solutions:

I. MS-DOS 5.0 has code pages for all European languages, including Polish. With its improved editor, all that is required is a compatible printer which accepts downloadable characters. The printer has to be one of the following: IBM Proprinter II and III Model 4201, II and IIIXL Model 4202, Proprinter X24E Models 4207, 4208 or IBM Quietwriter III Model 5202 or compatibles.

2. WordPerfect 5.1 has all the characters for Polish in its character file. The keyboard layout can be changed in the Setup option (Shift-F1;5;). Any printer with graphic capability will print out Polish characters.

3. Intex 1.2A is a Shareware wordprocessor for Polish (and many other languages). It requires a printer which accepts downloadable characters. They also offer a guide to multilingual spelling checkers, dictionaries, thesauri and desktop publishing in Polish. There is no translation software. Their address is:

Intex Software Systems International Ltd., P.O. Box 3068, Stamford, CT 06905-0068, Tel. (203) 975-7412.

From my experience, the hardest thing is finding an adequate printer.

By the way, the June issue was the first I've ever read and I think it's great. You'll find enclosed a check for my subscription for 1 year.

R. Peter Urbanski
Montreal-West

BBS query

Enclosed is my subscription for next year....I actually work on Baffin Island. I have a Toshiba computer here with a modem. I have satellite access to North Bay Military Base and Inet... I belong to On Line Now out of Thunder Bay and used to belong to the old C.R.S. out of Toronto. I have been trying to find a Vancouver BBS that I can access from North Bay. Do you have any suggestions?

I look forward to getting your paper every month, to see what is happening in computers in general and in Vancouver in particular.

Robin Fry
Winnipeg

Check the index for Online systems. Mind Link, Suzy and Dial A File come to mind.

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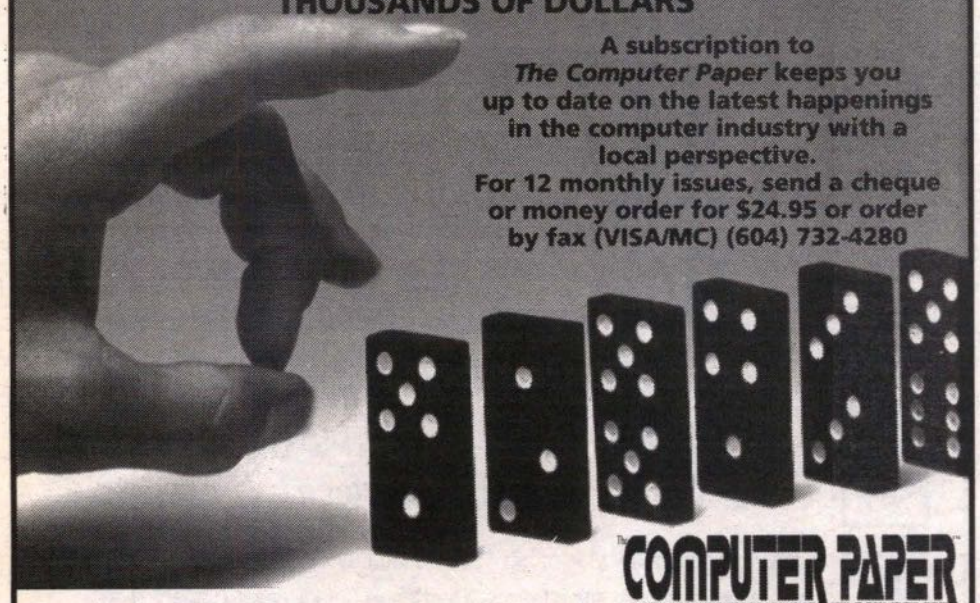

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What's **New**

Vancouver Business Computer Show

Industrial Trade and Consumer Shows (ITCS) is producing their first Vancouver show on September 18th & 19th at the Robson Square Conference Centre. The show, although expected to be smaller than the Pacific Rim Show in January, will include some big-name software companies under the Egghead banner. It seems Egghead is launching a direct sales office and warehouse in Richmond in September as well. Representatives are expected from Microsoft, WordPerfect, Borland, Symantec, Micrografx, Aldus and Central Point Software among others. ITCS also produces the Canadian Computer Show in Toronto in October as well as a show in Edmonton and one in Calgary. The show runs 10 a.m. to 6 p.m. For more information, contact ITCS in Vancouver at (604) 224-2207.

Softworld debuts in September

To acknowledge SOFTWORLD's international perspective, Michael Wilson, Minister of External Affairs, will be on hand to open the event on September 22nd. Delegations are expected from Japan, China, Taiwan, Hong Kong and Singapore. One of the events planned is a Trading Forum which will include a series of 7-minute presentations from developers. Potential investors are expected to witness over 150 presentations.

The goal of SOFTWORLD is to help establish Vancouver as the primary gateway between North America and the Asia Pacific. It will be held in Vancouver every two years. The conference costs $590. For more information contact ann lévi-lloyd (604) 682-2034.

PCCFA Announces Annual Fair and Swap Meet Date

VANCOUVER, B.C.,- July 9,1991— The Pacific Coast Computer Fair Association announced today that the planning is well under way for their annual computer fair and swap meet. According to show organizers, it is the Lower Mainland's premier computer bargain-hunters' event and it will be held on Saturday, October 19, 1991, from 10 a.m.to 4 p.m. For the twelfth consecutive year, this event will be held at McPherson Centre, 7325 MacPherson Avenue, Burnaby, just a few blocks southeast of the Royal Oak Skytrain station. The admission price of $3 (free for children under 10 and $2 for seniors) includes a chance to win a door prize.

As in previous years, private individuals and commercial businesses will sell new and used computer equipment, software, books, and other computer-related items. Computer clubs representing most of the popular personal computers will also have displays of equipment and software, and club members will be available to answer questions regarding their club's functions or their equipment and its software.

The PCCFA, a non-profit association of volunteers, is bringing back its popular speakers' program with two parallel streams of talks and workshops running on the upper floor of MacPherson Centre. Tentative speakers include representatives of Microsoft Canada, Apple Canada, Commodore Canada and Atari Canada.

The cost of tables for sellers will be $35, if reserved before October 1, $45 thereafter, and they can be reserved by calling (604)420-3286 starting September 16th.

Further information can be found on MIND LINK! BBS, discussion group PCCFA.Fair. Hosted by Peter Hughes DATA: 576-1241, 685-1214, 856-3231, For non-members of MIND LINK! request a complementary membership of 5 hours to access this information. If you require help call VOICE 534-5663.

Born to Shop

According to a newsletter put out by Jack Cooke, organizer of the quarterly Computer Swap Meet, 87% of the shoppers who attended his last swap meet were male. His customer survey goes on to state that 63% of all sales happen within the first two hours and 28% in the last two hours. Another reason to get there early. (Jack used to be a political organizer, hence his penchant for demographics) The next Computer Swap-Meet is scheduled for September 21st at the McPherson Convention Centre, 7325 MacPherson Ave, Burnaby. For more information contact: (604) 531-0829.

Postscript Color Lasers Available at Service Bureaus

Both Laser's Edge and Wysiwig Graphics in Vancouver, and OCS Technologies in Richmond acquired Color Laser photocopiers recently. (For the record, Laser's Edge claims to have gotten theirs three days before the competition, justifying their claim to being the first in B.C.) You may have already seen color laser photocopiers in a number of locations. What makes these units unique is that they can be printed to from PC and Macintosh computers. The quality of the photocopies is superior to most 300 dots-per-inch (dpi) laser printers, producing 400 dpi output. The samples we have seen are very encouraging. At *The Computer Paper,* we are experimenting with using the output from these units for color keys at a considerable savings. Sample prices for quantity one, letter size $14 and tabloid size $20. Once you have one out of the machine, the duplicating cost goes way down, starting at about $3.50/letter sized sheet and going down with volume. If you need impressive, low-volume color documents, and you are starting from a computer, check these units out. It will be a while before they show up in your own office however.

The cost of the photocopier is around $50,000 and the RIP box to talk to the computer is about $20,000. Contact Laser's Edge at (604) 662-3774, Wysiwig at (604) 684-5466, OCS Technologies (604) 273-8045.

Pictured above are: (centre) Doug Koshima, President, Sharp Electronics of Canada, (left) Hideo (Henry) Idera, V.P. Information Systems and (right) Minitronics owner, Bud Li-Lam.

Minitronics opens Sharp-only showroom

Minitronics Office Automation opened a Sharp Product Centre at 1948 Kingsway.in Vancouver on August 8th. On hand for the opening was Doug Koshima, the newly appointed president of Sharp Electronics of Canada. Products shown included Sharp's color laptop, a 386 version of their popular notebook (the PC 6600) and a variety of their TFT (Thin Film Transistor) LCD projection panels for corporate desktop presentations. The color on both the laptop and the projection panels is very impressive. Sharp seems to be on the leading edge of LCD and display technology. According to their representatives, a good portion of LCD panels on other laptop computers originate with Sharp. For more information, contact: Minitronics 872-3225.

Oops

Last month we mentioned that the Electronic Bookstore is offering printed versions of their books, previously only available online from Suzy. We got the telephone number wrong. The number for The Electronic Bookstore is (604) 874-0023.

Mind Link! Startup Kit now available in Computer Stores

The Mind Link! Startup Kit can now be purchased at a number of Lower Mainland computer stores. Included in the Startup Kit is a 4-month membership, easy to follow Beginner's Guide, handy reference card, general information about the system including terminal configuration tips and the equivalent of 12 daytime hours of free time. Contact Mind Link! (Office: 534-5663) for the store nearest you or log on as a GUEST and see for yourself (BBS: 576-1214). You can also send messages, articles, letters to the editor, etc to *The Computer Paper* via Mind Link!. When you log on, simply type "Computer Paper" at the first prompt. This will take you into an area of the BBS dedicated to communicating with us.

Slipped a Diskette?

Are you one of the 85% of the population with some kind of back pain? Too much time at the computer terminal? Did you know that most of that pain can be relieved through proper back care? The Burnaby YMCA is now offering the "Y's way to a Healthy Back" program to help you relieve your back pain. Some of the topics covered include good alignment, posture, mechanical back pain and relaxation. This program runs for six weeks, twice weekly starting September 17th. Contact the Burnaby YMCA 294-9622 and register now. The fees are $55 for 6 weeks.

Purchase Ordering Software

NRN Software of Vancouver has announced the release of a new Purchase Ordering (PO) software package. According to the developer, PO, was written in Clipper and tested by local purchasing agents. It includes stock/inventory database, vendor database, previous pricing look-up, all tax and shipping costs, custom or built-in purchase order forms. This is the second product in the NRN family. The first was a Facilities Energy Management package. Contact: Richmark Enterprises (604) 681-4309.

RIP box Ripped Off

According to a recent report in *Business in Vancouver*, Bridgeport Graphics in Richmond was recently broken into. Thieves took a number of computers, a laser printer, every disc in sight and the $40,000 raster image processor (RIP box) for their Linotronic machine. They apparently stopped short of hoisting the 700 -

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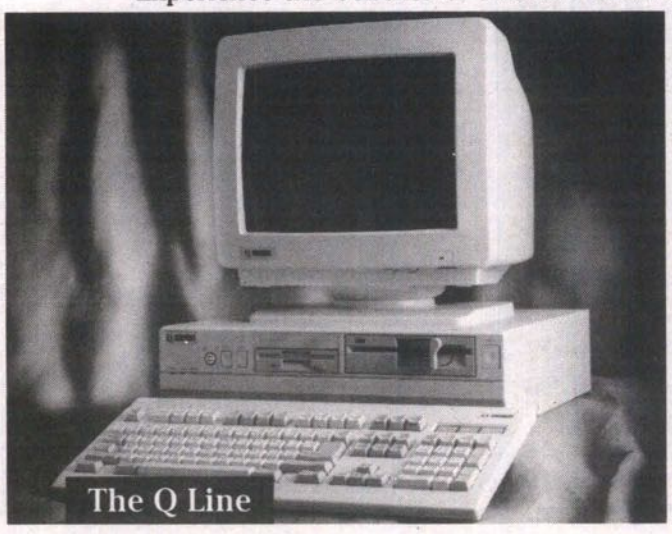

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512K VGA card, 1024 x 768
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Microsoft MS-DOS 5.0

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'386DX	33MHz 128K cache	$ 1699
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intel 80387DX math coprocessor	$ 299
3 button Logitech serial Mouseman	$ 75
- with MS Windows 3.0	$ 139
Cardinal internal 2400/9600 bps modem/fax (S/R)	$ 139
- with WinFax Pro 2.0	$ 219
24 pin Raven 2416 printer and cable	$ 299
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Laptop '386SX
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pound Linotronic. Fast work by the insurance company as well as Byte Computers, Linotype Canada, and the assistance of two competitors, Alphagraphics Printshops and Zenith Graphics, got Bridgeport back on their feet in record time.

While this story had a happy ending, it is indicative of a growing number of computer-related businesses that have been broken into in the last little while — not all of which are ending so happily.

Buyers are encouraged to beware of too-good-to-be-true prices from unknown sources.

Software for Sports Card Fans

INFOmation has recently announced SportFolio, software designed for sportscard collectors. It aims to solve a problem that all sportscards collectors face: organizing, counting, sorting, documenting and evaluating the collection. The program features twenty-one different reports, four different graphs and real-time updating. For more information, contact: INFOmation 572-8689.

Mac-Based ESL Training Program makes the Big time

Locally developed MacESL (English as a Second Language) and Open Format MacSL were recently listed in Chariot Software's Macintosh Educational Software Collection. MacESL was developed by Doug Tomilson of University Colleges in Vancouver, to assist students in learning English. The programs are done in HyperCard. The program allows students to compare their own versions of words with Macrecorder digitized speech. According to the developers, the major advantage of using a computer for this type of training is that it is endlessly patient. The programs sell for $87. Contact: University Colleges (604) 685-9380.

Multi-Level Marketing Software

CQ Research Corp of Vancouver, has announced an all-around office management software for the independent Multi-Level Distributor. The program is called The Mint, and it includes activity planning, contact management, inventory control, telemarketing, expense tracking, and point of sale modules. Contact CQ Research for more information: (604) 731-5583.

Reseller Management Handbook

Channel Strategies Inc, a Vancouver-based management consulting firm, has announced the second edition of their best-selling Reseller Management Handbook. The book is 120 pages long and provides action-oriented information on marketing and sales, financial management, financing, receivables management, staffing, reseller business models and performance measurement. The contents were written with resellers in mind. The book is $40 and an accompanying software package based on Excel (Mac and Windows) or Excel templates is also available for $495. Contact Channel Strategies (604) 263-6811.

Computer Cases and Power Supplies now available locally

Winpac Systems, a subsidiary of Famous Computer Canada Inc, of Toronto, has opened a Richmond office and warehouse to service the Vancouver reseller market. Winpac sells the cases on many of the computers assembled in the local market as well as in Toronto. For more information contact: (604) 244-9501.

Local Developer Elected to SPA Pen Computing SIG

The Pen Computing Special Interest Group (SIG) of the Software Publishers Association (SPA) announced recently that Norm Francis, President and co-founder of PenMagic Software Inc., has been elected to its first Executive Board. PenMagic has also recently announced its intention to develop for the recently announced NCR 3125 Notepad pen-based computer. Pen-based computing promises to open computer use up to a new group of people who do not currently know how to type. Contact: PenMagic (604)988-9982.

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NewsBytes

"Apple Needs IBM" Says Apple Executive

SYDNEY, AUSTRALIA, JUL 29 (NB)—Apple's Pacific region vice president, Ian Diery, was in Sydney last week, and is reported in the Financial Review newspaper as saying IBM was crucial to the future of Apple.

When asked about the consequences should the Apple-IBM deal fail, he said "I don't like to think!" He said, however, that Apple wasn't the poor relation in the agreement, "because we've got the volume—we're selling more personal computers than IBM." He is reported as saying Apple was bringing valuable expertise to the marriage, including multimedia, education computing, and consumer-level technology. He said he expected the IBM ties to add at least $1 billion per year to Apple sales, though it would be two or three years before product reached the marketplace.

Speaking about software for the new platform, he said, "We see Claris being a major player, though we won't give any undue preference." He also said he didn't expect Apple's relationship with Microsoft to cool following the announcement.

Apple Upgrades Style/Laserwriter Printers

CUPERTINO, CALIFORNIA, AUG 9 (NB)—Apple has offered enhancements to two of its printers in the form of new software that provides background printing capabilities for the StyleWriter, and new printer software that reportedly doubles the performance of the LaserWriter LS.

According to the company, the software for the StyleWriter allows users to continue working while a document is being printed. Four new TrueType fonts have also been added to the printer: Chicago, Geneva, Monaco, and New York. These join the current set of TrueType fonts which are automatically installed in the user's system during the normal printer installation procedure, and include Times, Courier, Helvetica and Symbol.

The new LaserWriter LS, in addition to getting its performance doubled, also lucks out by getting approximately 30 percent more paper capacity, up to 70 sheets from 50.

For paper-hungry users and memo-fanatics, an optional 250-sheet paper tray continues to be available. The LaserWriter LS also gets the four additional TrueType fonts.

Existing users of both printers can obtain the new printer software and TrueType fonts (new installation disks) at the same time through authorized Apple resellers, Apple user groups and online services.

Contact: Kate Paisley, Apple Computer, 408-974-5453.

Outbound Intros New "Mac Notebook"

BOSTON, MASSACHUSETTS, AUG 7 (NB)—Outbound Systems has unveiled a series of notebook-sized Mac-compatible computers. The new machines will replace the original Outbound Mac portable clone, which the company has been shipping for the past 18 months.

At the MacWorld show, Outbound System's booth was packed four deep as soon as the doors opened. Featured was the company's new line of notebook sized computers. All five machines in the line measure approximately 8.5 inches deep by 11 inches wide by 2

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inches tall. All of them weigh about 6.25 pounds.

This makes them the lightest Mac-compatible portables on the market. Prices start at $2,529 for the basic Motorola 68000-based machine with two megabytes (MB) of RAM, a superdrive compatible floppy disk, battery, and power adapter - to $4,299 for the top of the line model which features a 68030 microprocessor, 4MB of RAM, the floppy drive, a 60MB hard disk, battery and power adapter.

Bob Louthan, President of Outbound Systems, introduced the new machines in a press conference, stating that the Notebook series is "smaller, faster, lighter, and expandable."

As to the latter claim, he explained that all five machines in the line have standardized components and the process of upgrading is simply one of swapping the new components in for the old.

Louthan gave a demonstration in which he removed the CPU card, that also contains the RAM, and the hard disk as a way of showing the ease of upgrading the machines. Aside from these removable components, the machines are powered by standard video camera type batteries which can be recharged in the computer or externally.

Projected operating life on a single battery charge is three hours. The machines provide all of the standard Macintosh connectors including a single SCSI (Small Computer System Interface) connector. It is possible to dock a Notebook to a regular Macintosh via the SCSI cable and then all of the Notebook devices become regular SCSI devices on the base Macintosh.

Outbound Systems has solved the problem of providing a set of ROMs for their machines by signing an agreement with Apple Computer. Details of the agreement are being kept confidential, however, Louthan did describe the process.

When a customer purchases an Outbound Notebook, he also purchases a used Mac 512KE or SE. Outbound then repurchases the "shell" of the used Macintosh (i.e., everything but the ROMs) back from the customer and disposes of it. As a matter of fact, the customer never sees the used Macintosh that he purchased. If the customer has a used Macintosh, Outbound will sell the Notebook to him for $200 less.

Louthan was asked about the availability of Macintosh ROMs in case of high demand for his product. He replied that there are well over three million Macintoshes that sport the particular ROMs that his machines need and that there should be no problem getting them.

The machine was demonstrated as System 7.0 compatible. Louthan stated that shipments to the dealer channels began over two weeks ago and that all 250-plus dealers should have received their machines by now. Most of Outbound's dealers are also Apple dealers.

Contact: Leigh Anne Sutton, Outbound Systems, 303-786-9200.

OEM Production Of Book-Type Macintosh To Sony

TOKYO, JAPAN, AUG 2 (NB)—Apple Computer will turn over to Sony production of a book-type Macintosh, says the Nikkei newspaper. According to the nation's most reliable economic paper, Sony will manufacture Apple Computer's next generation book-type Macintosh by the end of this year. A Sony spokesman has confirmed to various media organizations that it will make the notebook machine for Apple. Apple Computer, however, denies that any deal with Sony has been struck.

The relationship between Apple and Sony is already close. Currently, Sony is providing various Macintosh parts, such as floppy disk drives, for Apple Computer.

Apple Computer has already publicly discussed plans for a lightweight, notebook-style Macintosh. The Nikkei says the unit will weigh between 2 and 3 kg (four to seven pounds), and the list price will be 200,000 to 300,000 yen (around $1,850).

Sony will produce the book-type Macintosh on an OEM (original equipment manufacturer) basis, and it will not sell the machine under the Sony brand name.

Sony has the technology as well as the production line for small computers, so analysts say it will be easy for Sony to adapt the line to the manufacture of a book-type Macintosh.

Apple Computer's Portable has been on the market since1989, but its popularity is limited due to the weight (7.2kg) and the price (998,000 yen or $7,400).

Sony also has advanced multimedia technology which observers suggest

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NEWSBYTES

Apple Computer might use in furthering multimedia development on the Macintosh, and specifically a notebook Mac.

Contact: Sony, +81-3-3448-2200.

Claris Intros *ClarisWorks* Integrated Software

SANTA CLARA, CALIFORNIA, JUL 29 (NB)—Claris has introduced an integrated software package for Macintosh computers that will directly compete with Microsoft Works.

Like Microsoft Works, ClarisWorks features word processing, graphics, spreadsheet, charting, database management, and communications features.

Renee Risch, spokesperson for Claris, told Newsbytes that, unlike Microsoft Works, ClarisWorks lets users access tools and features from within a single document. Other existing integrated products force the user to move among different "modules."

A tool palette allows users to add text, graphics, calculations and charts to their documents at any time.

The company maintains that users can upgrade to the company's MacWrite Pro for word processing, MacDraw Pro for graphics, and FileMaker Pro for database management with relative ease.

ClarisWorks is scheduled to ship in the United States during the fourth quarter of 1991 at the suggested price of US $299. Current owners of Claris AppleWorks, Appleworks GS, Microsoft Works, Symantec GreatWorks, and RagTime can upgrade to ClarisWorks for $99.

Contact: Renee Risch, Claris Corp., 408-987-7534.

Claris Ships *Resolve* Spreadsheet

SANTA CLARA, CALIFORNIA, AUG 6 (NB)—Following its recent release of the ClarisWorks integrated spreadsheet to compete directly with Microsoft Works, Claris has now announced shipments of its new Resolve spreadsheet for the Macintosh, designed to take market share from the popular Excel, and the edge out of the recently announced Lotus 1-2-3 for the Mac.

According to the company, Resolve features an intuitive user interface that combines ease of use and colorful graphics with powerful new spreadsheet functionality. The spreadsheet also offers advanced features, including a scripting language to enable sophisticated users to automate repetitive tasks, said the company.

As with all new Macintosh releases these days, the company says that Resolve takes full advantage of System 7.0.

Resolve is available now from authorized Claris dealers in the United States at a suggested retail price of $399. The company is offering an upgrade policy where current U.S. owners of Microsoft Excel, Lotus 1-2-3, Informix Wingz, Ashton-Tate Full Impact and Bravo Technology MacCalc programs can purchase Resolve for $99.

Contact: Steve Ruddock, Claris Corp., 408-987-7202.

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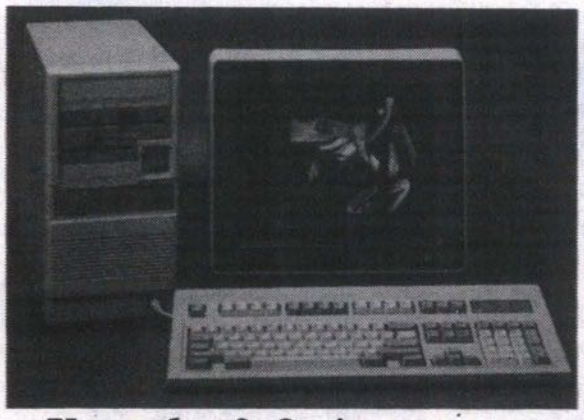

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NEWSBYTES

Flight Simulator 4.0 Debuts

REDMOND, WASHINGTON, AUG 6 (NB)—Microsoft has announced the release of Flight Simulator Version 4.0 for the Macintosh. The package brings to the Mac many of the enhancements seen in the latest editions for the IBM PC environment.

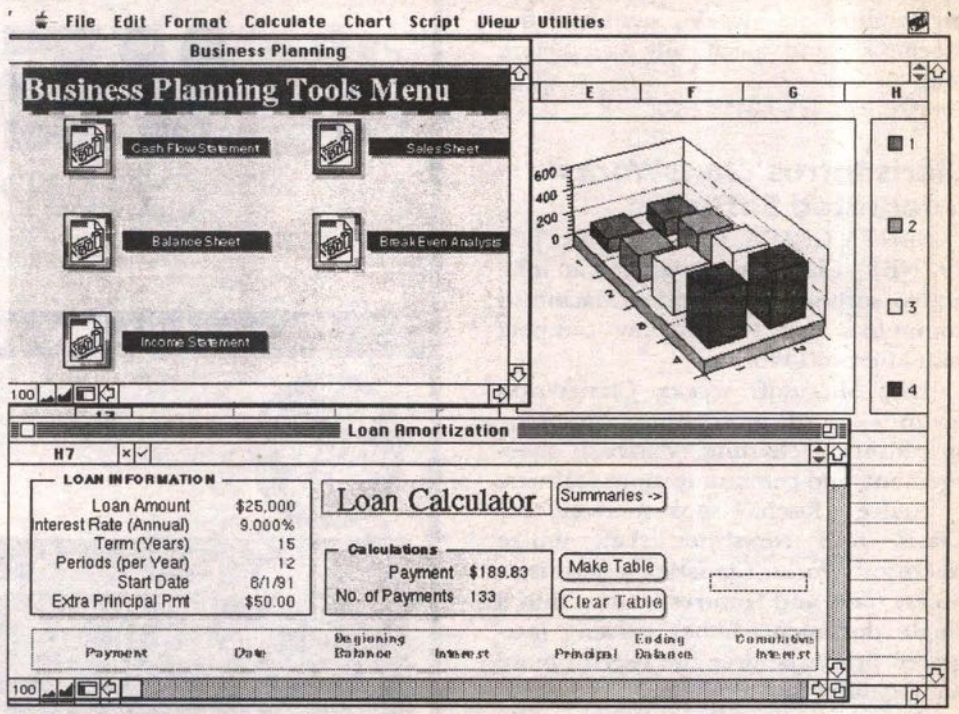
The latest release of the Mac flight simulation software will run in color or monochrome on all Mac models later than the Mac Plus. Desktop flyers will find three-dimensional graphics, whether using the color or monochrome version.

Microsoft now offers a fleet of aircraft including a Cessna 182, a Lear Jet, a Sopwith Camel, and a Schweizer 2-32 sailplane. You can even design and fly your own plane, using the experimental aircraft designer feature. If you design your own plane, you can modify the appearance and the aerodynamics of the aircraft and test them against the physical laws of flight.

When using the package, pilots will have multiple windows available to provide an on-screen map of the selected flight route, a cockpit view, a look from the tower, or a view from a spotter plane.

For neophyte pilots, on-screen flight instruction teaches everything from the basics to aerobatics, according to Microsoft. The new release is compatible with Apple's new operating system, System 7.0.

Contact: Sarah Charf, Microsoft, 206-882-8080.



MacWorld Expo Report

BOSTON, MASSACHUSETTS, AUG 12 (NB)—The Boston version of the MacWorld Expo has always been noted as one of the highlights of the year for Macintosh fans. This year was no exception with hundreds of companies using this week as their preferred time to announce new products or upgrades.

In addition to the product introductions highlighted elsewhere in this issue, several products were seen for the first time or technologies demonstrated for the first time to the avid Apple Mac users who came to the show. This article is a distillation of some of the more prominent of these.

New Software

Claris has announced that it has begun to ship Resolve, its new spreadsheet program. Resolve is based on the Wingz kernel that Claris purchased several years ago that has been enhanced and improved and had the familiar Claris "look and feel" put on it. The

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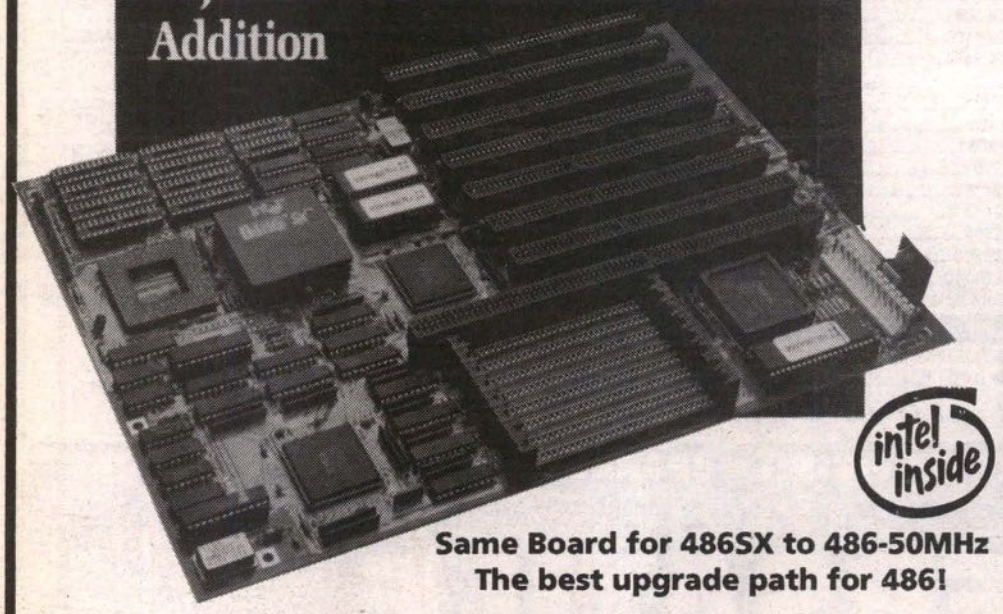

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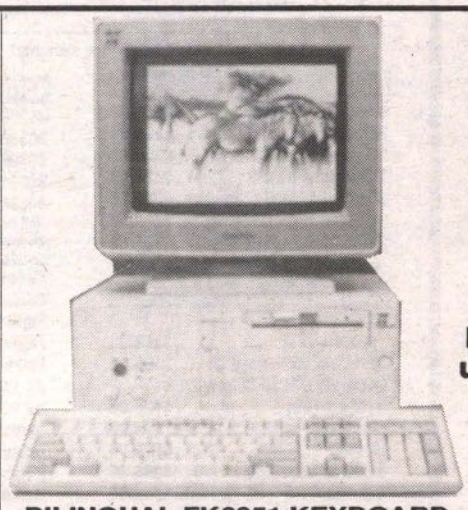

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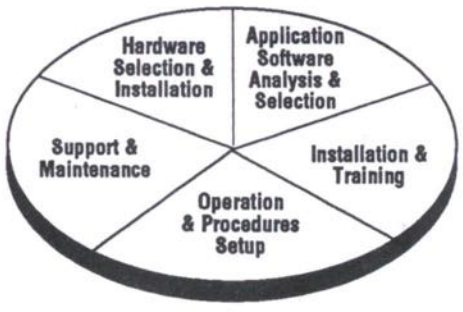

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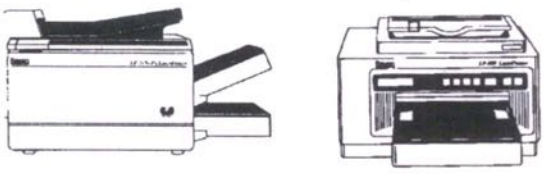

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package is completely System 7.0 compatible and takes advantage of all of System 7.0's features. Resolve will retail for $399 and Claris is offering current users of Excel, Wingz, Full Impact, and MacCalc the option of switching to Resolve for a fee of $99.

Stingray Entertainment has begun shipments of its new arcade game for the Mac called "Frankie's Dungeon." This is a graphical action game that takes place in a big dungeon with lots of killer monsters and a single hero who must conquer all or die trying. Available immediately, Frankie's Dungeon will retail for $35.

Software Upgrades

Insignia Solutions has announced a sweeping upgrade program and realignment of their line of MS-DOS software emulators. All three of the company's products—Entry Level SoftPC, Universal SoftPC, and SoftAT—have now been upgraded to Version 2.5. The new versions feature support for the Microsoft CD-ROM (compact disk, read only memory) extensions, Novell networking capability, more printer emulations, new user interface, System 7.0 compatibility, and a quicker installation procedure.

Apple Computer announced upgrades to two of its printer drivers. The Personal LaserWriter LS and the StyleWriter will now be shipped with a new version of the printer driver. These new drivers enhance the printer's speeds, allows for background printing, support larger paper tray capacities, and include four more TrueType fonts. Current users wishing to upgrade should be able to get the new versions from their dealers or user groups. Apple is not charging the dealers or user groups for the new software.

SuperMac will begin shipping Version 2.7 of its backup software DiskFit in late August. DiskFit 2.7 incorporates all of the features of Network DiskFit which in turn is being discontinued by the company. Version 2.7 also brings an additional new benefit in complete support of Apple's System 7. Upgrades to current owners will be available for $24.95 while Network DiskFit owners will be offered a kit containing 32 copies of DiskFit for $15 per unit.

InLine Design has released 3 in Three, a non-violent logic game that is intended to be educational but still retail an element of fun. This game has been released previously under the CinemaWare label. Unfortunately, CinemaWare filed for bankruptcy prior to being able to distribute a large number of copies, leading Inline Design to pick up the distribution rights.

MapInfo demonstrated MapInfo for Macintosh 1.1. This new version, which is shipping now, incorporates increased performance for drawing and redrawing maps on the screen, Dynamic statistics functions, dot density maps, and the ability to locate an intersection by entering the names of the streets involved. The price of the package has been set at $995 and an international version is due out soon.

Reference Software has announced that Grammatik Mac is compatible with Apple's System 7.0 and takes advantage of certain features of the new operating system. Features like Balloon help are being utilized to make it easier for users to make use of the capabilities of Grammatik Mac according to the company.

Software Demos

Insignia Solutions was demonstrating their upcoming product SoftNode. SoftNode will allow Macintosh users running SoftPC access to Novell networks. SoftNode will be compatible with Novell ELS II Netware Version 2.15, Advanced Netware Version 2.15, 2.2 and Netware 386 in the Ethernet environment. All other software products that work within those environments will work with SoftNode. SoftNode is supposed to begin shipping in September and will retail for $175 for a single-user and $1,150 for a ten-machine license.

Broderbund was demonstrating a new line of animated stories on CD-ROM. Called the "living books" series, Broderbund announced plans to have at least four books released soon. These books contain an interactive environments with animations, sound tracks, special effects, and a hyper text like search facility to encourage children to explore the story and all of its ramifications.

Titles will include "Just Grandma and Me," "Arthur Teacher Troubles," "New Kid on the Block," and the Aesop fables starting with "The Tortoise and the Hare." The first in the series—"Just Grandma and Me"—is slated for shipment in January.

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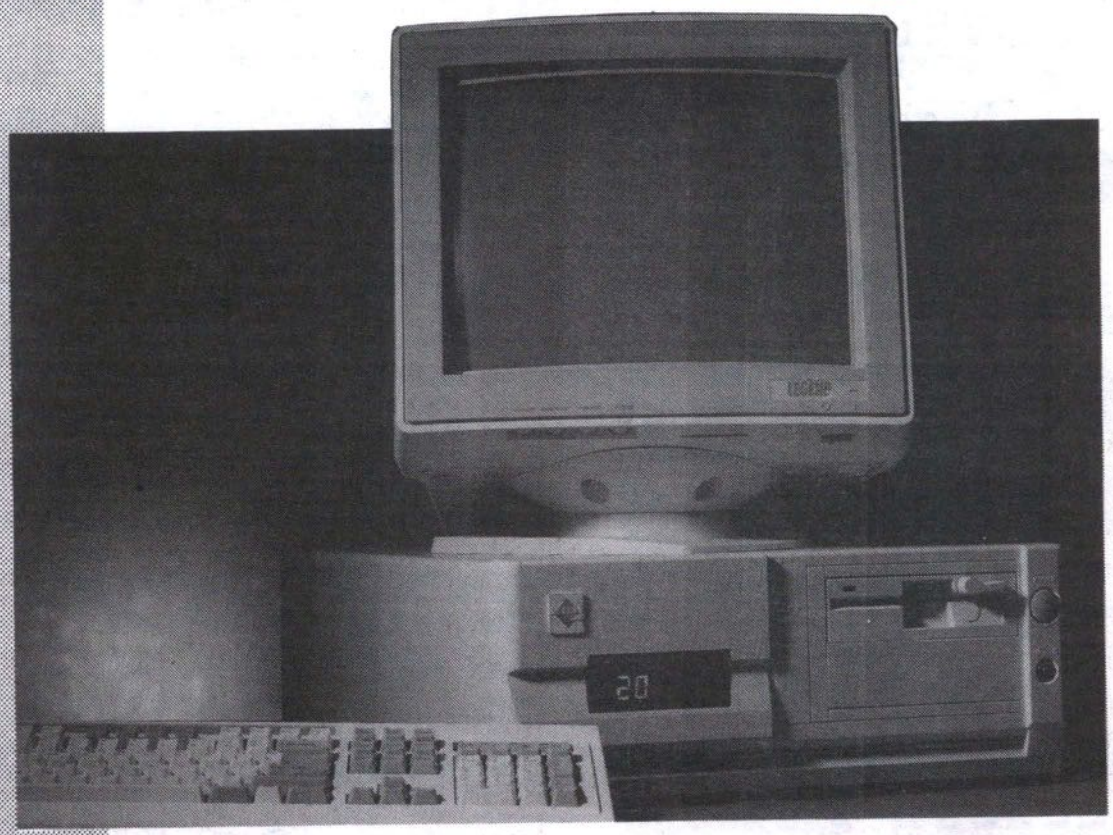

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Lotus was demonstrating its upcoming spreadsheet, Lotus 1-2-3 for the Macintosh. This new spreadsheet is now in beta testing and is expected to begin shipping in the fall. Lotus 1-2-3 for Macintosh is a System 7.0 compatible product that has been designed from the ground up to be a Macintosh application while maintaining compatibility with Lotus 1-2-3 on other platforms. Included in the package will be Adobe's Type Manager with 13 TrueType fonts, and BackSolver, which is a single-variable mathematical equation solver.

Davidson was demonstrating its upcoming release of Earthquest Explores Ecology. This is a new software package that uses Earthquest's encyclopaedia as a base for sixteen different interactive games. Six of the games are biosphere simulations that concentrate on demonstrating the inter-relationships between all of the biospheres on this earth. Particular attention is placed on the Amazonian rain forest. The program will begin shipping in September.

More Software Upgrades

Broderbund was showing an upgrade to TypeStyler. TypeStyler 2.0 is System 7.0 savvy and offers complete support for TrueType. Additional enhancements include support for 24 bit color and better screen rendering time. TypeStyler 2.0 also features Letter Fusion, which allows a user to select a range of letters on which to apply the effects. In addition, TypeStyler will have Adobe Type Manager bundled in its package and a package of 13 typefaces will be included as well. TypeStyler 2.0 will begin shipping this fall.

Aldus introduced version 3 of Aldus SuperPaint. New features of the product include support for up to 32 bit color; new image enhancement capabilities; texture fills; and HotKeys. Upgrades will cost $65 while new copies can be purchased for $199. Availability is expected to be mid-September.

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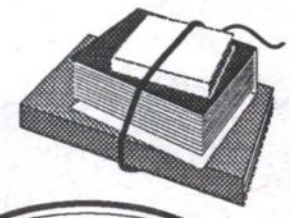

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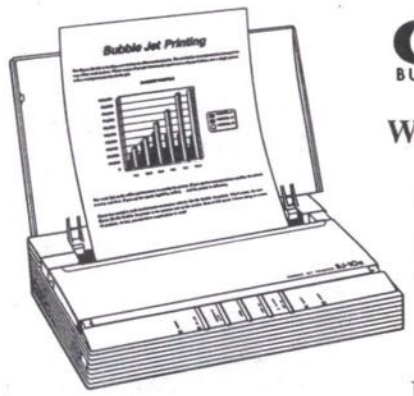

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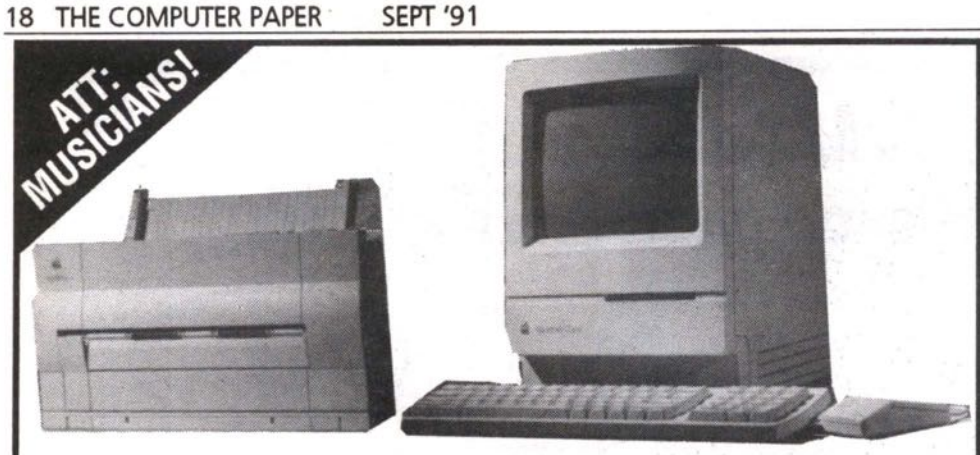

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MACWORLD REPORT

Software Technology Demonstrations

Frame Technology and Acius were showing a method in which database data stored in 4th Dimension can be extracted and translated into a form that can be used by FrameMaker for publication.

The method, which ACIUS used to publish several of their directories, has always been present within 4th Dimension but has not really been used to date. Frame Technology and Acius chose to advertise its existence more broadly to encourage its use and to show its usefulness as a result of several customer requests. Both companies would be happy to show this method to all current users who have a need to understand it.

New Hardware

QMS will begin shipping a pair of printers at the end of this month. The QMS 815 and 825 MR printers are the first desktop sized printers that feature a resolution of 600 by 600 dpi. The two models differ in the amount of paper trays that they support. The 815MR has a single paper tray while the 825MR supports two paper trays. Both printers are based on the print engines, support Postscript, and come with 45 built-in fonts. The MR in the model name stands for multi-res, which is a feature that allows the user to tailor the printing resolution from 600 by 600 down to 300 by 300 dots-per-inch (DPI).

Caere will begin shipping in September a new hand-held scanner that is capable of working with both character and graphics data. Called "Typist Plus Graphics," the new scanner can perform optical character recognition (OCR) on the text parts of a scanned document while Caere's The Graphic Editor allows the user to manipulate any associated graphics that were also scanned in. Typist Plus Graphics is billed as the first hand-held scanner that can do both functions. Shipments to dealers are expected to begin in September.

Radius has begun shipments of its new line of filters designed to reduce the quantity of low frequency field emissions emanating from their monitors. The new Ergo:Shield line has been specifically designed to be custom fit to the Radius line of monitors of all sizes that are currently being shipped. All of the filters in the line can be installed on the monitor by the owner, there is no need for a technically trained person.

Mitsubishi has begun shipping its new high-res 37-inch color monitor that is compatible with the Macintosh and most PCs and compatibles. Intended primarily for demonstration purposes, the new monitor can display in resolutions of 640 by 480, 1152 by 882, and 1,280 by 1,024 dpi. One notable feature is its built-in video converter that takes care of NTSC, PAL, SECAM, Composite Video, and S-VHS signals very easily.

Xante announced the release of its new Accel-a-Writer IV. This is a printer controller that upgrades the performance of your Hewlett-Packard LaserJet

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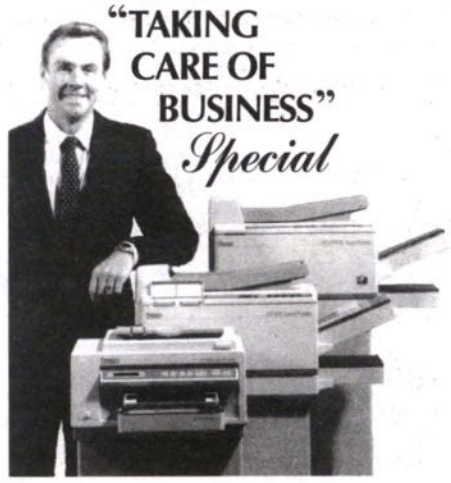

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MACWORLD REPORT

Series II laser printers. The upgrade allows the printer to increase its resolution to 600 by 600 dpi while allowing for simultaneous printing from more than one source (serial Appletalk, and centronics). There is also an advanced memory management feature that allows one page to be composed while the previous page is being printed. The board comes with six megabytes of memory and includes 35 PostScript fonts.

Aldus Debuts *SuperPaint* 3.0

BOSTON, MASSACHUSETTS, AUG 9 (NB)—Aldus Corporation introduced what it describes as a major new release of Aldus SuperPaint at MacWorld in Boston this week.

SuperPaint 3.0 is an integrated painting, drawing, and image enhancement program for the Macintosh computer. New features include support for 1, 8, 16, and 32-bit documents, and includes both monochrome and color support. "Customers working with 8-bit systems, for example, will be able to have quick access to nearly 16.8 million colors without requiring a 24-bit board," said Cindy Taylor, SuperPaint product manager.

The image enhancement feature of SuperPaint is a new addition. Features include brightness, contract, color balance, masking, smudge diffuse, lighten, darken, and invert.

Another new feature is texture fills. Several fill patterns are provided, and others can be created by the user and then applied in paint or draw. EPS textures can be used from another program, such as Aldus FreeHand, and used within SuperPaint.

Gradients have also been added. Gradients are gradual transitions from one color to another. They can be created in paint or draw, and up to 256 colors can be used in a single gradient. PostScript language gradients can be created in the draw mode.

Also new is hot keys, allowing the user to more easily access tools and palettes. Taylor said the simplified interface makes the program easier to learn and use.

SuperPaint will be available in the third quarter of this year at a suggested retail price of $199. Registered owners will receive upgrade information in the mail. Upgrades cost $65 plus shipping and tax. More information about upgrades can be had by calling 619-695-6956.

A Macintosh plus, Classic, SE, Portable, SE/30, LC or II series, with 2MB of RAM, System 6.0.5 or later, a hard disk and one 800K drive is required for black-and-white use. For color, you'll need a Macintosh SE/30, LC or II series, 2MB of RAM, 32-bit QuickDraw, System 6.0.5 or later, a hard drive and one 800K floppy drive.

Contact: Joanne Rush, Silicon Beach Software, 619-695-6956.

Sony Demos Multimedia

BOSTON, MASSACHUSETTS, AUG 7 (NB)—The Computer Peripherals Division of Sony Corporation of America has demonstrated several new multimedia products at MacWorld.

The Sony VDECK Hi8 video drive is being billed as the first 8mm VCR that was directly designed to be a computer peripheral. The Sony multi disc player is being billed as the first peripheral product that can play different types of media from audio CD through video laserdiscs in one box.

The Sony VDECK Hi8 allows you to control the playing of 8mm tapes from your computer, the company claims. While Sony was demonstrating only Macintosh control at this show, Sony representatives mentioned that the PC products are not far behind. Sized in a box that is the same as Apple's CD player, the Sony product is controlled via a serial protocol labeled VISCA (VIdeo System Control Architecture). About 70 developers have announced their intentions to develop products that use VISCA.

The multi disc player model MDP-1100 is a product that allows you to control the playing of laserdisk and other media types from your computer. The MDP-1100 has a unique tray that allows you to place media from audio CD's through video laserdisks on it. The computer controls the MDP via a serial link.

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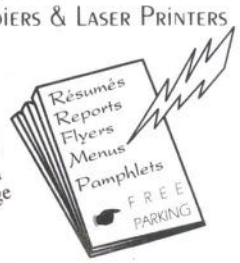

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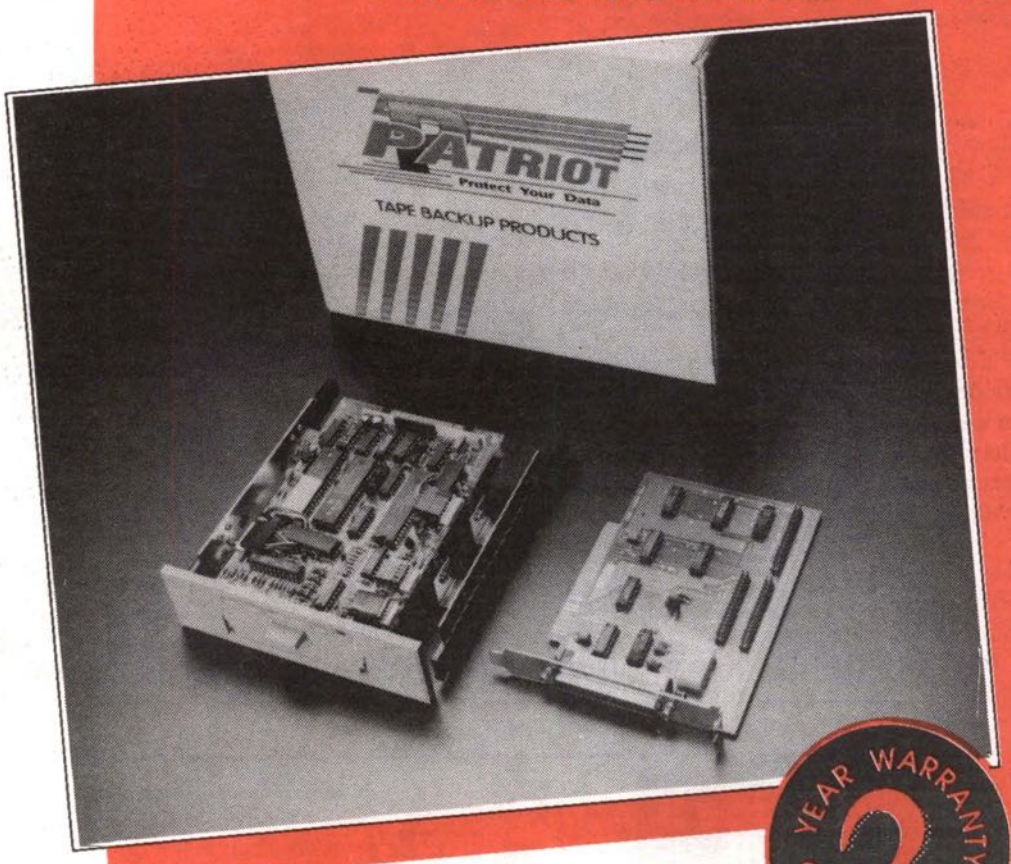

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There is still the need for a separate video card if there is a desire for any editing features.

Both products were demonstrated at the show and are not yet available for sale. Sony expects to begin shipping the MDP-1100 by the end of this month while the VDECK may be shipping by the end of 1991. Pricing on the MDP-1100 is $795 while it has yet to be established on the VDECK.

Both products are to be used in interactive training and educational applications, according to the company. One of the interesting features that the MDP-1100 supports is its bar code control wand. With this wand and a sheet of printed bar codes, a person can control the machine and therefore the flow of the presentation.

Contact: Will Chelak, Technology Solutions, 212-505-9900.

Mobius Display Boosts Classic To IIci Speed

EMERYVILLE, CALIFORNIA, AUG 12 (NB)—The new "030" display system from Mobius Technologies increases the performance of the Apple Macintosh Classic by up to six times, and gives it the operating speed of a Mac IIci, claims the company.

The display gives the Mac Classic a large screen and 25 MHz speed for the suggested price of $1,145. A two-page system is set to list for $1,345. Both will be available by September 1991.

"Classic owners will have the speed and display area that are necessary to run System 7.0's features productively," said Kamran Mohsenin, president of Mobius.

The company said that it will also offer virtual memory for either the SE or the Classic. System 7.0 does not support virtual memory on the low-end Macs. But if Connectix Corporation's Virtual 3.0 software is used, the Mobius-accelerated Mac can access up to 16 megabytes of application memory, four times the memory normally associated with the SE and Classic, said the company.

Mobius is including Connectix's Virtual 3.0 through December 1, 1991, with its $295 PMMU option (as an upgrade for the basic 68030 Display System, which does not include that processor) and its complete "PV" 030 display systems (which include the PMMU).

A one-page 030 Display for the Classic with virtual memory is available for $1,295 direct from Mobius. The $199 Connectix software is available at no extra cost to the customer. Previous customers who purchased the PMMU option can upgrade to Virtual 3.0 for $50.

Both the Mobius large external display and the Mac's built-in monitor can be used at the same time using the company's dual-screen software. Mobius' monochrome displays meet Swedish standards for low emissions.

Both monitors offer a 75 Hz refresh rate, and the one-page display has a 78 dots-per-inch (dpi) resolution, while the two-page display offers 75 dpi.

Contact: Paul Worthington, Mobius Technologies Inc., 415-654-0556.

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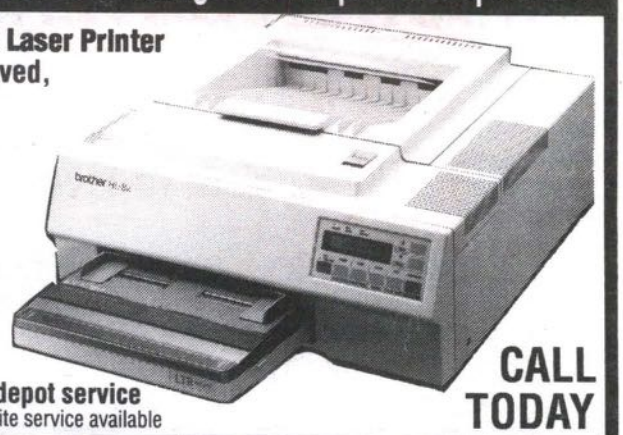

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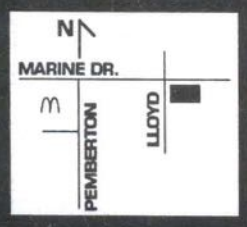

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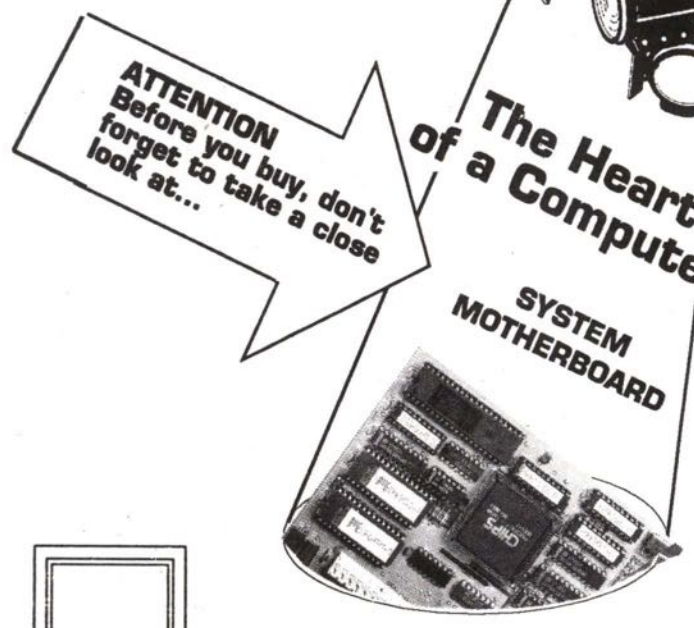

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New Version Of *Great Plains*

BOSTON, MASSACHUSETTS, AUG 7 (NB)—Great Plains Software announced the release of a new version—Release 6—of its integrated accounting software of the same name. The software company has also announces several new add-in modules for the package.

According to the company, the new version of Great Plains Software has more than 100 new features, and comes in 12 modules for ease of use by the business customer.

New additions to the Great Plains Software line include a system manager with executive advisor which adds graphics capabilities, printing capabilities, menu customization, and a macro keystroke recorder. Expanded capabilities of the general ledger module include improved report generation, unlimited budgeting history, and automatic transaction allocation.

Great Plains has also announced the upcoming availability of its newest module, a report writer. This software was developed for Great Plains Software by a Florida company, Snow Software.

According to company officials, the extra module adds the capability of going directly into the heart of the database that resides within the package. It will then be possible to generate any custom report that the user might desire.

The report writer module will be available by mid-September. Pricing for the new module is $795 for a single-user license while the multiuser and client/server versions will sell for $995.

The new version of Great Plains Software supports the Apple Mac's System 7,0 operating system software at the compatibility level. Balloon help and Adobe's true type features are not yet supported, but the company indicated that future releases will accommodate them as well. One additional increase in capability is the increased speed of the system with some users reporting as much as a 150 percent improvement in their productivity.

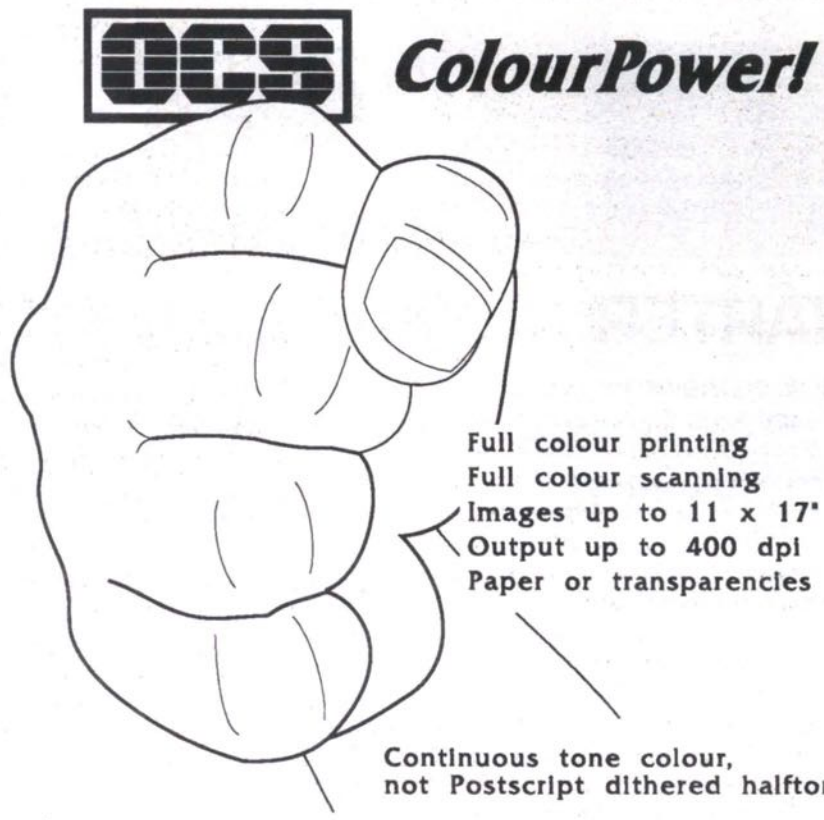
Current users can upgrade to the new version of software for about $65 per module. Contact the company directly for exact pricing as it varies based on the exact service contract that exists.

Contact: Terry Kalil, Great Plains Software, 701-281-3130.

Caere Intros *OmniPage 3.0* and Typist Scanner

LOS GATOS, CALIFORNIA, AUG 7 (NB)—Caere Corporation has introduced version 3.0 of its OmniPage page recognition software, and at the same time announced the Typist Plus Graphics hand-held scanner for the Macintosh platform.

A Microsoft Windows 3.0 version of Typist for the DOS environment has been available since March of 1991, and Typist 1.1 for the Macintosh was released in June.



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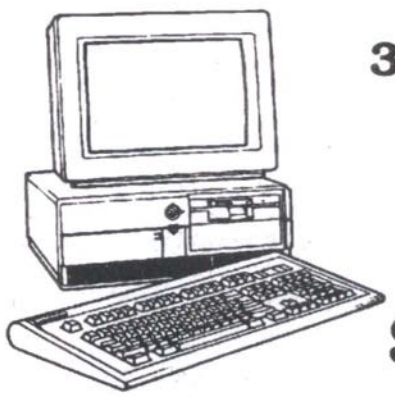

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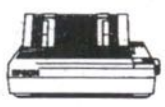

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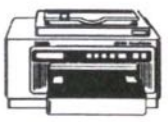

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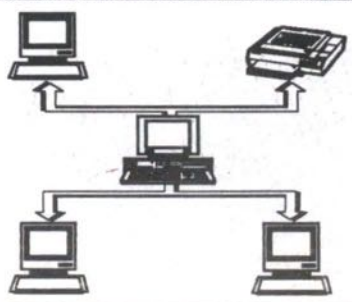

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APPLE

According to the company, OmniPage 3.0 is compatible with Apple's new Macintosh System 7 operating system and includes built-in spellchecking and draft-dot-matrix type-recognition programs. The new version also includes expanded support for scanners.

OmniSpell, an interactive spelling checker that was previously available only as an add-on product, is now built into OmniPage. According to Caere, the software is specially designed to detect and correct errors that can occur during the recognition process.

OmniPage 3.0 also includes OmniDraft, which was also previously only available as an add-on product. The software allows for the recognition of text printed in draft mode on nine-pin dot-matrix printers.

The Apple Mac's System 7.0 "publish and subscribe" feature is also supported, allowing for enhanced storage and retrieval capabilities, said the company.

Caere maintains that OmniPage 3.0 can recognize nearly all nonstylized fonts, in sizes ranging from six points to 72 points, at speeds of up to 115 characters-per-second, depending on CPU (central processor unit) speed. The software can also read 11 European languages, and automatically separate graphics from text and numbers.

The Typist Plus Graphics is a hand-held Macintosh-compatible scanner that combines optical character recognition (OCR) technology with image scanning and editing software.

According to the company, it is the only hand-held scanner that includes the ability to edit both text and gray-scale images. In addition to OCR functions, Typist Plus Graphics also includes image editing software called the Graphic Editor which creates black-and-white line art or continuous-tone images with up to 256 shades of gray.

Typist Plus Graphics requires an Apple Mac Classic or above, 4MB of RAM and a hard-disk drive. It will operate under System 6.0 and above, including System 7.0.

OmniPage 3.0 will run on any Motorola 68020- or 68030-based Mac with at least 4MB of RAM, a hard disk with at least 4MB of available space, and a compatible 300-dots-per-inch scanner. System 6.0 or above is required.

Available immediately, the suggested retail price of OmniPage 3.0 is $695. Typist Plus Graphics has a suggested retail price of $695 and will be available in September.

The company is running an upgrade promotion for registered owners of the Typist and Typist 1.1 for the Mac whereby they can receive a software upgrade to Typist Plus Graphics for $75.

Contact: Larry Miller, Caere Corp, 408-395-7000.

Toronto Firm Puts Children's Books In Multimedia Form

TORONTO, ONTARIO, AUG 12 (NB)—Discis Knowledge Research is offering a series of children's books in the form of multi-media software for the Apple Macintosh. The three-year-old company uses multimedia to add features such as speech, music, and sound effects.

The metaphor of a book is preserved on the computer screen, said Richard Wah Kan, vice-president of market development. Each screen looks like a page.

To turn the page, the user clicks with the mouse on the corner. The Mac's built-in audio capabilities provide a reading of the text while it is displayed on the screen, with music and sound effects added.

Another feature is the ability to click on a word and hear it pronounced, and see a definition. Similar explanations are available for pictures. Discis currently has 11 of the multimedia books available, at prices from US$75 to US$90. But future possibilities go beyond children's books.

"What we have developed here is a technology for putting a printed book on a screen," Wah Kan said. "It just so happens we started out with kids' books."

Rana Mainee, a consultant with Waltham, Massachusetts-based research firm Inteco Corporation, said training

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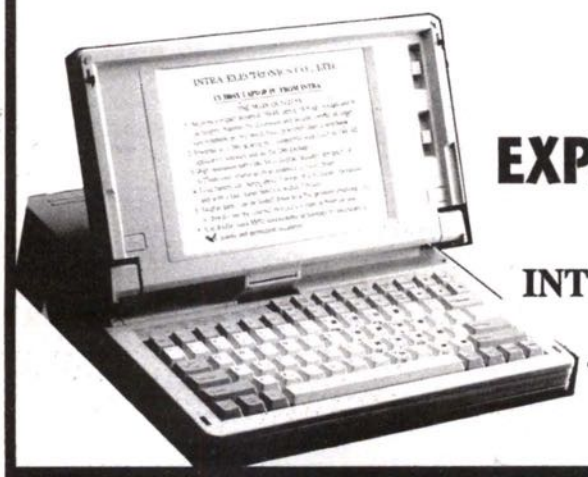

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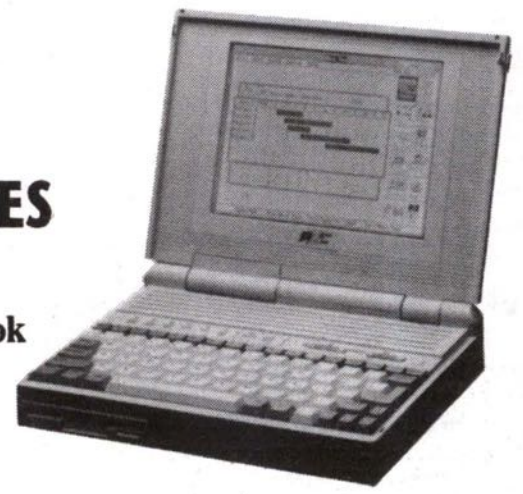

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APPLE

and education are currently the most active areas of multimedia applications development, though the business market will ultimately be larger.

Contact: Fiona Ferguson or Richard Wah Kan, Discis Knowledge Research, 416-250-6537, fax 416-250-6540.

ATARI

Andest Designs Pocket Modem For Atari Portfolio

MILTON KEYNES, ENGLAND, JUL 30 (NB)—Andest Communications has designed and manufactured a pocket modem for the Atari Portfolio palmtop PC.

The modem, which supports 300 and 1200 bits-per-second (bps), is being bundled with the Atari Portfolio PC for UKP 399.95.

According to Andest, the pocket modem was specifically designed for the Portfolio, drawing power from the Portfolio's battery pack—this saves on weight, as the modem does not require a battery, the company claims.

Bundled with the hardware is a copy of Andest's telecommunications package for the Portfolio, which supports VT52, VT100 and teletype terminal emulations, as well as Kermit, X-Modem and ASCII file transfers.

"By working closely with a portable computer supplier such as DIP, we can develop a modem to its exact specifications, which can help to retain the portable nature of the product," explained Tony Sellers, Andest's founder and managing director.

DIP, the developers of the Atari Portfolio, is pleased with the pocket modem. Commenting on the modem, Peter Baldwin, DIP's co-founder, said: "The ultimate challenge in portable computing is to provide the travelling businessman with the capabilities of his office counterpart, while retaining a portable product."

"The development of the Pocket modem means we can offer travelling businessmen immediate access to office-based computer records and provide a portable E-mail system with a product weighing less than two pounds for under UKP 400," he added.

Contact: Andest Communications, Tel: 0908-263300.

CANADIAN NEWS

Vancouver Exchange Sells System To Mexico

VANCOUVER, BC, AUG 14 (NB)—The Vancouver Stock Exchange (VSE) has announced the sale of its computerized stock trading system to the Mexican Stock Exchange. The deal follows closely in the wake of the VSE's first sale to the Venezuelan exchange in April.

The Vancouver Stock Exchange, Canada's third-largest, expects to make about C$750,000 on the sale. The exchange will be involved in follow-up consulting on implementation and training.

The system, developed by the Vancouver exchange and New York software developer TCAM Systems to run on IBM hardware, has been running in Vancouver since May of last year.

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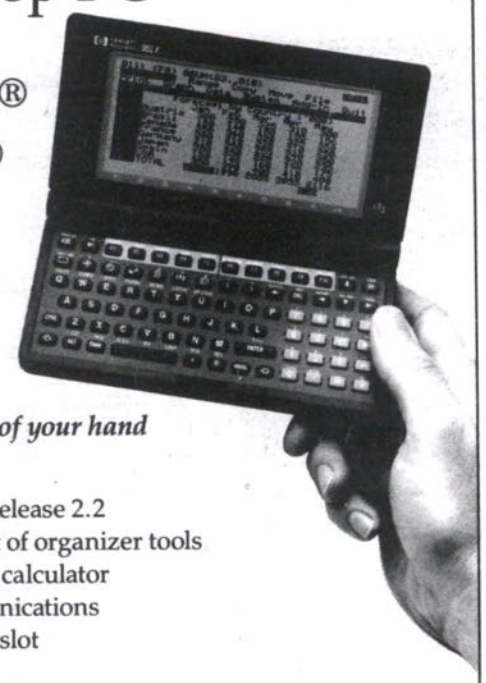

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Harvard Graphics	September 4	October 3	September 9, 10
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Lotus 123 Level II	September 13, 26	October 15, 28	September 16, 17
Lotus 123 Level III	September 30	October 25	September 26, 27
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Microsoft Word 5 Level II	September 24	October 30	September 25, 26
Multimate Advantage Level I	September 20	October 10	September 23, 24
PC Overview	September 11	October 4	September 12, 13
Supercalc IV Level I	September 4	October 30	September 27, 30
Symphony Level I	September 26	October 10	September 9, 10
WordPerfect Level I	September 5, 16, 25	October 2, 11, 21	September 5, 6
WordPerfect Level II	September 18, 25	October 17, 29	September 18, 19
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CANADIAN NEWS

Spokesman David Laundy said that the exchange has bid for sales to other exchanges as well.

Like the Venezuelan sale, the Mexican deal involves the VSE, TCAM, and IBM. These parties and the Mexican Stock Exchange were scheduled to sign agreements August 13 covering hardware and software sales as well as telecommunications and consulting contracts.

Contact: David Laundy, Vancouver Stock Exchange, 604-689-3334, fax 604-688-6051.

Joint Venture Tackles Systems Management in B.C.

VANCOUVER, B.C., AUG 13 (NB)—The B.C. Tel Group, parent of British Columbia Telephone, has announced plans to form a joint venture with Canada's largest computer service bureau to provide systems management services in British Columbia.

The deal is an agreement in principle so far, as B.C. Tel is still negotiating details of the deal with Regina, Saskatchewan-based Westbridge Computer Corporation. Plans call for IBM Canada to provide marketing services to the new company.

IBM Canada has a 27 percent stake in Westbridge, acquired in March in a deal that saw Westbridge take over STM Systems Corporation, the service-bureau subsidiary of Markham, Ontario-based International Semi-Tech Microelectronics, to become Canada's largest service bureau. International Semi-Tech and Westbridge's former parent company, Saskatchewan Telephone, also hold 27 percent each.

The new company will begin operations in the fourth quarter of this year, B.C. Tel officials said. Further details are to be released once formal agreements are signed, which Kirkbride said is likely to happen by the end of August.

Contact: Maureen Kirkbride, B.C. Tel, 604-432-2661, fax 604-433-1241; Peter Ross, Westbridge, 416-542-5240; Stan Didzbalis, IBM Canada, 416-474-3036.

Bull To Market Municipal Accounting

MARKHAM, ONTARIO, JUL 19 (NB)—Bull HN Information Systems will market Concord Municipal Accounting and Information System (MAIS) software across Canada. The software comes from Concord Consultants of Richmond, British Columbia.

Concord, an eight-year-old computer software company, develops and sells software to municipal governments in British Columbia. Under a joint marketing agreement, Bull will sell the MAIS software to Canadian municipalities, a spokeswoman said.

The Unix-based MAIS software runs on Bull's DPX2 series systems. Bull officials said it is the country's largest supplier of hardware and software to municipal governments.

Contact: Betty de Sousa, The Communications Group for Bull, 416-696-9900, fax 416-696-9897; Patti Knight, Bull HN Information Systems, 416-499-2855.

COMMODORE

Commodore Earnings Soar

NEW YORK, NEW YORK, AUG 14 (NB)—Bucking the recent computer industry trend to gloomy financial results, Commodore International has reported a more than 30-fold increase in net income for fiscal 1991. Commodore earned net income before extraordinary items of US$57.4 million in the year ended June 30, up from US$1.5 million last year.

An extraordinary charge of US$9.2 million having to do with settlement of a court case brought the final 1991 net income figure down to US$48.2 million. Commodore's annual sales rose 18 percent, from US$887.3 million to US$1.047.2 million.

Announcing the results, Irving Gould, Commodore's chairman and chief executive, said the results reflect the company's strength in Europe, which accounted for more than 85 percent of the company's total sales.

Commodore said sales of all its products grew in the fourth quarter of fiscal 1991. Sales of the IBM-compatible line of PCs rose 35 percent, sales of the venerable Commodore 64 increased 30 percent and those of the Amiga line grew by 20 percent, the company said.

Contact: Tom Shepherd, Commodore Canada, 416-499-4292, fax 416-494-9755.

World Of Commodore Show Breaks Records

SYDNEY, AUSTRALIA, JUL 22 (NB)—The World Of Commodore/Amiga exhibition held in Sydney last weekend attracted a record 29,642 paying customers. By contrast, the last New York World of Commodore/Amiga only had 19,000 visitors.

"The public response was simply unbelievable," said Commodore Australia Manager Pat Byrne. He claimed CDTV—Commodore's interactive, CD-based multimedia system—was one of the main factors. "But it wasn't the only star—there were displays of the latest computer applications, and every seminar was heavily over-attended."

As well as many local, Australian vendors, there were overseas exhibitors, some with brand-new product to test on the marketplace. Most software vendors had a number of CD-based applications for the CDTV system. These ranged from new versions of old games, right up to full encyclopedias complete with moving video and stereo sound. Look up Kookaburra in the bird section of the encyclopedia, see it fly and hear its call.

The shows are organized around the world by The Hunter Group of Canada.

Contact: The Others ph +61-2-9065088 fax +61-2-9064893.

GENERAL

Birthplace Of IC Becomes Protected Site

PALO ALTO, CALIFORNIA, AUG 9 (NB)—Who says California has no history? It just so happens that the birthplace of the first commercial integrated circuit has been designated a "registered historical landmark," by the Office of Historical Preservation for the

State of California.

The site now joins the garage in which Bill Hewlett and David Packard began their famous company as the second such landmark. The registered landmark designation is the 1000th for the state and the second for Silicon Valley.

The designation recognizes the significance of the integrated circuit developed in 1959 by the late Dr. Robert N. Noyce at Fairchild Semiconductor.

In developing the integrated circuit, Noyce used a method of linking the different components of an electronic circuit together by evaporating a conductive aluminum layer over "windows" in the silicon oxide, instead of interconnecting the elements with wires. The "metal-over-oxide" process allowed the integrated circuit to be built efficiently in large volume which in turn made ICs and their descendants affordable to the throngs.

The placement of the plaque honoring Noyce's integrated circuit will be at 844 East Charleston Road in Palo Alto, where Fairchild Semiconductor began its operations in 1957.

Contact: Howard High, Intel Corp., 408-765-1488.

Philippe Kahn Speaks On Lotus Suit, AT/Fox Suit

PASADENA, CALIFORNIA, JUL 23 (NB)—Borland's President Philippe Kahn has expressed his views on the litigation issues between Borland and Lotus and between Ashton-Tate (the company Borland is in the process of purchasing) and Fox Software, before a crowd of several thousand at a special meeting of the Pasadena IBM Users Group at the Pasadena Hilton.

Kahn's view is that the two cases are tied together quite closely. He said that in both suits the perpetrators, Lotus and Ashton-Tate, respectively, were trying to copyright not a new invention but a hierarchical command structure determined by functionality.

He added that, in both cases the companies should have sought patents, but instead are trying to get exclusive rights to something that in his opinion should not be copyrightable, no more than the placement of the order of the gas and brake pedals in an automobile should be copyrightable so no one else can use it.

Kahn said that, if this litigation succeeds, it could not only change the computer industry, but the entire consumer market could change. Suddenly, an airplane manufacturer could say it has a copyright on the placement of the functional controls in an aircraft, and other manufacturers would have to make aircraft with different controls. Computer chips could be copyrightable because of the functional order in which commands are executed. VCRs, microwave ovens, televisions, all have a hierarchy of commands based on functionality, and could then conceivably be copyrightable so each manufacturer would have to make different controls, and consumers would have to relearn each manufacturers set of controls, Kahn explained.

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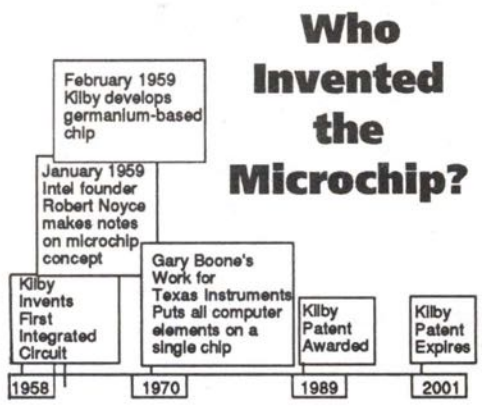
The conclusion, in Kahn's opinion, is that not only should a hierarchy of commands based on functionality not be copyrightable, but it could be disastrous if they became copyrightable. Kahn said that, in the Lotus suit against Borland, Borland is using a hierarchical set of commands from a Lotus menu based on functionality.

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. But it's the principle of the thing to us now," he said.

When asked about Borland's intentions on the Ashton-Tate suit against Fox Software, Kahn made a joke about lawyers, then said Borland is not a litigious company and he was sure something could be worked out with Fox, if the suit hadn't been already settled by the time Borland's purchase of Ashton-Tate was finalized.

Contact: Philippe Kahn, Borland, Tel: 408/438-5300, Fax: 408/439-9273.



Industry Watching Fujitsu Challenge Of Kilby Patent

WASHINGTON, D.C., JUL 23 (NB)—Fujitsu's gamble that Texas Instruments will not be able to force it to pay royalties for the so-called "Kilby" patent has high stakes that could affect the entire chipmaking industry.

The "Kilby Patent"—more formally known as the "Semiconductor Device" Japanese Patent No. 320,275—was awarded on October 30, 1989 and expires on November 27, 2001.

This question of just who invented the microprocessor, especially the single chip microcomputer, is quite complex and could be worth many millions of dollars to the eventual winner.

Back in 1958 Texas Instruments' Jack St. Clair Kilby invented the first integrated circuit, an MOS or metal oxide semiconductor, and nine years later Kilby, Merryman, and Van Tassel at TI produced the industry-changing pocket calculator based on that technology.

Much of the early work on this sort of microprocessor technology took place at Texas Instruments, but a recent challenger caused a worldwide stir last year when he was awarded a seemingly very basic patent on the single chip microcomputer.

Gilbert P. Hyatt's very widely publicized patent on the microprocessor may now be in doubt because it appears that his work may not predate that of TI's Gary W. Boone in 1970.

Boone was one of the team who worked on shrinking the electronics which go into the pocket calculator, and TI credits him with the concept of putting all the separate elements that make up a computer on a single silicon chip.

To complicate things even further, Intel's founder, Robert Noyce, made extensive notes on a microchip concept back in January of 1959, but Kilby built a germanium-based chip only a month later, with Intel's silicon-based microchip coming that summer. Noyce and Kilby share recognition as co-inventors of the microchip.

Kilby's first IC was actually a phase-shift oscillator developed as part of research being done for the Signal Corps (Pentagon).

Contact: Terri West, Texas Instruments, 214-995-3481.

Where Do Power Problems Come From?

NECADAH, WISCONSIN, AUG 1 (NB)—The National Power Laboratory, a division of Best Power Technology, is conducting a five-year study of the origins and effects of power line problems on computers and some results are surprising. Utilities, sunspots, and lightning are commonly blamed, but NPL's recent study shows that many problems occur within the user's facility.

Using dual Dranetz monitors at both residential and commercial sites, both entry point and use point measures of power disturbances are made, and comparisons of the two readings help pinpoint the origin of problems.

A recent three-month study showed

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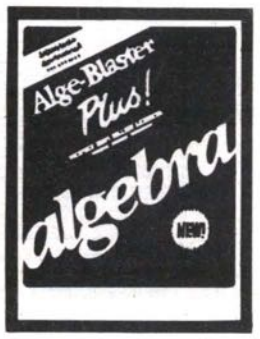

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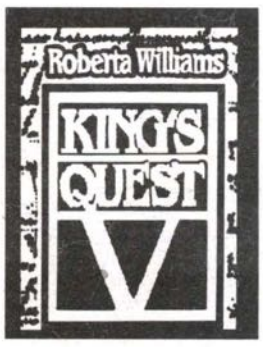

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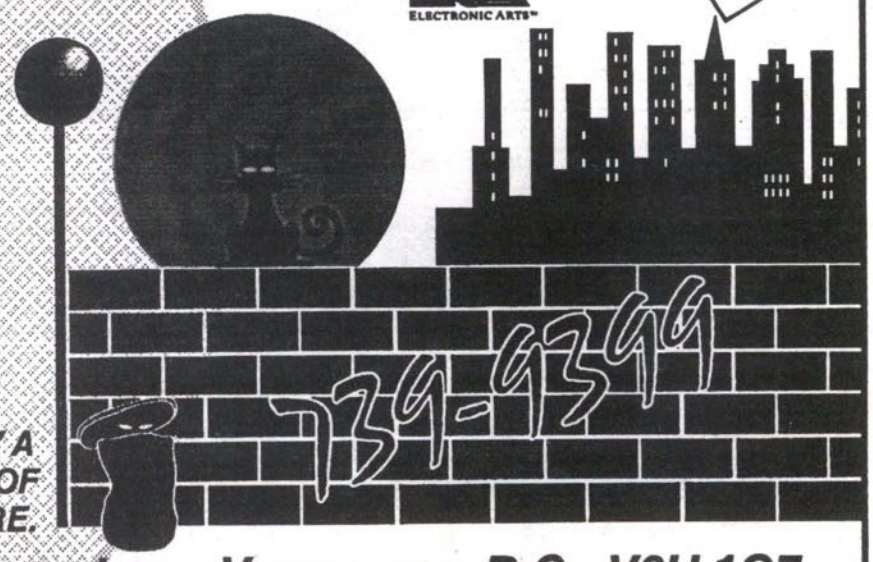

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32 power disturbances at the points of entry, and 130 at the end-user sites. Point of entry is where power is supplied by the electric utility and user sites are where the computers are located, so fewer than 25 percent of the disturbances recorded were due to line problems outside those created within the buildings.

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The National Power Laboratory is conducting a five-year study of power conditions and is attempting to set industry standards for the UPS or uninterruptible power supply industry.

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Digital To Buy Philips — Subject To EC Agreement

EINDHOVEN, THE NETHERLANDS, JUL 24 (NB)—Subject to final approval by both companies' respective shareholders and the European Commission's monopolies and mergers team, Digital Equipment Corporation will take over the troubled N.V. Philips group.

Although final details of the deal have yet to be agreed on by both companies, DEC has agreed in principle to purchase several of the leading edge technology divisions of Philips. DEC officials are said to be particularly interested in the financial services division of Philips, which supplies computerised equipment to banks and other financial institutions throughout Europe.

Financial details of the take-over bid have not been announced. Sources close to Philips suggest that the final price to be paid has not been fixed and will be dependent on sales figures currently being compiled by both companies' auditors. According to one Philips source, the divisions of the company in which DEC is interested have a combined turnover of around $1,200 million.

Aldus Tech Support Bulletin Board

BOSTON, MASSACHUSETTS, AUG 9 (NB)—Aldus Corporation, developer of PageMaker and other graphics programs, announced at MacWorld in Boston that it will offer registered users of several of its programs 24-hour technical support via an interactive bulletin board system.

Dubbed CustomerFirst Online (CFO), the service will offer support from product specialists, downloadable trouble-shooting tips, quick-reference guides, layout templates, macros, desk accessories, clip art, and other productivity and design aids. CFO is available to registered owners of Aldus FreeHand, PageMaker, Persuasion and PrePrint.

CFO is a subscriber service, and allows subscribers access to the Aldus Online Database, Online conferencing forums and public forums on CompuServe. Online Database is the resource used by Aldus technical support experts, and supports keywork searches. Subscribers can also request product information, register Aldus products, subscribe to "Aldus Magazine," and find out how to become an Aldus Trainer.

John Archdeacon, Aldus director of customer service, said, "Aldus is breaking new ground in the software industry by offering an electronic bulletin board designed for all users of Aldus products." Archdeacon said Online will be continually supplemented in order to give subscribers access to the most current information.

Subscribers will access Online through the CompuServe network using the Aldus Information Manager, a derivative of CompuServe's Information Manager. AIM uses pull-down menus, dialog boxes, movable windows, buttons, and a mouse. Aldus says AIM is available for both Apple Macintosh and DOS-based systems.

Subscriptions to Online can be purchased individually or acquired automatically as a part of the purchase of a CustomereFirstPremierOnline or Corporate Library service plan. With each plan, users get access to CompuServe public forums, and are credited with 12 hours of connect time

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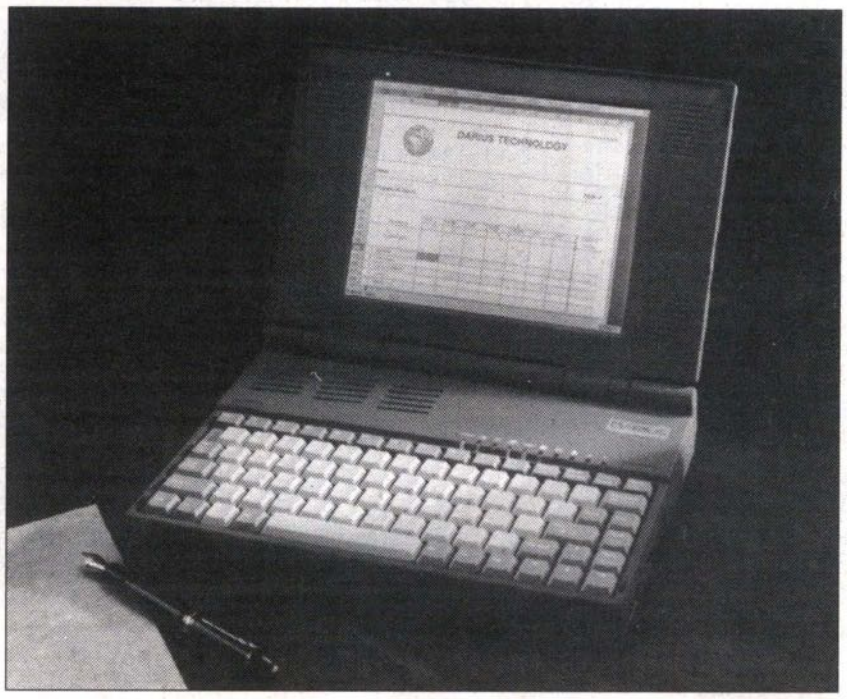

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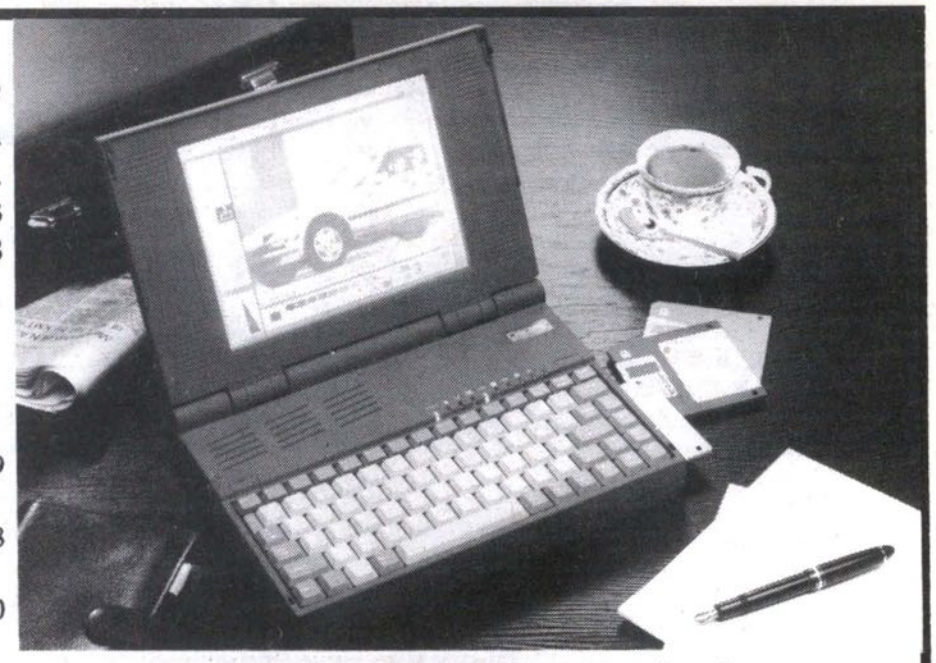

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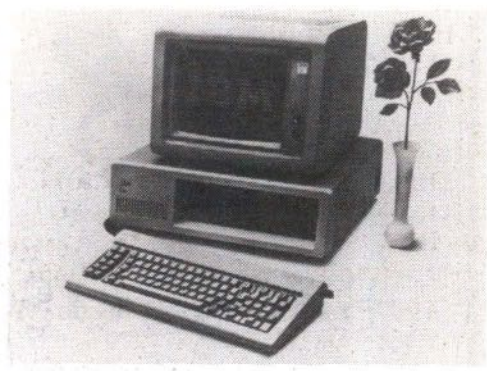
Premier Online is another subscriber service offered by Aldus; it costs $179 per year for each copy of the Aldus software, and gets the customer a discount on the price of any major new releases, automatic delivery of updates, free filter/driver packs sent automatically and other benefits.

The Corporate Library subscription offers more than $6,000 worth of free software, toll free access to your own account executive, the Discovery training series, a free enrollment in an Aldus Technical Seminar and other services. The cost of the Corporate Library service was not available.

Brad Stevens of Aldus told Newsbytes that the Aldus forum presently on CompuServe will continue. However Stevens described the forum as reactive, and said the Online service will be more proactive. Stevens also indicated that there would be information on Online that would not be available on the CompuServe forum, which he said is an informal service. "Online will be a vehicle for us to go out and actively put information on that bulletin board that we know people are going to want to use."

The subscription rate for Online is $249 annually. To subscribe to Online, call Aldus customer relations at 206-628-2320.



IBM-PC 10 Years Old This Month

WASHINGTON, DC, AUG 6 (NB)— The IBM PC, based on the Intel 8088 microchip, carrying a whopping 64 kilobytes of memory and a low density, 5.25-inch floppy drive, was introduced to the world just 10 years ago this month.

The first system was unveiled to the press running a Microsoft operating system, MS-DOS 1.0, and nothing else in the computer was made by IBM except the nameplate, case, and the keyboard.

Many industry observers then and now say that nameplate was the most important contribution IBM made to help legitimize the fledgling PC industry.

One industry commentator did point out that the deal between Apple and IBM came just before the 10th anniversary of the introduction of the IBM PC and Apple Computer's going public and asked if this was the beginning of the end for both companies.

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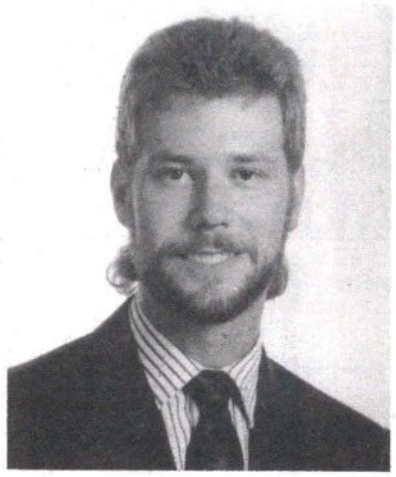
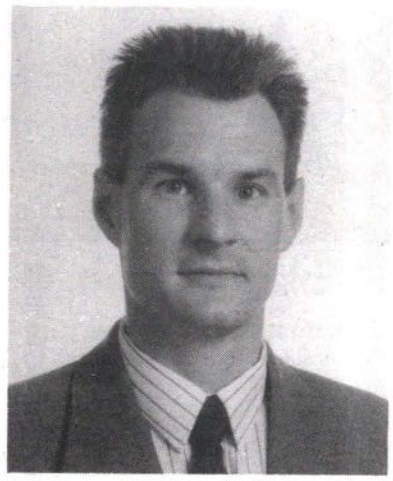


Richard Chadderton
Network Specialist



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IBM PC—The End is Near

BOSTON, July 26 —The original IBM Personal Computer is headed toward the end of the line. After ten years of faithful service to the computer community, the value of the original personal computer is fast approaching the level that makes it a donation item. The PC, originally priced as high as $4,000 in 1981 at its introduction, has recently traded as low as $200 and is frequently placed for donation rather than sold. "We are running out of people who want to buy these machines for cash," said Charles Thompson, Manager of the Boston Computer Exchange, "and the remaining owners realize that they have driven the machines for a rich and full lifetime." BCE will be sponsoring an official "Irish Wake" for the PC on August 12, 1991, at BCE office in Boston to mark the machine's tenth birthday and its transition from a salable commodity to a donation item. All BoCoEx Index readers are invited to attend. As the PC is slipped into the donation column, the XT showed it was headed in the same direction. With no more processing brains than the PC and nary more than a tiny hard drive, the XT is losing its value. The most popular of the XT's closed the week off $100 at $350 and buyers are expressing reluctance to buy into such old technology.

IBM Celebrates PC's 10th Birthday

WHITE PLAINS, NEW YORK, AUG 13 (NB)—IBM has celebrated the 10th anniversary of its introduction of the IBM Personal Computer by issuing a statement containing a retrospective look at the development of the original product.

The statement said: "IBM began development of the PC in August 1980 in a small building at its Boca Raton, Fla. site. The original team of a dozen developers, led by Philip D. (Don) Estridge, was given 12 months to complete the project."

"The development team needed to break the rules, to go outside the traditional boundaries of product development within IBM, and they did. They went to outside vendors for most of the parts, went to outside software developers for the operating system and application software, and acted as an independent business unit.Æ

"These changes enabled them to develop and announce the IBM PC in 12 months—at that time faster than any other hardware product in IBM's history."

"The IBM PC was introduced to the world at a press conference in New York City at the Waldorf Astoria ballroom, as well as several other locations around the country. The IBM PC used the Intel (A) 4.77 megahertz (MHz) 8088 microprocessor—advanced for the time, but slow by today's standards.Æ

"The diskette drives offered 160 kilobytes (KB) of storage, the equivalent of about 50 single-spaced, typewritten pages. Users could plug the PC into their home television set or choose from an optional monochrome or color display. A typical configuration of 64 KB of memory, a single diskette drive, a color display adapter and IBM Disk Operating System (DOS) was priced at $2,665 (about $3,950 in 1991 dollars.)"

The statement concluded by describing the decision to market the new systems not only through the establishment of IBM Product Centers but also through Computerland and Sears, Roebuck and Co.

Contact: W. Dean Kline, IBM, 914-642-5408.

PC 10th Anniversary—Borland's Kahn Expounds

SCOTTS VALLEY, CALIFORNIA, AUG 12 (NB)—Philippe Kahn, chief executive officer of Borland International, one of the largest computer software companies in the world, said on this 10th anniversary of the introduction of the IBM personal computer (PC) that the technological changes in the next 10 years will make the decade look like slow motion.

Kahn, whose company is a leader in object-oriented software technology, said: "In particular, object-orientation will revolutionize computer software just like microprocessors changed the face of the hardware industry in the '70s."

"The software business is going to undergo a revolution akin to the one that has happened in hardware. The move from transistors to integrated circuits introduced multi-application, compact components that were proven and extremely high performance. Object-oriented technology offers these advantages to the software industry," he

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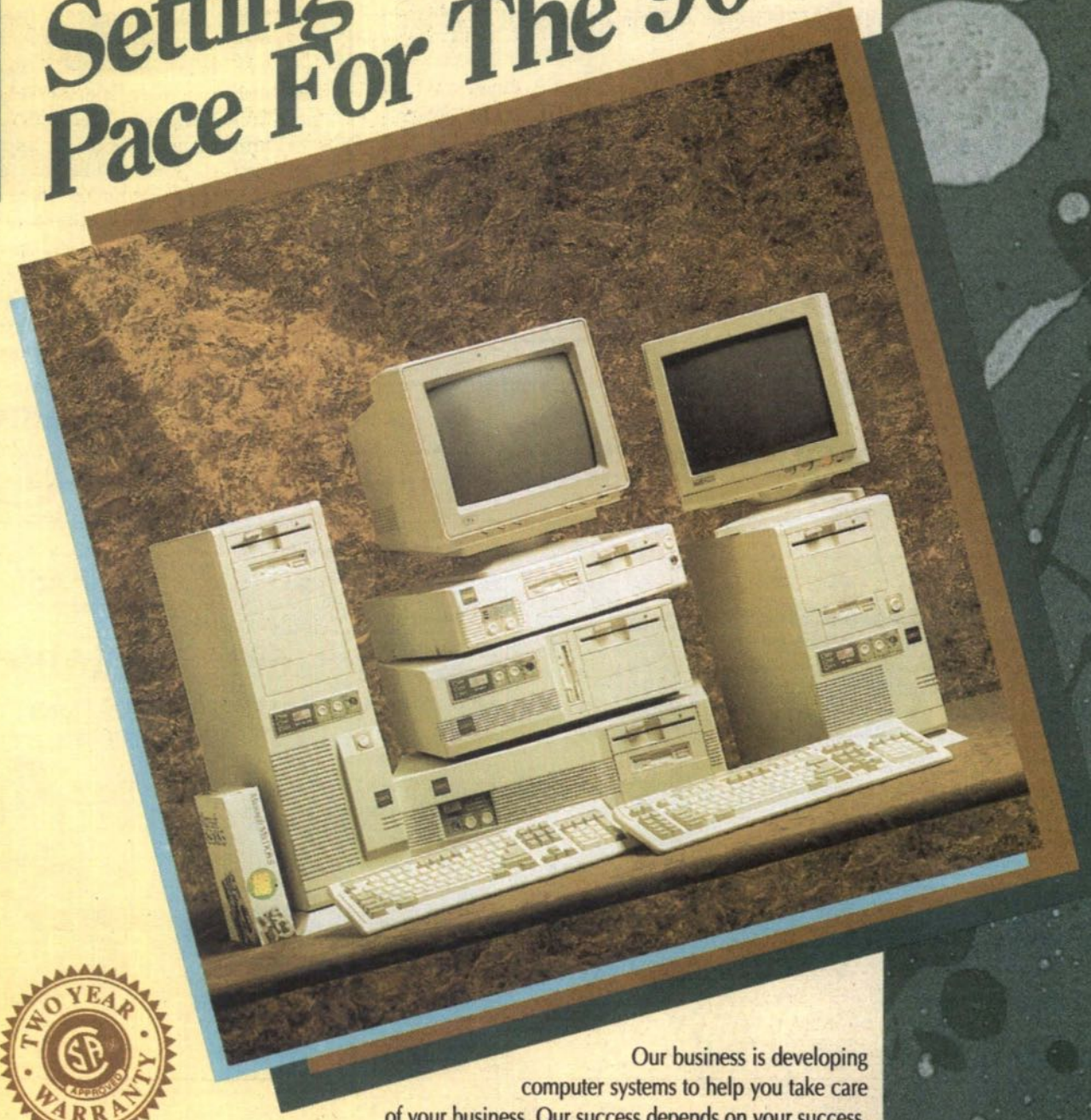

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added.

Kahn said he sees his company's focus on essentials—substance over form—as Borland's greatest strength: "Impatience is a rare virtue. ...Usability is key. With software, we figure that we have about five minutes. If the user can't operate the program without a manual in this amount of time he gets frustrated."

"In the decade ahead, customers will demand software products that interoperate and share information. The success of client/server architecture is dependent upon interoperable software applications," he added.

Kahn also thinks that this tendency in the software industry to think being the first to market with a product is what counts is fiction. He cites Quattro Pro as an example. "...We entered the spreadsheet market years after our top competitor [Lotus 1-2-3], and doubled our market share last year on the technical strength of our product."

"The same has been true for database management software and development tools. Being first buys you a short term advantage. Being best establishes a very special relationship with your customers," he said.

Kahn termed Borland's approach as developing "Best of Breed' products. That strategy seems to have worked. Borland reported profits for the first quarter of fiscal year 1992 as $77 million, an increase of over 87.6 percent on the same period of 1991. Last quarter of 1991, the company showed profits of $70 million and a net income of just under $8.5 million.

Borland's product line currently includes Paradox, Quattro Pro, ObjectVision, Borland C++, Turbo C++, Turbo Pascal for Windows and Sidekick.

Contact: Sandra Hawker, Borland, Tel: 408-439-1659.

Manzi To Keynote Canada's Netcon Conference

TORONTO, ONTARIO, AUG 12 (NB)—Jim Manzi, president and chief executive officer of Lotus Development, will be the keynote speaker at NetCon, a networking and connectivity conference scheduled for September 26 and 27.

Ed McMahon, marketing manager for show organizers Plesman Publications, told Newsbytes that this will be Manzi's first major address in Canada.

NetCon will be held in the Automotive Building at the Canadian National Exhibition Grounds. About 100 exhibitors, including Apple Computer and networking heavyweights Novell and Banyan, have signed up, McMahon said.

Contact: Ed McMahon, Plesman Publications, 416-497-9562, fax 416-497-9427.

Seybold Pub. Seminar Slated For October

SAN JOSE, CALIFORNIA, JUL 29 (NB)—Seybold Seminars of Malibu, California has announced its sixth publishing conference, the 1991 Seybold Computer Publishing Conference and Exposition, is to be held in San Jose at the San Jose Convention Center

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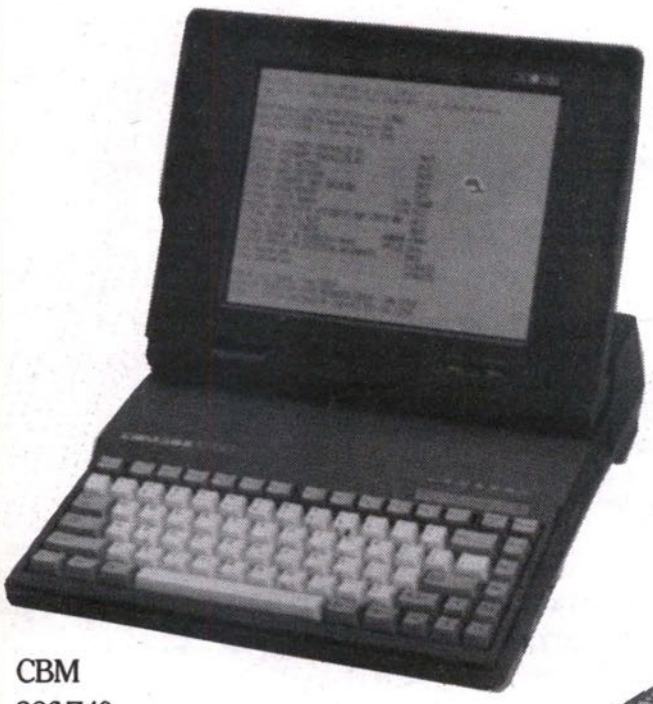

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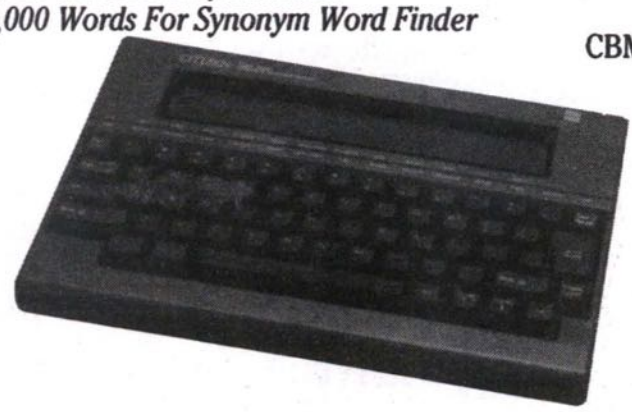

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The conference, expected to draw 250 exhibitors and 25,000 attendees, has a demonstration area called "Gutenberg's Garage," the Seybold Gallery where designers show off their work, and individual minicourses on subjects such as system integration, Postscript digital photography, desktop color production, and desktop video editing, Seybold said.

Conference registration information can be obtained from Seybold Seminars, 6922 Wildlife Road, P.O. Box 578, Malibu, CA 90265, telephone (213)457-5850.

Contact: Kevin Howard, Seybold, Tel: 213/457-5850, Fax: 213/457-4704.

Gates Profile In September Playboy

WASHINGTON, D.C., AUG 12 (NB)—David Rensin writes in his September *Playboy Magazine* profile of Bill Gates, "Soft Icon," that on a recent vacation to the beaches of Brazil, Bill Gates—the founder of Microsoft—was found reading James D. Satson's book "Molecular Biology of the Gene" rather than ogling the bathing beauties Brazil is famous for.

Although not one of the famous Playboy interviews, the profile does include quotes from a former girlfriend and Gates himself as well as other acquaintances.

The article describes Gates as an "eccentric" although, in one example seemingly cited as showing how eccentric he is, his propensity for watching Oscar-winning movies in preference to regular TV fare, seems to be less eccentric than just a sign of intelligence.

New CD-ROM Discs Make The Top Ten

WASHINGTON, D.C., AUG 13 (NB)—Many old favorites are on the second quarter's list of best selling CD-ROM titles compiled by the Bureau of Electronic Publishing, a leading marketer and publisher of CD-ROM hardware and software, but there are also three new titles that have reached the top ten.

"Reference Library" from The Software Toolworks, "Magazine Rack" from Information Access, and "Multimedia World Fact Book" from Bureau Development have hit the top ten, with placings of respectively, seventh, ninth, and tenth position.

Other top ten titles for the second quarter of 1991 were—in order from number one down: "Grolier's Electronic Encyclopaedia," "Microsoft Bookshelf," "U.S. History on CD-ROM," "World Atlas," "Compton's Encyclopaedia, Mammals" (sixth), and "McGraw-Hill Science and Technical Reference" (eighth).

For further information about any of these titles or to receive a catalog, contact: Bureau of Electronic Publishing, 141 New Road, Parsippany, NJ 07054 or phone toll-free on 1-800-828-4766.

Contact: Larry Shiller, Bureau of Electronic Publishing, 201-808-2700 or fax 201-808-2676.

Macromind's *Action!* Multimedia Windows Package

SAN FRANCISCO, CALIFORNIA, AUG 13 (NB)—Macromind, which is merging with Paracomp, another multimedia software house, has announced a Microsoft Windows multimedia application called Action!

According to the company, the package lets users quickly incorporate sound, motion and animation with text and graphics for presentations. The program comes with dozens of templates and features a Clip Media Library with special sounds, stills, and animated graphics. The product is scheduled to ship in September and carries a suggested retail price of $495.

Macromind has made its reputation in the Apple Macintosh market, with products like Macromind Director. Its growth has been slow because the Mac represents a small overall part of the computer market. Microsoft Windows is seen by Macintosh software developers as a potentially larger market, where their expertise in graphics gives them a leg-up over MS-DOS-based competition.

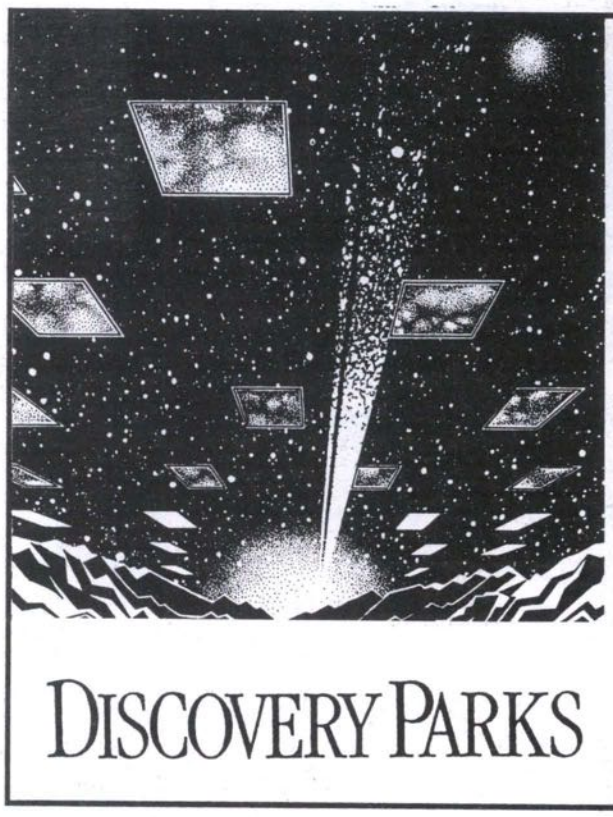
Contact: Bruce Cummings, Macromind, 415-442-0200.

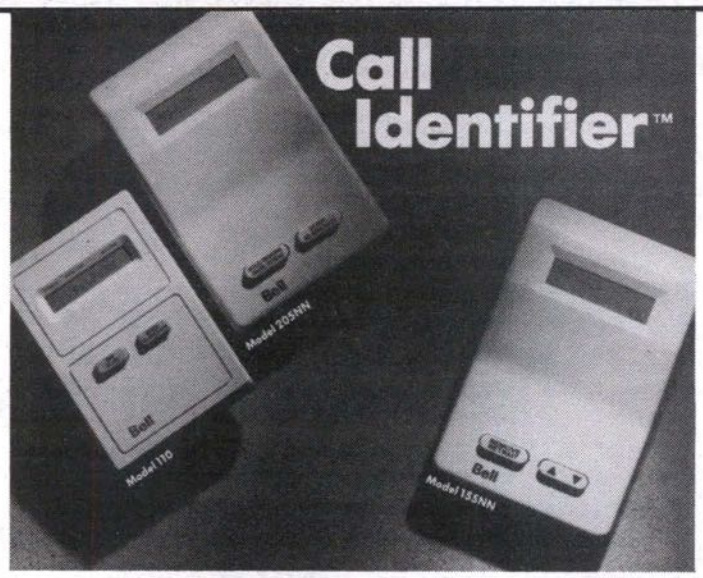
New *Maximizer Lite*

BURNABY, BRITISH COLUMBIA, JUL 23 (NB)—Hoping to appeal to the owners of lightweight laptop and notebook computers, Richmond Technologies & Software has launched a scaled-down version of its contact management software, Maximizer.

The new Maximizer Lite package fits on a single 3.5-inch diskette and sells for C$129.

Laptops and notebooks without hard drives will be "definitely a big market for us," Earl van As, product manager for Maximizer Lite, told Newsbytes. He added that the product may also appeal to price-conscious and impulse





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buyers, as well as to those users with older computer systems.

Maximizer Lite can maintain client lists and a to-do list and produce letters and notes using built-in word processing capabilities complete with spell checking. It lacks the support for multiple databases, income and expense tracking, file combining and updating functions, fancier list manipulation, and personal diary features found in the full package, van As said. Also, the spelling checker uses an 80,000-word rather than a 120,000-word dictionary.

The original Maximizer has been renamed Maximizer Advanced and will continue to sell for C$395, with a network version priced at C$895.

Contact: Earl van As, Richmond Technologies & Software, 604-299-2121, fax 604-299-6743.

First-hand Look At New Hydra Card

NEWPORT BEACH, CALIFORNIA, JUL 29 (NB)—Newsbytes got an opportunity to see first hand an IBM personal computer (PC) compatible running the new card that enables a PC to look like and run Apple Macintosh software. The Andor One Card comes from Hydra Systems, a small start-up firm based in San Jose.

Once the PC was powered on, the program had to be started to enable the Macintosh capability. Once the executable file was started, it took a couple of minutes, but the familiar Macintosh screen began to draw and the smiling Mac appeared.

Very quickly then, the familiar Macintosh screen appeared, but only in black and white, even though the monitor was color. Melissa Davies of Davies Bosch Associates, distributors of the Andor Card, explained that the Andor Card has not yet been able to take advantage of the color capabilities of the IBM personal computer.

Once the Mac screen was up, the mouse was used to start Microsoft Word 4.0. Everything behaved the way one would expect it to behave on a Macintosh. Newsbytes was able to load a Macintosh software product on the PC as well, in the Macintosh environment.

Amazingly, with Microsoft Word running, Davies pressed the two outside mouse keys simultaneously and moving the mouse to the right slid the Macintosh screen off to the right so only half was showing. Underneath was the PC screen with the instruction to press a key to go to the operating system prompt. Davies removed the Macintosh screen completely, pressed the Enter key and the DOS 5.0 shell appeared on screen.

Davies then gave the PC commands in the DOS 5.0 shell. After executing a few commands in the DOS 5.0 shell, and the Macintosh screen slid back, with Microsoft Word right where she left it. Pressing both shift keys had the same effect, but did not allow the user to control the rate at which the Macintosh screen slid onto the monitor from the right to the left as the mouse button control did. The key to start the DOS 5.0 shell in the DOS environment had to be pressed the first time the switch was made. After that, the switches

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Quantum 105MB 17ms, IDE 64K	$409
Fujitsu 135MB 20ms, IDE 64K 3yr warr.	$495
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between the Macintosh environment and the DOS environment were just a matter of using the mouse or the shift keys and moving the screen over.

One note, to get the Macintosh operating system to look at the PC 3.5-inch drive, the F1 key had to be pressed. Normally on a Macintosh, once a disk is inserted in the drive the drive sends a signal and lets the operating system know the disk is there.

The Macintosh operating system does not come with the Andor Card and would have to be purchased separately. However, Word for Word word processing software and Disk Manager Mac is included with the card. The Andor Card also has a small, portable speaker that comes with it and plugs into the card to provide the sound capabilities of the Macintosh.

A minimum of 2 megabytes of RAM is required to be placed on the Andor Card in the form of 1 megabyte SIMMS, with 4 MB maximum possible.

Contact: Melissa Davies, Davies Bosch Associates, Tel: 714/642-9057.

Windows Image, Audio Compression

CANOGA PARK, CALIFORNIA, JUL 22 (NB)—Optibase has announced new tools for image and audio compression: Optitools for Windows 3.0 and the +Audio coprocessor board.

Optitools is a software developer's kit for programming a Motorola digital signal processor (the 56001 DSP) that is on the Optibase 100 and 500 compression/expansion add-in boards for compression and expansion of images and audio, the company said.

Optibase says its Optitools is better because it provides the right compression/expansion tool for the right job. Compression of images and audio is an important issue, as a minute of uncompressed video can take a gigabyte of disk space. Ray Harris, vice president of marketing for Optibase said, "The main issues in compressing images and audio are file size and integrity.

"As compression is increased, data is lost and integrity is compromised. Images, voice and music do not share similar qualities, and not all compression/expansion algorithms share equal capabilities. Maintaining integrity depends upon choosing the correct algorithm for a specific type of image."

Optibase says its Optitools product does just that with four types of compression/expansion algorithms. The four are Joint Photographic Experts Group (JPEG) for simple continuous tone images, AADCT for continuous tone images mixed with text, Lossless for absolute image integrity with compression up to 1:3, and Voice and Music that enables the addition of voice or music to applications.

Adding voice or music to applications that already include image storage and retrieval is where the +Audio coprocessor board comes in. "+Audio for DOS- and Windows-based PCs [personal computers] makes adding voice or music to an application a simple matter of writing C-language calls in the program. We are providing this enabling technology for a range of customers, from PC vendors to telecommunications and media companies," said Harris.

One of the biggest applications for the new technology is desktop video conferencing. Harris said, "The 1990 market for desktop video conferencing alone was $300 million, a figure we project will zoom to $1 billion in the next four years."

Optibase says the board handles both digital and analog conversion, software buffers help minimize distortion and can compress in ratios as high as 1:8.

Contact: Ray Harris, Optibase, Tel: 818/719-6566.

119-Channel TV Add-on Board

TORONTO, ONTARIO, AUG 6 (NB)—AView Technology has announced DesktopTV, an IBM-compatible add-on board that turns the computer into an enhanced television, the company said.

The board is capable of receiving 119 channels, allowing VHF, UHF and cable TV channel selection, as well as Videodisc, VCR and other RF modulated NTSC inputs. Controls for the television are operated from the keyboard, and the sound is delivered by an external speaker which is included with the board.

"This is the first time a full-screen television option is being offered for the PC for under $400," said Dan Marshall, the company's president.

"I believe that we are opening a whole new world of desktop video applications. There are a wide number of possible applications for the board, from security and surveillance applications to distribution of training programs within a corporation, or for entertainment," he added.

The product has been developed in multifrequency and VGA versions. It is available direct from the company for $395.

For more information, call 416-922-6555.

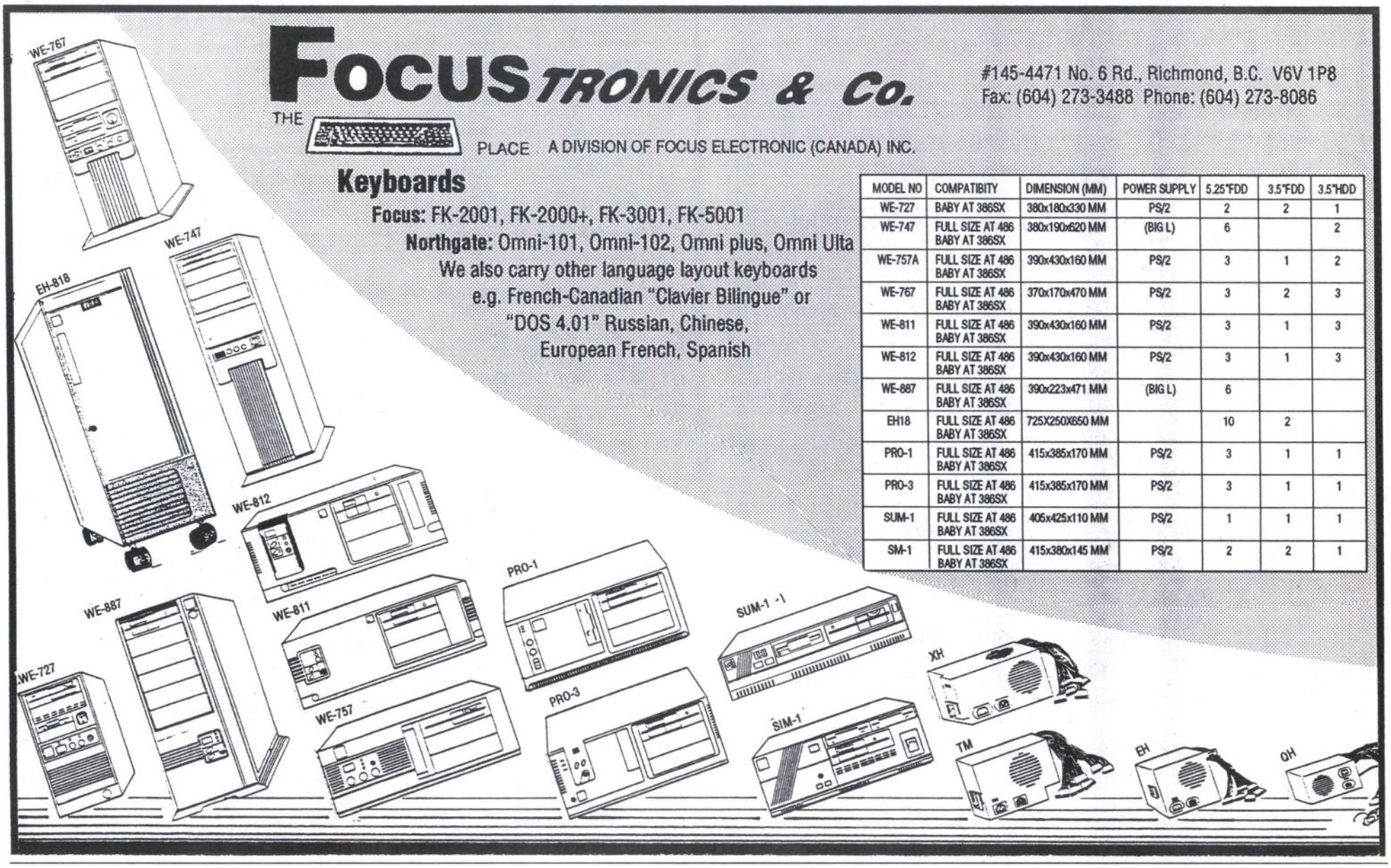
Autodesk Animator Pro For Multimedia

SAUSALITO, CALIFORNIA, AUG 1 (NB)—Autodesk is shipping its new Animator Pro software package, a two-dimensional (2-D) software package for the IBM personal computer (PC) 386 and 486 or compatible computers.

With screen-resolution independence, animated cells and advanced tweening, text handling and paint features, Autodesk says Animator Pro gives graphics and video professionals real-time animation capabilities.

The company says Animator Pro is a mid-range product, a step up in capabilities from the entry-level Autodesk Animator software, but does not have three-dimensional (3-D) capability Autodesk 3-D Studio software has.

The Autodesk Multimedia Division, the division producing Animator Pro, was created last August and has intro-



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WE-757A	FULL SIZE AT 486 BABY AT 386SX	390x430x160 MM	PS/2	3	1	2
WE-767	FULL SIZE AT 486 BABY AT 386SX	370x170x470 MM	PS/2	3	2	3
WE-811	FULL SIZE AT 486 BABY AT 386SX	390x430x160 MM	PS/2	3	1	3
WE-812	FULL SIZE AT 486 BABY AT 386SX	390x430x160 MM	PS/2	3	1	3
WE-887	FULL SIZE AT 486 BABY AT 386SX	390x223x471 MM	(BIG L)	6		
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duced Autodesk 3-D Studio. The 3-D Studio allows 3-D modeling and animation and also requires a 386 or 486 PC.

The company says the new multimedia division has expanded reseller channels to over 300 Authorized Multimedia Dealers.

Autodesk is perhaps most known for its package AutoCAD, available on PCs and workstations and used by engineering and drafting professionals for computer-aided design (CAD).

Animator Pro retails for $795, the company said.

Contact: Kathleen Doney, Autodesk, Tel: 415/491-8803, Fax: 415/491-8308.

Microsoft Acquires X86 Software Emulation Rights

REDMOND, WASHINGTON, AUG 13 (NB)—Microsoft has announced that it is has acquired a non-exclusive license to Insignia Solutions Inc's software emulation of Intel x86 based PCs. Terms of the agreement were not disclosed.

Insignia Solutions markets SoftPC which allows DOS-based applications software to run on non-DOS based machines. Macintosh, Unix, and SPARCstation versions are available. Insignia also markets AccessPC, which reads DOS disks and displays the files as icons on a Macintosh.

Insignia's technology recreates the IBM AT environment using proprietary software, and the license gives Microsoft the right to incorporate that technology in future product offerings.

Asked about the specific intent of Microsoft's acquisition of the emulation technology, a spokesperson for Microsoft told Newsbytes that the company had acquired the rights for future use, not for a specific purpose at the present time.

Announcing the deal, Ivor Share, Insignia Solution's VP of sales, said: "We believe Microsoft's implementation of software emulation will be the most innovative in the marketplace."

Steve Ballmer, Microsoft senior VP of systems software, said: "With the help of Insignia's technology we can preserve customer investment in MS-DOS and Microsoft Windows environment applications in our future system software products, on both advanced Intel-based systems and on other platforms."

Insignia, headquartered in High Wycombe, England, employs 110 staff and has U.S. marketing, sales and support offices in Sunnyvale, California, and Andover, Massachusetts. The company, which was founded in 1986, was initially funded by a consortium of British and Dutch venture capital firms. In 1990, Insignia Solutions reported revenues of $8 million.

Contact: Liz Sidnam, Microsoft, 206-882-8080 or Doug Reid, Insignia Solutions, 415-694-7600.

New Graphics Board Makes Windows Twice As Fast

SANTA CLARA, CALIFORNIA, AUG 13 (NB)—Actix has announced its new Tiger 10 video graphics adapter (VGA) boards for corporate users of DOS and Windows.

The company claims that the new boards double the speed of running Microsoft Windows while increasing the quality of the video image displayed.

The Tiger 10 displays up to 256 colors simultaneously, creating photo realistic images, company officials said. The speed comes from a graphics co-processor that makes screen displays twice as fast. Reduction of flicker also occurs with a screen refresh rate of up to 90 megahertz (MHZ), the company claims.

Actix officials added that the 100 percent acceleration is carried out using a proprietary Windows driver in combination with technology from Texas Instruments.

The new card offers resolutions from 640 x 480 dots per inch (DPI) to 1,280 x 1,024 DPI. For higher quality images Actix said that the Tiger 10 can generate resolution of 1,280 x 96 noninterlaced images. Interlacing is simultaneously projecting two screen images over one another to get an effect. Non-interlaced images are sharper and have truer color, producing a crisper, more realis-

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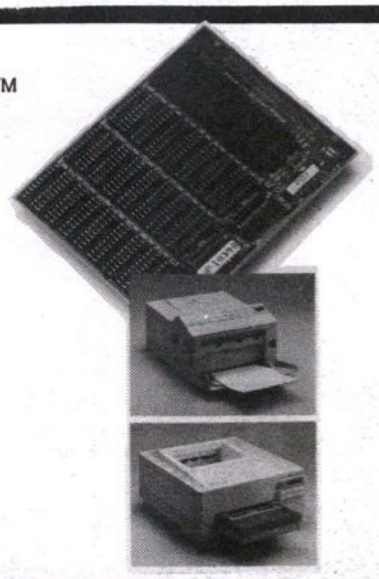

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tic image.

Actix said that the Tiger 10 card is available immediately and comes with the board, a software diskette, terminator plug, ribbon cable and manual. The Tiger 10V is shipped without the terminator plug and ribbon cable. Retail pricing ranges from $599 to $830 depending on the capabilities of the card.

Contact: Phil Grasso, Actix, Tel: 408-986-1625, Fax: 408-986-1646.

Norton Desktop For Windows

CUPERTINO, CALIFORNIA, AUG 1 (NB)—Symantec has announced the Norton Desktop for Windows product has begun shipping.

Symantec claims the product allows users to copy, move, view, launch, delete and print files. Files are printed by dragging the icon for the file to the printer icon, viewing by dragging the file icon to the viewing icon, and copying and other functions are accomplished in the same manner, the company said.

File viewing supports all the major spreadsheet, word processing, database and graphics file formats including, Excel, Lotus 1-2-3, WordPerfect, Microsoft Word, AmiPro, dBASE, .PCX, .BMP, .GIF and .TIF, the company said.

The company says the product also includes an automated data backup, data recovery and network support. Background operation is offered so backups can be run while the user is working, and a Norton scheduler allows backups and other routine activities to be run unattended at predesignated times, Symantec said.

The Norton Disk Doctor for Windows is included in the product and allows users to diagnose and often solve common disk problems, Symantec said. An Emergency Disk allows users to repair, unformat or optimize disks and recover erased files even when Windows cannot be accessed, the company claims.

SmartErase is also included and contains Unerase, a utility for recovery of deleted files, the company said. Other utilities include SuperFind for searching for files, Batch Builder for creating Windows batch files, Icon Editor and Librarian for creating and modifying icons, KeyFinder for pasting unusual characters or symbols for use in documents, Sleeper for screen blanking with nine different screen displays, and Launch Manager for starting any Windows or DOS program from within any application currently in operation.

Norton Desktop for Windows does not alter the look or feel of Windows, Symantec said, so users do not have to be concerned about another "program layer" on top of Windows.

The Norton Desktop for Windows retails for $149 and includes The Norton Backup which is a stand-alone

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Contact: Brian Fawkes, Symantec, Tel: 408/446-8886, Fax: 408/253-3968.

Borland Shows Off New Functions In Windows Products

PASADENA, CALIFORNIA, JUL 23 (NB)—Newsbytes got a sneak preview of Borland's new Windows products, including Paradox for Windows, Object dBASE and Quattro Pro for Windows presented by Philippe Kahn at a special meeting of the Pasadena IBM Users Group at the Pasadena Hilton.

Kahn talked about the importance of object orientation, saying: "Object orientation will be to the software industry what microprocessors were to the computer." Borland sees object orientation as essential to the industry and has made some logical, but new, object-oriented innovations in its Windows products.

Kahn said that part of the concept of object orientation to him was user being unaware of the structure of the data behind the program. Kahn said object orientation should be done in such a way that users do not have to be concerned with data formats, but the user should just be able to start a program and use data from any other program. The data structure handling should be done internally, by the objects themselves, he added.

In Borland's database products for Windows, Borland doesn't believe in a "native" database, and has done what Kahn called "database promiscuity."

Kahn added that Borland has already scrapped Ashton-Tate's proposed plan of making dBASE V incompatible with dBASE IV, if the sale goes through. Data from any database program can and should be available to any other database program, he said. That connectivity is planned for Borland's database products: "Users should be able to choose a product based on the product, not the format of their data."

Not only was the data transportable between applications, but Kahn said programmers will be able to create applications that run under Windows or DOS with the same source code, simultaneously. Kahn added that Borland took an existing SBT database application, and with no modification of the source code, turned it into a Windows application.

Kahn demonstrated a part of Object dBASE called the Resource Workshop, in which a user could create Windows menus in a non-Windows application and modify executable files without having the source code.

Containership is another concept introduced in the new Borland Windows products. Just as when a glass of water is moved and the water in the glass moves with it, so when objects on the screen are moved, any icons within

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icons in a Borland Windows product will move with all the functionality attached, when the icon is moved. So a button inside a box that executes a macro to tile the Windows in Quattro Pro, will be in the same place relative to the box, with the same functionality, when the box is moved, Kahn said.

The Windows versions of all three Borland products, Object dBASE, Paradox and Quattro Pro had full desktop publishing capability with word processing and graphics. All three were demonstrated on industry standard computers, either a 80386/20 or a Toshiba 1200 portable 80286 computer and performance appeared to be very good.

Kahn made much of Borland's new use of the right mouse button. Rather than the right mouse button being used as a duplicate of the left, the right mouse button in Borland Windows products, when clicked on an object, brings up the set of choices available for that object.

Kahn said that Borland's use of the right mouse button for allowing the user to make changes to an object on-the-fly, in context, is planned for all Borland Windows products.

The three Windows products were not given a definite release date, but Kahn said all would be released in less than nine months. Paradox for Windows is expected to be released first, and Kahn said it was very close to release.

Contact: Philippe Kahn, Borland, Tel: 408/438-5300, Fax: 408/439-9273.

Borland's Quattro Pro/ Paradox Windows Upgrade Plan

SCOTTS VALLEY, CALIFORNIA, JUL 29 (NB)—Hoping to insure a future share of the lucrative Windows market and the database management system market at the same time, Borland International has introduced a new upgrade plan, called the Passport Program, which guarantees special upgrade pricing to the Windows ver-

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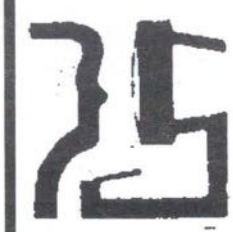

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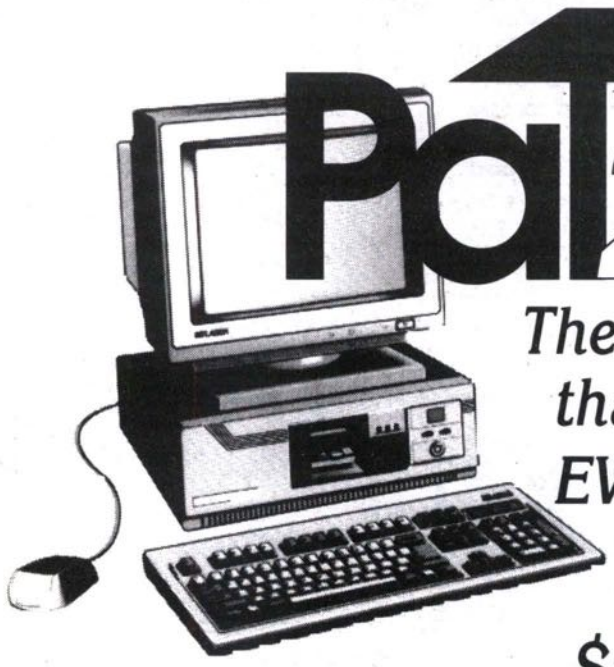

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sions of its Quattro Pro 3.0 and Paradox 3.5 products.

The plan applies to anyone who purchases and registers their Quattro Pro 3.0 or Paradox 3.5 products after July 1.

Anyone who purchase a full retail upgrade, competitive upgrade or LAN Pack version of Quattro Pro 3.0 after that date is eligible to upgrade to Quattro Pro for Windows (or the next DOS version of Quattro Pro) at the special Passport price of $49.95.

Additionally, the company says that anyone who purchases a full retail, upgrade, competitive upgrade or LAN Pack version of Paradox 3.5 after July 1 qualifies to upgrade to the Windows version (or the next DOS version) of Paradox at the special Passport price of $139.95.

Doug Antone, senior vice president, worldwide sales at Borland, said: "By investing in Borland's software today, (customers) are guaranteed the next upgrade version at a significant savings."

The company maintains that customers must register their Quattro Pro 3.0 or Paradox 3.5 products to qualify for the Passport Program upgrade pricing. Registered users will then receive advance notification when products become available, confirming the special Passport upgrade price.

The promotion will be applicable only on Windows or DOS upgrades available by March 31, 1992.

Borland recently announced another promotion concerning Quattro Pro 3.0 and Paradox 3.5. In that promotion, which runs until October 31, 1991, anyone buying the $495 retail version of Quattro Pro 3.0 or the $795 version of Paradox 3.5 can get a free copy of the company's Sidekick 2.0.
Contact: Borland International Inc., 408-439-1614)

Microsoft UK Reveals Plans For OS/2 And Windows

LONDON, ENGLAND, JUL 29 (NB)—Microsoft is actively encouraging users of OS/2 to migrate to the Windows environment, despite the fact that the software house is committed to developing OS/2 V3.0 for IBM. At the same time, Microsoft has firmed up its plans for the next generation of Windows, which it calls Windows New Technology, Windows NT for short.

Senior officials with Microsoft U.K. today outlined their plans for OS/2 and Windows, explaining that users are really after Windows. According to David Svenson, Microsoft UK's managing director, "There is a lot of FUD (fear, uncertainty and doubt) out there."

"Today we intend to clear this FUD. Steve Ballmer has been doing the rounds in the U.S. We're going to do the same in the U.K.," he added.

Svenson said that U.K. sales of Microsoft software are riding high. "They're better than the year before. This makes us the largest software company in the world," he said.

Dave Smith, UK systems manager with Microsoft, said that the company's strategy is now to sell and support Windows in a big way. "Microsoft Windows is the strategy we are embarking on," he said.

Smith went on to say that Microsoft is also planning to actively encourage OS/2 users to migrate to Microsoft Windows. This is despite the fact that Microsoft is committed to developing OS/2 Release 3.0 for IBM. "It's important to ensure OS/2 users migrate quickly to Windows," he said, adding that Microsoft is working hard to migrate OS/2 users to the Windows environment.

IBM, he said, has not made it clear what is happening with OS/2 version 3.0. This has resulted in a considerable amount of speculation as to the future of the operating system.

Microsoft is hoping to lure OS/2 users over to the Windows environment with the promise of Windows NT. Earlier and current editions of Windows (to version 3.1) have been graphical user interfaces (GUIs) overlaying onto a DOS base. Windows NT, said Microsoft, will be a bootable operating system in its own right, without the need for the user having to boot from DOS or OS/2.

Windows NT is now on target for a 1992 release. Version 3.1, meanwhile, is being readied for release before the end of the year. Microsoft officials refused to be more specific on these dates.

Features of Windows NT include support for multiple platforms, including 80386 and RISC microprocessors; Multiple DOS sessions; and the ability to emulate a DOS session from within the Windows environment without loading a copy of DOS into memory.
Contact: Microsoft UK - Tel: 0734391123.

Buttonware's PC-File 6.0

BELLEVUE, WASHINGTON, AUG 8 (NB)—ButtonWare has released PC-File version 6.0, its dBASE-compatible, flat file database.

ButtonWare says the program is easier to use since it offers a Windows-like interface with buttons, scroll bars, pull-down menus and dialog boxes, but without the heavy RAM (random access memory) and disk requirements that Windows products require.

PC File 6.0's menu structure has been redesigned to add pull-down menus, and has the option to run in character mode. It can locate files on any drive or directory, and supports the use of a mouse. Help screens have been expanded to allow users to scroll through detailed information, and general navigation help screens are available.

PC-File sells for $75-100 at retail outlets, and registered owners of earlier versions can update for $49.95. A LAN version is also available with a five workstation license for about $250. The new program is not available as shareware, like earlier versions were.
Contact: Dee Dee Walsh, ButtonWare, 206-454-0479, fax 206-454-1838.

HP Intellifont For Windows—Free

GREELEY, COLORADO, JUL 18 (NB)—Hewlett-Packard (HP) is offering its HP III customers its HP Intellifont-forWindows 3.0 free, just for

the asking.

HP says the Intellifont-for-Windows software comes with matching screen fonts for the CG Times and Univers fonts that come with the HP Laserjet III, IIID, IIIP or IIISi printers. The new software also allows the user to create matching screen fonts, without leaving Windows, for any HP accessory scalable typefaces the user wants to add, the company said. Font scaling on-screen allows the user to see exactly what is printed, not just an approximation full of jagged edges, for what-you-see-is-what-you-get (WYSIWYG) viewing of documents.

HP said Intellifont-for-Windows allows background printing and allows the user to change fonts on-the-fly, without planning ahead and without leaving a Windows application.

Intellifont-for-Windows 3.0 requires an HP Laserjet III family printer, at least an IBM AT or compatible personal computer (PC) with a high density 5.25" or 3.5" floppy drive, 2 megabytes of random access memory (RAM) and Windows 3.0, HP said. As a side note, Windows must run in Standard or Enhanced mode, which requires 1-2 MB of RAM—real mode is not supported.

The company has set up several ways for HP users to respond to the offer for Intellifont-for-Windows 3.0. Users are invited to call (303) 353-7650 or fax their request to (303) 352-6152. Users can also mail their request to Hewlett-Packard, P.O. Box 1754, Greeley, Colorado, 80632-9936. Some users are receiving an invitation by mail to obtain the new screen font software.

Hewlett-Packard also said it is also entering users who respond into a drawing for an HP scalable typeface product. But, of course, it's for a limited time only.

Contact: Cathy Lyons, Hewlett-Packard, Tel: 303/353-7650, Fax: 303/352-6152.

Problems with DOS 5.0

LOS ANGELES, CALIFORNIA, JUL 18 (NB)—All new software seems to be plagued with problems and Microsoft (MS) DOS 5.0 is no exception. Problems with accounting packages, disk utilities and network software seem to be the major sources of grief for some Los Angeles and San Francisco-based consultants.

Steve Sacco of Amcom consulting services told Newsbytes he likes DOS 5.0 and has upgraded to it on the systems of several of his customers without mishap. However, with a client running Autocontroller, an accounting package, the backup program would no longer work, Sacco said. He tried the "Set Ver" command recommended in the documentation—a command which is essentially a "lie" to the software so the software thinks it has the version of DOS it is expecting and keeps running. Sacco said it didn't work, and he had to give up and uninstall DOS 5.0.

A technician at MS Tech Support confirmed that several accounting programs have difficulty with DOS 5.0, including Peachtree and AMI.

Mark Florence and Fred Gault of the Canyon Company in San Francisco found less serious problems. Florence said upon installing DOS 5.0 on an IBM PS/2 Model 7 the DOS shell locked up completely and the machine had to be completely powered off. On another AT-class IBM compatible computer the shell had no color at all on a color monitor. In both instances they gave up and uninstalled the software. "We don't have time to mess around with it," Florence said.

Users can also expect problems with hard disks low or high level formatted, or partitioned with software that ". . .does not follow MS standards," said an MS support tech, who named specific software titles, including SpeedStor and Ontrack's Disk Manager.

Users who call MS Tech Support should be prepared to be persistent and to wait. It took Newsbytes 15 calls over a 1.5 hour period to get through, and 20 minutes of waiting once the phone was

Continued on page 67

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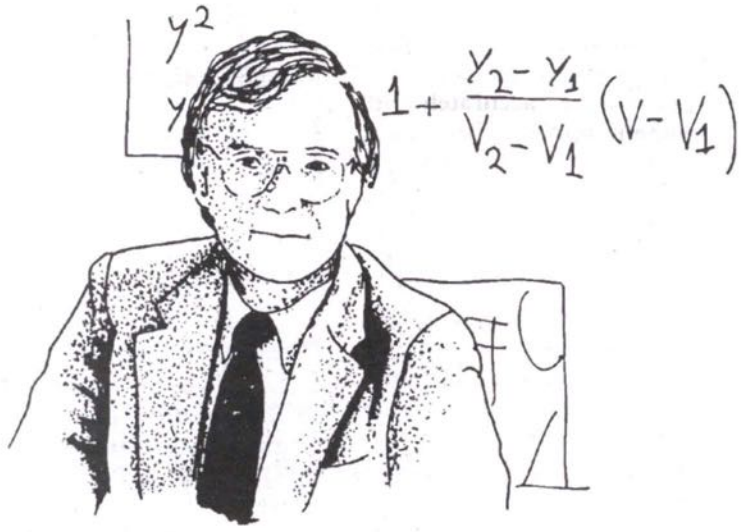


Quality control is the name given to practices in manufacturing industries that establish and maintain standards of quality in manufactured goods. Random chance affects manufacturing quality so statistics is part of quality control. The computer manufacturing industry, like most others, practices quality control.

Quality control matters when you buy a new PC computer system. IBM clone systems are built with components from different manufacturers. Motherboards, modems, monitors, printers, keyboards, drives, chips: all the many components can come from different manufacturers before they're put together to form the whole computer. Often buyers find component-based PC systems are the lowest priced. Vancouver has many retail dealers building and selling component-based PC systems.

Computer component manufacturers vary in their policies on quality control. Some impose high standards in manufacture that ensure components are almost all good and very unlikely to fail. Some have looser standards of manufacture, maintaining standards of quality in the marketplace by promptly repairing or replacing defective components returned under warranty. A few rotten-apple manufacturers produce poor-quality items, sell them cheap, ruin their own reputations and go broke, leaving a legacy of bad components failing on their owners with no manufacturer to honor the warranty.

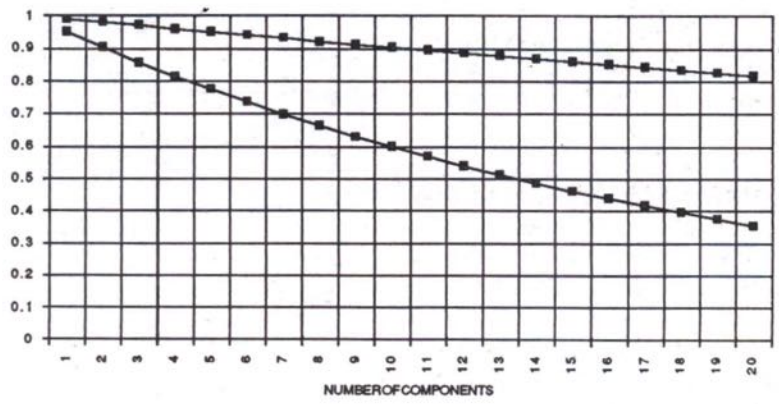
What are the odds of buying a brand new component PC system that has something wrong with it? New buyers can make the mistake of thinking that because their new computer cost them thousands of dollars and is very high-tech that it must be infallible. This is false. Statistics of quality control give the odds on defects appearing in a new component PC system. The odds are surprisingly high.

The Last Shall be First

Defects in a new computer system are likely to crop up anywhere. This is important for first-time buyers of complete systems to know. They are often computer novices who are gradually learning. The range of use of their system expands as they learn. From basic low-end functions they progress into specialized and advanced high-end functions.

Defects are just as likely in high-end functions as in low-end functions. But it takes time for the learning novice to get into these high-end function and discover the malfunctions that defects cause. This can be time enough for the warranty on the defective component to expire. This leaves owners stuck with the bill for repair or replacement if they want to use the high-end function that they bought and paid for but never received.

Quality Control Level of a Component PC System
(Probability of No Defects)



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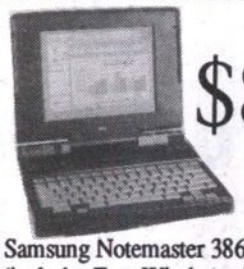

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QUALITY CONTROL

A False Faith

The idea that computers and computer components should be infallible because they are high-tech puts misguided faith in technology. Computers are complex and complicated. They are made up of enough parts, any of which may fail, that what is loosely called the law of averages or more accurately the long-run argument applies. Computer components can be trusted to behave as statistical entities with a probability of failure and a complementary probability of success.

"Failure" is when something goes wrong. Hard discs crash, files don't copy, printer heads break, modems don't connect, and on and on and on. Experienced computer users know bugs are part of using these computer systems.

"Success" is when things go right. The computer runs smoothly doing what it is supposed to, lulling the user into a treacherous sense of security. Things will go right some of the time, even most of the time, but not all of the time. Over a long-enough run the law of averages will catch up and high-tech computers and computer components will fail.

Setting the Standard

Manufacturers generally produce to a set standard of quality control. This standard is measured by the proportion of defective units produced out of the total units produced. It is expressed as a percentage or a decimal fraction between 0.00 and 1.00. It is also the probability of any given unit being defective, for example the unit you get as part of your brand-new computer.

Consider a fictitious hard drive manufacturer. The standard of quality control they set for themselves might be that one drive in twenty is defective. That is, one drive in twenty will fail while within warranty. Items that fail outside of warranty are not considered defective by most manufacturers.

The defective rate is 1/20, which equals 0.05; 5 % of the hard drives are defective, 95% are non-defective. In quality control these values are expressed as statistical probabilities. The probability of a "failure", a defective drive, is P(failure)=0.05. The probability of a "success", a non-defective drive, is P(success)=0.95.

A P(failure) expressed as a percentage is called a failure index. Failure indexes of 5% or 1% are the most common quality control standards in industry. Sampling and testing procedures enforcing quality control standards are usually based on tables, charts and protocols that assume a 5% or 1% failure index.

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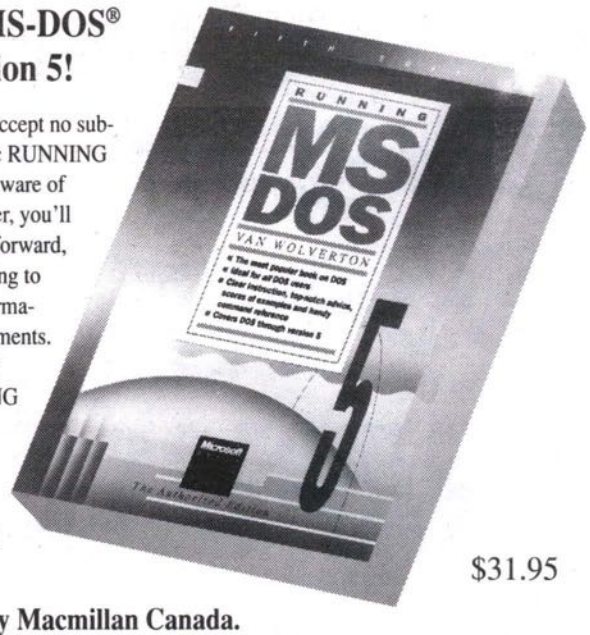

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Here comes some math. Readers who recoil in horror can skip to the graph which summarizes the math. But some readers will see the logic, get an aha! experience and be strongly impressed.

Start by thinking of a single computer component manufactured to a lower quality control standard with a failure index of 5%. It has a 95% probability of being free of defects (success!)

Now let's add to it another computer component with a failure index of 5% as we begin to build our whole computer system. For the whole system to be free from defects both components must be free from defects. In statistics we calculate the probability of this success by multiplying the probabilities of the two separate successes.

So the probability of the system being defect-free is 95% * 95%, or 0.95*0.95=0.9025. Our two-component system has a 90% probability of being defect-free, and a 10% failure index.

Let's add a third component with a high standard of quality control. It has a failure index of 1%, and a 99% probability of being defect-free. The probability of our three-component system being defect-free is:

(95%)*(95%)*(99%)
=0.95*0.95*0.99
=0.89=89%

There is an 89% probability of no defects and an 11% failure index.

Some readers will have noticed the pattern. As components are added, the probability of defects is increasing. The overall standard of quality control is slipping as the system gets more complex. Even when the components are of high quality the overall quality control standard will slip as component after component is added.

The Best of Times, The Worst of Times

Now we can construct best- and worst-case scenarios for quality control standards in component PC computer systems. The quality control standard of a given system depends on the number of components in the system, falling between the best-case and worst-case scenarios.

The best-case scenario is that all the components are manufactured to a high-quality control standard with a failure index of 1%. If we say the variable n is the number of components, the failure index for the whole system follows the formula 1-(0.99**n). This is the lower line on the "Failure Index" graph.

The worst-case scenario is that the components are all manufactured to a lower quality control standard with a failure index of 5%. The failure index for the whole system follows the formula 1-(0.95**n). This is the upper line on the "Failure Index" graph.

For those who know what it means, these are exponential decay formulae. The quality control standard decays exponentially as the number of components in a PC computer system goes up. This decay process is represented in the "Quality Control of a PC System graph."

Look at a best-case scenario of a system with a high quality control standard of 1% failure index on all components. The quality control standard drops below an adequate level of 5% failure index if there are more than five components. A short list of motherboard, monitor, keyboard, printer and one floppy drive makes up a computer system that barely passes in a best-case scenario. Any system more complicated is sure to have an unacceptably low quality control standard.

A fully loaded PC computer system can have twenty or more components. A best-case scenario gives a failure index of 18%, more than one chance in six of a defect in the system. A worst-case scenario give a failure index of 64%, a bit less than two chances out of three. These are pretty long odds to face when gambling with thousands and thousands of dollars of your hard-earned money.

The Cure

The components themselves have components. They follow the same logic of quality control standards. But the unit has passed the manufacturer's quality control standards before going to the dealer. By themselves the components have an adequate quality control standard.

It's when the dealer puts all the components together to make the whole computer system that the quality control standard slips. The whole system, sold as a single unit ends up being manufactured to a poor quality control standard. The cure for this is another level of quality control. Dealers can re-establish a good quality control standard if they test and burn-in the total system before they let the buyer take it out the door.

Thorough testing by the dealer runs special testing software. These programs run and check all functions, high-end and low-end. A conscientious dealer checks test results, returning defective components to the manufacturer and replacing them with components that do pass the test. This drastically reduces the chances of a buyer getting a system with a defect.

Electronic components like motherboards and expansion cards are likely to be fine indefinitely if they pass their initial testing and burn-in. With proper power surge protection they can long outlive both you and I.

Components with moving parts (hard and soft drives, printer heads, keys, etc.) will gradually wear out and eventually fail. They will probably fail outside of warranty but hopefully after a long lifetime of stalwart service. Initial testing should move all the moving parts and move them enough that initial breakdown problems are unlikely and a long working lifetime can be expected.

Dealers who test equipment thoroughly before passing it on to a buyer are not going to be the cheapest.

Testing requires extra person-hours and resources and the cost must be passed on to the buyer.

Testing may not be as important to experienced computer users or to those buying only one component at a time to add to an existing system. Individual components from different manufacturers are usually produced to a good quality control standard. Experienced users are likely to spot the odd defective unit if they get one. For these buyers, mail order or large-volume discount dealers may provide best value for the dollar.

Complete systems from a single manufacturer form a single production unit. For example, a portable computer from a major manufacturer (Sharp, Toshiba, etc.) will be manufactured and tested to that company's good quality control standard. Though it doesn't hurt, dealer testing is not as necessary for these items.

Novice computer users buying a new component PC system are at the other extreme. They may lack the experience to recognize poor performance, or may put it down to their own lack of expertise. If they do find a defect they can have an obstacle explaining it to the dealer to get it serviced under warranty.

For these buyers it is more valuable to choose a dealer who tests the equipment for them. It costs more in retail markup but is likely to save money and problems in the long run. Remember that the individual components were manufactured to an adequate quality control standard. The math showed that it is when they are all put together into a PC that the quality control standard drops past the point where the chance of getting a defect in a system is too high.

Dealer testing and burn-in, repairing or replacing of components reestablishes a good quality control standard for component PC computer systems. In the unregulated PC clone market it is the dealers who provide the quality control standard the buyers receive.

Buyer Beware

These are good reasons for new buyers to choose a dealer who thoroughly tests and burns-in a new component PC computer system before the buyer takes it out the door. Remember the way the probabilities worked out. In a multi-component system there will be between one chance in ten and two chances in three that there is something wrong with it somewhere.

Summary

Today's PC computer systems are made up of different components from different manufacturers. Each component is probably made to an adequate quality control standard by its manufacturer. But the statistical effect of putting many different components together into one computer system causes the quality control to slip surprisingly far below an acceptable standard.

Dealer testing and burn-in establishes a good standard of quality control for component PC computer systems.

A reference for the information in the article is:
Statistical Quality Control Methods
Irwing W. Burr
Statistics: textbooks and monographs: volume 16
1976, Marcel Dekker, Inc.

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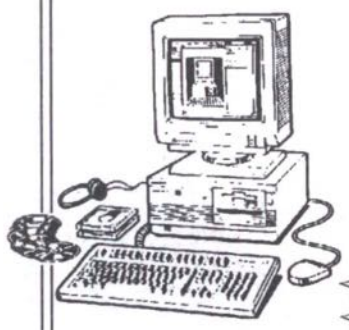

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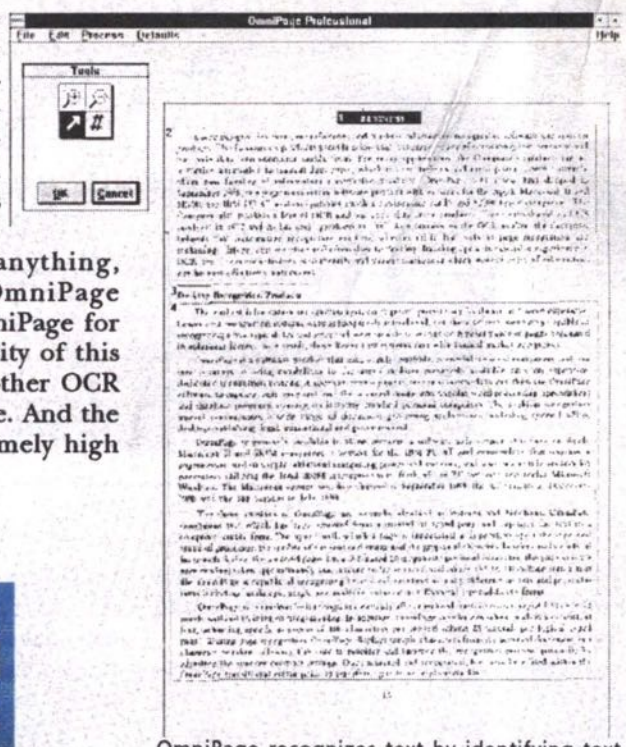
Rating: ****** (see below)

"Optical character recognition (OCR) is often heralded as the answer to all input prayers. And so it should be. The ability to input text into word processor format without retyping is well worth its weight in gold...if it works."

What I wrote two years ago still stands. Readers of *The Computer Paper* may remember last year's review of Macintosh OCR software, "Scanning for Text Recognition," published in the September 1989 issue. At that time, we reviewed four different OCR software packages. Our conclusion was that OmniPage for the Macintosh was by far the best product in its class.

Today, OmniPage Professional is available for the Windows 3.0 environment. Based on the performance of the Macintosh version, we would certainly expect similar results for OmniPage for Windows. The answer is yes! If anything, performance for OmniPage Professional outclassed OmniPage for the Macintosh. The simplicity of this software far outclasses any other OCR software we have seen to date. And the resulting output is of extremely high quality. Let's examine why.

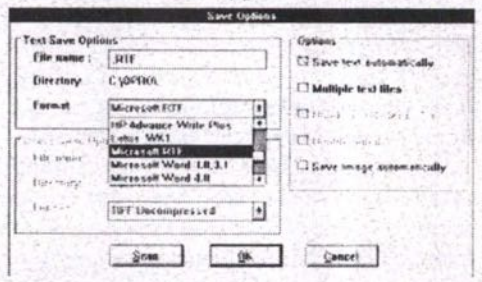


OmniPage recognizes text by identifying text blocks on a scanned page.

How does OCR work?

Ideally, Optical character recognition means having a software product linked to a scanner. Take a piece of paper with text on it, place it on the scanner and read it. Later, edit the words in a word processor. It should be as easy as that.

Well, it's not, not usually anyway. The problem with reading text is that not all text is the same. Some of your output may be in a variety of typefaces; some of it may be in book form, some may be in laser printed form, others may be in dot matrix form. Each of these different types of documents



OmniPage Professional can automatically save text in any of 49 different formats.

challenges the OCR software to perform different types of tasks.

Most manufacturers of OCR software know that these situations will arise in any given office. But most assume, correctly, that not all of these situations will occur at each office.

To circumvent the problem of making a software product which reads everything, these vendors use a matrix-matching system. This means that the software matches a series of dot patterns which form the character (bitmaps) to a library of character shapes stored inside your computer. If the shapes match, the letter is identified. If not, an error character is inserted.

The problem with this method is that only so many libraries of characters are shipped with the product. If the text your office reads is not contained in the character library, you will need to build

Continued on page 50

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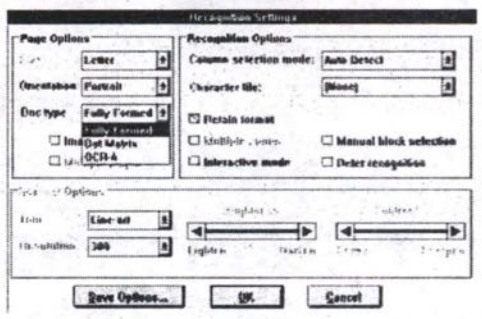
Continued from page 48

your own. This means that you must train your software to read your particular documents. This method is fine if you only have one specific type of document, but what happens if you have dozens of formats? That's where OmniPage Professional comes in.

In CAERE's own words, "Converting a bit-map to ASCII code might seem simple, since we humans have been recognizing text for most of our lives, but to the computer it is no easy feat...OmniPage, a page-recognition program, uses revolutionary OCR technology that analyzes individual character features (feature-analysis) rather than matches shapes (matrix-matching)." And believe me, it works! OmniPage read just about anything we put to it. It read it right and it did it within seconds. No training was involved. Better yet, OmniPage trains itself. We found that the more you read the same text formats, the faster OmniPage reads it. It read anything from monospaced text (from a typewriter or daisy wheel printer) to dot matrix printouts to faxed pages to magazine articles. And it read it with an accuracy ratio of between 80 to 99%. These results are hard to beat.



OmniPage Professional offers several text formats and sophisticated scan controls.

Installing and Using OmniPage

OmniPage Professional requires a 386 PC with 4MB of RAM and Windows 3.0 installed. You can use it on a 286 AT, but you need to purchase a co-processing board along with the software. The price of this board alone (about $1000) makes it worthwhile to get a 386 computer. Installing OmniPage Professional is a snap. Installation is performed through Windows. Select a directory for OmniPage, select the file formats you need, select the scanner you use and insert the appropriate disks. The next step is to create a windows swapfile (a swapfile is a special hard disk section which Windows uses in enhanced mode to store temporary information). This step may be confusing to new Windows users, but instructions are clear and simple in the OmniPage manual.

Once this is done, start OmniPage. Making sure the scanner is turned on, choose Scan from the Process menu. Set your Scan/Recognize Settings and click OK to begin the recognition process.

In its simplest form, scanning with OmniPage is very straightforward. If your scanner includes a sheet feeder, load it up, set OmniPage to automatic save and automatic spell check and go for lunch. When you come back OmniPage will be finished.

If you prefer to work in interactive mode, simply change the settings. OmniPage will let you choose interactively which portions of each page you wish to recognize. This process is more time consuming, but sometimes offers better results (less garbage in the text such as headers and footers, etc...).

OmniPage is the best OCR software package to choose today. It is easy to install, simple to use, fast, and accurate. The type of text which can be entered through OmniPage includes just about anything you can think of from mailing lists to spreadsheets to encyclopedias. OmniPage supports 49 different text formats from dBASE through Lotus 1-2-3 or Microsoft Excel through just about any word processor. The only real disappointment with OmniPage is that it does not include a Word for Windows filter, though it does include a Rich Text Format filter which can be converted to Word for Windows.

Anyone who owns a scanner and Windows 3.0 should seriously consider getting OmniPage Professional. With its workload throughput it will easily pay for itself in a matter of days if not hours.

The Rating Scheme is based on a scale of 1 to 6. The poorest performance receives 1 star while the highest receives 6 stars.

Nelson Ruest is a a trainer and consultant with Resolutions Enterprises, an Ottawa-based publishing consulting firm.

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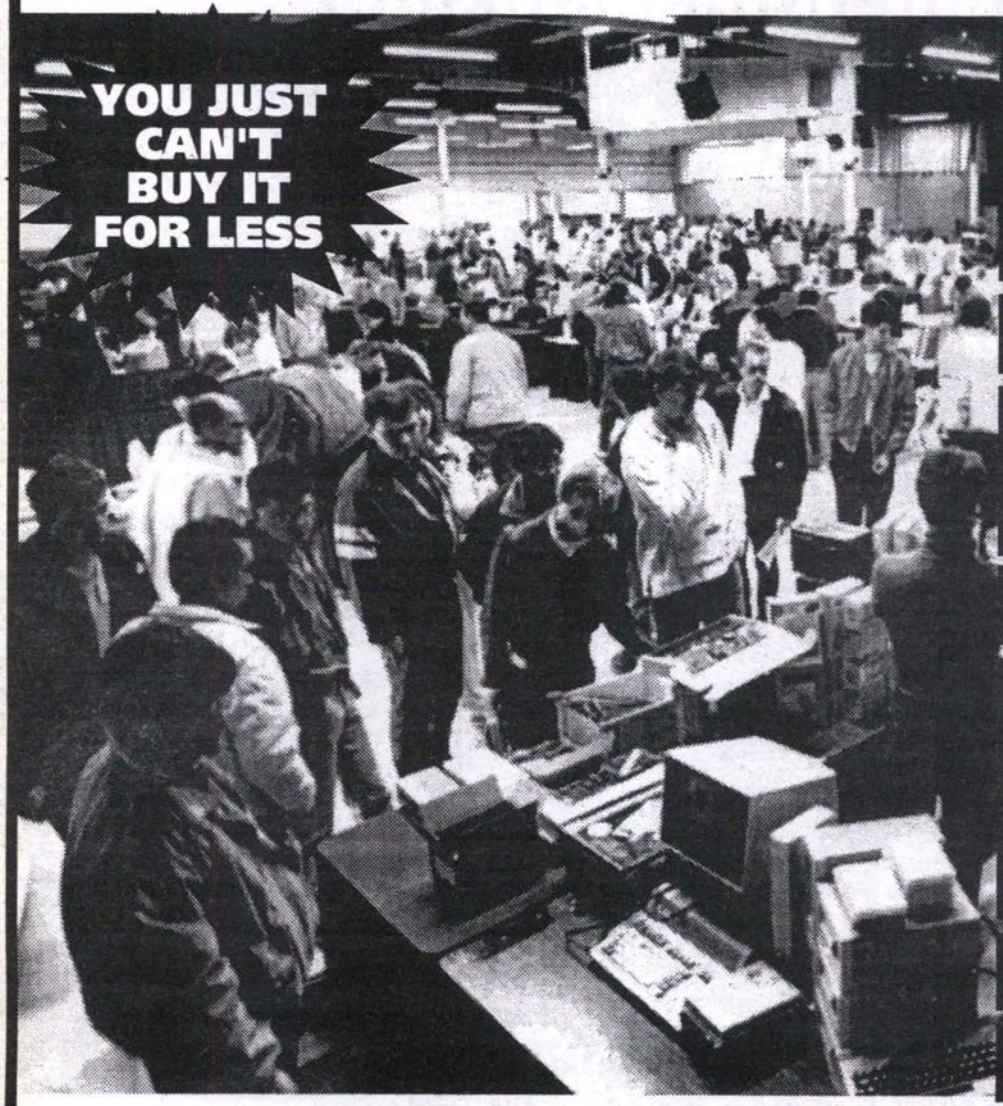

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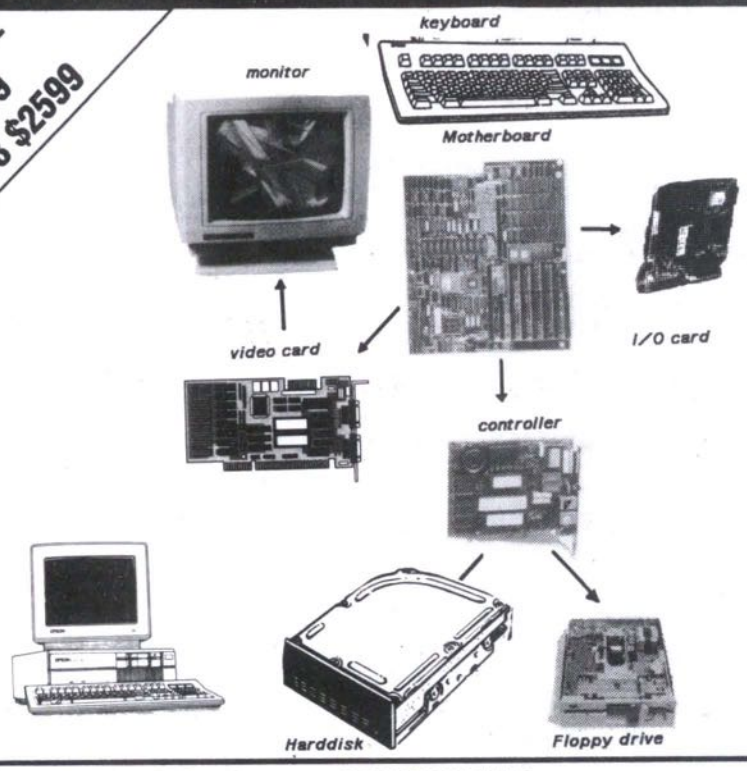

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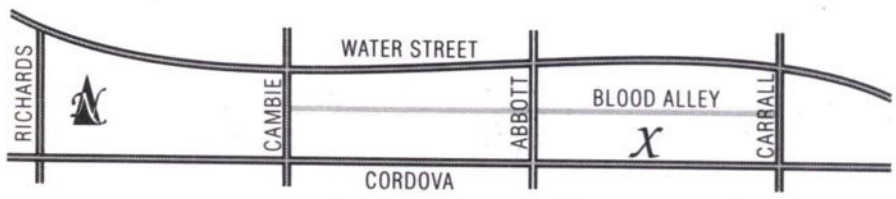

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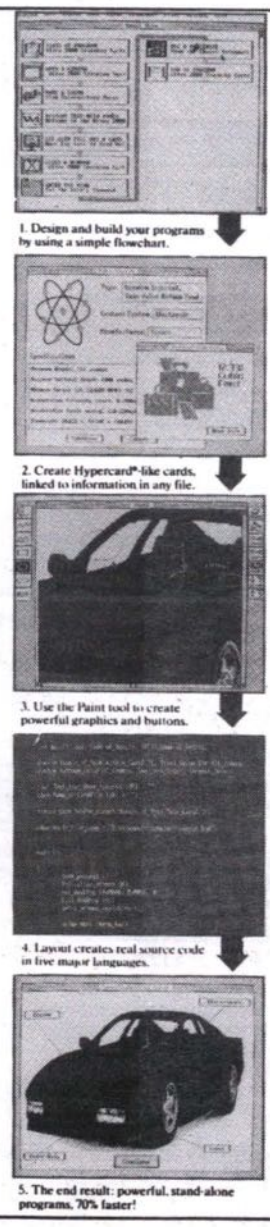
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Hitachi CD-ROM Drive for Mac

Reviewed by Graeme Bennett

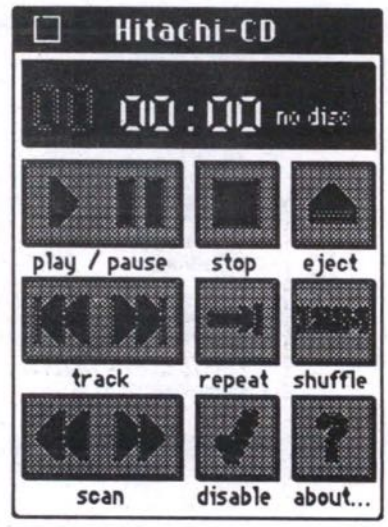
Product: Hitachi 1750S CD-ROM Drive for Macintosh
Manufacturer: Hitachi (HSC) Canada Inc., 6740 Campobello Road, Mississauga, Ontario L5N 2L8; 416-821-4545
Requirements: Macintosh (Model 1750S) and IBM-compatible (Model 1700SPC) versions available. (Mac version tested.)
Price: US$965, $C1249

Design Issues

Maybe it's just us, but this product doesn't seem to be designed very well. Should the Power button be less than one inch away from the Eject button? Should it be difficult to insert a CD with one hand? Should there be a drawbridge-type spring-loaded door that snaps upward, catapulting air and possibly dust toward the area of the inner mechanism? Why is there an IN port on a READ-ONLY device, anyway?

The very first CD that we inserted got stuck (a situation we were able to consistently reproduce by not snapping the cover of the disc caddy fully closed), and once stuck, proved very difficult to remove from the drive, using the manual eject button or even the "emergency eject" hole (into which one must push a straightened paper clip).

Admittedly, we deliberately "torture test" all gadgetry that crosses our desks, in an attempt to simulate normal useage patterns, but it is worth noting that no other CD player we've tested got a disc stuck under similar conditions.



Audio CD can be played via a convenient desk accessory.

The drive can act as an audio CD player, too, although no internal speaker is provided. A headphone jack and RCA sockets allow connection to audio equipment. The drive comes with software that includes a desk accessory for playing audio CDs, as well as drivers for the obligatory High Sierra and ISO 9660 disc formats.

Fastest Drive

Conservatively rated at 350ms, the Hitachi's access speed is faster than that of any other CD-ROM drive we've seen (even other 350ms units), and the Power button is rather convenient on the front panel. (By comparison, the old NEC CDR-72 player we own has the power switch on the back underneath the SCSI ports!)

Initially, we were amazed at the speed of this drive. To give you an idea of its performance relative to other drives, a 2.5MB file loaded from the Hitachi in 19 seconds. The same file took 48 seconds to load from our EMAC Metro CD drive. On a reasonably fast (19ms) hard drive, the file loaded in just under 10 seconds.

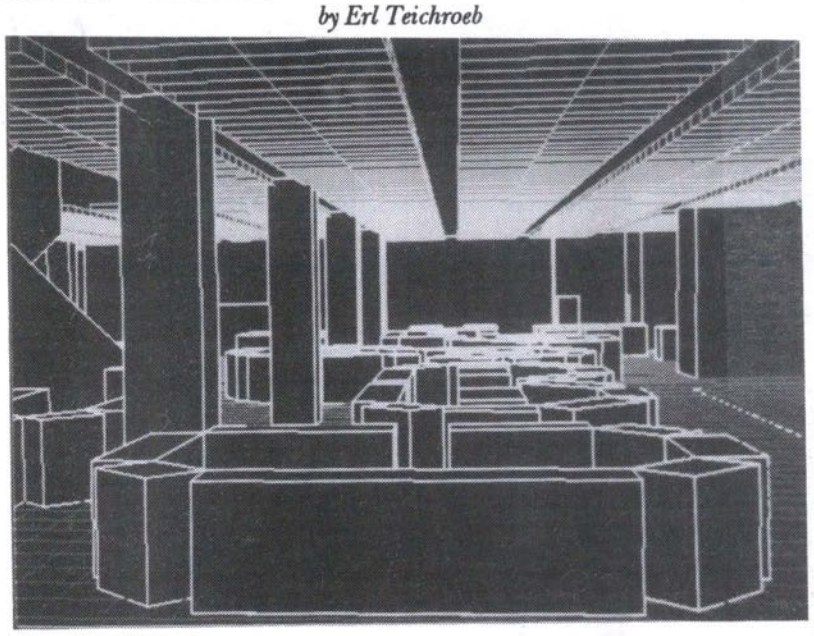
However, we soon began to notice a disturbing trend in discs that the Hitachi read. The Desert Storm disc (reviewed in our June 1991 issue) had severely distorted audio, and the Ocean Imagery disc of Photoshop pictures (portions of which were used for the July 91 issue's cover) consistently displayed garbled TIFF images. Both of these discs worked properly on other CD-ROM drives tested. Thinking we may have received a defective unit, we sent the drive back to Hitachi. Unfortunately, the replacement the company sent performed identically, even when checked on a different Macintosh (running no other INITs or other unusual system additions). Could it be that the Hitachi's impressive speed comes at the expense of data integrity?

The plastic dust cover flap of the 1750S became a constant annoyance, as it impeded the convenient insertion of discs. Because the disc caddy must be pushed into the slot with your finger, the flap always interferes with the procedure as it snaps closed behind the caddy—and your finger.

Continued on page 65

CAD Computer Aided Design

by Erl Teichroeb



General Overview

Computer-aided design (CAD) has come a long way since the first primitive workstations of 10 or 15 years ago that cost as much as a house. In fact, today you can have a much more advanced CAD station for under $3000. Low-end CAD software that sells for $500 or less is now at the point of providing very professional drawings.

The first CAD systems were basically a computer replacement for draftspeople, but they were too slow and simplistic to be taken seriously. With time CAD became more speedy and efficient and moved into the realm of the personal computer. AutoCAD was the first to do a good job of this and is thus the most widely used CAD program by far. There are now over 50 CAD programs available for the IBM and the Mac, and most of them can do things draftspeople only dreamed of.

Think of how word processors or spreadsheets have eased manipulation of text and you get an idea of how CAD can help you with drawings. But just as you still have to enter all the text by typing it in initially, so you also have

Continued on page 54

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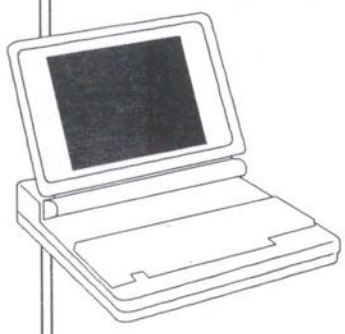

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Continued from page 53

to produce the original drawing; you still have to sit down and take the time to draw that line or circle, which can take as long as doing it by hand. The advantages emerge later when you begin editing and revising the drawing.

Rather than having to re-trace the floor plan for electrical of plumbing layouts, you simply use different layers (see below) or copy the floor plan to another drawing sheet. Electrical or structural drawings are best suited to CAD because of their use of schematic symbols and repetitive lines.

> It is helpful to have some sort of an understanding of CAD and its relationship to drafting before you go out and chat with the salespeople.

The use of CAD for architectural or mechanical drawings depends on what type of drawings your company produces. Architectural details can be produced, saved, and re-used for each job and it's a simple matter to make changes to them. Or, for example, the layout for a 20-storey high-rise can be copied from one drawing sheet to another instead of having to re-trace every time.

Mechanical and civil engineers might benefit from the precision attained only with a computer or from some of the 3-D packages available.

One more reason people are moving into CAD is simply for the professional-looking drawings. You can produce extremely accurate drawings with perfect linework and lettering, and by using a certain type of vellum (paper) and plotter, you can easily make changes by pencil if you don't want to go to the time and expense of re-plotting.

General Features

All CAD programs shold have certain features similar to the following:

- An x-y axis (and z for 3-D) and some sort of snap/grid system so you don't always have to key in the length and angle of every line, arc, etc, but rather can 'eyeball' it with your mouse or digitizing tablet. (A snap is like having a magnetic point for which you set the range of effect)

- Layers, or levels that allow you to organize your drawing as in overlay drafting (a series of transparent drawing sheets on top of one

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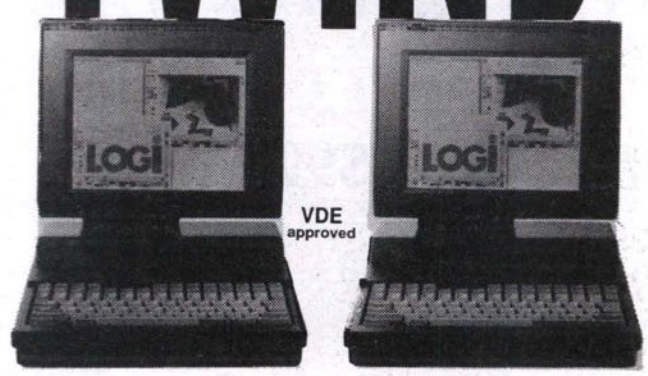

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another). For example, you can put your walls on one layer, your windows on another, and your dimensions on a third and then work on each layer separately and plot your drawing using a different pen thickness for each layer.

- Graphic entities (also called primitives) such as lines, arcs, circles, etc.

- Manipulation commands such as copying, scaling, rotating, etc.

- Editing commands that allow you to trim, extend, stretch erase, etc.

- Some way of moving around your drawing by zooming in or out, paning (moving across) or similar means. This is very important because it can get somewhat frustrating to be working on a large complex drawing on a small computer monitor.

- blocks/components (basically small, often used drawings or symbols) that will be repeatedly brought into the drawing

- Some sort of dimensioning menu. If there is one area of CAD that still needs work it is dimensioning, Associative dimensioning (which changes the dimensions automatically to reflect changes to the drawing) has certainly helped, but CAD is still waiting for that dimensioning program that makes computer dimensioning as easy as hand dimensioning.

- Utilities such as file and plotting menus. You should also be able to create DXF files (the most commonly used conversion utility), which allow IBM-produced CAD drawings to be compatible with other CAD software.

This list is by no means all-encompassing but it does represent features that every CAD package should provide and that should be compared when checking out different software.

Low-end vs High-end

CAD software is divided into two very general groups; high-end and low-end. High-end CAD starts at about $3000 and goes up from there. These programs are quite complex and it usually takes quite a while to master the program. Also usually included is a fairly advanced programming language so that you can tailor the program to suit your needs.

Most high-end CAD systems also offer a 3-D program, but you have to check if it is included in the program or whether it is a separate module for which you will have to pay extra.If you are interested in doing some computer modelling these 3-D packages are quite impressive, especially when you add some shading and a perspective view.

Low-end CAD sells for around $500 and under. A few years ago no serious CAD user would have considered these packages but that has certainly changed. Recent versions of the 2-D section of some low-end CAD packages have menus and commands that rival their more expensive counterparts, although without many of the more advanced features. They can, however, still produce nearly the same end result. Learning curves tend to be shorter so you can be producing professional drawings in very short order. But instead of an advanced programing language, most low-end packages make do with macros, which allow you to string together a series of commands which can then be initiated with a single keystroke.

Low-end CAD companies are also starting to offer some fairly advanced 3-D packages that, although they can't emulate high-end CAD, are very capable of producing professional looking models.

Hardware

Hardware needs will also dictate which CAD program you will end up buying. Some low-end CAD packages will work on an inexpensive 286 with 640k memory and gray-scale monitor. The more costly high-end CAD systems need a fast 386 with lots of RAM to run properly. You will also have to consider buying a color monitor so that you can apply different colors to layers or line thicknesses to be able to differentiate between them on your monitor.

Most CAD programs also need a math co-processor without which the program would simply be too slow to use. This is because CAD stores endpoints of lines or arcs and calculates the distance between them (known as the vector format), as opposed to most paint and draw programs, which simply store the position and color of a specific pixel (known as raster), thereby involving a lot of numerical processing.

You will need either a mouse or a digitizing tablet of some sort. A mouse works well with most high- and low-end CAD and is considerably cheaper than a tablet. A digitizing tablet allows you to do more efficient tracing; as well, it provides a visual means of inserting blocks, but keep in mind any function on a tablet is also available through menus and/or a mouse.

You will need some sort of output device, usually a plotter, although many printing companies in town provide a plotting service if you can't afford a plotter yourself.

This is by no means a completely comprehensive review of CAD but it is very helpful to have some sort of an understanding of CAD and its relationship to drafting before you go out and chat with the salespeople.

Erl Teichroeb runs a CAD consulting business and creates animations. Contact him at (604) 327-8430.

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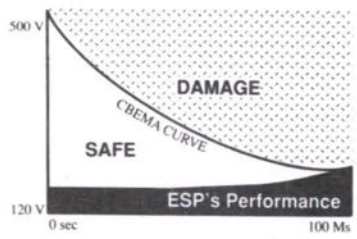

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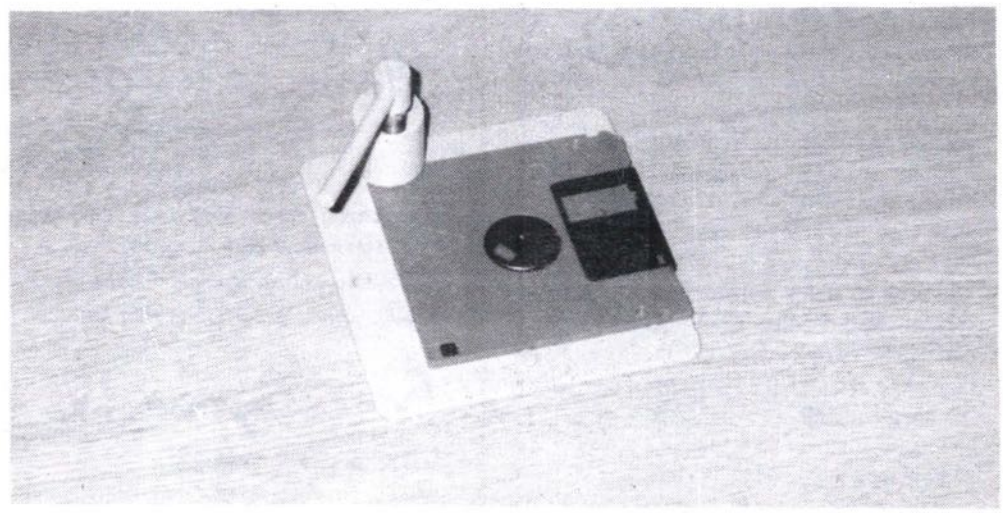
Disk Punchers: are they safe?

by Graeme Bennett



If you use an AT-class machine with a 3.5" drive, or a SuperDrive-equipped Mac, you may have wondered what the difference between Double Density (720k for PC and 800k for Mac respectively) and High Density (1.44MB) disks is. Most people think that there are only two significant differences: price, and that extra little hole opposite the write protect hole. Now on the market are devices that promise to save you money by allowing you to use regular double density disks in HD drives. These products, essentially specialized hole-punchers, are available by the brand names Disk Wizard (see figure 1) and Double Disk Converter. To use a regular disk in an HD drive, just cut an extra hole in the upper left corner, and initialize it with double storage capacity. Hmm. What's the catch?

There is an additional difference between regular and high density disks in the coating that magnetically stores your documents and programs on that disk. The magnetic bits in the coating of a 1.44 MB disk resists demagnetization more strongly than the magnetic bits on a 720k disk do.

Scientists measure this coercivity, or resistance to demagnetization,. in *oersteds*. As it turns out, the coercivity of a 720k disk is 600 oersteds, whereas the coercivity of a 1.44MB disk is 720 oersteds. Because the higher density disk must pack the magnetic bits together much more closely, its resistance to demagnetization must be higher so that they don't demagnetize each other. Experts warn that hopped-up disks are more susceptible to data loss, a month or more down the road.

In *Chicago Computing*, George Demos writes that "for coercivity, the ANSI standard requires a minimum of 600 oersteds for high density drives. All major disk manufacturers produce their double density disks at no less than 600 oersteds. Therefore, while this more-or-less proves that the disk-punching technique works, the fact remains that the high density disks are rated at a higher coercivity level, hence, may be expected to suffer less long-term magnetic data corruption. Further evidence that the magnetic media is not, as some advertisements assert, "essentially the same" is the fact that I have personally tried to format name brand high density disks on regular-density drives without success. Whether bulk "no-name brand" high density disks are truly high density media is anybody's guess.

In our own tests, we had no trouble with disks hopped-up with Disk Wizard (aside from putting the disk into the device sideways instead of upside-down on the first try, leaving us with a useless but harmless hole in the wrong place). If you are feeling the bite of HD disk costs, perhaps one of these products is for you. Caveat Emptor.

Incidentally, disk punchers for single-sided disks (used by earlier computers such as the Commodore 64, Apple II, 8-bit Atari and other machines with single-sided disk drives), suffer from a different problem. Because they buy double-sided 5.25" floppy diskettes, the owners reason, why not use both sides? For that matter, even if a disk is only certified as single-sided, generally both sides are perfectly usable, with no difference in density, or coercivity.

To use the "other side" of a single or double-sided disk in their single-sided drive, budget-minded computerists simply take a hole punch or any number of handy gadgets that can cut a notch in the thin diskette material. The trouble is, inside a floppy disk's vinyl jacket, the actual magnetic diskette is sandwiched between two pieces of fuzzy material, similar to the tiny bristles of a Universal Lint Removing Fantastic Brush, or whatever those things they sell at K-Mart are called. The tiny bristles catch the dirt, dust and stray magnetic oxide particles and sweep them in the direction of the spinning disk. Unfortunately, when the would-be thriftster flips the disk over, the brushes are suddenly sweeping in the opposite direction, and all this debris becomes dislodged, and ends up you-know-where. Whups.

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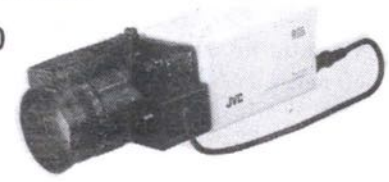

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A Tool for the Timid

VBasic introduces a nice touch with its short Blue Pages at the front of the Programmer's Guide.

After reading that and running the flashy on-line tutorial, I felt orientated and ready to easily create a fancy-looking application shell. To make it perform useful work, though, it is impossible to avoid the reality of low-down programming which is real low-down. Plan on spending 40 hours to install and getting to know the system.

For those experienced in another language, the VBasic language is very easy to pick up, since Microsoft provided a very readable intro to it. The advanced features are packetized into cohesive chapters following the intro, which can be read on an as-needed basis. The manuals are inviting and replete with examples.

For the Merely Lazy

The standard Windows Help provides a very complete online reference with plenty of examples which can be copied and pasted into your program.

The main weakness in the Windows Help system is the absence of a full text- retrieval strategy. It relies instead

Continued on page 58

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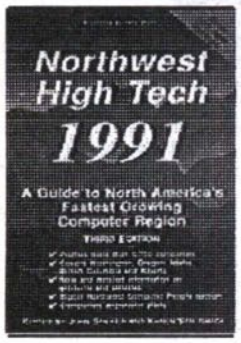

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on pre-built hypertext links. There is an example containing the FloodFill function, for instance, tucked under the hDC topic. There is unfortunately no way you can search for FloodFill. In contrast, Help has a topic called "How To" which is an incredible list of anything you could possibly do—an altogether impressive use of hypertext.

I wished for a "Functions by Programming Tasks" table, though it is there in hardcopy in the Language Reference. It would be nice if it were online.

Fools Welcomed

For both novice and experienced programmers alike, VBasic makes the initial stages of a project much easier than it would be otherwise by providing defaults and associative cues (all visual, of course) to jog the space between the ears. It is as simple as hustling the mouse around and dragging a bunch of stuff: buttons, combo boxes, and what not, into a containing window, which they call a "form," and you've got yourself a lame but live prototype.

Those who like programming by hacking will love the interactive, interpretive environment where explorations are nearly painless. It is not even necessary to declare local variables (thrilling, isn't it?). When you think you've got something that works, you can produce an .EXE run-time with a flick of the wrist.

Big Boy's Think Twice

The down-side of this Nirvana is that large-scale development with VBasic may be questionable. For example, a form is not listable. It exists forever as a visual design to be manipulated exclusively within the VBasic development environment. This is bad news for serious software developers. To mitigate this somewhat, it is possible to choose to list out the VBasic code that operate on these forms, edit them, and reload them back into the VBasic environment.

Another potential problem is the speed of compute-bound jobs. For speed, Visual Basic uses the newer token-threading technology, joining other interpretive languages like Actor and Forth. Nevertheless, based on my crude tests, VBasic and Actor code run 12 times slower than C++ code.

Room to Grow

The stock system provides a lot of functionality via pre-fab objects and methods, which form a friendly face over the pre-fab capabilities. A good case in point is that they make DDE (Dynamic Data Exchange) easy. An end-user, with a little bit of study and experimentation, can competently set up a DDE link with another one of his Windows application, e.g,. Excel, that speaks DDE.

To really make the pre-fabs sing and dance, though, be prepared to earn your stripes as a VBasic technoid. Like me, you may even resort to finding and using undocumented behaviors to make your application work just the way you want. As they say, "No pain, no gain."

If you need to go beyond the pre-fabs to tap into the extremities of the underlying Windows API (Application Program Interface), you would be wise to pass off that portion to a professional programmer. Even though you may have written some heavy Excel macros before, you should be aware that even experienced programmers find the underlying substrate challenging. Serial communications is one example that falls under this category.

In the Cockpit

On a lighter note, working with VBasic is fun. The splittable Code Window is quite neat and I found the automatic formatting and name fix-ups entertaining. I particularly like the ease with which I can get to the relevant part of my program merely by double-clicking on an object.

Yes, I have a few grievances. The Immediate Window, where interactive Basic is typed in, could use a lot more functionality. Same for the Code Window. I wish I could turn off the instant syntax checker since it interferes with my edits. There are faults with the project save procedure. I can't: 1) create a directory, 2) back up my project, nor 3) access my usual projects in an efficient way.

Power Trips, Anyone?

Although the manual (p. 1/380) says that a Windows API prototype file is included, it wasn't there. To do serious programming, it is necessary to buy the Windows SDK (Software Development Kit). Although the SDK books are available at bookstores, they refer to symbolic constants which are only defined in the SDK's windows file. Microsoft can score a substantial coup if they can roll QuickC into Visual Basic so that the power programmer can create custom DLLs (Dynamic Link Libraries) on the fly. These power packs can tremendously enhance your effectiveness, particularly since accessing DLLs from VBasic is dead easy.

In conclusion, though Visual Basic is extensible, via custom controls and DLLs, it provides no mechanism for working with abstract as opposed to concrete (visual) objects. This will hamper the development of an aftermarket for extensions. Aside from buttons and boxes, you do need things like collection classes, dictionaries, and streams. Another obstacle to third-party extensions is that they will have no way to extend the stock Help with their on-line documentation.

Thomas Fee offers consulting and training in object-oriented technology. He believes in freedom of expression and life after death. (604) 682-6590.

POINT-OF-SALE

POS Systems: a Case History

by Graeme Bennett

Back in 1988, Strider Computer Centre installed a point-of-sale (POS) system into its stores. *The Computer Paper* spoke with Strider President Gord McOrmand on how the system had worked out.

TCP: Why did you initially consider going to a point-of-sale system?

GM: Basically, because inventory control was one of the major difficulties we had. We wanted a system to track stock and facilitate timely reordering. We also wanted to set up a customer base and effectively track receivables.

TCP: How many terminals are you currently running on the POS system?

GM: We have seven or eight. They're mostly XTs, but ATs would have better performance. It is running on Novell, which has been very reliable.

TCP: How much time does it take to maintain the POS system?

GM: The actual POS system takes almost no time. What does take time is cleaning up old inventory items, duplicate customer files, correcting data entry errors and whatnot. We have to go in and clean out the old files and errors or eventually it turns into a monster.

TCP: What were the most troublesome problems in getting the system up and running?

GM: Aside from the actual inventory—having a starting point where you're actually alive and the system reflects. We found it easiest to just enter the codes and then do a manual inventory count. Now, when we count inventory, we don't even shut the store down, we just do one section of the store at a time.

Integrating it with our AccPAC accounting system was, uh, challenging. There is a new module that does it automatically, but we don't use it yet.

RPlus was not the first POS system we tried. We had a different one a year earlier but we scrapped it. The person from the company we got it from didn't set it up correctly, and in our case, and probably that of most other retailers, we didn't then have the time or expertise to configure and maintain it by ourselves. The person that sets up and configures the system is an essential component of a POS package. RPlus has been updated three times, and we've been quite happy with it.

TCP: In retrospect, has the POS system helped your business?

GM: Absolutely, without question. It was a lot of work, but otherwise we wouldn't be able to do the kind of order and inventory tracking we do. It does all my order entry. Any kind of retailer should consider the value of that.

Contact: Gord McOrmand, Strider Computer Centre 594-5422.

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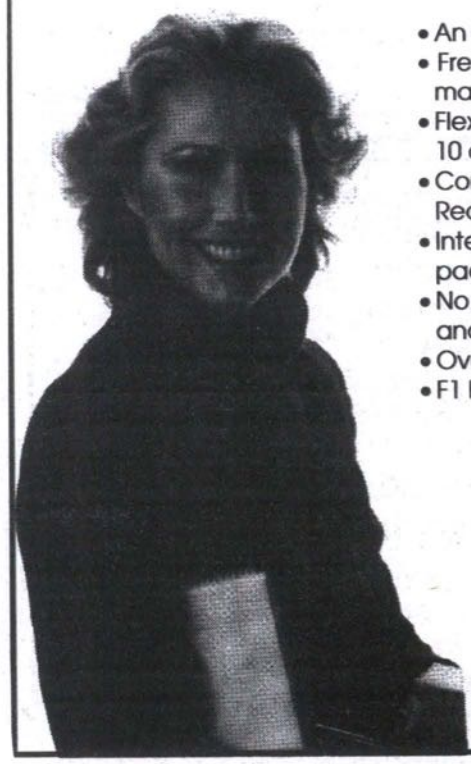

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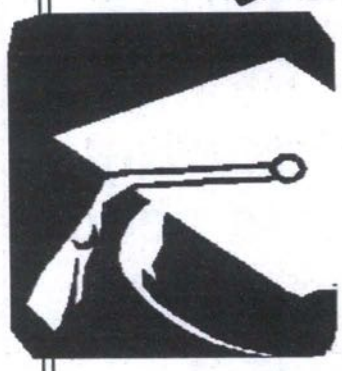

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POINT-OF-SALE

A POS Resource Guide

by *The Computer Paper* Staff

We began researching this article as we do many others—by calling around to find out what's popular; what people think about the products. However, it soon became apparent that the more dealers we spoke to, the more products were mentioned. Unbelievably, there is almost no product that has "cornered the market," and become any type of industry standard. Therefore, rather than focus on one or two products, we present a guide to what's available. Each entry consists of contact information, pricing, system requirements and a summary of key features.

Abacus II

Software developer: Comsoft Inc. 208, 10335 - 172 St. Edmonton, AB T5S 1K9 (403) 489-5994; (403) 486-4335
Local distributor: Tritech Computers, 8823 - 120 St. Delta, B.C. 597-4777; T.L.D. Computers Unit 150, 5815 No.3 Rd. Richmond, B.C. 273-4700
Base price: $3,495 incl. Abacus II Inventory
Optional costs: Cash drawer, scanner, slip printer, if req.
System requirements: 80286, 640K, HD
Demo version available/cost: $250 refundable towards purchase
Key features: Has a fully configurable system set up, integrates with the AR & inventory modules, allows single/multiple users per work station, accommodates most mfrs. cash drawers, fully supports GST set up in customer records etc., calculates change due on cash sales, records a check validation no., stores the credit card no. & expiry date on file.

Bar code scanning equipment

Software developer: Real Data Systems 120 - 1575 West Georgia St., Vancouver, B.C. V6G 2V3 683-7226
Key features: Works with any software package. Co. also supplies mag. card readers, bar code label printers & handheld computers for stock counting.

A.M.S. Advanced Management Software

Software developer: Arete Technologies Inc., 3168 West Broadway, Vancouver, B.C. V6K 2H2 731-0592
Local distributor: Arete Computers, same as above
Base price: $3,000
System requirements: DOS 3.3 or higher
Demo version available/cost: $80
Key features: Point and select, inventory control, AR, A/P G/L, commission, purchase orders, Software made easy.

DC 4 Poll / DC 4 Link

Software developer: Sweda Canada Inc., 4700 Dixie Road, Mississauga, ON L4W 2R1
Local distributor: same as above
Base price: $2,500
System requirements: 286, 640K
Demo version available/cost: no
Key features: Polls data from register to head office, sends price changes and E-mail to store, produces daily reports at head office, interfaces to results inventory & acctg. modules, as well as other soft goods packages, interfaces to ACCPAC in French & English.

Easy Retail

Software developer: Hands On Computers, 1422 - 128A Street, White Rock, B.C. V4A 3X4 538-1719
Local distributor: Lingo Computers, Amazing Innovations Company, Inc.
Base price: $370
Optional costs: none
System requirements: PC - AT, printer, hard disk
Demo version available/cost: call
Key features: Full systems without accounting features.

Easy Retail Version 3.0

Software developer: Verne Frazer, 1422 - 128A Street, White Rock, B.C. V4A 3X4 538-1719 FAX 535-9053
Local distributor: as above and Super Software
Base price: $299
Optional costs:
System requirements: HD 286 or higher
Demo version available/cost: $15 plus taxes for shipping & handling
Key features: Cash: prints out daily cash summary & compares it to actual deposit, prints daily report of sales sorted by receipt no./payment method. Inventory: list of all new products, actual outstanding/recommended order report, allows inventory history. Sales & payments: individual employee sales for any period, summary of all sales/employee hours worked/profit margin for any given period, small receipt option, full GST reports.

Gasbar Manager

Software developer: Windward Software, 275 Okanagan Ave. E., Penticton, B.C. 492-8888 FAX 492-8886
Local distributor: same as above
System requirements: IBM compatible
Key features: For daily acctg., bookwork & fuel calculations in a gas station/convenience store. Takes tank dip readings & automatically calculates fuel volume in tanks, keeps track of customer charge sales, sends statement at month end, has a built-in GST calculator, sends info from day-sheets, A/R & A/P to the G/L automatically, keeps track of daily totals in various depts. such as cigarettes, lottery, oil, pop & junk food.

Multi Express - sales

Software developer: BTI Technologies Inc. 103-1668 W. Broadway, Vancouver, B.C. V6J 1X6, 732-9499
Local distributor: same as above
Base price: $1,999 with 6 mos. free upgrade warranty, dealer may sell for less

POINT-OF-SALE

Optional costs: Multiuser Novell version $399
System requirements: 80286 computer or up, 1MB memory and hard drive
Demo version available/cost: $80 with full docum'n, full functional with ltd. transaction
Key features: Real time & fully integrated with POS, ordering, invoicing, rental, services & back orders, inventory control, A/R, A/P,sales history analysis, purchasing & quick inventory count adjmt. Add new customers, new items or new vendors at invoicing or purchasing; select diff. invoice form or printers at invoicing or purchasing; change invoice instead of issuing credit note & comes with audit trail; all levels password security defined by users.

PC - Sell

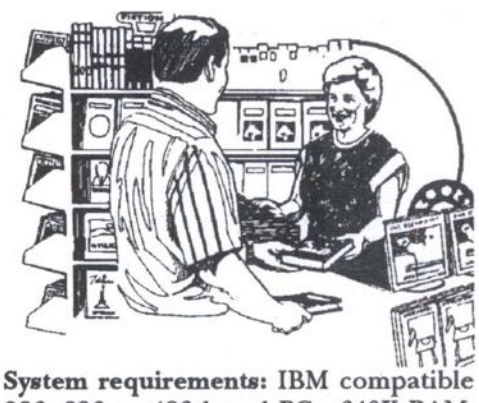
Software developer: Alliance Business Computers, 341-G North Road, Coquitlam, B.C. V3K 3V8 936-8088; 298-0486; 1-800-MOR-4LES
Local distributor: same as above
Base price: $295 to $1,595
Optional costs: AT, bar code scanner (wand or flat-bed) $400 - $1,500; scales to be added soon.
System requirements: 640K RAM, HD, DOS 3.3 or above
Demo version available/cost: $10 shipping prepaid incl., record ltd.
Key features: Customer, inventory with 5 pricing levels, vendors, sales, standing orders, rentals, reservations, shipping routes, POs, delivery loads. Many report formats, customer & sales histories, macro inventory, bar code labels, credits & returns, networkable user editable screens, reprintable invoice, real time entry. Available on lease-to-own with all equipment.

POS IM

Software developer: Ensign systems Inc. 26 North Main, Layton, Utah 84041.
Local distributor: Selling Solutions, 2834 McGill, Vancouver, BC V5K 1H6. 255-3349 voice or fax.
Base Price: $2100
System requirements: Any Macintosh, (hard disk).
Demo version available/cost: Free to qualified buyer.
Key features: Mac friendly, single/multiple user 14+ million separate items, unlimited client & vendor tracking, powerful report editor allows retailer to design own reports, barcodes etc, card verify used by Apple in their company store, almost no outside support required, reviewed as above, other POS by MacUser, Mac World, others, training cut to minimum, usually no need to change existing accounting package.

Profitek—RS Retail Sales System

Software developer: Infospec Systems Inc. 101 - 2806 Kingsway, Vancouver, B.C. 430-1223
Local distributor: same as above
Base price: $1,595, network version $2,295
Optional costs: none



System requirements: IBM compatible 286, 386 or 486 based PCs, 640K RAM, 1FD, 1HD, mono or VGA monitor
Demo version available/cost: $50
Key features: Choice of '3D Matrix' or 'Kitting & Component' versions which track soft/labor & non-identifiable item inventory. Includes complete cash register functions, inventory control, customer maintenance, mailing lists, AR, order entry & sales analysis, handles sales, refunds, deposits, layaways & payments to customer accts., tracks salesman & sales commission with full reports, option of instant invoice printing in various sizes & formats with pre-set message lines, split tender for transactions available.

Rapid Rental, Video and Item Rental Software

Software developer: T.V.L. Inc. 201 - 2609 Westview Dr. North Vancouver, B.C. V7N 4M2 983-2298 FAX 983-2296
Local distributor: direct
Base price: Single: $995; Multi: $1,595
System requirements: 286, 640K, 40MB, DOS 3.2, Epson printer
Demo version available/cost: Free: Real time and/or graphic slideshow demo
Key features: Easy to use, rental/return, POS inventory, prints bar codes, reservations very fast, user defined fields, reports well designed, unltd. no. of records, modem communications over 500 reports, window designed screens with context help, public terminal software.

Retail Systems /2

Software developer: Choice Software Systems Inc. 1475, 333 - 11 Ave. S.W., Calgary, AB T2R 1L9 (403) 266-3642 FAX (403) 266-5210
Local distributor:
Base price: $6,750 (monthly rental also available)
Optional costs: Pick, or Unix operating system
System requirements: 286, 40MB HD
Demo version available/cost: no cost
Key features: Multi user/tasking, multi store, Unix version, optional acctg., real time update, NCR 7052 ECR & Merit terminal POS, scanning, MSI hand held interface, on-line support, frequent buyer demographics.

Sales Easy

Software developer: B.A.S. Business Automation Systems Inc., 515 - 4710 Kingsway, Burnaby, B.C. V5H 4M2, 431-0881
Local distributor: same as above
Base price: $1,990
Optional costs: Bar code readers, cash drawers,wholesale or mfg. versions,

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1 - Profitek 3" Receipt Printer
1 - Cash Drawer with Computer Interface
1 - Profitek-RS Retail Sales Software
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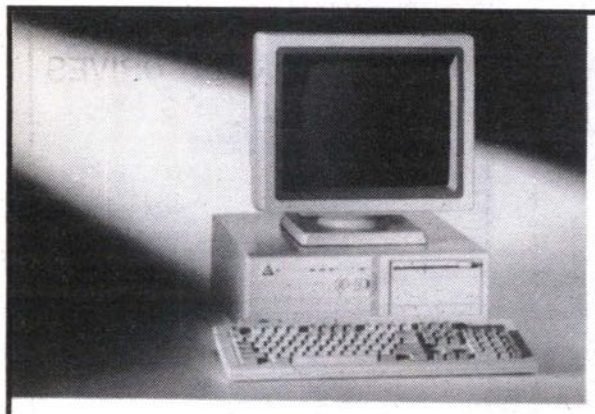

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System requirements: 286 min., Unix, 2MB RAM
Demo version available/cost: Free in-house or on-site demos
Key features: Can be customized, inexpensive networking & true multi-tasking, available in retail, wholesale or mfg. versions (with rental or repair sub-versions), total inventory control, POs/invoicing, acct. & stmt. billing, flex. GST & PST handling, analysis reports, multi-level password security, complete mfg. control (production posting according to recipe file), acctg. (G/L & A/P), payroll, job costing modules available.

Samco Point of Sale

Software developer: Samco Software Inc. Unit 61 - 7789 - 134th Street, Surrey, B.C. V3W 9E9 597-4211 1-800-663-2080
Base price: $995
Optional costs: Install kit $98 - Samco Canadian Real World Inventory control, plus A/R
System requirements: DOS 3.3 or higher, HD 640K
Demo version available/cost: $95
Key features: Records sales & returns, registers correct pricing even for qnty. discounts, etc., merchandise pricing by key entry or bar codes, identifies merchandise by number, dept. or description, automatically adds sales tax, prints sales & payment receipts, invoices, corrects or voids sales tickets, accepts combined payments of cash, checks, credit cards, coupons, etc., automatically balances cash drawers, displays current inventory levels in multiple locations.

Samco Point of Sale II with Practical Accounting

Software developer: Samco Software Inc. Unit 61 - 7789 - 134th Street, Surrey, B.C. V3W 9E9 597-4211
Base price: $300
Optional costs: Req. Samco - Real World Practical Accounting System $895
System requirements: DOS 3.3 or higher, HD 640K
Demo version available/cost: $95
Key features: Add-on to Samco Pract. Acctg., designed to replace a standard cash register, includes standard register functions such as sales, returns, quotations, payments & special order products, provides standard audit reports, wide range of reports geared for mgmt. purposes, allows interface to cash drawers, bar code readers, receipt & invoice printers, etc., maintains Inventory Mgmt. info all of the time, reporting includes historical analysis, projected inventory overstock levels & stock out situations, GST handling at time of sale.

Timeac Retail, Timeac food & beverage

Software developer: Timeac Computer Systems Inc, 227 6th St, New West, BC V3L 3A5.
Local distributor: Timeac. Todd N. Holonchak Tel 521-4454

ARETE 386SX/16 $1,050
ARETE 386/25 $1,200
ARETE 386/33 $1,350

ARETE 486/25 $2,250.00
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- Graphics Card
- 101-Keyboard
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Demo version available/cost: $10 + taxes & shipping/handling chg
Key features: Direct integration of G/L, A/P, A/R to ACCPAC, Bedford, can operate in either POS or invoice modes, Bedford integration: imports ACCPAC Bedford Chart of Accts, customers & vendors, auto update of all journal entries created by TMAN directly to Bedford data files & of Bedford A/R & A/P modules, displays customer's A/R status directly from Bedford at POS. Cdn. GST capable, item sales history by customer by invoice, customer purchase history by invoice. Inventory reports: session end sales report by item, sales by dollar value by qtr., sales movement by unit volume by qtr.

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Local distributor: Marathon Systems Solutions Inc., 509 - 1200 W. Pender St., Vancouver B.C. V6E 2S9
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System requirements: DOS 3.0 or higher, Novell, Unix
Demo version available/cost: no
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Telesystems ITI 9000

Software developer: International Telesystems Inc. 101, 9128 - 152nd St. Surrey, B.C. V3R 4E7 589-1086 FAX 585-6371
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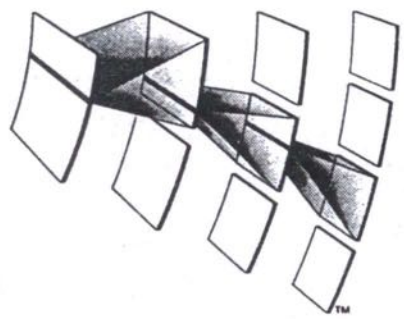

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New Life for Old Macs

by Graeme Bennett

Product: NewLife 25MHz accelerator for Macintosh Plus
Version: 4.4. System 7 requires new version due Sept. 1st.
Manufacturer: NewLife Computer Corp., 603 March Road, Kanata, ON K2K 2M5 (613) 592-5080 or 1-800-663-6395
System requirements: Macintosh Plus. Models available for Classic SE, 512KE, and upgraded older Macs.
Price: C$1099 (with 68882). Prices vary on other models—call for price list.

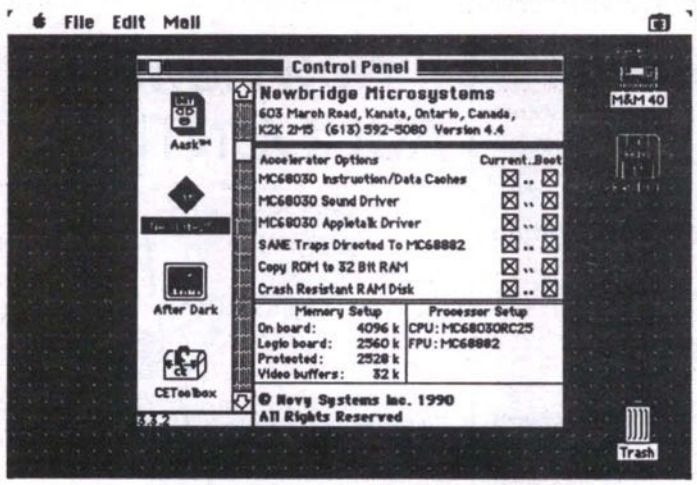

Figure 1. The NewLife Control Panel. This illustration shows the name "Newbridge Microsystems," however, the company has since changed its name to "NewLife." The new System 7-compatible software should be available by the time you read this.

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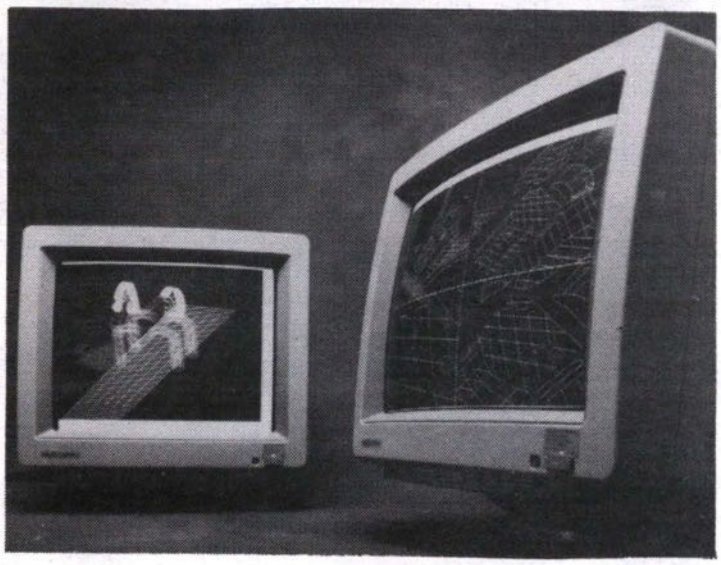

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The NewLife accelerator endows a Mac Plus with a 25MHz 68030 microprocessor and 68882 math coprocessor, resulting in a machine with the speed of a Mac IIci at a much lower cost. Of course, other benefits of the IIci, such as NuBus slots and color support aren't addressed by the NewLife upgrade, but if speed's what you want, the NewLife's got it.

Installation

The first step of the installation is getting the Mac's case open and motherboard removed.

Because compact Macs were designed specifically not to be user-serviceable, a tool known as a torx wrench is required to open their cases. NewLife recommends that you have a dealer install the upgrade kit, and hence, doesn't include this tool, which resembles a very long Allan key. Fortunately, you can get this essential tool for about US$8 from mail-order suppliers such as MacConnection (1-800-334-4444). Locally, I found one at Advantage Computers (604-299-3881) for C$25.

Essentially consisting of a daughterboard that clips onto the Mac's motherboard by means of a solderless "Killy clip," the NewLife is fairly challenging to install. (According to NewLife's Canadian Sales Manager Marilyn Williams, the board can be soldered in place instead of merely clipping on. She told me installation is much easier in an SE.) Expect to pay about $100 for your dealer to install the upgrade if you would rather not do it yourself.

Additionally, we added 4MB of RAM. NewLife's toll-free technical support proved to be knowledgeable and helpful, and told us that adding 80ns or 100ns RAM would produce 2 wait states. Adding faster (and more expensive) 70ns SIMMs would yield only 1 wait state. The 120ns RAM on the Mac Plus' motherboard can still be used. A total of 8MB can be installed—4MB as main memory and 4MB to be used as a RAM disk.

Performance

Although many seasoned computer technicians have a justifiable mistrust of clip-on CPU upgrades, the NewLife appears to be a well-constructed, reliable product.

Here at *The Computer Paper*, our national sales rep John Oliver used the NewLife-enhanced Mac for a couple of months. He reports that "it did seem reliable, with very few bombings for ANY reason, and it went through the really busy part last month with all of us working on the database off my drive. And it was REALLY fast." Says John, "The SE-30 that I'm working on now is noticeably slower by comparison."

Software

Software included with the board consists of a Control Panel device (see Figure 1) that controls various configuration options, such as turning on and off instruction and data caches, and patching the system's sound and

AppleTalk drivers for proper operation. Although the current version does not work with Apple's new System 7 software, NewLife told us that a System7-compatible update will be released by the time you read this.

Other software features include a crash-resistant RAM disk, redirecting SANE (standard Apple numeric environment) calls to the 68882, and copying the Mac Plus' ROM to 32-bit RAM for faster performance of ROM-based operating system calls. Despite the fact that the NewLife equips the Mac Plus with a 68030 with built-in PMMU (paged memory management) chip, it remains unable to take advantage of System 7's "virtual memory" feature, due to the fact that Apple's implementation requires Toolbox functions not present in the Plus' 128K ROMs. Fortunately, a third-party VM product called Virtual from Connectix (415-324-0727) supports VM—even on 128K ROMS, as long as a 68030 is present.

A Connectix tech support rep said that Virtual has been adapted for virtually every accelerator product on the market, with implementations for Novy (who's name is on the NewLife software), Mobius, Dove's Marathon accelerators and others, including original Mac IIs upgraded with a 68851 PMMU chip. Although at this writing, Virtual is not System 7-compatible, he said versions of Virtual for upgraded Mac Plus and SE computers running System 7 should also be ready by the time you read this, with implementations for other 68030-based machines slated to appear by October.

Conclusion

If you had resigned yourself to putting that old Mac out to pasture in favor of this year's model, consider these accelerators as a cost-effective alternative. If you don't need the color, audio input capabilities and other bells and whistles of today's modular Macs, you can give your current machine a whole new lease on life.

Continued from page 52

Despite the complications of disc insertion, the dust-cover flap over the door of the CD slot is probably a good idea (considering that so many CD-ROM drives fall victim to dust-related problems), although we'd rather see a soft-touch, slow-closing door system (like those found on better cassette decks and, ironically, virtually all audio CD players) rather than the flimsy spring-loaded affair on this unit.

On the back of the drive are two SCSI ports. Unlike every other SCSI device we've ever seen, the Hitachi's ports are misleadingly labelled IN and OUT, as if they are not interchangeable (they are). To its credit, though, the manual correctly identifies the two ports as identical. It also includes a good description of how to set the SCSI ID and internal termination switches.

Conclusion

Remember that specs aren't everything. Despite the fact that this drive is easily the fastest drive we've ever tested, its ergonomic eccentricities and the fact that data from some discs doesn't load properly significantly alter our perception of it as a product. It is hardly acceptable to recommend a drive that apparently can't load certain types of data. In this case, slow and steady wins the race.

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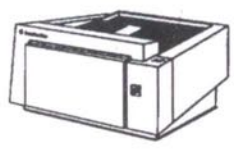

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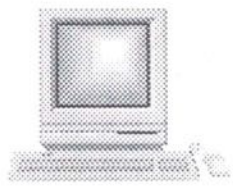

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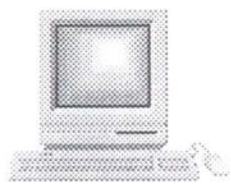
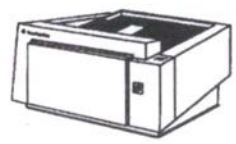

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Charles Moore

By Roedy Green

Interviewing Galileo

Have you ever wondered what it would be like to go back in time and interview the great innovators like Galileo or Leonardo da Vinci?

Next month, I will get a chance to interview Charles Moore, our age's equivalent computer iconoclast. You can get to hear him too, because he will be coming to speak at BCIT on September 19. Moore created Forth, a radically innovative computer language. He also designed $150 RISC computers that run at 200 to 500 MHz. By comparison the fastest 386 is only 33 MHz.

How I found out About Moore

You probably have never even heard of Moore. I hadn't either until 1979. I was working with Dr. John Lilly at the Human Dolphin Foundation in California. We were working on Project Janus to make ultrasonic sounds underwater to dolphins and analyze their responses using a mathematical technique called Fast Fourier Transforms.

I arrived all prepared to write computer code in DEC PDP-11 assembler, but Lilly explained he wanted me to use a new language called Forth. The language was totally weird. It had no equivalents in any of the computer languages I knew already. Charles Moore was its creator.

I learned only a few "words" of this strange new language, and overnight I created an electronic Etch-A-Sketch that let dolphins draw, using ultrasonic whistles to control the pen.

I could not believe how quickly I could produce results with Forth. I then went back to Vancouver and set about creating my own Forth-based database language called Abundance. I use it for writing custom charity applications.

What Is Forth?

Some people call Forth a religion, because its adherents are so fanatically positive about the language. I think of it as a toolkit to build your own computer language custom-tailored for the job.

In the magazines you will hear about C, Pascal, Ada and Smalltalk, but you will rarely hear about Forth.

However, you have probably used programs written in Forth without even knowing it, e.g., Ashton-Tate's RapidFile, VP Planner and Peachtree accounting.

Forth shines in interacting with the real world. For example, Bell Canada uses it to handle network trouble-shooting. Forth controlled the models for the battle scenes in Star Wars. It runs the Skycam used in football games. It even grades and sorts peaches.

The Chips

When it came time to implement Forth on existing computers, Moore was dismayed at how much dithering they do. They might take perhaps six instructions to accomplish what you would think of as a simple Forth operation such as adding two numbers.

So he decided to redesign computers so they would get on with it, and do elementary Forth operations in a single step. He went even further, and discovered he could sometimes get computers to do four or five operations in a single step.

To compose comprehensible computer programs, you must break them into tiny pieces. A traditional computer wastes huge amounts of time in the CALL mechanism, i.e., shifting attention from one piece of the program to another. Moore found new ways to slash this overhead.

Moore takes a deep approach to problem-solving. He is not content just to make a minor improvement to what has already been done. He is willing to start over completely from scratch looking for the simplest, cleanest solutions.

Where and When

Come see him, if only to be able to tell your grandchildren. In time, I think we may consider him the Einstein of our age. He will be at the Forth BC Users' Group meeting at BCIT room 1A-324 on September 19 at 7:30 PM and at the SFU Engineering Department September 17. For details call 526-9864 or 980-9991.

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Continued from page 43

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Lotus Updates 1-2-3

CAMBRIDGE, MASSACHUSETTS, JUL 18 (NB)—Lotus Development has updated its top DOS spreadsheet product. The new 1-2-3 for DOS Release 3.1+ is available immediately. Lotus also reported a large drop in net income in the second quarter.

1-2-3 for DOS Release 3.1+ brings most of the same features to Release 3.1 that Release 2.3 added to those of Release 2.2. Release 3.1+ includes a file-viewing feature based on the technology used in Lotus' Magellan disk management software, as well as added spreadsheet auditing capabilities, both of which were introduced in Release 2.3, spokesman David Allen told Newsbytes.

The new release also includes Lotus' Solver technology, previously available only in 1-2-3/G for OS/2, and the Lotus DataLens driver for data exchange with Borland International's Paradox database software.

1-2-3 for DOS Release 3.1+ requires an IBM or compatible PC with an 80286 or higher microprocessor, a hard disk, one megabyte of available system memory and DOS 3.0 or higher. For the what-you-see-is-what-you-get (WYSIWYG) display, 1.5 megabytes of memory is recommended. Solver requires three megabytes of memory.

The suggested retail price of the 1-2-3 for DOS Release 3.1+ Standard Edition is US$595. The Network Server and Node Editions of the product will be available within 30 days at suggested retail prices of US$895 and US$595, respectively. Dutch, French, German, Italian, Spanish and Swedish versions of Release 3.1+ will also be available this quarter.

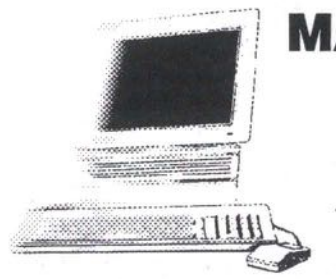
Anyone who bought or upgraded to any PC version of 1-2-3 since March 1, 1991 can upgrade to Release 3.1+ for a suggested retail price of US$49, Allen said. Anyone who bought or upgraded to Release 3.1 since January 8 is eligible for the same offer. All other 1-2-3 users can upgrade for US$150.
Contact: Alexandra Trevelyan, Lotus, 617-693-1580; David Allen, Lotus, 617-693-8687.

TELECOM

DDE Allows Software Teamwork, Delrina Shows

TORONTO, ONTARIO, JUL 22 (NB)—With the latest release of its Winfax Pro facsimile software for Microsoft Windows, Delrina Technologies is taking advantage of Windows' Dynamic Data Exchange (DDE) capabilities to make Winfax and other software work together.

The first example is integration of Winfax Pro and Polaris Software's Packrat personal information manager. Winfax Pro 2.0 has a built-in ability to spot the presence of Packrat and work with its phone book feature, company spokesman Josef Zancowicz explained. For example, when a Winfax user



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9 *Aldus FreeHand 9:00-3:00PM	10 System 7.0 9:00-12:00 1:00-4:00	11 Intro to Word 9:00-3:00 Intro to Mac 6:30-9:00PM	12 Intro to Mac 6:30-9:00PM	13 *Intro to 4D 9:00-3:00
16 *Adobe Illustrator 9:00-3:00PM	17 Advanced Microsoft Word 9:00-3:00PM	18 Intro to Excel 9:00-3:00 Intro to Word 6:30-9:00PM	19 *PageMaker 9:00-3:00 Intro to Word 6:30-9:00PM	20
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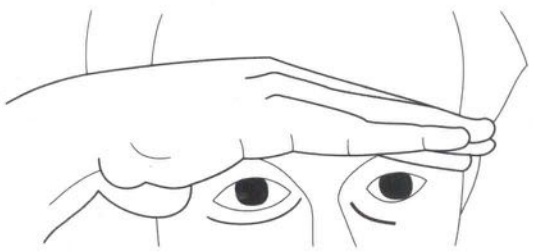

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enters a person's last name, Packrat will look up the person's fax number and insert it automatically in the Winfax send screen.

This capability required creation of special macros in both packages, Zancowicz said. DDE opens a number of other possibilities for packages to work together.

Mark Gavin, product manager for Winfax Pro, told Newsbytes Delrina is exploring a number of possible ways of taking advantage of DDE. For instance, he said, a database of names and addresses in Microsoft's Excel spreadsheet software could be merged with a letter created in Word for Windows and then sent out by fax using Winfax.
Contact: Josef Zancowicz, Delrina Technologies, 416-441-3676, fax 416-441-0333; Chad Kinzelberg, Polaris Software, 619-743-7800.

TRENDS

31 Unions Seek Anti-Repetitive Strain Injury Standards

WASHINGTON, DC, JUL 31 (NB)—The Washington Post has reported that a coalition of 31 unions has asked the U.S. Department of Labor's OSHA or Occupational Safety and Health Administration to issue an emergency six-month standard intended to combat repetitive strain injuries (RSI) such as those leading to cases of Carpal Tunnel Syndrome, something often experienced by those who spend many hours each day keying data into computers.

According to the Post report, the number of cumulative trauma disorder cases (another name for the problem)

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has experienced a five-fold increase during the period from 1981 to 1989. As a result, around one in 500 U.S. workers now suffers from the injury, which affects both blue-collar factory workers and white-collar clerical workers.

The injury, which can result in permanent disability, occurs when a highly repetitive task involving limited wrist motion causes a strengthening of the muscle at the base of the wrist. The situation is made worse by inflammation at the site of the injury.

These two actions together cause a thickening and pinching of the bundle of nerves which pass through the `tunnel' formed by the structure, pinching the nerves, so resulting in pain and weakness of the hand and wrist.

Some workers have had surgery to open up the restricting sheath, which may provide a degree of permanent relief from the pain.

Unions, from the AFL-CIO to the United Food & Commercial Workers International, are now requesting the emergency regulations which would specify just how employers must adjust working conditions to eliminate or reduce the stress that is thought to cause the problems.

UNIX

Silicon's New Iris Indigo RISC Machine

SAN JOSE, CALIFORNIA, JUL 22 (NB)—Silicon Graphics has unveiled its latest weapon in the exploding worksta-

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tion market—a low-end machine complete with three-dimensional capabilities, called the IRIS Indigo.

The Indigo includes a color monitor, high-quality CD-audio and video features with microphones included and a base price of $7,995 for 8 megabytes of RAM.

The distinction between the high-end personal computer and low-end workstation markets is becoming more blurred every week. The next large market boon is seen to be this niche market of low-priced graphics-oriented machines.

Edward R. McCracken, president and chief executive officer of Silicon Graphics, said: "The PC and workstation worlds are converging. Out of this fusion, a new type of product will emerge—the RISC personal computer."

Reduced instruction-set computer (RISC) microprocessors reduce the number of instructions performed by the processor, which speeds up operations of the desktop computer. A MIPS RISC processor powers the Indigo.

The release will be a shot in the arm for the ACE (Advanced Computing Environment) consortium, which consists of major software and hardware vendors all hoping to stake a claim on developing RISC technology. Silicon Graphics is one of the members. Other members include Compaq Computer Corporation and Digital Equipment Corp. ACE was formed to compete head-to-head with workstation leader Sun Microsystems, and the number two company, Hewlett-Packard, for future market share.

Apple recently threw its hat into the workstation ring with IBM by signing a letter of intent to develop future RISC technology based on IBM's RS/6000 technology.

One of the biggest advantages of the new product, apart from its comparatively low price, is that it not only supports current software designed for the Silicon Graphics' platforms, but will also be compatible with future operating system software being developed by ACE, should that consortium succeed in its intention of producing future products.

Adobe Systems has already shown support for the new product by announcing that a version its Adobe Illustrator will be available for the IRIS Indigo personal computers sometime in 1992. Autodesk will be releasing a version of AutoCAD for the Indigo. Other products announced and under development for the workstation are from top companies: Wordperfect, Spyglass, BioCAD, Time Arts, Interleaf, and Informix.

Silicon Graphics first licensed Adobe's Display PostScript system in October of 1990 and the IRIS Indigo is the first Silicon Graphics product to support the technology.

Adobe claims that with Display PostScript system, IRIS Indigo users will have access to a true WYSIWYG computing environment, since the images viewed on workstation displays will precisely match the output from PostScript printers.

High-end workstations sell for as much as $80,000. Indigo public relations manager, Betsy Wahlquist, says the Indigo will be capable of performing the same special effects that high-end Silicon Graphics workstations performed for the film "Terminator 2"—only at a slower pace. The Industrial Light and Magic production company created scenes in which a character was metamorphosized, for which the firm has won critical acclaim, on the Silicon Graphics' $50,000 graphics workstation.

NeXT Computers Posts Huge Sales Increase For 2Q

REDWOOD CITY, CALIFORNIA, AUG 2 (NB)—NeXT Computers has surprised many in the computer industry by announcing that revenues for the second quarter ended June 30, 1991, reached $46 million, an 86 percent increase over the prior quarter.

Alison Thomas, spokesperson for the company, told Newsbytes that the results showed that NeXT was a "growing company whose technology is now more widely accepted."

According to the company, 70 percent of its workstation products went to customers in business and government, while the remaining 30 percent went to colleges and universities. Additionally, Europe and Asia accounted for more than 49 percent of sales.

The company said that revenues for the quarter came from sales of NeXTstation and NeXTcube, which began shipping in November, 1990. Additionally, the second quarter was the first full quarter of shipments of the

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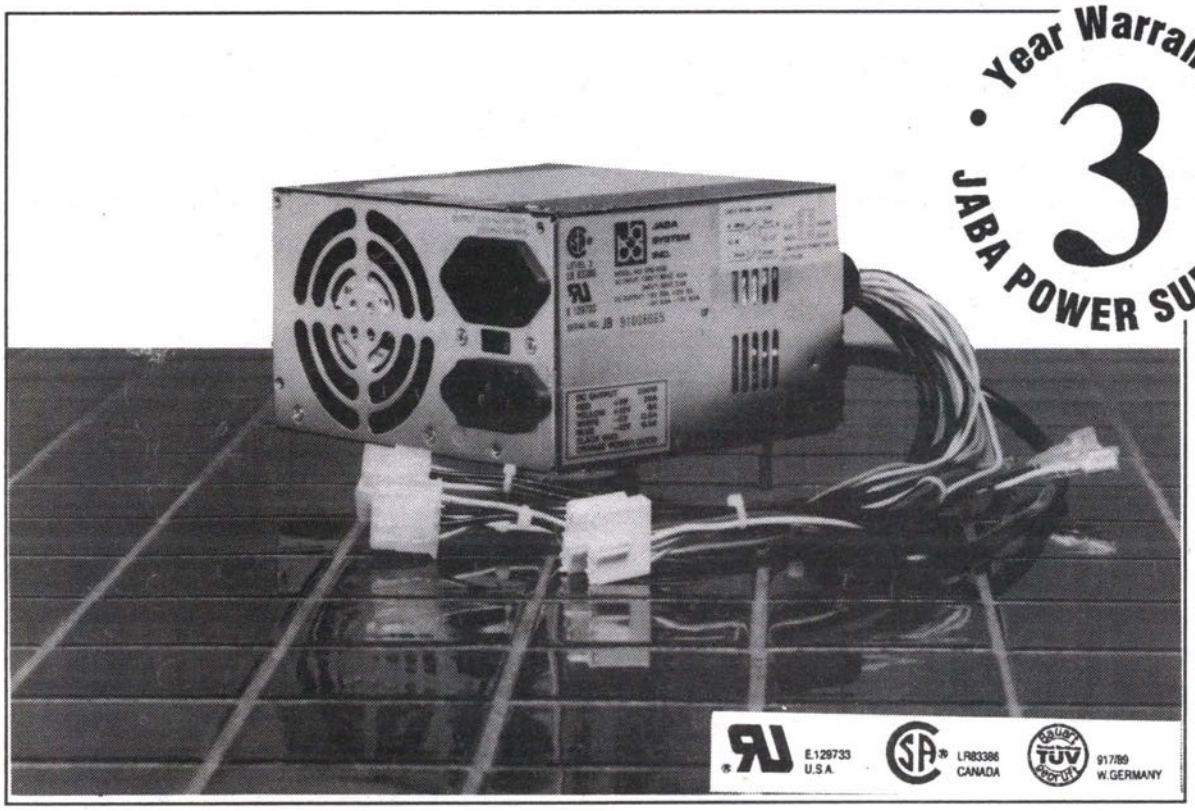

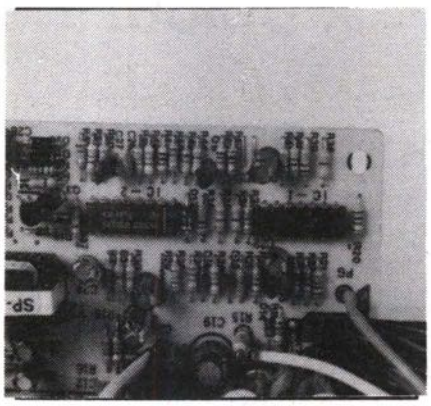

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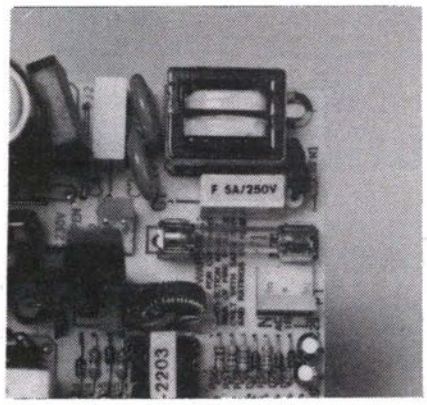

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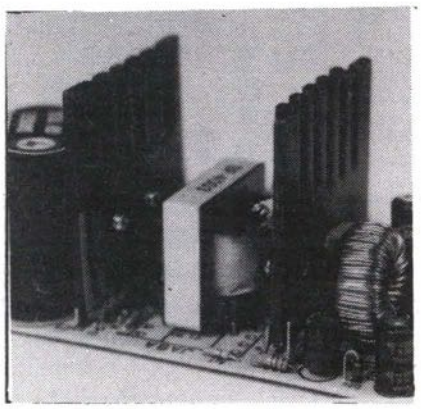

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NeXTstation Color, which began shipping on March 12. The quarter also included initial shipments of NeXTdimension, the company's new 32-bit color PostScript workstation, which began shipping May 28. All four machines are powered by Motorola's 68040 microprocessor.
Contact: Allison Thomas, Allison Thomas Associates, 415-780-3786.

Frame, Sun Approach Small Publishers

LOS ANGELES, CALIFORNIA, AUG 14 (NB)—Small publishers are receiving an offer from Frame and Sun Microsytems for a Unix-based Sun SPARC station desktop publishing system that costs the same or less than a comparable IBM personal computer (PC) or Macintosh computer system.

The companies claim that several publications are switching from their current equipment and moving to the Sun/Frame combination for everything from in-house newsletters to magazines. Frame points to Bear Stearns, a Wall Street firm who purchased its desktop publishing product FrameMaker and is now using it for all the company's manuals, as an example.

Programmer Raj Punderika of Bear Stearns estimates that his manuals now take less than one-third the time to prepare—a single man-week as opposed to three man-weeks.

Frame said that its customer profile is starting to include administrative assistants, secretaries and word processing operators, because the Unix operating environment has pull-down menus and self-help, so even unfamiliar users get up to speed quickly.

Sun claims that sales of Unix-based workstations and servers for electronic publishing are 13.4 percent of the present total market representing $762 million in revenue. The company estimates that the Sun workstation accounts for nearly half of all the workstations used for electronic publishing.

Sun also touts the variety among software vendors and commercial publishing vendors who support the Sun SPARC station. Lotus Development, WordPerfect, Xerox, Kodak, Ashton-Tate, Frame, Agfa/Compugraphic, Dupont, Pre-Press Technologies, Linotype, and Raster Ops are just a few of the vendors Sun mentions.

Sun is claiming that standard PCs and Apple Macintoshes are underpowered for editing large color images, and points out the Sun workstation can be interconnected to the PC or Mac.

Sun if offering a free video tape—"Meeting Today's Document Publishing Challenges"— that explains the benefits of the technology to potential customers. The tape is being issued free of charge until August 31, 1991.

Information on how to obtain the tape is available by writing in care of the Publishing Manager, Sun Microsystems, Inc., PO Box 5164, Denver, Colorado 80217-9343, or by calling (800) 695-1601.
Contact: Whitney Greer, Sun, Tel: 415/336-0598, Fax: 415/336-3880, Kristin Vais, Frame, Tel: 408/954-3921, Fax: 408/433-1928.

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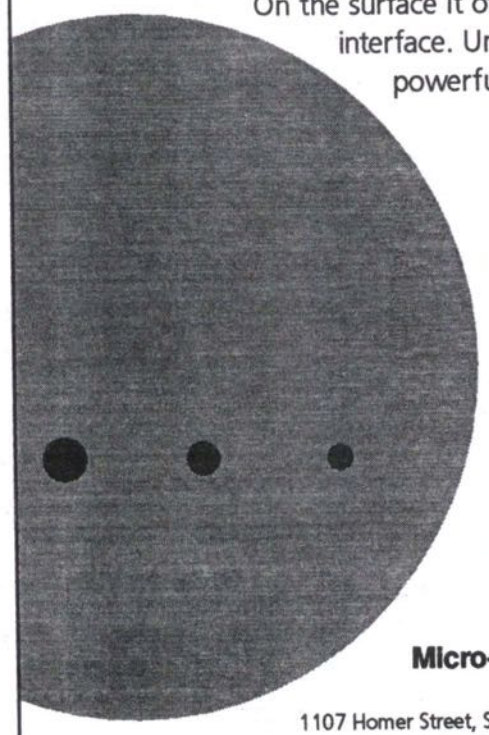

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Educational Software

The Heart of Educational Change

by Stewart R. Ladyman, Superintendent of Schools, School District No. 15 (Penticton)

As we enter the Information Age at an accelerated pace, it is imperative that educators and parents ensure that the software being introduced and used in the home and at school is beneficial to learning.

Technological changes in the past six months at the hardware and system levels are providing software developers with an opportunity to develop creative packages. We must never lose sight that the technology is a tool to improve the way we live, learn and work. We must also realize that we are part of a global village and we must be able to communicate to a variety of audiences.

> "Educational software will allow people to learn at both younger and older ages in ways we have not even thought about."

Technology will become commonplace in our homes in the near future. Educational software will allow people to learn at both younger and older ages in ways we have not even thought about. The advent of voice, data and video will also change the types and ways we use software. Besides the telephone, in the near future we will learn and communicate using satellites, the FM band, lasers, infrared and other electronic tools. The educational software will be a crucial link to this technological explosion.

Educators will only benefit from technological advances if they can see that there is an improvement to the teaching/learning environment. Parents will want to have their children learn with technological assistance if it goes beyond the present "pen and paper" methods.

During the past five years a number of research studies have sought to answer the question "what and how do you expect children to learn from computer instruction?" In analyzing the reports there appears to be a consensus emerging that the computer and its peripherals have a positive effect on teaching and learning.

This conclusion is only positive if the educational software has been appropriately designed. Many software packages are designed on an opposing philosophical base to the instruction in the learning environment. If you believe in a creative-thinking style of teaching,

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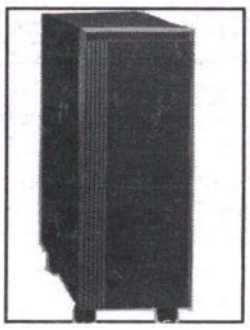

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you would not want educational software that is considered to be drill and practice. On the other hand if you are looking for reinforcement of a concept, then drill and practice software may be appropriate.

There are a number of basic concepts that developers and users of software must be cognizant of if we are all to take advantage of the technology.

- Are the skills and concepts consistent with the curriculum?
- Can the student use an open ended approach to exploration?
- Are there a number of ways to do the same task?
- Does the software allow time to plan or is it time-sequenced?
- Is there feedback to the student's response?
- Are the graphics clear, interesting and uncluttered?
- Is the reading level appropriate to the students' abilities?

Well-designed software offers students a way in which to think creatively and solve problems. Teachers should provide information and support but with minimal involvement.

Educational software can make a special contribution to special needs children's learning. The appropriate software will allow these students to express themselves in a variety of manners not previously available to them. Software can promote planfulness possibly at the expense of playfulness.

In the selection and developmental process three things must be considered:

(a) does the software allow for control of information so that key concepts are not missed?

(b) does the software ensure that there can be no misconception of what skill or concept is being taught?

(c) does the software account for student ability and time efficiency?

There are potential great strides to be made in the teaching/learning environments by using appropriate educational software. Effectiveness will depend on the quality of the software, the amount of time it is used and the way in which it is used. Educators and parents need guidance on effective programs to use and effective ways to use them.

As mentioned earlier, the field of technology is changing at a fast pace. Software developers will need to keep abreast of not only technological changes but also educational teaching strategies and philosophical shifts. Teachers and parents must be proactive in assisting with this development. If they know what the goal is, then they can assess if the software will meet that goal. Educational software must not be allowed to replace the teacher but software must allow the teacher time to develop other attributes and interests for the student.

Wouldn't it be ideal if all educational software promoted personal empowerment? When technology does all of our thinking we are doomed to extinction. Let's make sure that change is controlled by us and not forced on us.

Learning How to Type

by Peter Noah

So, your friends, workmates, and family have finally convinced you² to buy a computer. Welcome to the club. You will have many hours of fun and productivity. Unfortunately there will be some frustrations involved and the first is that you have to be able to type.

As yet it is the only practical method of inputting information into a computer. Maybe in our lifetime we will have voice input, but right now it is possible only in the laboratory. What about the mouse, you may ask? Yes, we have the mouse, but it is only a pointing tool and so is useful only for selecting, not for originating information. What about "hunt and peck" typing, won't that suffice? Definitely not. The time wasted makes a mockery of your investment in a computer. No, you must learn to type and learn to type properly, but this is not as difficult as it sounds. It takes the average person roughly 30 hours to learn to type at a survival rate of 20 (WPM) words per minute.

Courses

The simplest way of learning to keyboard is to take a course at a local educational institution, e.g., your local School Board, a community college, a community center, a business training school, or one of the larger computer retailers in your city. It will cost you roughly $175, and as long as you show up, you will know how to beginner-level type at the end of the 30 hours.

"Learn To Type" Programs

The above method is almost foolproof but if you are ironwilled or want to save money, you can buy a "learn to type" program for your computer. After trying out dozens of such programs my three favorites are as follows.

Typing Tutor

Product: Typing Tutor IV Plus
Publisher: Published by Simon & Shuster Software, New York. Written by Kriya Systems, Inc.,
System Requirements: IBM PC, XT, AT, PS/2 or compatible, DOS 2.1 or higher, 5.25" or 3.5" floppy, or hard disk. Versions also available for Apple/Macintosh systems.
Price: Cdn $49.

The oldest and most successful "learn to type" program is Typing Tutor. It is excellent for beginners in that it uses menus and submenus to get you around (no memorizing). This program produces charts of your speed and accuracy on each key. For variety, it even has an arcade-quality game, called Letter Invaders, where the letters you have been practising drop from the top of the screen and you must type them

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Finally, the program is small, (1/4 MB), so it doesn't use much valuable space on your hard drive, or can be run from a floppy disk. Its one weakness is that the lessons are not divided up, so it seems to go on and on without a break.

Mavis Beacon

Product: Mavis Beacon Teaches Typing
Publisher: Individual Software Inc.
System Requirements: IBM PC, XT, AT, PS/2 or compatible, DOS 2.1 or higher, 5.25" or 3.5" floppy, or hard disk. Versions also available for Apple/Macintosh systems.
Price: Cdn $49.

Another good program is Mavis Beacon Teaches Typing. It is more personable in that it addresses you by name and gives you personal messages, like, "Excellent work Peter," or "20 WPM, I knew you could do it." It produces graphs showing your progress and gives you special drills on weak keys (something Typing Tutor does not as easily do). It has easy to use menus and has a moderately exciting game. Its one weakness is that the program is copy-protected. This means you must always have the original diskette close by for the random authorization checks the program makes. This is a nuisance, but upon request, the company will send you a version without this feature. Otherwise, it works like a charm.

All The Right Type

Product: All The Right Type 2.2
Publisher: Didatech Software, Burnaby, BC; written by Beaucamp, Panon, and Shulman.
System Requirements: IBM PC, XT, AT, PS/2 or compatible, DOS 2.1
or higher, 5.25" or 3.5" floppy, or hard disk.
Versions also available for Apple/Macintosh systems.
Price: Cdn $67.

All The Right Type is a good program, used for years in many school districts. It is a small program (1/4 MB) and simple in structure, but it is popular with the students and very effective. It is similar to a textbook in that you are presented with a kind of "table of contents" from which you select the letters you would like to practice. Letters you have completed are checked off. You can even pick a previous lesson and improve your score on just it. It also tells you that you are, for example, at line 8 out of 14 in the current lesson, so you know how long your lesson will take, something the other programs do not do. It is also convenient for your kids to have the same program at home as they have at school.

All The Right Type charts your progress but only on lessons, not on individual letters Other disadvantages are, since it was designed for teachers, you must leave the program to setup or view your records (no big deal), and there is no game for some much-needed variety.

In conclusion, despite its weaknesses, because of its table of contents layout, that lets you manually pick the lesson you want to practise or improve your score on, of the three programs discussed. this is my favorite. It's a matter of personal taste, though, so ask to preview each of them at your software retailer.

Costs

All these "learn to type" programs cost around $50.(All The Right Type is $67.) and are well worth it. A word to the wise, though: don't mix the different programs while you're still learning, as they have different sequences for introducing the keys, and you could easily get confused. After you learn, you can buy one of the others for review or to correct any areas of weakness you may have.

Other Notes

There are other typing programs that are valuable for either under- or over-, achievers. Notable are the shareware programs: **PC Fastype** for the slow-pokes, and **Typing Made Easy** for the speed freaks.

Summary

To use a **computer** you must know how to **type**. Two ways of learning are **"courses,"** and **"learn to type programs."**
Three excellent "learn to type" programs are **Typing Tutor, Mavis Beacon Teaches Typing**, and **All The Right Type**. They are **easy** to use, are **quick** to learn (**30 hours**), and are **inexpensive** (**$50.-$70.**). Unfortunately, a **problem** with all "learn to type" programs is, that it is up to the individual to **make time** for them, and **few** of us are **self-disciplined** enough to do this properly. Therefore, if you are only normally self-disciplined or need to learn immediately, it is **best** to opt for the **course**. **Courses** are **available** in most communities, will take you approximately **20-30 hours**, and will **cost** you around **$180.**

Peter Noah is with the Vancouver School Board and teaches Keyboarding and Data Processing. He can be reached at 228-9926, for comment or discussion.

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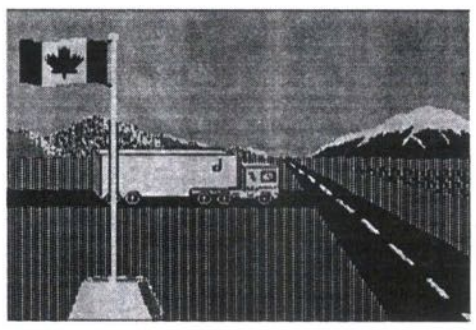
Summer School

A review of two educational software programs.

by Cathalynn Labonte-Smith



Truck Driving Woman

Product: Crosscountry Canada
Publisher: Didatech Software, 3812 William Street, Burnaby, B.C. V5C 3H9 U.S. Toll Free: 800-665-0667. In Canada: (604) 299-4435, FAX (604) 299-2428
System Requirements: For IBM version (also available for Apple II, II Plus, IIe, IIc, IIc Plus) IBM-PC or XT, 512K RAM, MS DOS 2.0 or higher, one floppy drive and hard drive, CGA (note: VGA version will be released soon).
Key Features: A tool to teach Canadian geography to grades 4-9 by having them become a truck driver, who's mission it is to pick up commodities particular to each region and deliver them using the quickest safest route.
Price (IBM): Home edition $57; School edition $77; Lab Pack for five computers $160; Site/Network License $395.

This summer I became a tough, truck driving woman—I drove a semi-truck from coast to coast in Canada. Of course, first I had to pass the driver's license test, but then all I had to do was pull on my cowboy boots and climb up into my rig. On my trip I learned the physical geography of Canada, as well as some of the unique products our cities have to offer. I slept in my truck while I waited for my orders from a nasty dispatcher who had me making more trips to warehouses than a hummingbird to flowers. I ate in greasy truck-stops, crisscrossed time zones, encountered rain and sleet, cracked up my truck three times, changed two flat tires, spent thousands of dollars on fuel and didn't even get one speeding ticket. I hauled uranium from Sudbury, ON, sulphur from my hometown of Lethbridge, AB and asbestos from Cassiar, BC all the way to Fredericton, NB. When I delivered my load the Canadian flag was raised in my honor and I won a trip to the Quebec Winter Carnival, which I will look forward to throughout this Fall.

Ten-four, Rubber Ducky; bet you didn't think I had it in me, did you? I'm not old Wrong Way Labonté anymore. Ah, the solitary life of the road warrior, shifting multiple gears and radioing for help on the deserted backroads of Canada. Okay, I'll 'fess up, I did it using Didatech's Crosscountry Canada software, where you learn as much about Canadian geography as you learn about the profession of truck driving.

Crosscountry Canada can by played by one student or by teams of students. The winner is the team that spends the least on expenses like repairs, gas and

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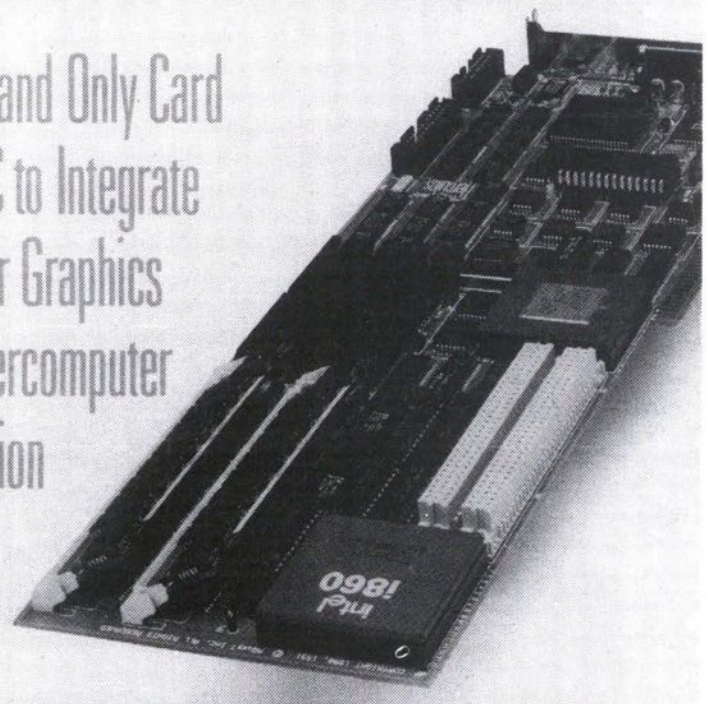

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food, and finishes their dispatched mission in the shortest time. In addition to teaching navigational skills, e.g., drive southeast, and the obvious geographical skills, Crosscountry Canada also challenges decision-making skills. For instance, I had to decide what was the best route to follow, consider weather conditions for the time of year, when to rest and eat, when to gas up the truck, where to pick up a load when several cities had the same commodities and when to pull into town while the warehouses were still open. There are enough details to make this program realistic, like turning on the truck, the truck lights at night, or windshield wipers in the rain. The gas gauge was a constant preoccupation as gas cost an exorbitant 60¢ a litre.

Kids who can figure out the complex rules of regular video games will certainly have no trouble navigating through this software, and neither should their teachers. What can I say, this was fun, I learned a lot — I know it's for kids, but they didn't have this back when I was in school. Actually, I think it would be a neat tool for families to plan their driving holidays with, as it mentions points of interest, the population of each city and something about the city itself. Well, you'll have to excuse me, I've got a rig to get ready, you see, I'm going to truck across the USA, with *Crosscountry USA*'s help, of course.

Note: Crosscountry USA is also available from Didatech in the Macintosh format. Products for the Apple II series of computers are Crosscountry Canada, USA, California and Texas.

SchoolWare

Product: SchoolWare - English
Publisher: Quality Learning Systems Inc., 151 Front Street, Penticton, B.C. V2A 1H8 Telephone: (604) 492-2592 or 492-1022
System Requirements: AT compatible with VGA and a hard drive. For sound effects you need a Covox Soundmaster board.
Key Features: Tutorials for grades 5-6 English in grammar, vocabulary, reading comprehension and composition, and good work is rewarded with game-playing sessions.
Price: C$89.95

SchoolWare English took an hour to install because of its insistence on re-copying master files over and over into each subdirectory for each lesson and it took up about a whopping 8 MB of hard disk space. However, Quality Learning Systems Inc. assured me that I had an older version of the program and it can now be installed in twenty minutes.

The program is intended to help grades 5-6 learn English grammar, vocabulary, reading comprehension and composition by giving instructions and questions, then showing them their scores and where they went wrong. I thought the grammar tutorial was its strongest feature, as all the elements of speech were explained and then tested, and when you were wrong it gave you the same kind of example again until you got it right. Also, the short-story exercise was quite good; students are presented with a story to read and then they are asked questions to see if they understood what they read.

The vocabulary component seemed a little unfair, as it was done like an across/down type crossword grid with clues but the clue didn't include how long each word was supposed to be. The paragraph section seemed awkward as I didn't install the mouse, and it seemed to me to be more a lesson in proofreading than in building a correct paragraph, and also it had me trying to guess what the program wanted me to do, rather than what might make a better paragraph.

Quality Learning could improve their system by making the manual meant for the teacher (who can customize and monitor each student's lesson plan) more accessible to a non-technical reader. One other feature that might be added is a quick way to leave the lesson, for when you start a lesson you seem to be committed to going through to the end of it.

If your kids are in need of drill and practice on their grammar, this program may be useful to them. The lessons are solid and the games sufficiently rewarding, though the user-friendliness could be improved for non-teachers.

Other Sources

Educators interested in finding more out about educational software available to them may contact "Only the Best" - an annual consumer report for educational software - at RR Bowker Co., 245 West 17 St., New York, NY 10011, (212) 645-9700. Cost $29.95 U.S. RR Bowker Co. Order dept. - P.O. Box 762, New York, NY 10011.

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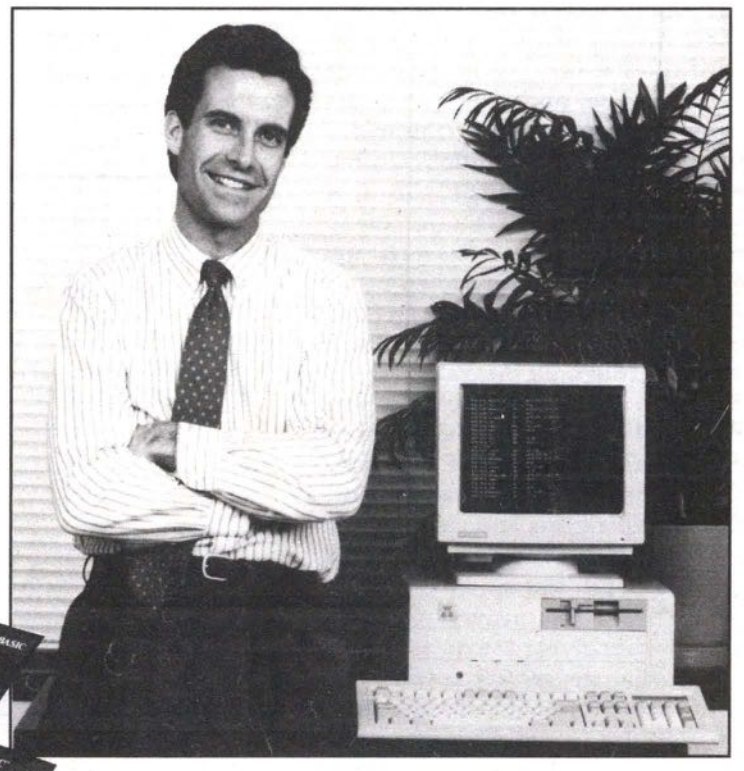

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Shareware Educational Software

by Gord Simmonds

Product: Amy's First Primer (Version 1.8)
System Requirements: IBM PC, XT, AT, PS/2 or PCjr with 256K RAM, color display or TV, IBM color graphics adapter or EGA graphics adapter.
Publisher: Rob, Garth, and John Robinson, Computing Specialties, Orange City, IA 51041 USA. It is available as shareware or direct from the author.
Suitable for: children aged 4-8 years and requires an
Price: Program registration is $10.00 US.

Simple, colorful, easy-to-use programs for young children are hard to find. Amy's First Primer was written by her father and brothers and reprogrammed until they met with five-year-old Amy's approval.

The programs center around several Kindergarten activities such as learning the alphabet, numbers, shapes, colors, counting, pattern recognition and shape matching.

Utilization of only a few easily recognizable keys allows youngsters to quickly navigate through the available programs and use the program with limited supervision. The Arrow keys navigate, the Enter key selects, etc.

The ABC Song program aids with learning the alphabet by letter/picture association by playing the ABC Song and displaying each letter of the alphabet. Beary Fun Letters displays a picture and waits four seconds for the first letter to be typed in from the keyboard, and will display in both upper and lower case the correct response. Froggy is a delightful maze for problem solving skills, while Load The Truck is useful in pattern recognition and matching game.

Product: School-Mom
System Requirements: 256K RAM and a color graphics adapter (CGA). A Microsoft compatible serial mouse is optional.
Publisher: Dr. Andy Motes, Motes Educational Software, 1632 Brooks St., Fayetteville, AR 72701.
Price: It is available as shareware or direct from the author. Program registration is $29.00 US.

School-Mom (Version 3.57) is an educational tool for children ages 4 to 16. On its main menu you will find Music, Art, English, Spelling, Math, Time and even Exams. Parents or teachers can edit or add to the School-Mom data files on the registered version.

Each menu item is sub-menued for difficulty levels or options. Create and play tunes by placing notes on a treble staff. Creativity, relaxation, and simple enjoyment can be found under the Art option. Spelling consists of preschool alphabet recognition to spelling drills at any level of difficulty as you can enter your own words.

The English option teaches nouns, verbs, adjectives, and adverbs. Unscramble sentences, study sentence patterns and subject-verb agreement. The math option consists of several math games, addition, subtraction, multiplication and division, and pre-algebra skills. Teaching time to children is simplified with the Time program that actually ticks.

Gord Simmonds is the owner of SIM-COM Services (854-DISK), a company in Abbotsford specializing in shareware .

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Used Equipment	
1MB AT Clone/1.2/360/40MB w/ Mono Monitor	$ 625
Zenith 386/33 Desktop w/ FTM-1492 VGA*	4500

*Video Card & Hard Drive Extra

AMT Technology Corp.
Tel: (604) 731-7880
Fax: (604) 731-7844
1459 W.Broadway (Granville & W.Broadway) Vancouver, B.C. V1H 1H6

ALLIANCE
BUSINESS COMPUTERS

APYX 386DX 25MHz $1399
1MB RAM, 1.2MB Floppy Drive, 45MB Fujitsu Hard Drive 25ms, 101-Keyboard, Desktop Case, 200W CSA Power Supply, 1 Serial, 1 Parallel, 1 Games Port, 14" VGA Monitor 1024 x 768 .28dpi, OAK VGA Card 512K

APYX 386SX 16MHz $1199
Same as above

Point of Sale System $2999
Apyx 286 16MHz, 1MB RAM, 1.2MB Floppy Drive, 45MB Fujitsu Hard Drive, 101-Keyboard, Desktop Case, 200W CSA Power Supply, 1 Serial, 1 Parallel, 1 Games Port, 12" Paper White VGA Monitor, VGA Card, Citizen Tape Printer, Laser Flatbed Bar Code Scanner, PC SELL Software, DOS.

Monitors

AOC Paper White	$117
AOC 1024x768 .28dpi	$387
NEC 3D VGA	$837
Optiquest 15"	$797
Mitsubishi 16"	$1347
Nanao 16" 1024x768	$1497
Nanao 16" 1280x1024	$1897

Hard Drives

Stacker Hard Disk Doubler	$129
Fujitsu 45MB IDE	$257
Fujitsu 100MB IDE	$477
Fujitsu 130MB IDE	$527
Fujitsu 180MB IDE	$747
Fujitsu 640MB SCSI	$1897
Three Year Warranty on Fujitsu Hard Drives	
Western Digital 185MB IDE	$387
Western Digital 200MB	$757
Controller HD/FD IDE	$27
1.44MB Floppy	$77

Co-Processors

387-33 Intel	$277
387-25 Intel	$277
387SX-20 Intel	$187
387SX-16 Intel	$177
287-10 Intel	$117
286-12 AMD	$177
286-10 AMD	$97

Miscellaneous

Sound Blaster	$177
Joysticks from	$29

Printers

Panasonic 1180i	$187
Panasonic 1123	$337
Panasonic 1124i	$437
Panasonic 4420	$1197
Star 1001	$217
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Fujitsu DL1100	$377
Fujitsu DL3450	$527
Canon BJ10	$437
Okidata OL400	$827
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Hewlett Packard IIIP	$1447
Hewlett Packard III	$1997
Hewlett Packard IIID	$3167
NEC 90	$CALL

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386-33 Cache 128K	$1627
486-33/40	$1597
486-25 Cache 128K	$1287
486-25	$1177
386-33 Cache 64K	$677
386-25	$477
386SX-20	$347
386SX-16	$297
286-25	$207
Turbo XT with 640K	$77

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Chicony	$37
NTC	$57
Tangent	$57
Focus 2001/3001	$67/87
Northgate	$127-197
Maxi Switch 123-key	$289

Desktop Publishing Software
Finesse $69
by Logitech

OCR Software
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SPECIALS!!!

DD Diskettes 5.25"	$3.77
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Microsoft Mouse	$69
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Cardinal Fax/Modem	$137
ATI VGA Card	$47
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Order Desk 1-800-MOR4LES
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Dymond "K" Ent. 65396 STN. "F", Vancouver
Info Spec Systems Inc. #101 - 2806 Kingsway, Vancouver
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New Tech Computer 1151 Kingsway, Vancouver
Omninet Computer Ltd. 3728 Main St., Vancouver
Peep Computer System Ltd. 4319 Fraser St., Vancouver
RPC Computer Electronics 1796 Renfrew St., Vancouver
Sector Technologies Ltd. 621 Kingsway, Vancouver
Super Store Computers #3 - 111 W. Broadway, Vancouver
The Computer Place 860 Burrard St., Vancouver
Value Computer Systems Ltd. 403 W. Broadway, Vancouver
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A+ Computers 860 - 12th St., New Westminster
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Aldergrove Stereos & Elec. Aldergrove Center Mall, Aldergrove
Panther Computers 27124 Fraser Hwy., Aldergrove
Ashnola Computer Systems 441 Main St., Penticton
R & B Computer Source Ltd. 1010 Lakeshore Dr. W., Penticton

Auscan Tech #2 - 555 Clarke Road, Coquitlam
Bakker Business Services 147C - 1st Ave. N., Williams Lake
Bear Facts Computing Ltd. 45834 Cheam Ave., Chilliwack
Compucare Systems Inc. 5579 - 204th St., Langley
MicroAge Computer Stores 5579 - 204th St., Langley
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Strider 8471 - 120th St., Delta
Tower Computers 7215 - 120th St., Delta
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Fourth Generation Systems #195 - 22255 Dewdney Trunk, Maple Ridge
Maple Ridge Comp. Discount 22661 Lougheed Hwy., Maple Ridge
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Globalink 1360 Laurel Road, Sidney
Insight Media Centre Ltd. 10501 - 125B St., Surrey
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TRAINING

Working with Computers

A search for high tech jobs reveals a need for deeper skills

by R. G. McNutt

Could I be a desktop publisher? Or start my own company to do online research? Or better yet, unleash my total creative potential with hypermedia? Could there be a future for me, the aspiring entrepreneur, in one of these areas?

Packing my pencil and notebook, I ventured forth into downtown Vancouver's information world in search of new career opportunities. What I found was wilder territory and steeper terrain than I had expected. But there may just be gold at the end of the rainbow for pioneers determined to pursue it.

In Search of Understanding

The information market supports three main businesses: the transmission business; the gathering, retrieval and storage business; and the information understanding business.

Transmission businesses are mainly large, global affairs such as AT&T and IBM. They manufacture hardware and provide network services. These groups tend to cannibalize anyone invading their turf. But unless you decide to compete against Sony, it is unlikely you will meet this fate.

Gathering, retrieval and storage vary from small businesses, such as a local BBS, to large global databases. In general, they are expensive to start and are highly competitive. In business terms, the "barrier to entry" into this field is too high for most.

The information understanding business, on the other hand, is generally small, often local, and relatively easily entered. The understanding business gathers data, transforms it through organization into information relevant to a particular customer, then presents it in a suitable format. Making information understandable is a great untapped market, and most computer entrepreneurs will work in this area. My search took me inside three of Vancouver's understanding businesses:

KICKS

KICKS COMPUTER SYSTEMS INC

Formerly doing business as

MORSE-TECH COMMUNICATIONS

We are happy to announce the Grand Opening of our second store to serve you. In addition, we have changed our corporate name from "Morse-Tech Communications" to "KICKS Computer Systems Inc." which we have nationally trade marked. After extensively researching into the computer industry, for future expansion purposes, it became clear to us that we should consider a unique name directly related to ourselves without any slight indication of association with other companies.

Grand Opening *Prize Draw !!!*

First Prize:	Legend-2 1436 Non-interlaced SVGA colour monitor (1024x768, .28 mm dp) bundled with Trident 8900 SVGA adapter 1MB
Second Prize:	Cardinal 2400 bps MNP5 internal modem
Third Prize:	Geoworks Ensemble Graphical User Interface Software
Fourth Prize:	1 of 4 packages of entertainment software (1 for each winner) Yeager's Air Combat Windows Entertainment Package Castles, Wing Commander
Fifth Prize:	5 legeend Hi-res Serial Mouse (1 for each winner)
Draw Date & Location:	The prizes are drawn on September 30, 1991 at the Metrotown Please particpate at your local KICKS Computer Systems Inc.

Grand Opening Super Special Deals

80386DX-40 Cache System

- AMD 80386DX-40 CPU, AMI Bios
- 64 KB cache memory, 128 KB optional
- 1 MB RAM (70 ns) expandabele to 32 MB
- 1.2 MB or 1.44 MB floppy drive
- Quantum 52 MB (17 ms, voice coil IDE hard drive
- 16-bit 1:1 IDE host adapter for 2 FD / 2 HD
- AT I/O w/ 1 serial, 1 parallel, 1 games ports
- Trident 8900 SVGA adapter 1 MB
- Desktop AT case w/ 200W CSA approved P/S
- Darius 1024 SVGA monitor (1024x768, .28 mm dp)
- 10-keys enhanced tactile keyboard

$ 1669

80486DX-25 Cache System

- Intel 80486DX-25 CPU, AMI Bios
- 8 KB internal cache memory
- 64 KB external cache memory, 256 KB optional
- 1 MB RAM (70 ns) expandabele to 32 MB
- 1.2 MB or 1.44 MB floppy drive
- Western Digital 84 MB (17 ms) voice coil IDE hard drive
- 16-bit 1:1 IDE host adapter for 2 FD / 2 HD
- AT I/O w/ 1 serial, 1 parallel, 1 games ports
- Trident 8900 SVGA adapter 1 MB
- Desktop AT case w/ 200W CSA approved P/S
- Darius 1024 SVGA monitor (1024x768, .28 mm dp)
- 10-keys enhanced tactile keyboard

$ 1669

Please see next 2 pages for more *amazing deals.*

The above system prices are for cash and carry orders only.

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 # 5-4300 Kingsway
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Fax: 430-9883

1237 West Broadway
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V6H 1G7
Tel: 738-3886
Fax: 738-2881

Mon-Fri: 9:30am-6pm Sat:10am-5pm

2260 Guildford Town Centre
Surrey, B.C., V3R 7C1
Tel: 582-0318
Fax: 582-0463

Creative Electronics

Mon, Tues, Sat.: 9:30-5:30
Wed-Fri.: 9:30-9:00
Sun.: 9:00-5:00

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KICKS COMPUTER SYSTEMS

FEATURE SYSTEMS

Smart 386DX-25 System
- True Intel 80386DX-25 CPU, AMI Bios — $1,399.00
- 1MB memory, exp. to 8MB on-board
- Teac 1.2MB or 1.44MB floppy driv — w/ 4MB memory
- 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 — 386SX-20 as above
- Desktop baby footprint AT case — $ 1259.00
- 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 — $1,599.00
- 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
- Quantum 52 MB (17 ms) V.C. IDE hard drive
- 1 serial, 1 parallel, 1 game ports — w/ AMD 386-40
- Oak 16-bit SVGA card w/512K — add $ 60
- Desktop baby footprint AT case
- 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, 20/25MHz clock speed — $1799.00
- 8 KB internal cache memory
- 64 KB external cache memory, 256 KB optional — w/ 4MB memory
- 1 MB memory, expandable to 32MB on-board — add $168.00
- Teac 1.2MB or 1.44MB floppy drive
- Quantum 52 MB (17ms) IDE hard drive
- 2 serial, 1 parallel, 1 game ports
- Trident 8900 1MB SVGA card (1024x768/256 colors, non-inter.)
- Desktop baby footprint AT case
- 200W CSA Approved power supply
- Darius HRV1024 SVGA monitor 1024x768,.28 mm dp
- 101-keys Tactile enhanced keyboard

Smart i486DX-33 4MB Cache System
- Intel i486DX-33 CPU, AMI Bios — $2,759.00
- Built-in Math Co-proccessor
- 8 KB internal Cache memory
- 256 KB external Cache memory
- **4 MB memory**, expandable32MB on-board
- Teac 1.2MB or 1.44MB flodrive
- **Western Digital 84 MB (17IDE** hard drive
- 2 serial, 1 parallel, 1 game ports
- Trident 8900 1MB SVGA card (1024x768/256 colors, non-inter.)
- Desktop baby footprint AT case
- 200W CSA Approved power supply
- **Legend 14" non-inter. SVGA monitor** 1024x768,.28 mm dp
- 101-keys Tactile enhanced keyboard

Please refer to preceding page on Grand Opening Super Deals on 386DX-40 and 486DX-25 Cache Computer Systems.

TAILOR-MAKE YOUR OWN COMPUTER SYSTEM

ADD A HARD DRIVE, HD/FD CONTROLLER, GRAPHICS CARD & MONITOR TO COMPLETE SYSTEM

80286-12/16 SYSTEMS
- 80286-12/16 MHz CPU; AMI Bios — 12MHz $ 379
- 1 MB memory, exp. to 4MB on-board — 16MHz $ 399

80386SX-16/20 SYSTEMS
- Intel 386SX-16/20 MHz CPU; AMI Bios — 16MHz $ 525
- 1 MB memory, exp. to 8MB on-board — 20MHz $ 569

80386DX-25 SYSTEMS
- True Intel 386DX-25 MHz CPU, AMI Bios — $ 699
- 1 MB (70 ns) memory, exp. to 8MB on-board

80386DX-40 Cache SYSTEMS
- AMD 386DX-40 MHz CPU; AMI Bios — $ 959
- 64 KB Cache memory; 128 KB optional — 33MHz $ 879
- 1 MB (70 ns) memory, exp. to 32 MB on board

i486SX-20 Cache SYSTEMS
- True Intel i486SX-20 CPU, AMI Bios — $ 1,099
- 8 KB internal cache memory
- 64 KB external cache memory, 128 KB optional
- 1 MB (70 ns) memory, exp. to 32 MB on-board

i486DX-25 Cache SYSTEMS
- True Intel i486DX-25 CPU, AMI Bios — $ 1,359
- Built-in Math Co-proccessor
- 8 KB internal cache memory
- 64 KB external cache memory, 128 KB optional
- 1 MB (70 ns) memory, exp. to 32MB on-board

i486DX-33 Cache SYSTEMS
- True Intel i486DX-33 CPU, AMI Bios — $ 1,679
- Built-in Math Co-proccessor
- 8 KB internal cache memory
- 256 KB external cache memory
- 1 MB (70 ns) memory, exp. to 32MB on-board

All "tailor make" computer systems comes with the following configuration:

1 MB RAM (80 ns or faster)
small footprint desktop case
200 Watt CSA power supply
1.2 MB or 1.44 MB floppy drive
1 serial, 1 parallel, 1 game ports
101-keys enhanced tactile keyboard

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

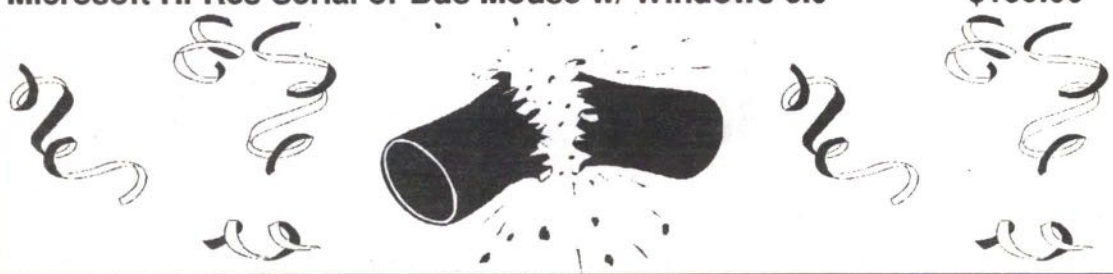
(one year warranty for 286 and 386SX systems.)

2 YR. Warranty

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

Grand Opening SUPER DEALS !!!

Intel 387-33 Math Co-proccessor	$269.00
Cyrix 387-33 Math Co-processor	$249.00
Cardinal 9600 Send/receive internal Fax Modem	$139.00
PC Tools Version 7.0 w/ Anti Virus	$109.00
Notron Utilities V6.0	$119.00
Sound Blaster	$159.00
Microsoft Hi-Res Serial or Bus Mouse w/ Windows 3.0	$159.00



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Celebrating the Opening of Our Burnaby Office

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Legend-2 Non-Interlaced Monitor

14-inch Ultra VGA analog display
1024x768 maximum resolution
0.28 mm dot pitch
Video Modes: 640x480, 720x400, 800x600
non-interlaced at 1024x768
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Vertical Frequency: 50-90 Hz
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$ 479.00

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17" non-interlaced Flat Screen analog VGA display
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0.28 mm dot pitch
supports EGA, PGC, VGA, SVGA
1024x768 non-intelaced
FCC Class B
PC's Magazine Editor's Choice

$ 1295.00

Samsung S3710 Notebook Computer

- Intel 386SX-16 CPU
- 1 MB RAM expandable to 5 MB
- 3.5-inch 1.44 MB floppy drive
- 20 MB IDE hard drive (23 ms)
- 640x480 VGA White LCD display
- 64 shade grey scale, ext VGA port serial, parallel, mouse port
- rechargeable NiCad battery w / 2.5 Hrs backup time
- **weighs 7 lbs w / battery**
- **MS DOS; MS Windows 3.0**
- **Laplink s/w and Lotus Works**
- **2 year warranty**

$ 2399.00

Video Adaptors & Monitors

Monochrome graphics card	$20.00
Oak 16-bit VGA card 256K (800x600)	$65.00
Tricom Excel 16-bit VGA card 512K (1024x768)	$ 85.00
Trident 8900 SVGA card 256K exp 1 MB	$ 82.00
Tricom 1024x768 256 colors VGA card 1MB	$149.00
ATI VGA Wonder XL 512K exp. to 1 MB w/ mouse	$229.00
OEM ATI VGA Wonder Plus 512K exp. to 1MB	$155.00

Monitors

12" TTL Amber Monitor	$109.00
14" TTL White Monitor	$119.00
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	$359.00
Legend-2 14" non-int. VGA monitor 1024x768, .28 dp.	$479.00
AAmazing 14" non-int. VGA monitor 1024x768, .26 dp	$729.00
Seiko 1450 non-int. VGA monitor 1024x768, .25 dp	$ 839.00
Sony 1304 Multiscan Monitor w/ cable	$859.00
NEC Multisync 3D colour monitor 1024x768, .28 dp	$719.00
IDEK Iiyama 17" non-int. monitor 1024x768, .28 mm dp *PC Magazine Editor's Choice*	$1295.00
IDEK Iiyama CAD80 5221 21" monitor (1280x1280, .31 mm dp, non-interlaced)	$2,599.00

Mice

Microsoft hi-res bus or serial mouse	$109.00
Microsoft hi-res bus or serial mouse w/ MS Paint	$115.00
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
Everdata Mouse (350dpi) w/ paint	$32.00

Floppy & Hard Drives (Bare)

Teac or Fujitsu 5.25" 1.2 MB floppy drive	$75.00
Teac or Fujitsu 3.5" 1.44MB floppy drive	$75.00
Western Digital 40 MB (28 ms) IDE	$ 219.00
Micro Science 42MB (28ms) V.C. IDE w/ 32K cache	$239.00
Quantum 52 MB (17 ms) V.C. IDE w/ 64K cache	$255.00
Western Digital 84 MB (17ms) V.C. IDE w/ 64K cache	$350.00
Quantum 105 MB (17ms) V.C. IDE w/ 64K cache	$435.00
Maxtor 130 MB (15ms) V.C. IDE w/ 64K cache	$475.00
Western Digital 212 MB (15ms) V.C. IDE w/ 64K cache	$759.00

All other brands, SCSI and ESDI hard drives please Call.
(All hard drives have a minium 2yr warranty.)

HD/FD Controller

16-bit IDE HD/FD controller	$20.00
16-bit IDE HD/FD ctrl w/ 2 ser, 1 par, 1 game ports	$ 35.00
Intelligent IDE HD/FD controller	$59.00

All other brands and types of controller Please Call.

Tape Drives

Colorado DJ10, 60/120MB capacity w/ DC2120 tape	$339.00
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	$159.00
Gravis Joystick	$45.00
Y-cable for game port	$12.00
Shipping Box	$15.00

Memory Chips & Module

256K Video memory (4464-80ns)	$ 20.00
256K Video memory (44256-80ns)	$ 16.00
512K Video memory (44256-80ns)	$ 32.00
Each 1MB upgrade using 1MB 80ns DRAM or SIMM	$ 65.00
Each 1MB upgrade using 256K 80ns DRAM or SIMM	$ 72.00

Modems

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	$139.00
ATI 9600 bps external modem V.42 Bis w/ cable	$ 475.00
US Robotics HST 14.4 internal modem w/ V.42 bis	$ 689.00
US Robotics HST 14.4 external modemw/ V.42 bis / cable	$ 709.00

Math Co-proccessors (Special HOT Prices!)

Intel 80287XL	$119.00
Intel 80387SX-16	$165.00
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	$249.00
Cyrix 80387-33	$249.00
C yri x 80 387 - 40	$ 299. 00

Keyboard

KPT Enhanced Keyboard	$39.00
Datacom DFK-191 Enhanced Keyboard	$53.00
Focus 2001 Enhanced Keyboard	$59.00
Focus 3001 Enhanced Keyboard	$85.00
Focus 5001 Enhanced Keyboard	$119.00
Fujitsu 4700 tactile Enhanced Keyboard	$59.00
Fujitsu 4800 non-tactile Enhanced keyboard	$49.00
Northgate Omnikey 101	$125.00
Northgate Omnikey Plus	$139.00
Northgate Omnikey 102	$129.00
Northgate Omnikey Ultra	$179.00

Computer Cases

Desktop Footprint Case w/ 200W CSA Power Supply	$109.00
17" Mini Tower Case w/ 200W Power Supply	$145.00
9" Tower Case w/ 200W Power Supply & LED Display	$139.00
Full Size Tower Case w/ 220W P.S. & LED Display	$199.00

Printers

(6' printer cable included, Canadian Warranty)

Epson LQ-510 24-pin printer (demo, 1 only)	$309.00
Epson EPL-7000 Laser w/65 in one Font card,6 ppm	$1,095.00
Epson EPL-7500 Postscript Laser w/ 6 ppm	$2,695.00
Fujitsu DL900 24-pin printer	$ 309.00
Fujitsu DL1100 24-pin printer 240cps draft 60cps LQ	$349.00
Fujitsu DL1100 24-pin printer w/ color kit	$389.00
Fujitsu DL1100 color kit	$65.00
Fujitsu DL3450 24-pin printer 240cps draft 60cps LQ	$529.00
Fujitsu DL3400/3450 color kit	$109.00
Hewlett Packard Desk Jet 500, 3 ppm, 300 dpi	$675.00
Hewlett Packard Laser Jet II P, 4 ppm 300 dpi 512K	$1,099.00
Hewlett Packard Laser Jet III , 8 ppm 300 dpi 1MB	$2,050.00
Hewlett Packard Laser Jet IIIP, 4 ppm 300 dpi	$1,475.00
Hewlett Packard Laser Jet IIIsi, 17 ppm 300 dpi	$5,375.00
Okidata Laser 400, 4 ppm, 300 dpi	$779.00
Okidata Laser 800, 8 ppm, 300 dpi	$1,250.00
Okidata Laser 820, 8 ppm, 300 dpi w/ Postscript Emul.	$1,595.00
Okidata Laser 840 Post Script Printer, 8 ppm, 300 dpi	$2,135.00
Roland Raven 9101 9-pin 192cps draft 38cps NL	$199.00
Roland Raven 2416	$299.00
Roland Raven 2418	$399.00
Roland Raven 2465 24-pin wide carriage	$ 489.00

Software

ACCPAC Bedford Intergrated Accounting (GST) 3.4	$135.00
Adobe Type Manager for Windows	$85.00
Aldus Pagemaker 4.0	$575.00
Borland C++ for Windows 3.0	$399.00
Borland Turbo C++ 2nd Ed.	$89.00
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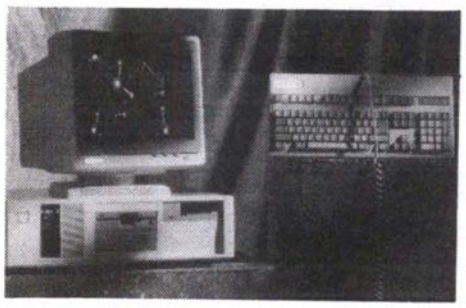

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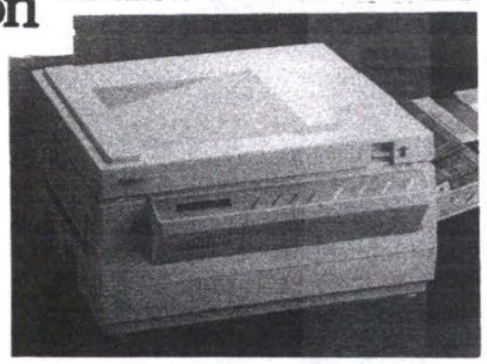

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Breaking The Trail in Desktop Publishing

Owner Patricia Hort of Afterwords Publishing Services, a Vancouver art production company, kindly agreed to escort me into the world of desktop publishing (DTP). With 20 years' experience in art production and typesetting, Patricia is a skillful guide who speaks with confidence and knowledge.

Involved in DTP since 1985, she sees DTP not so much as an end in itself but as "just another tool" to serve her clients—mostly art agencies and other designers. She describes the Vancouver market as "diverse and specialized, and apt to become more that way" as the technology finds specialty markets.

Patricia expects the industry to show considerable growth as organizations such as newspapers, press agencies, art production houses and printers mate DTP with their in-house production systems. The advantage? Control over time and production — not cost, as many believe. Productivity usually drops until users master the learning curve.

If your thinking of giving up your present career for a DTP position, make sure you have a comprehensive background in the graphics or typesetting disciplines. "You need a lot more experience than most quick courses provide," says Patricia. "Years and years of skill and training are required to be a first-class DTP publisher." A good DTP publisher is competent in typography, screen angles, color work, production processes, copyright, concept design and layout, paste-up, film and plate making and printing. Patricia wouldn't even consider hiring someone with less than two years' experience in traditional graphic arts or typesetting. Other desirable traits are methodical work habits, an instinct for working within computers, and creativity.

If you're good, so is the money: $20 to $30 per hour. If you're bad, you won't be in the industry long.

Patricia sees the DTP future as exciting and expects outrageously creative work to become commonplace. Her advice for those wishing to become involved: get training and experience in the traditional art or typesetting environment first, then become a DTP publisher.

Thoroughly inspired by Patricia, but dismayed over how many new skills I needed to enter DTP, I decided to shift my search elsewhere.

Digital Hunters: Online Research

A short trek brought me to one of Vancouver's well-established data researchers: Tania Gorn of Just The Facts Research Inc. Tania, a librarian by trade, has spent 10 years in the online research industry and was happy to share her hard-earned knowledge.

Just The Facts provides a combination of online and manual research. Also available are custom database set-ups and a records-management service. Clients are entrepreneurs and businesses of all sizes who have budgeted for information research because they understand its value. They buy information in a number of categories, including market and stock trends, patents, statistics, market issues, sales figures and competitor information. Most prefer to use the expertise of consultants such as Tania because it saves them both time and money over having employees do searches which can require a high level of skill.

When I asked Tania about my future in online research, she was polite but realistic.

About 90% of information researchers, she explained, have a degree in library sciences — although she admitted that one can compensate with specific knowledge or expertise in a subject area. The Vancouver market is small (sun-tanning parlors outnumber information businesses 3-to-1 in the Vancouver yellow pages) and not expected to develop rapidly in the near future. Cities such as Toronto, with many corporate headquarters, offer a much broader market base. Modems, however, can open up remote markets — Tania serves clients in California, Australia and Japan.

Successful marketing is largely based on having contacts in the industry, making it a hard one to break into, and the industry itself is susceptible to recessions. On the plus side, overhead to start a small firm is relatively low — a computer, modem, telephone and plenty of sharpened pencils.

To make it in the B.C. market you must be "good," which means fast, efficient and knowledgeable. And while Tania Gorn has been very successful, she advises newcomers to get training, understand and target their market very carefully, and not to give up the day job at first. Even if you're good, she says, it can be hard to make a living. I decided to safari on.

What's all the Hype?

Perhaps the most exciting area for future growth is "hypermedia," a presentation technology brought about by increases in information storage and the need to refine access and delivery for end users.

Hypermedia (or multimedia — the terms are interchangeable) refers to computer based delivery of multiple mediums: sound, music, text, static graphics, animations and full motion video. Hypermedia represents a different way of accessing and presenting information which allows the user maximum control over a multi-sensory learning process.

In hypermedia, information is grouped non-sequentially into "nodes" which rely on intelligently programmed inter-linkings. Unlike a book, which reads from start to finish, hypermedia products can jump about from chapter to chapter, back and forth, and maintain intelligibility. The result is much faster navigation, especially through large volumes of information

such as CDs and laserdiscs, and a more entertaining, engaging and educational experience for the user.

Sometimes called "interest path learning," hypermedia shifts learning from dry, rote, left-brained repetition towards a more-fluid, intuitive, right-brained approach. This will delight many (especially children), but may confuse others who are more "straight line" thinkers. Hypermedia also requires much greater levels of user participation — a plus for learning, but a setback for others who like a more passive approach.

Despite any drawbacks, hypermedia appears poised for major growth. A September 1990 Market Intelligence Research Corporation study projects a two-billion-dollar market by 1997. And hypermedia experts predict even television and newspapers will ultimately be user-interactive.

B.C. companies such as MotionWorks of Vancouver and Sanctuary Woods of Victoria are promoting hypermedia for training and education, advertising, information kiosks, professional presentations, computer games and other applications. Some B.C. educational institutions are already applying the technology in the school system—the area which may represent its greatest potential. Other smaller companies and a handful of hopeful individuals are specializing in niche markets.

But despite high-end customers such as CP Rail, Vancouver Children's Hospital and the B.C. Government, the Vancouver market is still moving slowly due to hard financial times and the untested nature of the product. Hypermedia will "slowly and steadily" evolve in the B.C. market, "as corporations become aware of its value," according to Vancouver systems consultant Brent Lewis.

To be a good hypermedia producer requires an extensive background in a variety of fields. Brent Lewis looks for people who have at least some of the combined skills of animator, artist, movie producer, graphic designer, sound engineer and computer expert. And you should be well organized, calm, and able to deal well with high levels of stress. Pay varies, but $15-$20 per hour is an average starting wage — if you're lucky enough to find steady work. Most hypermedia productions are done on a contract basis by small companies which call in programming or artistic help as required. And while prices are coming down, a studio of professional-quality equipment will likely cost you $10,000 and up. Upon hearing that, I decided to set compass back to the classroom.

Back to the Books (and software tutorials)

As my career search came to an end, it became clear that desktop publishing, online research and hypermedia productions are tools, not trades. Anyone wishing to be involved will need solid background training and considerable experience in related areas before they are in demand. Beware of short courses that promise to turn you into an industry expert in a few weeks or months. If interested in pursuing any of these or other information careers, talk to as many people as you can who are already working in the industry before committing yourself.

The future of these technologies is bright, so look upon this as a time to prepare yourself. Because if you don't have the credentials, it can be a concrete jungle out there. Really!

Contact Information:

DTP: Afterwords Publishing Services, #105-400 Smithe St., Vancouver BC V6B 5E4 Ph: 688-4098 Patricia Hort (owner)

Online Research: Just The Facts Research Inc., 2724 S.E. Marine Drive, Vancouver, B.C., V5S 2H1 Tania Gorn (owner) Ph: 604-435-6290

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TRAINING

Only the Educated Will Survive

by Bret Dobbin

Now that Canadian businesses are cautiously embracing the good news of a fading recession, company executives are once again able to focus on other important aspects of their growing enterprises. Managers are re-discovering the disturbing reality that employee education still remains one of the most complex management issues of the 90's.

According to Statistics Canada, companies in this country spend only half the amount of what American, Japanese, and Swedish companies allocate for computer education. In fact, the decade of the '80's saw only 25 percent of all Canadian companies including training costs within their annual budgets, and only 14 percent of all Canadian employees regularly enrolled in computer courses sponsored by their employers.

But it seems that corporate Canada is finally starting to see the correlation between lack of training and poor office productivity. Management has just now realized that large increases in expenditures for automation technology have not guaranteed increased productivity. Suddenly, computer training is being viewed as a strategic investment rather than a menacing cost.

How can a company, who has come to terms with the reality of computer education as a necessity, begin to provide training for their employees? Ideally, this question should be addressed even before a new system is implemented into the employee work environment. It is vital to first determine who the new users are, what existing levels of expertise these users already have, and what new levels of increased productivity will they be expected to reach with the introduction of the new computer technology to be installed.

Many consultants recommend that a company communicate the general nature of its training plans to its employees by making a positive strategic positioning statement which indicates the direction of the company. If the message is clearly communicated by the employer and readily accepted by the employees, there will be an increased desire to learn about the new technology.

It is important that the company's new training plan include guidelines

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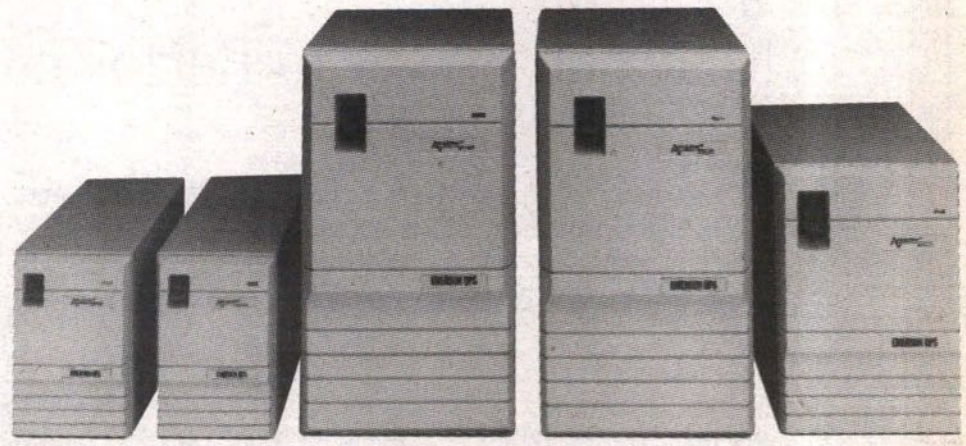

annual budgets, and methods of training and re-training as new software upgrades may eventually require. It is absolutely imperative that the company commit to ongoing education as an integral function of the company itself. A philosophical commitment can be demonstrated in a written strategy statement or as part of the company's formal business plan. A more decisive action would involve senior management assigning a top executive to take direct responsibility for the introduction and execution of all education programs.

For those who are committed to future survival and growth, it is wise to allocate an annual investment of approximately 10 percent of yearly hardware costs for the company education budget. It is important to realize that this new training and education endeavor is much more than a 12-24 month company plan. As hardware technology changes, and because many application software packages are upgraded about every 9 months, it is essential to make the training concept a permanent commitment.

How does a company, after deciding to introduce an education program, select the best training method for its employees? Indeed, there does seem to be a puzzling array of options including reference manuals and third party textbooks, audio cassettes and video tapes, on-line help and computer-based training, as well as hands-on training in a traditional classroom setting.

While reference manuals and texts have always been the least popular - and perhaps the most frustrating - method of learning, audio/video cassettes are gaining popularity as inexpensive options for computer training. Ranging from $60.00 to $600.00, these simple tools are ideal for people who are somewhat familiar with computers and also technically capable of running audiovisual equipment. As most people are comfortable in front of a television or stereo, these training tools can often prove to be the least intimidating and the most ideal for "at-your-own-pace" learning.

Perhaps one of the greatest advances in "user-friendly" software is the recent advent of on-line manuals and context sensitive help screens. Combine these electronic miracles with training disks complete with sample exercises and you begin to delve into the world of computer-based training. Computer-based training requires no extra equipment and is available from a variety of vendors in the $30.00 to $300.00 range.

However, most experts agree that instructor-led training is the most effective method for learning. In addition to the availability of an instructor who can give immediate answers to questions as they arise, students usually work in a lab environment with 6 to 10 other users who are also going through the same learning process. While this type of training isn't exactly inexpensive - with ranges from $100.00 to $1000.00 per person per day - it is usually found to be the most rewarding for participating students.

Even after deciding that classroom education would be the most ideal method for your computer training, there are still several important decisions to make before selecting your particular training site. Three of the key factors to consider are the staff, the training environment, and the equipment.

What are the qualifications of your prospective instructors?

An ideal course instructor will have an excellent working knowledge of the computer products to be studied and have experience in teaching adult employees. In the event that the training company also sells computer hardware and software, it is important that your instructor is someone other than a computer sales representative. Ideally, your vendor will have an Education Division with separate personnel who handle training independently from the Commercial Sales Division.

Will the training environment be conducive to learning? Many companies now specialize in training for employees of third-party companies and have created learning labs which are designed strictly for teaching. When speaking with a prospective training company, insist on visiting their premises if the training will be conducted in their labs. In many cases, although prices generally increase, companies can send instructors out to the customer's site if there are enough employees needing simultaneous training on the same products.

What equipment does the prospective training company utilize? This is especially important for courses, such as networking management or computer maintenance, which are hardware-oriented. It is best if their lab environment emulates your own on-site work environment and that the instructors are familiar with your equipment. And it doesn't hurt to have references from employees of other companies that have the same equipment you have and have satisfactorily completed courses with the prospective trainer as well.

While the growing commitment to employee education becomes a reality for all of corporate Canada, perhaps the most important thing small businesses can do is to follow suit. This investment, of time and money, will indeed pay off with big dividends in the near future. As every company, both big and small, prepares to compete in a global economy, many are predicting that only the educated will remain as the survivors.

Bret Dobbin is a Winnipeg-based computer consultant and free-lance writer.

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TRAINING

A Tale of Two Dyslexics

by George Slade

How computer technology can affect those with learning disabilities.

Photo by Image Club

This is a true story of two men. As chance would have it, these two men were born on the same day, and they both have dyslexia, a disturbance of the ability to read. Lets call these two men Jay and Steve.

As I grew up and went through school with them, they both had drastic problems conforming to the education system. Both had numerous failures in school, being held back, etc. Both were identified as having dyslexia. But yet at the same time both would display signs of brilliance in their life outside of school. As time went on, both succeeded in struggling through high school and both graduated.

The educational system patted itself on the back, thinking it had done its job and these boys had obtained sufficient grades to graduate. This was considered a victory. In reality it was a failure—all the educational system had done is succeed in crushing the self-esteem of these men. It had also labeled them as dumb because their marks were low.

Unable to proceed with post-secondary education (because of low marks) Steve and Jay went searching out a place for themselves in the real world of work. Both men exhibited the ability to work hard but both still had serious handicaps in written English, and neither had any post-secondary education. The lack of any post-secondary education was the biggest impairment, not their weak English skills. As the years went on, both went from one low-paying job to the next.

A divergence in these two men's paths came when Steve discovered the personal computer. No, he did not invent it, but he discovered that it was a tool which he could use to get around his dyslexia problem. The computer did not cure the learning disability, what it did is provide an alternative method of producing written material.

This allowed Steve to get his ideas in print in a meaningful way rather than in the jumbled mess which was the usual result.

Dyslexia is a "catch-all" word for many forms of learning (processing) disabilities. In Steve's case the disability was an inability to express himself in written form. Basically his brain was faster than his hands and he could in no way slow down his thinking process or speed up his hands.

The solution for Steve was word processing where he could bash out his thoughts and then use spell checkers and grammar checkers to go over the text and refine it. What if Steve had been able to have a notebook computer to use in high school instead of carrying around three-ring binders full of blank paper? He probably would have overcome his disability earlier and been able to avoid the pain and stigma which he suffered.

The current status of Steve and Jay is that Steve is now a well-respected businessman who has achieved a level of success never dreamed of by any of his teachers in high school. Jay has yet to break the cycle of low-paying, no-future jobs and has yet to discover the benefits that using a computer may make in his life.

This is a simplified but true, story. There are a lot more factors involved in both these men's lives which have had impacts on their respective levels of self-esteem, which also impacts on their levels of success.

The moral of this story is not "If you have a child with learning disabilities, buy them a PC and they will end up being the CEO of IBM," and in no way do I want to lead parents of children with learning disabilities down a path with no results.

The moral of the story is that technology enables some people with learning disabilities to overcome some disabilities. In this case, Steve's learning disability took the form of interrupting the process of getting his ideas from his mind down on paper.

The educational system did not recognize this as being a medical

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problem that could be overcome, but rather "Just a lazy kid." If your child has one leg that has not developed normally and needs special equipment to walk, you will get that special equipment for that child to walk (in fact the government will pay for that equipment). Why not use technology to help a child who can't write, just like it helps a child who can't walk? For Steve the brace is a microcomputer. For another child the brace may be a pocket calculator, and another may need a pocket computer.

There is nothing more painful than having a child with a disability, and this pain is compounded when society does not recognize the problem. I have witnessed the frustration of parents struggling to find out why their child is not doing well at school.

It is my hope that anyone who reads this, and identifies with it, may realize the crutch or brace for their child or a friend's child may indeed come in the form of a microcomputer, and will go out and get the correct brace for their child and encourage them to use it. Each child with a disability is different and the solution for each child is different. Computers may be another tool to be used in solving these problems.

Just as using the computer to solve business problems requires thought, using the computer to solve an educational problem requires thought.

George Slade - The author has a personal interest in the use of computers in assisting children with learning disabilities. He would like to hear any comments you may have on

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Computer Calendar

EVENTS

CBTA, Edmonton, Sept. 18,19,20
CANADIAN COMPUTER SHOW AND CONFERENCE, October 21st to 24th. Telephone (416) 252-7791. Industrial Trade & Consumer Shows Inc.
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
NETCON, Sept. 26,27
VANCOUVER BUSINESS COMPUTER SHOW, September 18&19, 10 a.m. to 6:00 p.m., Robson Square Conference Centre

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
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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).
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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.
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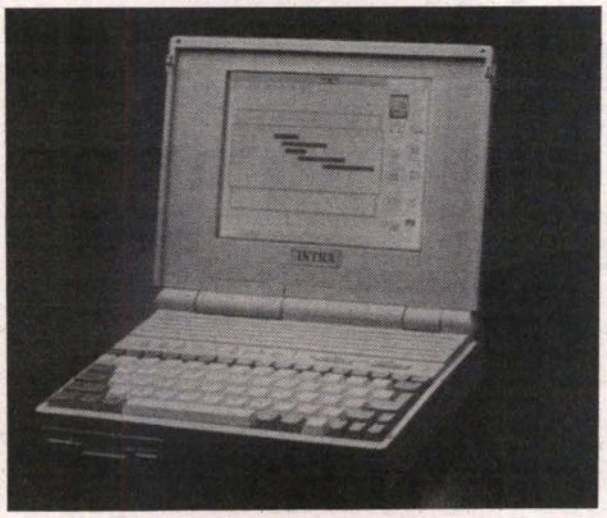

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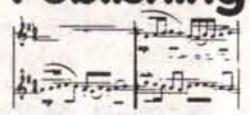

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Index of Advertisers

Accounting
Alsoft Systems 90
Healey, Seigneuret 63
TXL Management 44
Books
Book Warehouse 2
Cody Books 89
J & K Publishing Co. 90
Microsoft Press 46
Resolution Bus. Press 58
Cellular Phone
ACS 40, 57
DTP
AlphaGraphics 74
DeskSide Publishing 90
First Image Group 61
John Mulvihill 87
Laser's Edge 7
Lazer Set 17
Magic Press 69
Quickset Graphics 52
Scan Master 46
Vision Presentations 32
Events
NeXT Users' Group 87
PCCFA 86
Swap Meet 50
Van. Bus. Comp. Show 84
Hardware & Software
3D Micro Systems 49
A+ Computer 10
ABS Technology 30
Ace-Tech Computers 43
AE Electronics 36
Alliance Bus. Computer 77
AMT Technologies 47-77
Ashton-Tate 68
ATCO 70
ATIC Computer 31
Bar Tech 68
BCD Software Dev. 90
Bramall Systems 82
Campus Computers 94
Canada Portable Comp. 44
Canadian United Invest. 34
Cansel Survey Equipment 25
Calcon Products 54
Cardz Computers 3, 75
CCS Computer 22
Central Comp. Source 62
Commercial Electronics 56
Compuage 45
Compumax 15
Computer Empire 6
Computer Exchange 95
Computer Express 26, 88
Computer Mobile Repair 90
Compuwork 63
ComStar Distributors 62
Comtex Micro 33
CSM Marketing 71
Cybernetics 89
David Neises / Den Pac 91
Discovery Computer 90
Doppler Computer Centre 96
DPE Computers 92
ECL Industries 90
Envirotech 74
Focustronics Inc. 37
Friendlyware Computers 2
Fujikama 14
Future Shop 11, 28
Galaxy Computers 38
Help Software 59
Hi Tek Electronics 44
Image Media Services 83
Impaq Technology 8
Infospec Systems 23
Intelligent Solutions 46
Intertech Hardware 41
IQ Plus Computers 21
ITAC BC 43
Kalman Communications 58
Koyaan Computer Serv.s 10
Kureo R & D Ltd. 43
KYE International/Genius 48
Labtop Computers 35
Layout (MARCOMP) 52
Megatronics 93, 36
Mentek Systems 38
Micro Bus. Systems Inc. 54
Micro-Source Computer 71
MicroGram Systems 72
Minitronics 19, 28
Morse-Tech 79, 80, 81
New Tech 39
Omninet Computer 24, 59
Pacific RAM Logic 72
PAL Systems 16
PC Computer 57
PC Voice 82
Phase 1 Systems 29
Pitcher Consulting 89
Polytech Comm. 53
Prestige Enterprises Co. 27
Progress Systems 73
Q by Javell 9
Roboware 90
SchoolWare/Quality Learning 78
Seanix Technology Inc. 20
Software Alley 2, 29
Sovo Computer Centre 18
SPORTfolio INFOmation 58
STD Computer 64
Strachan Computers 12, 42
Strong Computers 54
Super Store 51
TCS The Computer Store 85
The Mint/CQ Research 91
TLD 67
Tri Tech Computers 47
Unidac 14
Universal Technology 24
V-Com 31
Varsity Computers 69
Versatile Computer 13
Westcoast Computers 19
Winpac Systems Inc. 72
Zegna Electronic 40
Macintosh
Advantage Computers 66
BYTE Computers 65
Info-data 63
Infomax Computers 67
Tomorrow's Graphics 17
Music
Annex Sound 18
Noteworthy Music 90
Networking
Vancouver Netware 90
DPE Electronics 4
First Online Support 32
The Triex Group 90
Online Systems/BBS
Cyberstore Online 55
Dial-A-File 90
Mind Link! 17
Point of sale
Infospec Systems 61
Arete Computers 62
Easy Retail/Hands On 60
Lingo Computers 60
POSIM/Selling Solutions 60
SalesEasy/Business 60
Service & Consulting
A & S 82
Calcon 91
Compumentor 89
Compunet Comp.Group 91
Custom Database Sol. 91
Digitizing 90
D I S C 34
Data Man.& Consulting 91
Discovery Parks Inc. 35
Fleetwood Comm. 90
ICCA 91
Infotech 90
Macri, Colleen 91
Minitronics 90
Newman Consulting 91
OCS ColourPower! 23
Rockland Coast 90
RPC Comp. Electronics 27
Unique Drafting Services 58
Shareware
Alt. Pers. Software 90
Computersmiths 90
Doug & Colleen's 89
Dover Micro Ltd. 90
Gemini Marketing 83
Mountainview Dataworks 39
Nexiss Distributing 90
Sim Com Shareware 62
Universal Computer 90
Subscriptions
NEWSBYTES 68
The Computer Paper 8
Supplies
Laura Mitchell 90
RTJ Office Products 91
Save On Laser Services 26
Superior Laser Supply 7,21
Vista Laser 39, 83
Surge Protection
Compu-Power Controls 84
ESP 56
Training
Academy of Learning 88
MacKay Institute 88
Capilano College 87
Coquitlam Cont. Ed. 86
Desktop Designs 86
Drake Training Centre 86
Fernandes, Susan 83
Masako Holdings 86
NRI Schools/McGraw-Hill 76
On-Track Comp. Train. 25
Precision Design 91
R.J. Norman 87
UBC Continuing Ed. 87
Van. Comp. Tutor 87

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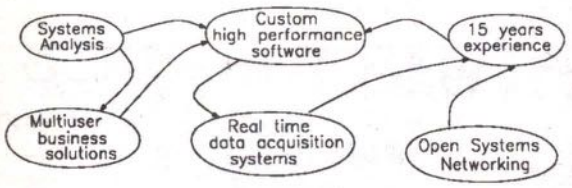

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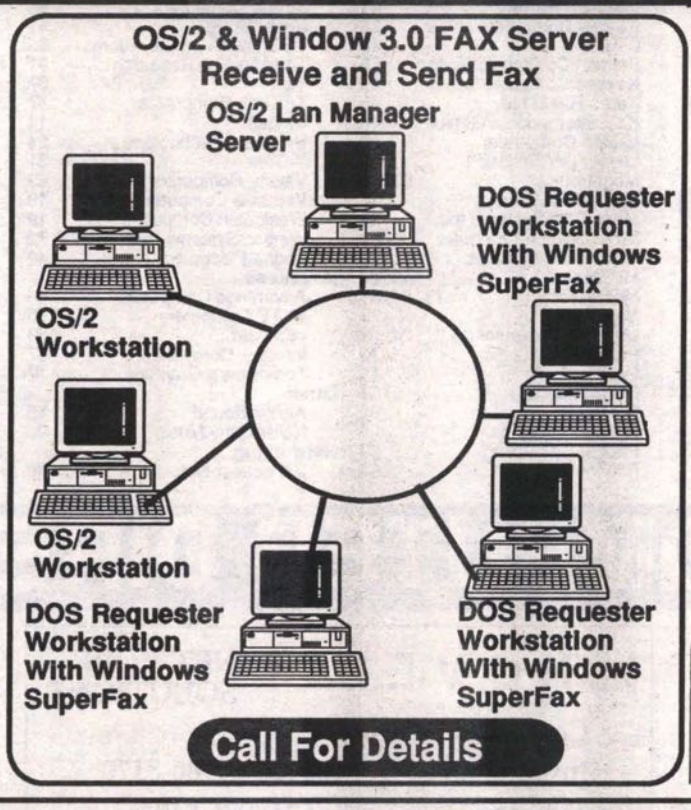

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Continued from page 94

they still sometimes have to fiddle the code to get the results they want—but every year the systems get better.

To assess the reasons aircraft components occasionally go wrong, Bacon Donaldson Laboratories use microcomputer technology for failure analysis, nondestructive examination and mechanical testing. Legal and insurance clients around the world call upon this Richmond, B.C. company's resources to explain everything from techniques used in terrorist bombs to in-flight failure of structural components.

Perhaps the most impressive display of personal computer graphics at the show was put on by Montreal's Allied-Signal Aerospace Canada. Their SIMULATRIX aircraft technician training system incorporates breathtaking 256-color animation to explain the workings of jet engines. Using a 2.5 MB graphic display board of their own design, Allied-Signal tie in a VCR for video overlay with color animation and digitally stored voice to create a truly multi-media, interactive training system.

The student controls the pace and depth of the lesson by pointing with a mouse to on-screen menus. SIMULATRIX explains the innermost workings of jet turbine engines by showing combustion processes in real-time animation.

Vancouver's BC Research Corporation uses microcomputers extensively to meet the design objectives of their aerospace clients. The Tensiodyne fatigue monitoring fuse, a serrated alloy wafer about the size of a credit card, was developed using 386 and 486 PCs, along with Silicon Graphics engineering workstations, for California-based Tensiodyne Corporation.

Keeping aviation and aerospace companies across North America informed of the latest developments is the Aviation Aerospace Information Network (AVIN), operated by Allan K. Hunkin of Langley, B.C. and running on the Canadian-designed SUZY computer information exchange. PC users with modems can exchange electronic mail, research data files and spreadsheet archives, or post bulletins on the AVIN grapevine.

The above are but a few of the companies which keep Canada at the forefront of aviation research. Most are small and entrepreneurial, with expertise in niche areas. All use microcomputers to innovate solutions in one of the most sophisticated and exacting industries. Though rarely acknowledged, such companies represent Canada's best hopes for the future in a global market.

The Abbotsford show also illustrates the extent to which personal computers are encroaching into the rarefied domain of the graphics workstation.

This can only be good news for small Canadian development companies whose primary assets are vision and talent—and for the world-wide aviation industry which reaps the rewards of their research.

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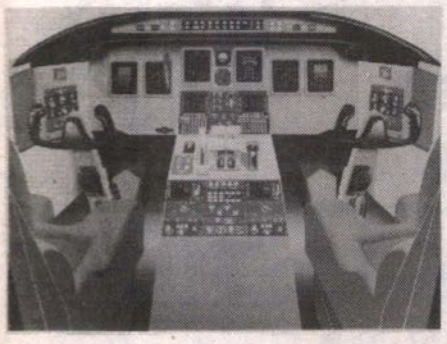
Microcomputer Research Takes Off at the Abbotsford Air Show



by John Mulvihill (684-3214)

Any lingering doubts about the microcomputer's application in advanced research are quickly put to rest by a visit to the Abbotsford Air Show. A stroll past the exhibitors' booths at Airshow Canada '91, the industry trade show portion of this world-class airplane extravaganza, unearths dozens of Canadian companies who use personal computer platforms in aerospace applications previously the exclusive domain of mainframes and minis.

Consider the real-time, fully graphic geographical tracking system developed by Axion Spatial Imaging Ltd. of Edmonton. On a standard 386-based PC they store a digitally compressed map of Italy, which the user can expand in sufficient detail to view the canals of Venice. Full 3-D topographic rendering is supported.

Before leaving for a flight, pilots must go through preflight briefing with airport officials to share route and weather information. Conducted in person or over the phone, these exchanges involve a lot of Q&A and taking of notes. MacDonald Dettwiler of Richmond, B.C. offers an alternative: pilots can use their laptop computers to log on to their National Aeronautical Information Processing System (NAIPS) and download the very latest information. More convenient, more efficient, and less prone to misunderstanding.

Microcomputers play a growing role in the manufacture of aircraft components. Zum Hingst Technologies of North Vancouver have pioneered the use of personal computers in the operation of milling and machining equipment. Back in 1977 they wrote their own code to achieve the precision required for aircraft standards from their NC (numerical code) machines.

Now, they run their nine milling machines with 386-based PCs via a Lantastic network, using AutoCAD software for component design and the SmartCAM program to translate their blueprints into machine instructions. According to owner Uwe Zum Hingst,

Continued on page 93

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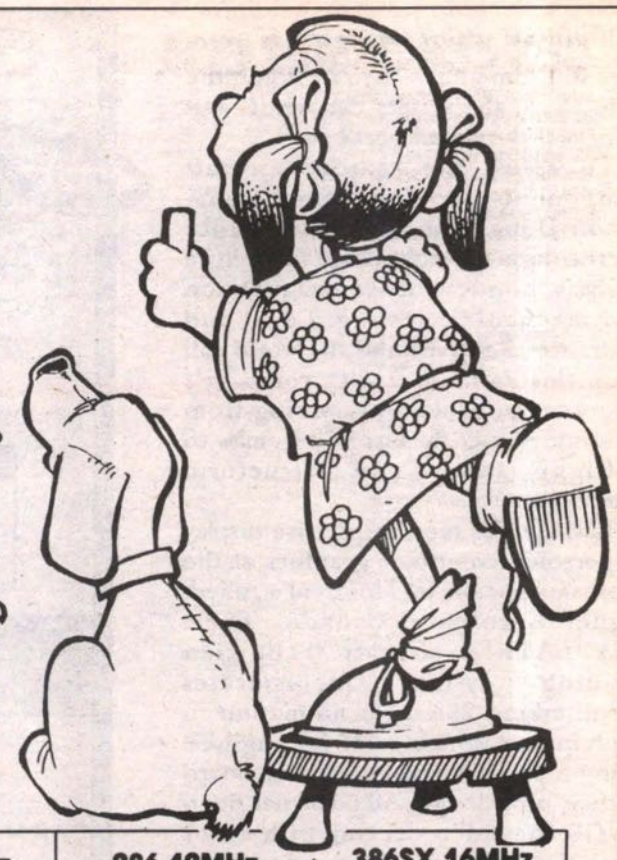

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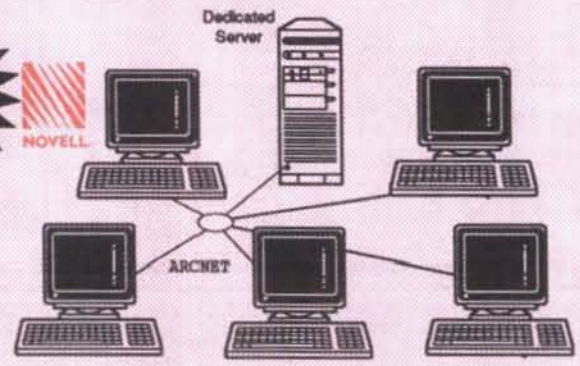

Dedicated Network Server 386SX
- 386SX/16MHz CPU • 2MB RAM
- 1.2MB Floppy • Mono Display
- Arcnet card • Serial/printer port

Workstation 286/16
- 286/16MHz CPU • 1MB RAM
- 1.2MB Floppy • Mono Display
- Arcnet card • Serial/printer port

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- 386 - 25 MHz Dedicated Server
- 4 MB RAM Memory, 210 MB HD
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- 20 ports Hub (Active/Passive)
- 20-286/16 Workstations

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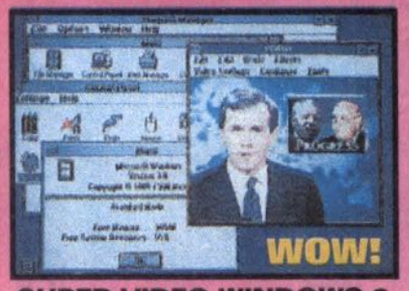

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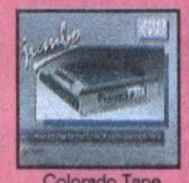

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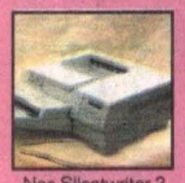

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ColoRIX VGA Paint	179	FoxBase Run.t/Pro RunTi	339/388				
Company Ladder	69	FoxPro RF Runtime	398				
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Quicken (best value acctng)	49	WordPerfect 5.1 UPGRADE	125
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R Base for Dos / Personal	599 /149	WordPerfect Office / LAN	109/349
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ANO VATION

VOL. 2 NO. 2 SEPTEMBER 1991

NEW OFFICE IN KAMLOOPS

With a booming economy in the Okanagan region of British Columbia, ANO Office Automation is further expanding its network of offices with the opening of the Kamloops branch slated for mid-September, 1991.

The new office, located in the industrial district of Kamloops, will house a complete sales and service department with a full time Novell approved technician on-staff. Catering to the business, education, and government sectors, the primary thrust of this new office will be service.

"In today's dog-eat-dog world of the hi-tech industry, the successful reseller must stand apart from the rest. We do this through service excellence and not through price-price-price.", explains Mr. Dick Medema, Regional Manager for the Okanagan and Kamloops.

We wish them all continued success in the bountiful and beautiful Okanagan and Shuswap regions!

ANO

COME ON DOWN

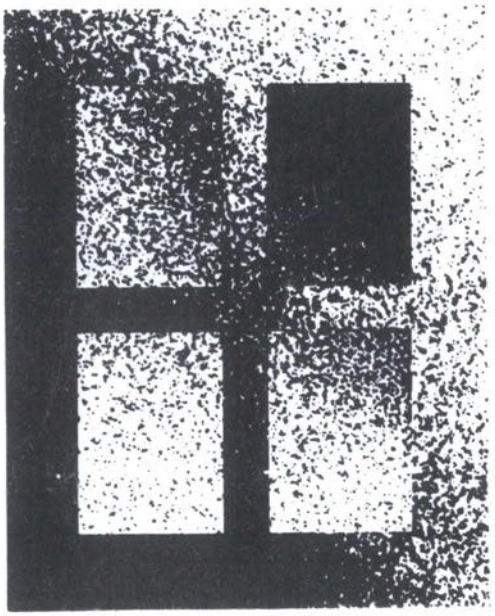
ANO Office Automation will be participating in the Vancouver Business Computer Show September 18th and 19th at the Robson Square Media Centre (Booth #110), the Marketplace '91 exhibit September 19th and 20th for the ministries of the Province of British Columbia, and the UBC Computer Show October 9th and 10th.

We hope you get the opportunity to come down and visit our booth.

New Bundle

The Microsoft Office

The incredible success of Microsoft's Windows 3.0 operating environment has spawned a plethora of products supporting this new wave in personal computing. Even companies like Lotus, and WordPerfect who have traditionally stuck by their guns with text based applications are now folding to the demands for Windows versions.



Microsoft has gone one step further in securing its hold on the Windows applications market with the repackaging and attractive pricing of what it labels "The Microsoft Office". Essentially it is the bundling of Excel 3.0 the leading graphical spreadsheet, Word for Windows, the number one selling full featured graphical word processor, PowerPoint, the powerful presentation graphics program, and Microsoft Mail version 2.1, their latest entry in the network marketplace which is an excellent electronic mail solution supporting all major PC networks.

The major advantage is that all of the products offer a consistent interface, reducing the learning curve dramatically. Of course the attractive list price of only $899 Canadian makes it even more appealing.

ANO

INSIDE THIS ISSUE

50MHz Intel Processor 2
Tech Talk 2
CAD Embraces 300/330 3
Enhanced Training 3
Customer Database Mgmt. 4
Canofile 250 6

More Power

New 50MHz 486 Processor

Just when you thought it was safe to invest in a PC based on Intel's 33MHz 486DX , Intel turns around and announces the mass production of a new chip operating at 50MHz. Although actual systems aren't expected to ship until early Winter (probably to be profiled at the Fall Comdex in October at Las Vegas, NV), Intel has released the chip to PC manufacturer's for development.

This announcement comes fresh on the heels of the co-release of the 386SL portable processor chip set by Intel and Zenith Data Systems at the Spring Comdex in Atlanta, GA. This revolutionary new processor set effectively makes notebooks running on the 20 and 16MHz 386SX obsolete after only a few months off the production lines. Already in mass production, Zenith's MastersPort 386SL boasts an extraordinary 8 to 11 hours of battery with a meagre 1 to 1.5 hours of recharge time. Other features include a stunning 32 grey scale VGA display, 16-bit display bus, 1.44MB 3.5" floppy drive, a special 60MB Conner hard drive, and 2MB of RAM, all weighing in under 7 pounds.

Also anticipated at Comdex will be Intel's much awaited 586 CPU. Although not official, it would only seem logical that Intel would have something nouveau to show the power hungry public.

AND

Tech Talk with Ken Ng

System Maintenance

Q. *What preventative maintenance techniques should I use to improve the life of my PC ?*

A. PC's and their peripherals are delicate pieces of equipment. Aside from the preventative maintenance required (which I will get to later on), it is also vital that the operating environment be relatively dust free. One of the biggest problems (aside from dirty power) our service department deals with is dust that accumulates inside the PC causing a component to short out.

In order to keep the system in good shape you should clean it up about once every 4 to 6 months. To do this you will need to invest in a floppy drive cleaning kit (one for each size of drive), a tape drive cleaning kit (if necessary), a bottle of compressed air, a hard drive utility package such as Spin Rite II or Optune, and a vacuum cleaner.

Once you have all of the supplies, you will have to open up your computer and take out all of the expansion cards. Using the compressed air clear out the power supply fan, ventilation slots in the case, floppy drives, tape drives, expansion slots, and expansion boards. Then strike up the vacuum cleaner and suck up all of the obvious dust and dirt. Next, using the drive cleaning kits, clean out the floppy and tape drives. After all this is done, piece your system together and run the hard drive clean up utility.

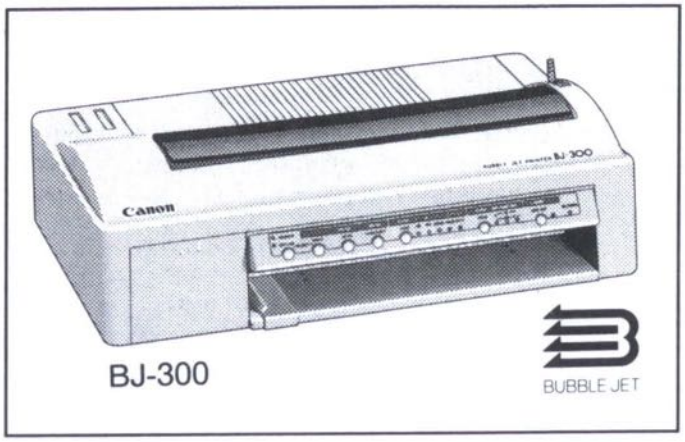
If you don't quite feel that adventurous, you can bring your system into our office and we'll do it all for you under our PC Tune Up program - volume discounts are available for multiple machines. This service by the way is included with the renewal of a Security Support On-site Service Program.

Other Tune Ups are available for laser and dot matrix printers - we'll discuss that one some other time.

AND

Perfect Fit

Bubble Jet Accels In CAD



The biggest assets for the average business user of the Canon BJ-300 and BJ-330 has been the outstanding paper handling, quiet operation, blinding speed and superb output. For the engineering community, however, the speed and output are the real clinchers.

Through the use of Print-a-Plot (a third party software application), the latest additions to the Bubble Jet family effortlessly produce stunning CAD drawings without the expense of special paper. The biggest advantage being that every engineer can have a 300 or 330 by their desk to produce 360dpi quick plots for final checking before sending it to an actual full size plotter - they'll even print on velum.

As well, instead of storing large D or E size plots, engineering firms are finding it handy to simply print out a plot on letter, legal, or ledger paper and file it like any other piece of paper. Thus reducing wasted space, eliminating the cost of additional copies, and making for a more efficient filing system.

For more information on the Canon BJ-300 or BJ-330 call the ANO office nearest you or send in the "Reader Response Card" at the back of this month's ANOvation.

ANO

Much Improved

Enhanced Training Program

ANO Office Automation and Computer Consultants International have made arrangements with Vancouver Community College and Douglas College to carry daytime courses at ANO's National Head Office in Richmond, B.C.

Commenting on this new program, Gillian Gallie, Co-ordinator for ANO's Professional Training Division furthers that this new arrangement "will enhance our capabilities to provide a full service training program. The demand for top notch computer training is growing rapidly. We anticipate this will reduce the burden on the evening and Saturday classes."

One of the biggest reasons sited for the popularity of computer training from sources like ANO is that the software available keeps changing. Making it less than feasable to maintain an in-house training program. Since third party training programs can distribute the costs amongst a wider audience, the actual costs themselves are very attractive.

Aside from the packaged courses, ANO also offers customized courses for the business user with very specific training needs. Experts are available to help design a unique training program from a list of dozens of applications and operating environments, tailored to any company's requirements. Some of the most popular include WordPerfect, Windows, ACCPAC, Lotus, dBase, Ventura, Excel, Novell Netware, and OS/2.

These customized courses can be held either one-on-one on-site, or in our classroom facifilities. Should you have a unique application program which has been mastered by your own in-house expert, classroom rentals are available through Richmond, Kelowna, Edmonton, Ottawa, and Toronto.

For further information contact the ANO office nearest you or our Professional Training Division at (604) 276-8898.

ANO

Helping Hand

Customer Database Management

If you are not maintaining a strategically structured program for customer tracking, you could be losing out on lost revenue. Generally speaking, repeat patronage is a key to success. The way which you handle past customers can affect future revenues.

In this article we will be discussing the many facetes of customer database management. Input has been supplied by industry leaders to ensure that all bases have been covered from a variety of angles.

PROSPECT MANAGEMENT

Prospect Management is different from Customer Management in that it requires considerably more energy to prepare. With customers you probably already have the information required to setup a quality database. With prospects, however, you usually have to put in a little more time to acquire information about their business.

If you plan on using the database for direct mailing to prospects, you must make sure that the money you are putting into the mailer isn't ending up in the circular filing cabinet under "G". Your database should be targeted to the decision makers, and those who influence the decision makers.

IDENTIFYING PURPOSE

The purpose of any customer database should be that of a marketing tool. One company which makes excellent use of its customer database is Tip Top Tailors. Everyone that buys a product from Tip Top is asked if they are a member. If you are, you receive discounts and seasonal updates on upcoming specials. If you are not, they will add your name to their list simply by filling out a quick form.

You see Tip Top already knows that you buy suites or dress clothes, thus they invest the time to make sure that you come back to them when you need a new suite or tie. Of course they also understand that just because you're on their database doesn't mean you'll buy from them. Tip Top also spends an extraordinary amount of energy ensuring that you receive excellent service and an equally attractive price.

Tip Top can also use this database for sales analysis purposes. They should be able to track the number of club members who return to their stores, if customers are loyal to one particular location, customer buying frequency, and the average purchase of a club member. This type of information is crucial when putting together a marketing strategy because they are better able to accurately target their campaigns.

Quality car dealerships use customer databases to track client purchases and remind the customer when it is time to come in for service. This is an excellent opportunity to both increase service revenue and to reinforce their market positioning in the consumers mind. As the average buying cycle is between 5 and 7 years in the automotive industry, a small investment in their customer database can mean thousands upon thousands of dollars in future revenue.

A properly maintained customer database can also reduce the learning curve when a new sales rep takes on an account. If the account is well documented, he or she won't be spending a lot of time sifting through paper or data files, and asking questions which should be easily accessible.

IDENTIFYING NEEDS

The initial stage in creating a customer database is sifting through what you believe to be vital information about the customer. In order for a sporting goods distributor's database to be effective they must breakdown the types of stores they deal with. For them there are specialty stores (skiing, hockey, baseball, football etc.), general stores, and clothing only stores.

Also, they must know which accounts they already deal with, their average annual purchases, and who is responsible for that account. This type of information is essential when putting together a structured database. Without it, implementing a telemarketing or direct mail campaign would be next to impossible.

DATABASE MANAGEMENT

One area where many get out of the gates quickly but fade out in the stretch is managing an existing database. Keeping a database up to date

requires time. If left unattended it will inevitably end up in a mish-mash of junk and quality contacts.

The best way to keep a database updated is through utilization. Through telemarketing and direct mail, a database can be kept relatively clean. One mailer which works particularly well for this purpose is a questionnaire - be sure it includes a change of address and contact section. It also acts as a superb marketing tool for identifying customer wants and needs.

Never become lazy when maintaining your database. Each piece of information can be important, and may be needed sooner or later. You may want to make it the responsibility of each sales rep to maintain their account and prospect database.

Of equal importance is that you get the correct spelling of the customer and his or her name. Nothing is more irritating to a reader than spelling errors.

AVOID CLUTTER

When setting up your database, be sure to include pertinent information, but don't clutter it up with trivial data. In general you will need to know the following information which we have outlined below.

Customer Type

This can include identification as a Frequent Buyer, Casual Buyer, or Prospect.

Industry

For those dealing with multiple industries this is vital. When targeting specific markets it is important to be able to quickly and easily separate them from the rest of the pack.

Product Interests

If you deal with a number of product lines it is important that you be able to target marketing campaigns towards those clients interested in particular products. Using the sporting goods distributor as an example, it would be redundant for them to market a new line of ski equipment to holiday swimwear stores.

Sales Rep

Be sure to identify the sales personnel responsible for each account. Should a sales rep leave, it will be easier to distribute their accounts and prospects to other sales reps.

Important Dates

Record any important dates which relate to each customers; i.e. birthdays, anniversary's, corporate year end, vacations etc.

Other

For ANO Office Automation our customer database is also used to track data about network installations and those customers that subscribe to annual on-site service. This type of information allows us to effectively manage our account base. As the sales, support, service, and telemarketing personnel have access to this data, we are better able to keep up to date records on our clients.

USING YOUR DATABASE

Once you have an established customer/prospect database in place it's time to put it to use. As was mentioned earlier we use our database for many things - direct mail, telemarketing, service contract maintenance, general customer information, and service information.

What you choose to use your database for will directly affect the software you select. Be sure to plan this out carefully and with longterm goals in mind. The last thing you don't want to have to do is change software in mid-stride.

DIRECT MAILING

Direct mail is probably the most common use for a customer database. A properly structured database will directly affect the effectiveness of this type of marketing activity. Obviously, an unorganized ill-planned customer database will result in a similar end product - as the saying goes "junk in, junk out".

Here are some general rules for successful direct mailing, assuming that your database is properly setup.

Rule #1: Get It The Right People

Don't waste your time sending direct mail pieces to those who won't read it. Try to avoid sending a mailer to a position such as general manager. Sending a mailer to an actual person has a higher probability of being read. Most secretaries are told to trash direct mailers that aren't for a particular person.

Rule #2: Attractive Packaging

The better looking the packaging your mailer is contained in the higher chance of it being opened and read.

Rule #3: Attractive Content

The never judge a book by its cover adage is no more important than with direct mail. The attractiveness of your direct mail piece is just as important as the packaging.

Rule #4: Get To The Point

Most people in a decision making role want the meat of your message up front. Even in newsletters, you will lose the readers interest if you don't get to the point quickly.

IMPROVED CUSTOMER TRACKING

Many companies choose to use their accounting software for this one, however, most systems (without the help of third party software) don't do

Continued on Page 6

Long Awaited

Canofile 250 Conquering The Paper Jungle

Document filing is the single most important area needing improvement in today's office environment. Storing and retrieving information swiftly and effectively is an urgent priority to all office workers. Yet piles of information are often left neglected - accumulating on desktops, stuffed into drawers or at best filed in clumsy, awkward filing cabinets.

A survey conducted in Japan, asked companies to prioritize those conditions which would lead to a better office environment. A very high percentage of management, as well as office staff, felt it necessary to improve their filing systems. Canon responded to this need by introducing the Canofile 250 - the world's first desktop electronic filing unit.

Electronic filing systems using magnetic and optical media show a very prominent increase in demand. In fact, according to statistics compiled by the Association of Image and Information Management (AIIM), the information and image management industry is expected to grow 300% by the year 1993. By the year 1993, 54% of the entire product segment will be occupied by electronic filing systems. Clearly, in the future, electronic processing and automated retrieval of information will become standard in every office.

In spite of the strong demand for electronic filing systems, those previously available did not penetrate the market very deeply. The reasons behind this were the high price tag and complex operation procedure , as well as the space factor (conventional systems are very large). Moreover, most of the currently available electronic filing systems use non-rewriteable optical disks, a great inconvenience when processing active documents.

With these thoughts in mind, Canon developed the Canofile 250 - compact, easy to use, reasonably priced and with a magneto optical disk that's rewritable. The Canofile 250 is specially suited for those smaller offices and businesses that perhaps refrained from purchasing electronic filing systems, however desirable, due to high cost and/or complex operation. Additionally, departmental sections within large corporations will also find the Canofile 250 particularly helpful.

HIGH CAPACITY

The Canofile 250 uses Canon's newly developed Magneto Optical Disk (MOD) "Diskfile 502M" which provides high-speed access to and high-capacity storage of data in a removeable cartridge format - about the size of a standard CD.

Although magneto-optical technology is a relatively new concept, it utilizes principles of magnetic recording which were proven effective long ago. The result is a high-capacity recording and storing system that combines the best of optical and magnetic disk technology allowing information to be updated or deleted.

BLINDING SPEED

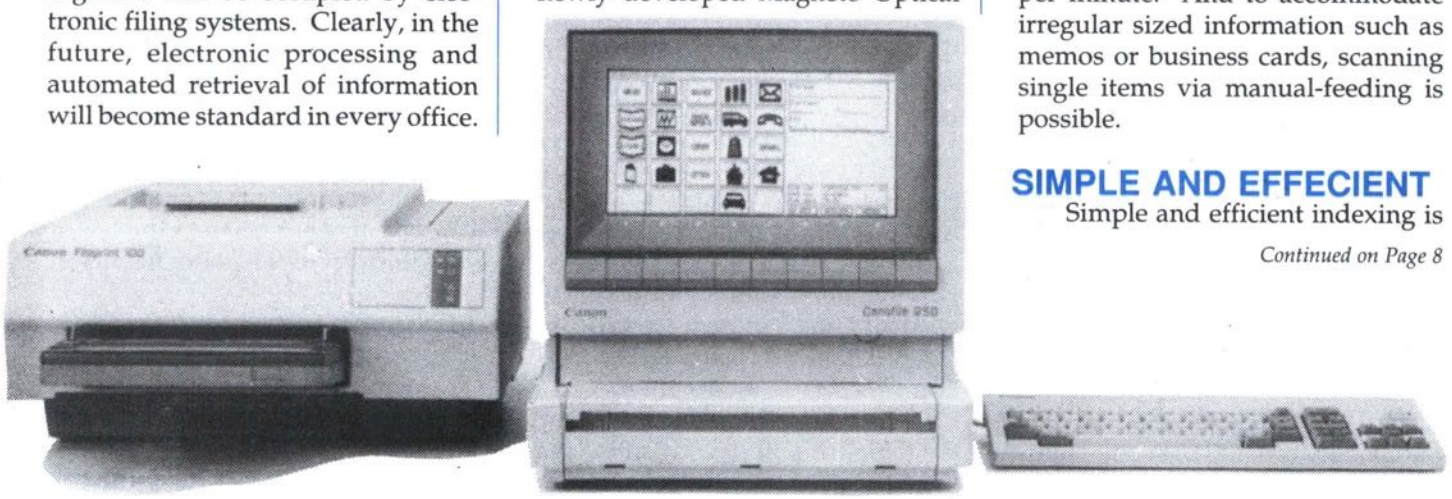
Conventional filing cabinets are often bulky and cumbersome to sort through, but with the Canofile 250 electronic filing system, thousands of files can be safely and conveniently stored on one desktop.

What once might have taken office staff several hours to file, now can be done in a matter of minutes. A single magneto optical disk can store up to 13,000 A4/letter-sized sheets of image information. Additionally, the Canofile reads at a blinding speed of 40 double sided A4/letter-sized pages per minute. And to accommodate irregular sized information such as memos or business cards, scanning single items via manual-feeding is possible.

SIMPLE AND EFFECIENT

Simple and efficient indexing is

Continued on Page 8



Helping Hand Continued

a very good job of this. Most Contact Management and Marketing Management applications are designed to do very specific tasks - improve the efficiency of the sales cycle, improve customer relations, and take advantage of direct mail and telemarketing more effectively.

Relying on an accounting sub-ledger to handle the hundreds of tasks associated with Contact/Marketing Management would be like swatting flies with a brief case - possible but not effective.

"Don't Make Your System So Complex No One Can Use It"

SOFTWARE REQUIREMENTS

When planning out your software needs it is vital that you take into account the size of your database, the output you expect to achieve, your reporting requirements (sales managers that are sticklers for statistics should pay particular attention to this one), flexibility, expandability, and whether or not networking is important.

Research will only make your buying decision the right one. Remember that once you're full swing into setting up the database itself, switching programs can mean a lot of blood, sweat, and tears. Evaluate your needs closely and get everyone that will be involved later on, involved in the pre-buying cycle.

There are many contact management applications on the market today - some of those include The Maximizer, TeleMagic, UpTrends Marketing Manager, and Act! - through proper research and planning you will more than likely make the right decion.

HARDWARE REQUIREMENTS

This is not an easy topic as it is dependent upon the type of application you purchase and what its intended purpose is. For example someone buying a Unix based system will require completely different hardware over someone buying a LAN-tastic system.

What remains consistent is the devices used to produce output; i.e. the printers. If you print out the odd letter and don't participate in any form of mass mailers then a 4 Page Per Minute laser such as the Canon LBP-4 will do you just fine. However, if you produce double-sided highly complicated mailers to a number of people, the Canon LBP-8 Mark IIIR will be more up your alley.

If you plan on using laser labels then a dot matrix or Bubble Jet printer isn't a necessity. For us, we use a high speed dot matrix to produce over 2,000 labels per month for our newsletter - laser labels just don't cut it.

IN CLOSING

Remember these simple rules and you won't mess up:

1. *Select the software package that best suites your overall needs.*
2. *Keep your database up-to-date through constant usage.*
3. *Don't make your system so complex no one can use it.*
4. *Categorize your customers clearly and concisely.*

We have covered a tremendous amount of information, of which we hope you gained from. It is clear that customer database management is a vital tool for most businesses, whether you be a dry cleaning service or an accounting firm doing income taxes.

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Canofile Continued

another advantage that makes the Canofile 250 such an indispensable asset to your office. The Canofile 250 offers four indexing methods: Index Cell (visual graphics), File Name, File Number, and Date. Each method lets you store, classify and retrieve your information with ease.

HIGH QUALITY OUTPUT

The Canofile 250 comes bundled with Canon's Fileprint 100 laser beam printer which produces 400dpi printouts at the speed of 4 pages per minute. The high resolution guarentees image information as clear as the originals, and the high-speed printing results in quick and efficient distribution of information.

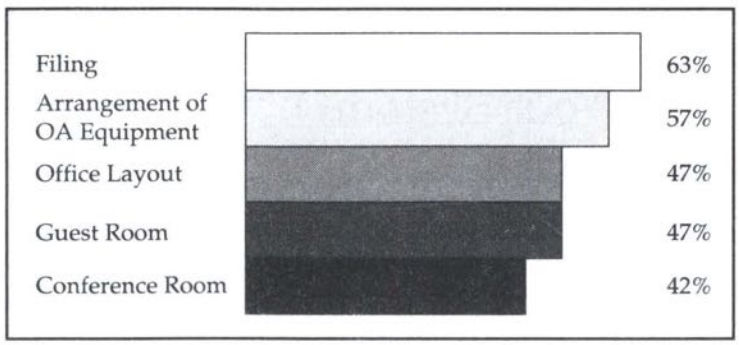

Figure 1. Survey of Japanese management shows priorities for a better office environment.

IN REVIEW

The Canofile 250 is the ideal compact and affordable solution to the urgent need of information management. For further information please contact the ANO office nearest you. This exciting new product will also be featured at the Vancouver Business Computer Show and the U.B.C. Computer Show (See the front cover for further information on these events).

ANO

Reader Response Card

Contact: _____

Position: _____

Company: _____

Address: _____

City: _____

Prov: _____ Postal Code: _____

Phone: _____ Local: _____

Fax: _____

Type of Business: _____

Please send me ANOVATION monthly: ☐

Please have an ANO Rep contact me: ☐

Please send me more information on:

- ☐ Microsoft Office
- ☐ Zenith MastersPort 386SL
- ☐ Computer Training
- ☐ Canon Canofile 250
- ☐ Canon BJ-300/330
- ☐ PC Tune-Up

Suggestions: _____

_____

_____

STAPLE BUSINESS CARD HERE