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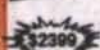
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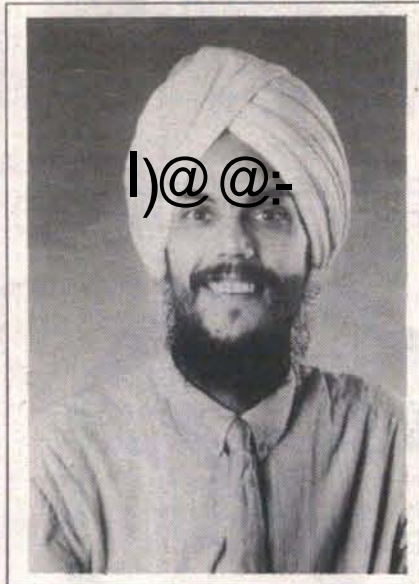
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FROM THE EDITOR



It was a busy month for computer activity in this town. Computer Associates bought up Bedford's accounting division, including their Macintosh package, Simply Accounting. We had the Apple Business Show and the Computerland show both in the same week. Mission Cyrus announced the opening of a Burnaby based manufacturing plant for high end 586 laptops and other computers. Last but not least, I attended the Unix user group for an interesting meeting.

The Computer Associates purchase was met with mixed reviews. Some said that CA was, in its usual style just buying up the competition. (Bedford competes directly with ACCPAC Easy) Others suggested that the purchase was motivated by the fact that Simply Accounting, Bedford's Macintosh accounting package is a best seller, and CA had no Mac products. Others complained about the price, Bedford's sales were something on the order of \$5 million a year, and CA paid \$165 million. That is just sales, not profits. Whatever the reason, the world seemed to take note that British Columbia is a leader in producing world class accounting solutions.

The Apple Business Show had a dash. Any show that you attend and they have a dozen or more Mac IIcx's and a bank of laser printers at the reception area lined up just to print out your name tag, has class. The show had a number of interesting items. Lots of high end CAD and DTP Video. While not many of the items were brand new, it was in keeping with Apple's focus of showing leading edge products for the Mac.

The Computerland Show on the other hand was far less impressive. Judged on the same criteria had three generic AT's and two dot matrix printers had trouble keeping up with the sparse crowd. Highlights of show included the new color LaserJet 800 H.P. and an OS/2 display. The color DeskJet reeked for something on the order of \$1400 and produces 180 dots per inch resolution. Very impressive for those less demanding presentations in color. At the IBM booth, the only real products that they were showing for OS/2 currently are Excel the spreadsheet, and SideKick & om Borland.

Mission Cyrus's Burnaby based manufacturing facility was announced with a political hoopla last week. Bill Van der Zalm and his Regional Development minister were out to welcome the Mission group. Mission makes high end stereo equipment in the U.K. and they have decided to launch a PC division. B.C. was chosen, because it is a nice place, has enough talent, is cheaper than the U.S. and our provincial government was amenable to guaranteeing their loans, (not necessarily in that order of importance) Their designs are impressive and we wish them luck in their venture here.

I went to the local Unix user group this month. The program title which caught my eye was "Trends in Unix". That sounded a little more lively than their usual "Device driver development in C" so I decided to go. The last meeting I had attended, their had been a chummy 30 or 40 people who all spoke Unix. This time there was a crowd of over 100 and some of them even spoke dialects of the English language that I could understand. It is a testament to the growth of Unix in the market that many new users are becoming interested. According to George Pajari, president of Clarendon Data local Unix support company and the principle speaker of the evening, the reasons for this growth are multiple. There is a growing base of fast, powerful and under utilized 586 computers out there. They are either limping along with DOS, kludging it with Windows or DesqView or some other pseudo multitasking system or waiting for applications to show up in OS/R. "Unix is the answer" says George. Unix has a strong body of software that already works and can offer true multi-tasking and multi-user activities. Best of all, a standard brand of Unix is finally emerging. George has promised to tell us more about this rapidly growing religion..I mean ...operating system in a regular column.

Enjoy the issue.

Kirtan Singh Khalsa
Publisher/Editor

Coming Editorial Schedule

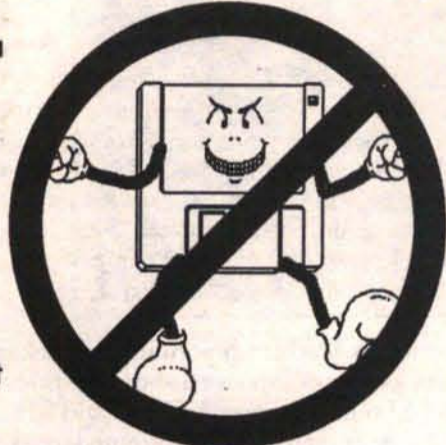
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LETTERS TO THE EDITOR

BBS List In Demand

Hi, I was wondering if you could add a BBS list in your paper. Like what you had on February of 1989. Because I modem a lot, and I find it a bit frustrating not knowing some of the BBS's phone numbers, and I feel this would help since it might also get people to help keep the list up to date. Thank-you for your time.
Edward Mui
via Mindlink

The BBS-List that was published in the February/89 issue was far more complete than the latest ones to come out. I miss this full list.
Bruce Arabsky
via Mindlink

Atari Neglected

To my understanding it seems the Computer Paper has neglected support for the Atari ST. As you may have noticed ST support is growing rapidly across Canada, and the U.S.A. The ST has matured to a powerful computer and software is up to par with the Mac and IBM systems. It would be nice if someone put the time to release information supporting ST's, after all you are a COMPUTER paper?
Murad Meraly
via Mindlink

See our article on the Atari ST in music, and our Newsbytes section on Atari. We try and give coverage, but the fact is not very many of those million plus Ataris have been sold in Canada due in part to a lack of advertising in papers such as ours.

Musical Reply

Re: Musical Micros (Computers and Music) by Danny Mott - May '89. I was quite pleased to see an article on computers and their relevancy to music. Being a music/computer retailer, I hope that the average music/computer user will be exposed to their potential options and see their creativity expand. However, there were a few points that caught my attention and required a comment from an experienced musician and computer user.

Firstly; Mr. Mott, why be so negative? "Do You Really Need..." "Is There Anything Good...". Since these comments were headline type it struck me that this person may not really see the value of a computer to the average musician. Most of the clientele that come into my store looking for music instruments, comment to the fact that they already own a computer or are seriously considering the purchase of one in the near future. So if you are going to have a computer and you are going to have music, why not interface them? And if someone is considering purchasing a computer just for music, consider how much of the computer's potential for other functions is wasted.

Next; so much of what was written was past tense. Yes I know you were detailing the "Memoirs of MIDI" but MIDI ain't dead yet boss and the software and equipment for wider and more complete MIDI use is growing extremely rapidly. MIDI is a toddler!

My pet peeve with your article is in respect of the IBM/MS-DOS machinery. Of course everybody has their 'flavour favorite' but Mr. Mott implied in this first installment that the IBM and compatibles is a fourth rate computer for music use. He states "The IBM... does not have as wide a cross-section of music software to choose from...". Maybe true in 1986, but I have a listing that shows synth editor programs for all major synths, educational and instructional software, sequencers more diverse than any other format, and notational programs that for speed and MIDI ability are extremely powerful! The price of IBM et. al. has

significantly dropped over the past two years and as I look through "THE COMPUTER PAPER" most of the advertisements are for MS-DOS computers, software and peripherals.

Thank you Mr. Mott for your positive points. I look forward to your future comments.
Sincerely, Timothy Tucker
Carillon Music Ltd. Surrey, B.C

Used Computers Wanted

An enthusiastic reader of your paper, I recently noticed an advertisement in the classified section for the donation of used computers and wondered if we might place a similar ad.

The Burnaby Association of the Mentally Handicapped has grown by 200% over the past two years. Our need for computers, both for staff and special programs for 250 mentally handicapped adults and children, now far outstrips the government's ability to fund us.

Many mentally handicapped individuals would benefit from the opportunity to learn simple computer programs, if only the equipment was available. In addition, our staff is currently labouring under a heavy load of paperwork which could be alleviated by more computer access.

Cam Dore
Executive President, Burnaby Association for the Mentally Handicapped
(- see advertisement in the Classified Section for details)

MASTHEAD

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New HORNET Distributor for Western Canada.

Harbinger Services has announced the formation of Hornet Systems Canada for the exclusive Western Canadian and Pacific Northwest distribution, service, and support of the HORNET Project Management Software System.

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HORNET was originally introduced in 1980, and is today sold and serviced worldwide. The product is offered with full service technical support and training services. Price: \$4700 Cdn. Contact: Relf Drommer: 941-5789

Software Based Motor Vehicle Tutorial

HIGHWAY is a new software program, written and distributed by NISSEN VENTHUMK. Highway is a motor vehicle tutorial, to assist student drivers with a different approach to prepare for their written test. Helpful tips and suggestions are included. Most of the material in the B.C. driver training manual is covered in the in depth tutorial. Signs and signals are covered, extensively including graphics. Suggested retail price for HIGHWAY is \$9.95. Dealer inquiries: Len or Phil Thomsen (604) 584-1005

Omni College First To Offer Course on Word 5

Omni College is the first off the mark with a training course on Microsoft's new version 5 of their popular word processor. According to Omni College president Bruce Morris, the program offers some significant features which blur the line between desktop publishing and word processing. Microsoft is calling this new area "document processing". Contact: Bruce Morris at 682-4884

"Export or Xvie" Peat Marwick Tells Software B.C.

There are markets further away than the US which may be easier to penetrate was the message to B.C. software developers from Bruce Stewart of Peat Marwick at a recent Software B.C. meeting. His presentation "Marketing Products into Australia" is available in report form for \$50 from Peat Marwick 662-5500.

Another highlight of the meeting was a presentation by Synex International software developers of the popular SQE spreadsheet utility. They spoke on their success with a variety of spreadsheet add in products including SQZ, PK Harmony, the Cambridge Spreadsheet Analyst and ACCLink. A new product called "Q-The Financial Publisher" is slated for release soon. It is apparently a financial planning and report generation program.

Their next meeting will be held at Benidict's 11170 W Pender June 15, 7:30 PM. Contact: Ken Satewski 291-2255

STM Opens Vancouver Education Centre

STM Systems Corporation has announced it will open a Vancouver centre for microcomputer and mainframe training classes. STM has facilities in Toronto, Mississauga, Ottawa and Calgary. STM is a subsidiary of International Semi-Tech Microelectronics, the Markham Ontario based multi-national conglomerate. Contact: 1-400-268-5884



Mission To Assemble Chalmers MS-DOS Compatibles in B.C.

The Mission Group, a British manufacturer of high end stereo equipment, has announced plans to manufacture a

line of PC compatibles locally. With sales in the multi-billion dollar range on their audio equipment, Persian born, Canadian bred, founder Farad Azima has set his sights on the PC market for his next venture.

Mission Technologies has already made a name for itself in Europe by being the first off the block with 20 MHz and then 25 MHz 586 PCs. They have chosen B.C. to manufacture product for Europe and eventually they plan to take on the U.S. market. The B.C. government has agreed to guarantee 25% reduction in loans for them.

Their designs are innovative and the technology, according to the experts, is hot. One interesting twist is their M86 tuggable, the Darius Pro Portable, complete with built in telephone. The product line primarily consists of Micro Channel Architecture (MCA) PS/2 compatible computers. They reportedly also

plan to release a Sun compatible, SPARC chip based machine that will use the MCA bus. Some experts predict that this pairing of very fast speed of the SPARC chip and the more common MCA bus will be a winning combination.

The Mission Group may stand a better chance than previous European companies seeking a share of the U.S. market. They made a good start by inviting one of the founders of Computerland in the U.S. to sit on their board of directors. Their sales predictions are, \$20 million the first year, building to \$155 million in 5 years.

Vancouver ACCPAC Users Group Holds First Meeting

A new user's group has been formed to meet the needs of a growing number of users of the popular ACCPAC Plus accounting software. Meetings

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will be held the last Wednesday of each month at the Stanley Park Pavilion. Planned meetings include a talk by Norm Francis, VP of Computer Associates and a discussion of Local Area Networks, their planning and installation by Andrew Bates of Softrak Systems. Contact Shauna Seib for more details 662-5500.

Hard Disk Controller Clears Bottlenecks.

If an effort to speed up hard disk access time and improve system throughput, DFI of Orlando, Florida, has recently released the PMM11 an intelligent hard-disk controller board that utilizes on-board cache RAM.

Users report substantial productivity boosts when using the board, and they also praise its ease of installation and support. The cache controller can have 512K to 16 megabytes of RAM installed on the board. The savings for opening high CAD or spreadsheet files on a network can be the difference between ten and two minutes. The board is available locally from DPE Electronics (885-7587)

Canadian Shareware Libraries Adds to Collection

CSL of Surrey has added to its already extensive selection of shareware software titles, a new collection of dipart and fonts over 6500 clip art images which are copyright free and ready to use to enhance desktop publishing efforts are now available. The dip art is available in Macintosh, MS-DOS and Atari ST formats. Contact CSL 597-0441



BC Business Network Enhances System

The B.C. Government's own bulletin board, the Business Network (BCBN) is going through a number of enhancements to its system and additions to its databases. They have made a new "sign on" disk available to users to facilitate getting up and running on the online database system.

Some samples of the data available on BCBN include: budget highlights, international business opportunities, access to Washington state databases, B.C. statistics, and more to come.

All is not rosy, however as a survey of their users indicate that the system is still difficult to use, information is incomplete or outdated, and the system runs slowly. Contact BCBN (604) 660-8900

Doppler Announces New BBS- All the Frills Included

David Chalk, president of Doppler Computer Centre, has announced a new BBS service for the Lower Mainland. The purpose of the board is to provide superior his own message will offer access to a large body of public domain software and a place to communicate and learn about computers and other topics. The computer runs on a 386 computer with a 20 megabyte database. It is a multi-user multi-line system, so many callers can access the system at the same time. The phone number is 682-4285.

Sunflex Opens Regional Office in Vancouver

The world leader in micromesh type anti-glare and static control filters has opened an office in Vancouver. Sunflex of Canada makes anti-glare and static control filters for CRT based processing systems. According to Sunflex, consumer demand, prompted by growing concerns over video screen emissions, has increased steadily. Chase and reflections can apparently be eliminated while at the same time, enhancing contrast

allowing the user to work longer without fatigue. Contact: Sunflex of Canada 681-4865



IPC Announces ROMHz \$86 Computer

IPC Systems, a Canada wide distributor and reseller of computer products, has announced a new line of 886 based computers. Built around a fast 20 MHz Intel 80586 microprocessor, the Entry Series, comes in two models. The ES1 has 1 Megabyte of RAM, and the ES4 comes with 4 Megabytes of RAM standard. Standard features include parallel and serial ports, 1.2 MB floppy drive, and a IM2 key keyboard. Warranty is for 5 years on labour, and 1 year on parts. A variety of hard drives are available for these systems. IPC Systems 875-5595



SoftSet Has The Answer For Software Backlog

Software development has always lagged behind hardware development, but it seems to be getting worse. With delays in established programs such as Lotus 1-2-5, and buggy releases on products such as Microsoft Word 5.0 on the Macintosh, the software industry is in need of new tools to get software out the door, on time, and in good working order. Bill Campbell of SoftSet Technology, and SFU professor Rob Cameron think they may have the solution. In the first of what they hope to be many successful "technology transfer" agreements, SFU has taken an equity position in SoftSet in an effort to get this new technology for software development out of the university and into software companies.

The product called Aranda is what professor Cameron calls a "meta-language". The program "reads" a variety of programming languages and can display the structure of a variety of development languages in a visual, tree structure that facilitates analysis, and project management. Aranda is actually a whole set of tools, a workbench of tools designed to help software developers create better products. The program also facilitates in the documentation process, by creating documentation in the process of development.

Experts have stated that even the best programmers can't create more than 10 lines of code a day. According to Bill Campbell, president of SoftSet, "Adding more programmers doesn't work. It isn't a question of motivation or ability, the question is of unclear communication between programmers and program segments."

Aranda was debuted at the recent Apple Developers Conference in California. The feedback was that SoftSet has a hot product on its hands. Plans are in the works for implementation of the program for MS-DOS and other as well. Contact: SoftSet Technology 784-1196

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NEWSBYTES

ANIGA

Video Toaster Promising To Revolutionize Desktop Video
TOPEKA, KANSAS, U.S.A., 1989 MAY 10 (NB) — An add-on card and software for the Commodore Amiga 2000 computer, due out this summer, promises to put dazzling special effects within the reach of the average video camera owner. NewTek's Video Toaster, \$1,595, now in beta test, can perform functions normally reserved for systems in television control rooms that cost upwards of \$8,000 or more: digital video effects, character generation of text keyed over live video, frame staxing, frame buffering, four-input switching, and frame grabbing. It also offers four BNC composite inputs, two BNC composite video outputs, and meets an RS-170A broadcast specification.

The unit, ten months in the making, created a great deal of excitement at the April National Association of Broadcasters convention in Las Vegas, where it was touted as the world's first and only broadcast video computer. NewTek Vice President Paul Montgomery tells Newsbytes that the main delay in bringing the product to market is in the housing design — engineers want it to be installable in television station switchers. Montgomery tells Newsbytes the product is being beta tested by some prominent entertainers — magicians Renaad Tenor, and Alex Bennett, a famous San Francisco disk jockey known for his acerbic wit.

Third party developers are already working on additional software for the Video Toaster, including a SD Digital Video Effects package, Toaster Paint software for creating video artwork, 59 Object Creation and Animation software,

ware, and A-B Roll Editing software. Hardware add-ons include a ILM interface for digital video editing, and the TaasterNet Wall of Video system.

If this price weren't a breakthrough, NewTek has also announced its Infinite Window Time Base Corrector for \$1495. This hardware allows any video source to be used with the Video Toaster, including home video cameras and VCRs, at a fraction of the cost of current hardware.

"The video industry will never be the same," boasts Montgomery. (Contact: Stephanie Bonner, NewTek, 915-554-1146)

APPLE WORLD

Apple Responds To Suit From Apple Corp
CUPERTINO, CALIFORNIA, U.S.A., 1989 APR 25 (NB) — Apple Computer has filed its response to a lawsuit against it by Beatles recording company Apple Corp. The computer maker calls the suit a violation of European antitrust law, and claims that it is basically unfair.

The suit, launched against Apple in February, is based on a 1981 agreement the U.K. based giant with Apple founder Steve Jobs. The suit called for Apple to keep its name off all products that synthesize music, in return Apple could use the Apple logo without interference from the recording company. However, lately Apple Computers have been prominently featured as controllers for musical instruments, and their sound capability has dramatically improved.

A UK court will now decide whether to grant Apple Corp an injunction against sales of all products Apple makes that may violate the agreement, as well as payment of past due royalties Apple

Corp demands. If granted by the court, the demand could cause Apple to fork over \$20 million, according to Apple Corp attorney Wayne Cooper in San Francisco.

U.C. Macworld Expo Features New Excel

WASHINGTON, D.C., U.S.A., 1989 APR 25 (NB) — Microsoft has unveiled Excel version 3.0, a major upgrade to the best-selling spreadsheet for the Macintosh. The new version addresses the maximum memory space of the Mac [eight megabytes], overcoming the one megabyte barrier of earlier versions. There are also several new features which improve speed, presentations, and forms creations. There are additional chart types, and 40 new macro functions to allow chart-making.

This version of Excel also is Microsoft's fast product utilizing BIFF file format, which allows transfer of spreadsheets, charts and macros from Excel to Microsoft Windows. These capabilities are expected to expand when Excel for MS OS/2 with Presentation Manager is released later this year.

A new HypexCard stack to learn Excel is included. Registered Excel owners can upgrade for \$99. New copies are \$595. The product ships in the second quarter of this year.

New Macintosh System Software Previewed

SAN JOSE, CALIFORNIA, U.S.A., 1989 MAY 9 (NB) — Before an audience of an estimated 1,500 software and hardware developers Apple Computer provided a preview of its newest operating system. The System Version 7.0, said to be fully compatible with earlier and "future" Macintosh operating systems, is designed to exploit more of the power inherent in Motorola's 68000

microprocessor, and allows the Macintosh to compete with features inherent in OS/2 and Unix on just two megabytes of memory.

System Version 7.0 provides the machines with virtual memory, or the ability to use a hard disk as if it were additional random access memory, and 32-bit addressing, which will expand the maximum memory addressable by applications. These two attributes are part of the new Application Communications Architecture. This will allow applications to exchange data and instructions either on a single Macintosh or over a network, providing a "live copy/paste" function between applications.

Apple's new System Version 7.0 will also allow the computer to better utilize the multitasking-like features of MultiFinder — performing several tasks at once. This operating system, however, will not provide for true multitasking, something observers don't expect to see until Version 8.0 comes out.

New imaging software, called Outline fonts and Layout Manager, give Macintosh users more control over what you see on screen; Outline fonts are mathematical descriptions of text that can be scaled to any point size at any resolution. The Layout Manager provides typographical quality text layout.

In addition, a new print architecture should allow Macintosh to work with more printers and output devices. And a new Finder will be more intuitive, extensible, and will allow more direct manipulation techniques, according to Apple.

Apple also announced a new Communications Toolbox, which is a set of common routines, functions, and features that provide software developers with standard programming interfaces

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to date connection, terminal emulation, and file transfer capabilities. It also provides end users with consistent use interfaces across all applications. The best Apple could say about the death and immortality of this was that it would come "later this year." (Contact Cindy McGarvey, Apple, 408-74-1578)

More Apples Than IBMs Sold In 1988 — But Not A Trend
 SAN JOSE, CALIFORNIA, U.S.A., 1989 MAY 9 (NB) — For the first time since it entered the PC market in 1981, IBM has been surpassed by Apple Computer in PC unit sales. Dataquest, a market research firm, says Apple sold 11.27 million Macintosh and Apple II computers in 1988 while Big Blue sold 11 million personal computers.

Dataquest does not, however, think this is a trend. "IMs finally getting it together," says Steve Bair, an analyst with Dataquest. IBM PC sales fell 20 percent in 1988, but this year's new products and stronger marketing should allow IBM to regain its lead, he added.

Meanwhile, Dataquest also says IBM and Apple face an even greater threat than each other — overseas competition. They're losing market share to Taiwanese and Korean computer manufacturers, whose overall dollar sales jumped 45 percent in the U.S. quarter ending in 1988.

Portables, and specifically battery-powered portables, will be the hottest growth area in the PC market through 1992, my Dataquest says. Personal storage devices will lead peripheral growth. Software firms will continue to earn well — last year revenues for the top 15 U.S. software companies grew 40 percent. And in telecommunications, fax machines, voice messaging, and e-mail are hot.

Manny Fernandez says growth in the U.S. market will be nothing compared to that in Europe which will follow the integration of the European Community in 1992. Fernandez says the Japanese are already steps to grab the lead by committing \$600 million to build a wafer fabrication plant in Britain. "Today's global market requires companies to set up manufacturing and research in overseas markets," Fernandez said. "The days when you could just manufacture in one country and sell everywhere are those days over." (Contact Lois Long, Dataquest, 408-457-4509)

Portable Macintosh From Next Sys
 SAN FRANCISCO, CALIFORNIA, U.S.A., 1989 MAY 10 (NB) — Next System is offering a lightweight, 10 pound portable Macintosh that you can make yourself, using parts from a Macintosh 128K, Plus, SE or SE/30, for \$1,795. And the firm is also making available the same kit, minus the case and with a different monitor, called the Boomerang, for \$800 less.

Available the first week of June, the TravelMac kit consists of a logic board with a 2400 baud modem, video interface, and power supply on a card, as well as a super-wispy black and white LCD. It plays with cold cathode back light that has a 640 by 480 pixel resolution. Also included is a rechargeable battery capable of running the unit for four hours between charges. It includes a carrying bag, indicators, a case, a carrying bag, and interfaces for high resolution monitors, and keyboard and mouse.

The Boomerang, which Next System President Peter Kilcommons refers to as a "hackn's version," has a blue and white LCD display, no case, and a \$995 price tag. The LCDs on both

configurations display the traditional Macintosh graphic interface, but do exhibit some minor "glitches," he says. Kilcommons tells Newsbytes that the TravelMac kit takes only 15 minutes to put together, or can be done by the retailer that sells it to you. Retailers include Computer Buffers as well as Computer Select stores in Sunnyvale and San Francisco. In addition, the product can be ordered by calling Next Sys at 415-255-2295. The cost is at least half what Apple is expected to charge for its portable, being prepared for an August debut.

As far as Apple is concerned, all this is perfectly legal, says Kilcommons, since a customer could buy the Macintosh parts. Even though taking apart a Macintosh voids its warranty, most owners of older Macintoshes have expressed wariness anyway, he says. There is a warranty on the TravelMac and Boomerang kits. Next System is a Certified Apple Developer. (Contact Peter Kilcommons, 415-255-2295)

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Stacy Could Be
 The Most Versatile Laptop
 BURRINK, CALIFORNIA, U.S.A., 1989 MAY 10 (NB) — Atari executive Sig Hartman recently told a gathering of dedicated Atari users and developers that this year the Atari will establish itself as a standard in the U.S.A. He was talking about the availability of memory chips and a new company commitment to U.S. markets. However, he could be right for other reasons as well.

- Atari's Stacy computer may become the laptop of choice for more than just the Atari crowd. Two developers of compatibility products for the Atari are introducing hardware versions that will

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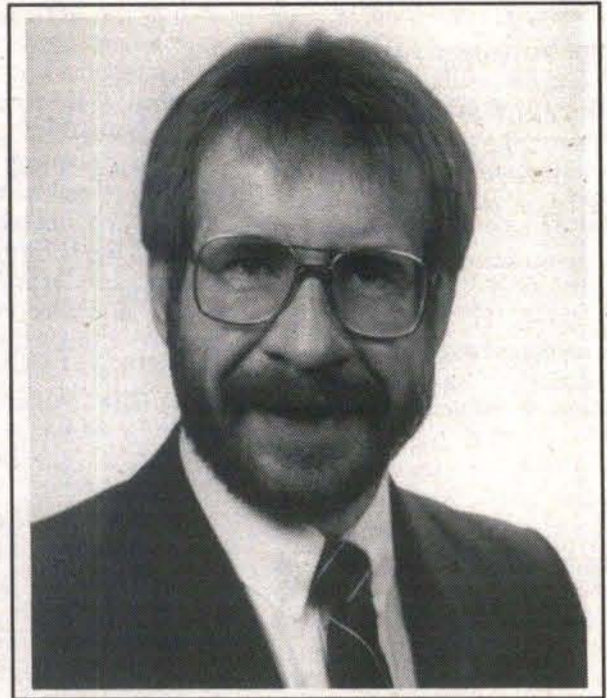
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allow the ST to mimic either the more popular Macintosh or the ubiquitous PC clone. Both of the products are said to work extremely well as software emulations but both developers claim that their brand new hardware products will remove virtually the last shred of incompatibility.

David Small of Gadgets by Small, Inc. is the developer of Spectre GCR. Small recently told me that the hardware version will "significantly speed up disk operations" in the Macintosh mode. "It really works," said Small. The company claims that processing speeds can exceed the real Macintosh by 50 percent, a Mac Plus by 20 percent.

Presumably the Stacy will not present a problem for Small's product because it attaches to a standard port and the Stacy reportedly features all of the ST's ports. If it works well, the Atari could become the portable Macintosh that Apple is still holding back from the market.

One potential flaw is that every unit must use a licensed Apple Mac BIOS [basic input/output system]. Those can only be obtained from dealer that violate their agreement with Apple or from stripped Macintosh computers. Therefore, Apple can indirectly apply real pressure on Gadgets if and when it wants.

PC Ditto II is a hardware version of the PC Ditto IBM personal computer emulator sold by Avant-Garde Systems. The hardware version must actually attach to the ST's 68000 chip with clips.

Stacy will need to be opened to install the product—presuming that there is room for it in the case. Partner William Teal told me, "PC Ditto III is more compatible than the software version of PC Ditto." More than that, the company claims, the unit runs three times as fast as an IBM XT on the Norton SI rating [5.0 v. 11.0]. That could make Stacy an attractive alternative to slower

PC compatibles running at 4.77 or 954 MHz. Stacy's performance may also allow it to compete with more expensive 80286 laptops as well.

Stacy will probably sell to ST lovers first but the market for buyers of Mac and PC clones is a real possibility. The Stacy's announced target price, including a hard disk, is under \$1500. The Spectre GCR is just \$299.95 and a \$100 exchange credit is available until May 31. PC Ditto II sells for exactly the same \$299.95 but registered users of the software version will receive a coupon worth \$150 toward purchase.

Gadgets by Small can be reached at 505-791-4098. Avant-Garde Systems can be reached at 904-221-2904.

Stylesheets For Atari Publishing Systems
ANAHEIM, CALIFORNIA, U.S.A., 1989 APR 22 (NB) — ArtWare Publishing Design attended Atari World at the Disneyland Hotel with two new products for the ST. One of them is a collection of very stylish artwork called Encore! .GEM Vector Illustration Library for the Atari ST. The company described its vector graphics as "much the same way Postscript works." Encore! includes borders, text balloons, pointers and arrows, ready logos and illustration categories of general, computers, and home and house.

A second product, also shown but as yet unannounced, was Stylitics, a set of style sheets for Desktop Publisher SI. Styles include formats for disk labels, cassette labels, magazine layouts, newspaper/letter layouts, business forms, flyers and others. The product is compatible with Publish It! for the ST. A prerelease price of \$25 was available at the show but ArtWare did not provide details about the offer or other pricing.

(Contact 81M454747)
Frontier Announces Multi-Drive System For Atari ST

HARROGATE, ENGLAND, 1989 APR 28 (NB) — Frontier Software has announced the development of a multi-drive attachment for the Atari ST. The unit, which allows up to 52 drives to be connected to 4 single Atari ST, will be shown at the Atari User Show in London [25/25 June, 1989].

According to Martin Walsh of Frontier, the device allows both 5.5 and 5.25 inch drives to be linked together, and for a single master disk to be duplicated to all 52 drives simultaneously. The system, says Walsh, has been designed to cater for software houses' needs.

"There is a need for such a device for small software houses and public domain clubs who cannot afford to have commercial duplication services do their disk copying. Our system also gives users the flexibility that most duplication companies cannot give," he said.

The Frontier system consists of a single motherboard that controls up to four daughterboards, each with the capacity to link up to eight drives. Using special software, users can have multiple disk drive icons on the ST's screen simultaneously, in place of the ST's normal limit of two.

(Contact - Martin Walsh, Frontier Software - Tel: 0425-567140)

B.C. BYTES

AISI Optimistic About Japan Prospects
VANCOUVER, BRITISH COLUMBIA, CANADA, 1989 MAY 4 (NB) — Home automation vendor AISI Research sees good prospects in Japan after a recent visit there by its president, William Smith, according to a company spokesman. John Borg, of AISI's public relations agency Smith Marketing Communications in San Francisco, who accompanied Smith to Japan, said AISI's representatives "accomplished 10 times what

they expected." Visiting Tokyo for an international conference on home automation, AISI's contingent demonstrated the North American CEBus standard and the AISI Spirit chip set implementing it. Smith and AISI Director of Engineering Ludo Bertsch made contact with virtually every major Japanese consumer electronic company, Borg said. He added that the Tokyo conference made steps toward a unified world standard based in part on CEBus.

(Contact John Borg, Smith Marketing Communications, 415-989-5104)

Consumers Software Herald New Release Of Network Courier

VANCOUVER, BRITISH COLUMBIA, CANADA, 1989 MAY 11 (NB) — Consumers Software has announced Version 2.0 of The Network Courier. The electronic mail software for IBM and compatible PCs on local area networks [LANs] has more than 60 new features. One is the ability to create a personal address list mixing different address types, including Network Courier, X.400, and IBM DJS055 and PROFS users. Another allows the network administrator to set up custom user directories. A third new feature is an electronic filing system that lets users organize their messages into folders. The folders can be public or private, and this feature can be used to keep a record of a particular "conversation" conducted by electronic mail. An assortment of other features have also been added.

The Network Courier starter kit sells for C\$295 and supports up to six users. A Single Postoffice Network version, supporting up to 150 users, costs C\$695. The Inter-Network version, which supports connections among LANs, costs C\$995. Users who bought Version 1.0 of Network Courier before Aug. 1, 1988, can upgrade for C\$150 per 150-user post office. Those who bought it after

that date can upgrade free.

(Contact: Michael Shandrick Consumers Software, 604-488-4548)

Consumers Software's IBM Deal
VANCOUVER, BRITISH COLUMBIA, CANADA, 1989 MAY 16 (NB) — Consumers Software played a part in IBM's new office automation software, announced today. Jack Grushcow, president of the Vancouver software firm, said a highly customized version of his company's Network Courier software forms the base of the MSDOS electronic mail component of OfficeVision, the grand strategy for unified office automation functions across IBM hardware from the PC to the 5090 mainframe. The product's user interface complies with IBM's Systems Application Architecture (SAA) strategy for applications common to all IBM's hardware platforms.

Grushcow added that IBM will be selling Network Courier itself through its own sales force and distributors in the United States and Canada. IBM representatives will be able to order Network Courier for their customers and IBM Credit Corp. will provide term lease financing for the software when a customer acquires it along with an IBM computer.

Network Courier operates on DOS and OS/2 LAN servers.

(Contact: Michael Shandrick Consumers Software, 604-688-4548)

Computer Associates Buys Bedford Accounting Business
BURNABY, BRITISH COLUMBIA, CANADA, 1989 MAY 12 (NB) — Computer Associates (CA) has bought the accounting business of Bedford Software, based here. The purchase includes the Bedford Integrated Accounting and Bedford Toolbox packages for IBM and compatible computers, Bedford Simply Accounting software for the

Apple Macintosh and the Bedford name. Most employees of Bedford, which up to now has been almost entirely an accounting software company, will move to Computer Associates. The purchase price is C\$15.65 million.

About 10 Bedford employees, including senior management, will stay on to continue developing a new online information product called Suzy. The new product has been in development for 18 months and is undergoing testing, said Kristin Keyes, corporate communications coordinator at Bedford, but probably will not reach the market for another 12 to 18 months. Bedford will have a new name, not yet chosen, since rights to the current name have been sold to CA.

Bedford has no comment on reasons for the sale, but the company did say part of the proceeds would go to its shareholders in an extraordinary dividend, while the remainder would help pay for development of Suzy.

Suzy is to be an online information service aimed at small business and consumers, with a focus on financial data but also including travel and other information.

Norm Francis, vice-president of Canadian operations at Computer Associates, said the merged company will probably continue selling all of Bedford's products as well as CA's Accpac line of accounting software. CA has traditionally been a market leader in the mid-range and high-end PC accounting, he said, while Bedford's strength has been entry-level packages. Francis said CA will "bring Bedford customers fully under the umbrella that we offer for Accpac customers." (Contact: Kristin Keyes Bedford Software, 604-294-2594;)

CANADIAN NEWS

Amiga, Commodore PDA Compatibles Get Ontario Schools Approval

TORONTO, ONTARIO, CANADA, 1989 MAY 1 (NB) — Commodore's Amiga 2000 and 2500 and its IBM-compatible PC 10-III, PC 20-011 and PC 401-111 have been approved as Grant-Eligible Micro-computer Systems for use in Ontario schools. The provincial government approval, which qualifies schools that buy the machines for substantial financial support from the province, comes just a couple of weeks after the Apple Macintosh received similar approval, and four months after the province approved Commodore's ComLinks educational system.

The move is the latest in a series of moves away from the previous policy of providing a narrow range of hardware. That policy came under fire from a variety of directions, including the provincial government's own auditor, who said it limited the availability of software that Ontario schools could use.

(Contact: Toni Pettit, The Communications Group, 416-447-4591)

International NewViews User Conference Set For Toronto

TORONTO, ONTARIO, CANADA, 1989 MAY 8 (NB) — The first international conference for users of NewViews, PC accounting software from Q.W. Page Associates of Toronto, will be held here June 26-2

Microsoft Canada Offer Amnesty On Unlicensed Software

MISSISSAUGA, ONTARIO, CANADA, 1989 APR 28 (NB) — Canadians with pirated copies of Microsoft software should come forward, urges Malcolm

MacTaggart general manager of Microsoft Canada. MacTaggart said his company will not prosecute anyone who owns up to having unlicensed copies of Microsoft products and pays the going retail price for a licence. What we're trying to do is solve the problem," MacTaggart said, "not kill the messenger."

MacTaggart added that his company, as one of Canada's largest software vendors, is taking a leading role in protecting the rights of software developers. He said new Canadian copyright laws passed last year have made the public more aware that copying software is wrong. Microsoft's recent laying of copyright infringement charges against two Toronto companies [see related story in this week's Newsbytes] has led a number of organizations to inquire about legitimizing Microsoft packages, MacTaggart added.

(Contact: Malcolm MacTaggart, Microsoft Canada, 416-678-8811)

Microsoft Releases Excel 2.20
MISSISSAUGA, ONTARIO, CANADA, 1989 APRIL 27 (NB) — Microsoft Excel Version 2.20 for the Macintosh is expected to ship to Canadian dealers by the end of the second quarter, according to Microsoft Canada. The suggested retail price is C\$499, and registered users can upgrade to the new version for C\$155.

(Contact: Gathic Lee, Microsoft Canada, 416-475-9811)

Buddy, Can You Spare A Dime? PostLink Code Software Helps If Not

VANCOUVER, BRITISH COLUMBIA, CANADA, 1989 MAY 5 (NB) — Canada Post has added PostLink Software: a very nice selling point for its PostLink package. The Canadian post office has started charging meter clients and other large volume mailers an extra 10 cents

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for each piece of mail without a postal code. The software, which runs on an IBM PC, XT, AT, PS/2 or compatible with a hard disk, is RAM-resident. Users can pop PostLink up within another application, look up a postal code and copy it into a word processing document, spreadsheet or other file.

A version of PostLink covering all of Canada costs C\$249. Versions for Ontario only, Quebec only, and the western provinces and territories cost C\$99 each, a version covering the four Atlantic provinces costs C\$59. (Contact: John Henry, Promark Software, 604-988-2051)

CD-ROM

Sony Exec Calls For Standards In The Computer Market

NEW YORK, NEW YORK, U.S.A., 1989 APR 27 (NB) — In an address delivered before the annual Microsoft CD-ROM conference, Michael P. Schulhof, vice chairman of Sony Corporation of America stated that lack of standardization in the computer software industry is hampering consumer acceptance of personal computers. He compared computers to television sets noting that consumers did not have to choose between separate network standards when buying their set. Schulhof said the American National Standards Institute (ANSI) standards for CD-ROM should be made official rather than advisory as they are now. He suggested that potential CD-ROM application ideas should be solicited from end-users and facilities should be established in universities and secondary schools to educate young people about the vast amount of information that can be readily available through CD-ROM technology. Schulhof advocated industry self-regu-

lation rather than government enforcement of standards. He also confirmed that Sony is involved in a joint effort with Philips and Microsoft to implement CD-ROM standards and stimulate CD-ROM technology.

(Contact: Howard Geltzer, Gelixer & Company, Inc./212-575-1976)

DESKTOP PUBLISHING SOFTWARE GRAPHICS

Ventura Publisher For The Mac Dte At August MacWorld

SAN FRANCISCO, CALIFORNIA, U.S.A., 1989 MAY 12 (NB) — Xerox will introduce a Macintosh version of its popular MS-DOS desktop publishing software, Ventura Publisher, in August, according to PC Week magazine. The trade weekly quotes an unidentified source as saying the product will have all the features of the MS-DOS product, including the ability to perform word wrap and indexing, but will also allow exchange of documents between the two divergent formats, as well as provide the traditional Macintosh interface with pull-down menus.

Newsbytes was told by a Xerox spokeswoman that the company had no comment on the report.

GENERAL

Armed Robbers Aim At DRAMS

SANTA ANA, CALIFORNIA, U.S.A., 1989 APR 25 (NB) — A rash of armed robberies has hit the dynamic random access memory chip (DRAM) industry in Orange County, California. According to Patrick J. Kiger, a reporter for the Orange County Register, since September 1988, five armed robberies have occurred.

In September, a man in a business suit

entered a Stanton, California computer store, severely beat the owner and left with \$40,000 in chips. In late November, armed robbers took \$160,000 in custom memory chips, closely resembling DRAMs, from Holt Inc.

In January, thieves armed with assault rifles broke into AST Research, bound two guards, beat and kicked one and then broke into a locked area trying to find chips. They were unsuccessful, however, they took \$17,000 worth of computer equipment with them when they left. In a second incident in January, two armed robbers got away from Western Digital Corp.'s facility with \$105,000 worth of DRAMs the company had just purchased.

The most recent incident occurred in March when four heavily armed men wearing ski masks were thwarted in their attempt to steal DRAMs by two cleaning women who locked themselves in the company's corporate offices and called police.

Kiger told Newsbytes that to date there have been no arrests in any of these cases. Kiger added that since the recent DRAM shortages have eased, some industry officials are predicting the incentive for thefts will decrease. He also noted there are others in the industry who are not so sure that the crime spree has ended.

(Contact: Patrick Kiger, Orange County Register, 714-955-2226)

Grid Laptops Help Clean Up Oil Spill

PRINCE WILLIAM SOUND, ALASKA, U.S.A., 1989 APR 25 (NB) — Cleanup crews from Environmental Services are running programs on laptop computers to predict the movement of oil spilled when the tanker Exxon Valdez ran aground here earlier this month. The cleanup crew is using Grid Compass and Gridcase 1200 laptops, linked by satel-

lite and phone lines to a Grid wide area network server in Environmental Services' head office in Anchorage. The network is used for electronic mail as well as for the spreadsheet models that determine oil slick movements & information on the speed and direction of wind and water currents.

(Contact: Les Parsneau, Grid Systems 416-446-1555)

New Personal Robot From Droid Systems

NEW YORK, NEW YORK, U.S.A., 1989 APR 28 (NB) — Hungering for your own little R2D2? A company called Droid Systems may have just the item to fill your android needs.

Droid Genesis I, a four foot tall robot with a built-in IBM PC compatible computer, is said to be able to take inventory, clean floors, sort stock shelves, among other potential employment. Able to lift 15 pounds with its single gripper-arm, it will operate for six hours between charges, generates 5/8 horsepower, and has a base fitted with a keyboard for programming. Its head has a face-like contour and houses the Droid's speech simulator and auditory receptors.

"We hope to make the Droid I the standard in the personal robotics field. To encourage other companies to develop new applications, we are offering a limited number of Droids to firms which demonstrate sincere interest in developing innovative, practical programs and hardware extensions," says Robert Danial, chief executive officer of Droid Systems.

And just in case you get this \$12,500 fellow home and then run out of tasks for him, Droid System suggests he be taught to do the following: wash car, house sit, serve drinks, tell jokes, mow lawn, answer doorbell, feed pets, walk the dog, do farm chores, milk the

cow?), tell stories, be a golf caddy, or a tennis ball retriever.

(Contact Leonard Stein, VisiMity Public Relations, SIR-7774860)

Tatung Intro's Ergonomic Desktop Publishing Monitor

LONG BEACH, CALIFORNIA, U.S.A., 1989, APRIL 28 (NB) — With desktop publishing becoming a full-time job for some computer operators, Tatung has introduced a grayscale monitor designed to ease operator eyestrain. The screen, which measures inches diagonally, features a flat square CRT [cathode ray tube] to reduce glare and distortion.

The monitor, Model MM-1580, has a paper white phosphor display for gray scale graphics. Resolution is 1024 by 786 pixels. A tilt and swivel base adds to the ergonomic design for operator comfort.

According to Tatung, this monitor is said to work with any PC compatible

graphics card.

(Contact Julius Chiang, Tatung Company of America, R18-9797055)

Australian Computer Makers CFC Safe

SYDNEY, AUSTRALIA, 1989 APR 26 (NB) — Computer manufacturers have been named the most responsible users of ozone destructive chlorofluorocarbon [CFC] chemicals in factory processes in Australia. Steve Anderson, executive officer of the Association of Fluorocarbon Consumers and Manufacturers said, "Out of the Australian CFC users they [computer and electronics companies] are very environmentally conscious."

He said they tended to lose little of the chemical into the atmosphere through the use of "closed bath systems." However, reports from the US have labelled IBM that country's biggest CFC belcher. In Australia IBM, along with

companies like Hewlett-Packard and NEC, use about 6000 litres of CFCs a year, of which a large portion is recycled. An IBM spokeswoman claimed a change in technology would reduce the company's CFC use by some 90 percent by the first quarter of 1990.

In a report to the federal government it was revealed electronics companies use 850 tons of CFC a year in Australia. Anderson said this was relatively small when compared to the 8500 tons that go into manufacturing foam plastics.

Valuable New System For Singapore's Real Estate Industry

SINGAPORE, S.E. ASIA, 1989 APR 26 (NB) — Singapore's real estate industry is to get a system that will allow valuers to check on properties, do financial analysis, search for property sales information and even communicate with the rest of the industry.

The Singapore Institute of Surveyors and Valuers [SISV] is presently developing such a system. Lim Lan Yuen, president of SISV, said the management search cum statistical system would provide online service to both real estate professionals as well as academics when it is fully ready.

Called the Integrated Real Estate Database System [IREDS], it contains, amongst others, a module for multiple listing that manages a listing of properties available for sale and rental by subscribing agents. Subscribers can inquire about properties on the list by type or price range by dialing up the system.

According to Professor Lim, the system has many advantages. "For instance," he said, "the vendor needs to deal with only one agent but will benefit by having other subscribing agents acting on his behalf. In other words, his property is exposed to a larger market, without any increased cost. As for the purchaser, he has to approach only one subscribing agent to get a comprehensive listing of properties available in the market, unlike the present system with agents operating in small fragmented markets."

A well designed multiple listing system has resulted in a higher turnover for the industry and higher quality of professional service in other countries where it is already in use.

The system also provides a bulletin board with the industry's latest news. Professor Lee said, "For example, private auction sales and results of the latest Urban Redevelopment Authority sale of site tender can be disseminated to all members almost immediately."

(Contact: Singapore Institute of Surveyors & Valuers, PH-665 2228080)

New Engineering Products Show

LOS ANGELES, CALIFORNIA, 1988 NOV 85 (NB) — The Engineering Conference offered attendees their first opportunity to see several recently announced products.


Definicon Systems exhibited the SP-ARC1 coprocessor for the IBM PC XT, AT and compatibles. Based on a Cypress SPARC processor, with a Texas Instruments TIS847 Boating point coprocessor, the company claims up to 12 VAX MIPS [millions of instruction per second] for the board.


Helios Systems showed the MSS0 series of memory boards for the previously announced Sun Microsystems 8/50 systems. The boards are available in 4 and 8 MB configuration. Installation does not require components on the Sun CPU [central processing unit] board to be desoldered. The boards are now shipping.

Clearpoint Research Corporation was also showing a line of 4 and 8 MB memory expansion boards for Sun 5/50 systems. The SNME-850 boards connect to the Sun CPU board using three connector boards which plug into the CPU, MMU and RCHK chip carriers. Soldering is not required. Limited shipments are to begin in mid December. The boards carry the Clearpoint lifetime warranty featuring a 24 hour repair or replacement policy.


Epoch Systems displayed the Epoch-1 Infinite Storage Server for the first time. Announced earlier in the month, the Epoch-1 uses a combination of fast hard disk technology and CD ROM to provide online storage of from 1 to 150 gigabytes [billion bytes]. The Epoch-1 system provides online data access to the files stored on its hard disks. The Epoch-1 system also provides on-line data access to the files stored on its hard disks. The data on CD ROM is available for staging back to the hard disk system within seconds of request. Human operator intervention is not required for normal operation. Storage

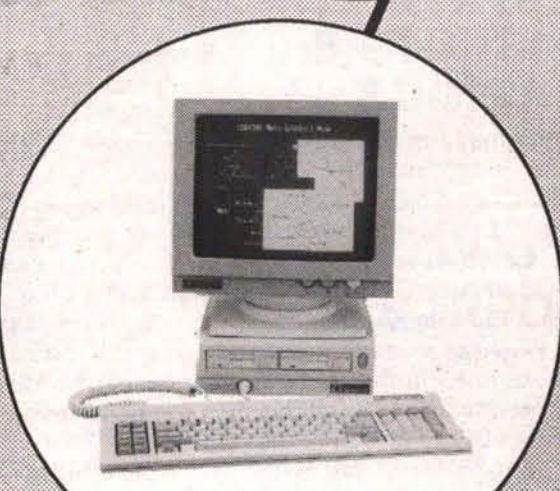
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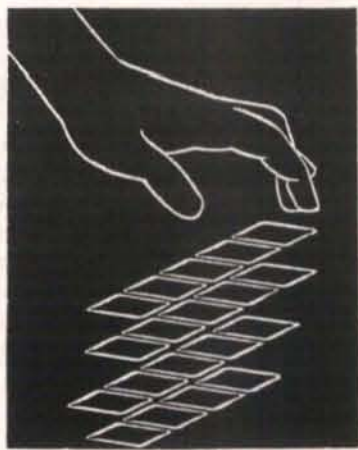


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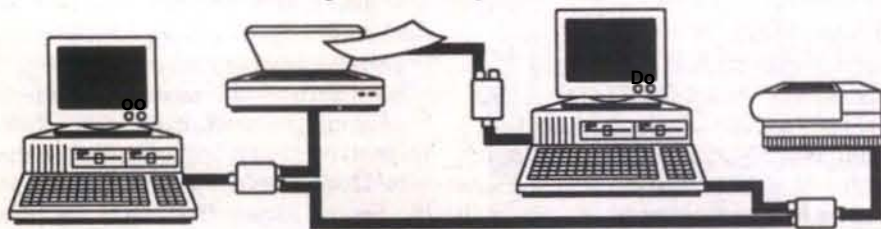
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Radiation-free VDT Announced
NEEDHAM, MASSACHUSETTS, U.S.A., 1989 MAY 17 (NB) — Safe Computing Company has announced a computer monitor that emits no radiation, according to the Needham, Mass.-based firm. The company says the terminal is safe for pregnant women and others who might be at risk from the alleged radiation emissions from computer displays.

Company President George Lecture told the Associated Press that the Safe Monitor will sell for \$995, or about four times the price of a conventional monochrome display. Radiation is controlled by use of a low-radiation LCD display and four radiation shields. Strong backlighting is used to compensate for the strong dimming effect caused by the shields.

IBM WORLD

IBM Licenses Yet Another Graphic Interface
WOBURN, MASSACHUSETTS, U.S.A., 1989 MAY 5 (NB) — IBM has signed a deal to license and develop graphical user interface technology with Interactive Images, Inc.

Interactive Images is a leading vendor of graphical user interface development technology. Under this agreement, both companies will jointly develop and market various software products. IBM will also acquire a minority equity interest in EASEL, a graphical user interface development environment for personal computers.

EASEL consists of a development system, workstation run-time versions, communications modules, application templates, and other modules designed to help application-level programmers prototype and implement graphical user interfaces.

Despite their stated move toward a "consistent" graphical user interface, this agreement marks at least the third graphical user interface that IBM is working with. Other companies include Microsoft, developer of the Presentation Manager and Next, which has licensed parts of its interface to IBM.

(Contact: Debbie Allen, Interactive Images, 617-958-8440)

IBM Canada Unveils New PS/2 Models
MARKHAM, ONTARIO, CANADA, 1989 MAY 9 (NB) — IBM's new PS/2 Model P70 586 and Model 555SX are available immediately in Canada. IBM Canada has priced the 555SX at C\$5,545 with a 50-megabyte hard disk, and C\$6,145 with a 60-megabyte drive. The P70 will go for C\$10,895 with a 60-megabyte drive and C\$11,745 with the 120-megabyte unit. (Contact: Karen Grant, IBM Canada, 416-474-5900)

Microsoft Ships Word Version 5.0 For The PC
REDMOND, WASHINGTON, U.S.A., 1989 MAY 8 (NB) — Microsoft is finally getting Word 5.0 out the door, following months of delays. The company says Word is the leading word processor in France and Germany and is rapidly gaining market share in the U.S. To enhance the celebration, Software Digest has rated Microsoft Word for the PC version 5.0 the best word processor compared to 12 others in its category.

The new Word 5.0 has graphics handling and integration, print preview, multiple columns on screen, improved links to spreadsheets, annotations, enhanced document management and retrieval, and improvements to outlining and tabs. The Help index has also been expanded from 50 to 90 features. This version also provides broader platform support for either the OS/2 or MS-DOS operating systems.

Users who acquired any version of Word for IBM PCs and compatibles, including the network version, before October 1, 1988, can upgrade to version 5.0 for \$75. Those who purchased Microsoft Word after October 1 get the upgrade for free. For all others the price is \$450. The product requires a PC or compatible with two drives, MS-DOS operating system 2.0 or higher, or OS/2 1.0, and a minimum of 580 kilobytes of memory.

Software Digest, an independent organization that rates personal computer software, contracts with the National Software Testing Laboratory for its product evaluations. Microsoft Word 5.0 received high marks for ease of learning, error handling, performance, and versatility.

(Contact: Sarah Chaff, Karen Meredith, Microsoft, 20th St 24080)

Novell's Netware Now In NS Version
SAN FRANCISCO, CALIFORNIA, U.S.A., 1989 MAY 5 (NB) — At a packed press conference Monday, Utah-based Novell unveiled the newest member of their NetWare LAN family — NetWare 586. Even though the company refers to this as Version 5.0, it is a brand new product optimized for 52-bit systems with 586 architecture.

NetWare 586 can support up to 250 users on one server, a significant increase over the 100 user limit of NetWare 286. Other features include simplified installation, enhanced printer resources and file security features, and a technique called dynamic resource configuration that automatically manages memory allocation for caches and buffers. NetWare 586 will be available in third quarter 1989.

In a related announcement, Novell revealed a new software development environment for NetWare called the NetWare Programmer's Workbench. The company will make a number of software development tools available, either independently or as a complete "workbench" package in the third quarter of 1989.

Novell also announced a 52-bit Micro Channel network server adapter and a new disk coprocessor board for the AT bus.

(Contact: Mark Calkins, Novell, Inc., 800-455-1267)

IBM Unveils Graphic New Software
WHITE PLAINS, NEW YORK, U.S.A., 1989 MAY 17 (NB) — IBM has unveiled what many believe is its most significant software configuration to date — OfficeVision — an integrated set of programs with a consistent graphical interface not unlike the Macintosh, designed to work across multiple hardware and operating system platforms.

IBM's OfficeVision brings electronic mail, filing, document preparing, calendar scheduling, and other office functions across all major IBM computing environments. Available in 20 different languages, OfficeVision is designed to be IBM's software productivity platform for the future. The company plans to roll out OfficeVision/2 for the OS/2 environment, OfficeVision/MVS for the Multiple Virtual Storage environment, OfficeVision/VM for the Virtual Machine environment, and OfficeVision/400 for the OS/400 operating environment.

The OfficeVision family is based on SAA or Systems Application Architecture, which was announced two years ago to provide a framework that will allow applications to run over IBM's various platform architectures. The overall goal of OfficeVision is to provide a seamless, graphical interface across all of IBM's hardware and software platforms, and to allow software developers to write to the SAA architecture so that applications can be easily integrated into the Of-

OfficeVision family.

The first parts of OfficeVision are not expected to be available until September, and the entire package will be rolled out over a period of 18 months. However, while the software price per workstation is approximately \$50, there are some potential drawbacks to the system. The prime two are IBM's poor track record as a software company and the minimum of eight megabytes of random access memory per workstation that is required.

"This is an integration solution, not an application solution," analyst Nancy McShany, of International Data Group, told Newsbytes. "I don't expect it to be wildly popular."

However, Krystyna Filistowicz, an analyst at Dalquest, told Newsbytes that, "we think it is a viable offering since it comes up with some of the solutions they promised two years ago with SAA."

Filistowicz said that despite the high cost of entry, "we are at the stage now where to go to the next state of office implementation, the cost is not out of line."

Ultimately, analysts feel that OfficeVision could be a critical path for IBM. If successful, it will cement its role as the market leader at all levels of computing, and will help sales of iPS/2s and the OS/2 operating system. However, there is ample competition from

many other platforms like HP, DEC, and Apple, and many feel the price is too high for all but IBM's most true blue customers. (Contact: Tim Brueur, IBM, 914442-544V)

Lotus To Develop 1-2-5 For OfficeVision
CAMBRIDGE, MASSACHUSETTS, U.S.A., 1989 MAY 18 (NB) — Lotus Development Corp. has announced that it will develop a graphical version of 1-2-5, its best-selling spreadsheet, for IBM's newly announced OfficeVision/2. The company plans to adapt its as yet unreleased graphically-based version of 1-2-5, 1-2-8/G, for users with the IBM software. 1-2-8/G is being designed to take

advantage of the graphical interface and multitasking abilities of OS/2 with the Presentation Manager. Analysts told Newsbytes that the additional development to write to the SAA specification that underlies OfficeVision involves little additional work.

No timetable on pricing was announced by Lotus for the release of either 1-2-8/G or 1-2-5 for OfficeVision.

(Jon Pepper/19890519/Press Contact: Betsy Kosheff, Lotus, 617-225-1292)

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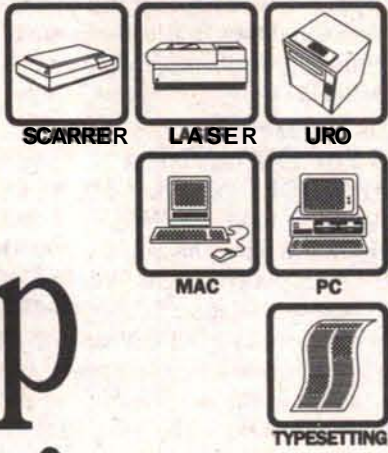
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sold the most laptops in America in 1988, the second year it won that distinction. According to IMS America's Reseller Report, the NEC MultiSpeed family raked in 58 percent of the market share in a category comprising all battery and non-battery operated laptops. Runners up included Toshiba, Zenith, and Compaq with 35 percent, 20 percent, and five percent, respectively.

NEC says its laptop MultiSpeed EL alone held 80 percent of the unit market share, making it the most popular laptop in America.

IMS America, based in Plymouth Meeting, Pennsylvania, tallies up purchases from computer resellers throughout the U.S., and publishes the data each month in Reseller Report.

(Contact: Marion Black-RuKn, NEC Home Electronics, 51248N500)

TELECOMM 8a FAX

Fax, Paper Shortage Predicted
 NKM CANAAN, CONNECTICUT, USA., 1989 MAY 11 (NB) — International Resources Development warns there's a looming shortage of fax paper, caused partly by the rising popularity of fax. The study, by Leslie Townsend, adds that shortage is made worse by fears over the long-term viability of the coated paper market. It can cost \$1 million to build a coated paper plant, and analysts expect a switch to plain paper fax machines in the early 1990s, under the Group IV standard. Most fax machines a day run under the Group III standard.

Worse, Townsend says, bad fax paper can damage thermal printing mechanisms and cause the entire machine to catch on fire as wax builds up on the print heads.

(Contact Elizabeth Hanscom, International Resources Development, 205-99645RS)

Connecticut Bans Junk Fax; Congress Considers
 HARTFORD, CONNECTICUT, USA., 1989 MAY 16 (NB) — Starting October 1, it will be illegal to send someone an unsolicited fax message in the state of Connecticut, with violators subject to a penalty of \$200 or the actual damages of their victims, whichever is greater. Connecticut thus becomes the first state to act on a junk fax bill just a few weeks after Connecticut Republican Rep. Christopher Shays introduced a junk fax ban in the U.S. Congress.

Shays' bill, while not a total ban, would require that the junk fax industry keep lists of people who don't want such messages and that senders identify themselves and their phone numbers on each page of a message, leaving themselves open to counterattack by irate junk fax recipients. Shays' bill is co-sponsored by Rep. Edward J. Markey, a Massachusetts Democrat and chairman of the House Energy and Commerce subcommittee on telecommunications. The House bill, along with a Bell company deregulation bill, will likely not be acted upon until after President George Bush appoints three new members to the Federal Communications Commission, which oversees telephone issues as well as TV and radio.

Other states considering junk fax bills include California, Vermont, New York, New Jersey, Maryland, Florida, Washington, New Mexico, Illinois, Michigan, Ohio and Pennsylvania.

Knight-Ridder Yrading TV Stations For Qafha Services

MIAMI, FLORIDA, U.S.A., 1989 MAY 11 (NB) — Knight-Ridder plans to sell eight of its television stations — a medium generally believed to have peaked in revenues — and some of its 50 newspapers. The money will be invested, according to President James K. Batten,

in electronic information businesses. Batten told the company's stockholders' meeting in Miami his company will sell stations and papers to pay for Dialog, purchased last year for \$555 million from Lockheed. Lower advertising revenues and the Dialog purchase caused a 5V percent drop in Knight-Ridder's net income for the first quarter, compared to a year ago.

Besides paying for Dialog, Knight-Ridder may be forced to create new online software, say observers. Dialog, with hundreds of different databases, and Vutext, one of the two major players in the online newspaper morgue or back-issue business, have different command structures. MoneyCenter, the brokers' service, could offer the model of what Knight-Ridder can do with better software. By combining charts, text, and online transactions processing on a single screen, MoneyCenter is expected to prove a model for the 1990s.

(Contact: Lee Ann Schlatter, 505-576-5959)

Still-Paying Service About To Hook Up With Alex Videotex System

WINNIPEG, MANITOBA, CANADA, 1989 MAY 5 (NB) — Touchpay, a telephone bill-paying service provided by Comcheq Services, is expected to be available on Bell Canada's Alex videotex system in Montreal by mid-May. Leona Henog, consumer marketing manager for Touchpay, said the service has been available in Winnipeg for more than two years, and Comcheq began marketing it nationwide in December. Subscribers can pay bills for major credit cards, a number of department store and gas station cards, telephone service and electricity anywhere in Canada, she said. So far, Winnipeg is the only city where customers can also pay their parking tickets through Touchpay.

Users control the system from the keypad of a touchtone telephone, prompted by recorded voice messages. Customers using Touchpay through the Alex system will use the keyfns of their videotex terminal. A personal identification number controls access. The service costs 50 cents Canadian for each bill paid, with no initial sign-up fee. Touchpay available anywhere in Canada.

Alex, currently undergoing market tests in Montreal, is expected to be extended eventually to other cities in Bell Canada territory, Toronto and Ottawa being the obvious top contenders. (Contact: Leona Henog, Comcheq Services, 204-944416)

Minitel Aiming Pitch At RSOCS, Information Provider 3

NK NYORK, NEW YORK, U.S.W., 1989 MAY 11 (NB) — Minitel Services, a joint venture between France Telecom and Infonet, is spurring the fuScourt press to gain access to Bell company gateways and information providers. President Joseph Mazzeo told Newsbytes that Minitel Services, which already serves Houston, Texas, through US Videotex, will go live on US West's vast phone system August 1. An em again, off-again deal to goon MNEX's InfoLook gateway also looks on again, and negotiations continue with Bell Atlantic, which recently opened the Bell Atlantic Gateway. Negotiations are also continuing with BellSouth, but they're reportedly stalled because BellSouth doesn't want its Southeastern users to access Aline, the sexually oriented service which is number one on the French Minitel hit parade.

In order to be an information provider [IR] on the Minitel Services, according to salesman Dennis Ross, it must have a PCATer, better yet, a 586 machine to act as host. The machine will also need an XRS card, and its own

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phone line. There's a \$1,000 up-&ont fee to start service, plus a \$1,000 per month network access charge. What do you get? Of the 17 cents per minute, or \$10.20 per hour, which Minitel will charge consumers — handling all billing — there's a \$1.20 per hour billing charge, and Minitel takes another \$4.50 per hour off the top. That leaves the IP with \$4.50 per hour plus any transaction charges they might impose — say \$2 to look at a newsletter. The costs can be made up with 12,000 minutes of connect time per month, roughly 200 hours.

Access to the Bell gateways is important to Minitel because it will let consumers nationwide access the service with a local phone call, using Minitel emulation software in their PCs or a \$500 Minitel terminal. Access to more IPs is crucial if Minitel is going to overcome Aline's success and avoid charges by conservatives' grumbling "What-ppm."

(Contact: Joseph Mazzeo, h Minitel Services Co., 9144944266)

IBMSetsNew Conferencing Rules
ARMONK, NEW YORK, U.S.A., 1989 MAY 8 (NB) — IBM has launched a crackdown on users of its internal computer conferencing system after finding that even people in Blue Suits will become anarchic if offered the tools of anarchy. Among the new rules: no cursing, no slurs, no talking about unannounced plans, no talking about non-business issues, and the use of sarcasm and irony is strongly discouraged.

Perhaps the most telling new rule is one that the system is intended for peer-to-peer communications, and not a substitute for official communications channels. Jumping over hierarchies is one of the major advantages of conferencing in large organizations, studies suggest, and the new IBM rules lead some to wonder whether Big Blue was conferencing at all.

Essentially, the IBM rules on computer conferencing are identical to its rules governing other forms of communication, and the rules guarantee that informal communications among IBM employees will continue to be done informally, without benefit to or knowledge by IBM.

Tom Davenport, an associate professor at the Harvard Business School, told a magazine reporter that the idea of organizational change &om communications systems, which is big among academics and consultants, just hasn't reached business leaders' heads yet.

TRENDS

Nippon Steel Launches Super-Upgrade Board

TOKYO, JAPAN, 1989 APR 21 (NB) — The computer division of the world's largest steelmaker, Nippon Steel, has developed a board which upgrades the data processing speed of a workstation or personal computer to roughly that of a supercomputer. Called Parallelware, the new board adopts a parallel processing method, in which four microprocessors on the board calculate data, which is then sent to the microprocessors of a computer, so the board will perform complicated science calculations or artificial intelligence procedures.

The maximum processing speed of the board is 64 million floating points per second or mega FLOPS. However, by increasing the number of microprocessors of the board, the processing capability will be as powerful as that of a supercomputer, according to Nippon Steel.

Parallelware upgrades a SUN4 high-end Sun Microsystems' workstation &om 10 million instructions per second [MIPS] to 80 MIPS and is priced at whopping 7,900,000 yen or \$60,800. Three lowered versions are available for Apple Macintosh, IBM PC/AT, and

NEC's PC-9800 series, and are priced at 12 million yen or \$9,200.

Nippon Steel will attach Parallelware to workstations which the firm is receiving &om Sun Microsystems on an original equipment manufacturing basis, in order to achieve a greater share in the workstation market. Newsbytes could not ask about export plans because a company spokesman could not be reached for comment. (Contact: Nippon Steel, 05-588-9578)

High-Tech Hotel Hits California
SAN FRANCISCO, CALIFORNIA, U.S.A., 1989 MAY 5 (NB) — Developer Mark Lambourne is creating what could be the travelling executive's dream hotel — rooms equipped with IBM PS/2 computers, Ricoh fax machines, voice mail, private telephones which can be direct-dialed &om the outside, a fully-equipped Macintosh-based desktop publishing room, a boardroom, audio-

visual facilities, and secretaries-for-hire, along with custom-designed furniture, a television, VCR, and fully-equipped kitchen.

Sated to open for business July 1, the Nob Hill Lambourne at 125 Pine Street, owned by Brittingham Guest Properties, will have rooms priced &om \$175 to \$250 per night — a reasonable rate for San Francisco. The hotel will have 14 rooms and six suites, and is being created in a \$1.4 million renovation on an existing facility. Lambourne says sweeten an overnight stay, the staff will answer your phone calls with the name you choose — your company, for instance — rather than the name of the hotel.

Lambourne tells Newsbytes these so-called "executels" will also be sited in Seattle, Chicago, New York, Boston, London, and Paris, but San Francisco is the first. "It's an idea that we have thought

about for probably a year.... Utilization of a fax machine, and the fact that people need information now, will become more important as we head toward 1992," he says.

"Business executives are fed up with balancing stuff on their beds and pleading with the general manager for a fax machine."

While the facility has a July 1 start date, reservations can be made now by calling, in the U.S., 1400-BRITANNIA. (Contact: Mark Lambourne, 455-228V)

Toshiba Develops

16MB Floppy Drive

TOKYO, JAPAN, 1989 MAY 10 (NB) — The difference between a hard and floppy drives has been narrowed with Toshiba's new 16 megabyte capacity 5 1/4 inch floppy disk drive [FDD].

The newly developed FDD, named the DFI01, features 16 megabytes of



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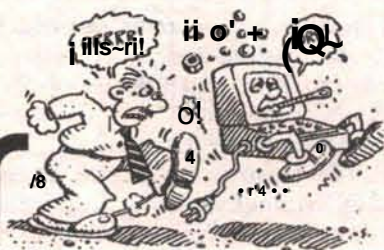
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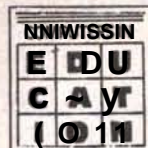
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memory capacity with a vertical magnetic recording method. This technology allows data to be recorded at a higher density than ever before. To control tighter tracks on the floppy disk, a dual servo mechanism has been adopted to precisely move the magnetic head.

A hard disk like high speed access time has been achieved — 1500 revolutions of the floppy disk per minute — as well as a 70 millisecond average access time and five megabit-per-second transfer rate.

The company has been selling a four megabyte, 5.5-inch FDD which utilizes vertical magnetic recording technology. Toshiba says shipments will start in October.

(Contact: Toshiba, (05457) 1111)

Daikin Develops Chlorofluorocarbon Substitute
OSAKA, JAPAN, 1989 MAY 9 (NB) — Osaka-based cleaning fluids maker Daikin Industries believes it has found an alternative to environmentally-harmful CFCs or chlorofluorocarbons, which are destroying the earth's ozone layer. Daikin has developed a fluoride alcohol for cleaning semiconductors.

The new cleaning solution, called 5FP or pentafluoropropylalcohol, will replace CFC-113, a cleaning fluid which faces international restrictions in July. Daikin will distribute samples of the new cleaner to semiconductor firms by the end of this month before starting commercial production.

The substance has the same non-combustible and surface tension qualities as CFC-113 and is useful as a cleaner for resin and wax used in semiconductor soldering.

Net Chip Process From TI
AUSTIN, TEXAS, U.S.A., 1989 MAY 17 (NB) — Researchers at the University of Texas have announced a new process that lowers by several hundred degrees the temperature at which thin layers of crystalline silicon, used to form microchips, can be grown.

The low temperature process is expected to lead to the development of chips that hold significantly more data than existing chips. These chips should be able to handle the large amounts of data at supercomputer speeds.

The U.T. project was in conjunction with a team at the Research Triangle Institute in North Carolina. The new process is called remote plasma-enhanced chemical vapor deposition [RPCVD]. The process will not be on the market for about six months but it will have significant effect on electronics by the year 2000. According to IEEE professor, A.F. Tasch of UT's Microelectronic Research Center, this breakthrough will lead to electronic devices so tiny that they will be measured by the number of atomic layers they contain. One atomic layer is equal to 20 billionths of an inch.

5.5-inch Floppy Like A Hard Drive
TOKYO, JAPAN, 1989 MAY 11 (NB) — YSL Data has developed a 5.5-inch floppy disk drive [FDD] with the largest memory capacity for its size, 27.8 megabytes — an amount which nearly equals the memory capacity of an average hard disk drive [HDD]. The magnetic recording material for the disk is metal powder. And the magnetic head can transfer five megabits of data per second. The new FDD revolves the disk 1,800 times per minute and at the same time automatically controls the balance of the disk revolution, achieving an average access time of 50 milliseconds.

Y.E. Data plans to further improve the recording material density to develop 42 megabyte and 60 megabyte FDD units.

4-Meg DRAM Prices Plummet
TOKYO, JAPAN, 1989 MAY 17 (NB) — Prices for the most advanced semiconductor memories available, four-megabit dynamic random access memory [DRAM] chips, have been cut to 50,000 yen or \$215 per unit — one third what they were six months ago. When Japan's major chip makers Toshiba, Hitachi, NEC, Mitsubishi Electric, and Fujitsu started shipping their commercial samples last fall, the price was near 100,000 yen or \$715. Hitachi has the lowest price — 20,000 yen or \$140.

Though each Japanese chip maker is currently in test production with monthly output of 20,000 to 50,000 units, they are now scheduled to establish volume production with monthly output of 200,000 to 500,000 units this fall. The rapid decline in price has prompted some analysts to predict that four-megabit DRAM prices will be under 10,000 yen or \$70 by the end of the year.

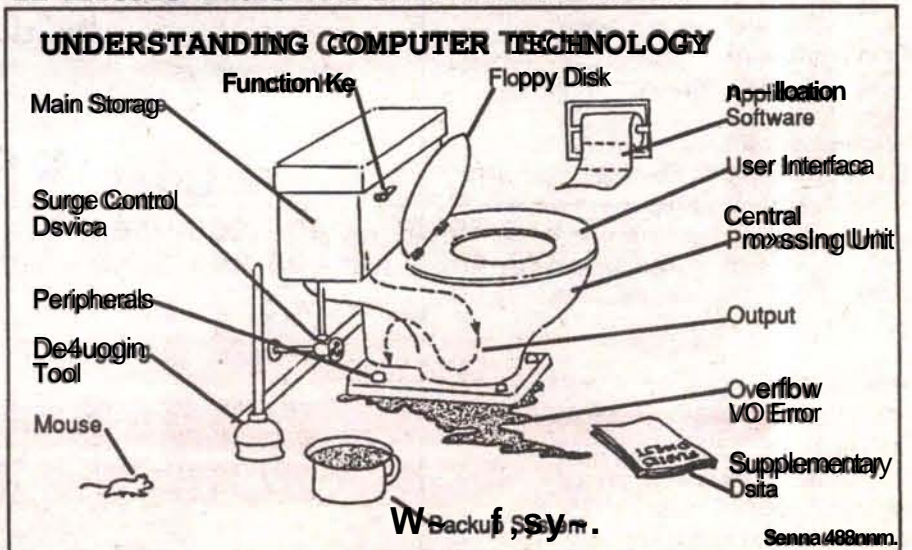
UNIX

UNDE, DTP Shows Share Toronto Stage
TORONTO, ONTARIO, CANADA, 1989 MAY 19 (NB) — Canada's second annual Multi-User Computer Show combined Unix '89 and the desktop publishing oriented Graph '89 at the Metro Toronto Convention Centre May 17-19. About 250 exhibitors and an estimated 14,000 visitors made the show larger and livelier than last year's version.

Toronto-based HCR Corp. used the occasion to launch a nationwide value-added resale program in Canada. The company said its Multi-User program will provide products, support and technical service to some 600 Canadian resellers. A similar program will start in the United States in the third quarter, the company added. HCR also announced a self-paced Unix training course called InterTRAIN.

Choreo Systems of Ottawa gave the first Canadian demonstration of the Open Desktop from Santa Cruz Operation. Choreo will sell and service the integrated software product for desktop Unix systems in Canada.

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HOW TO BUY A HARD DISK

This month I will show you the ropes of buying a hard disk and controller for your new or existing XT/AT done. I will caper the terminology and explain the various extra-cost options. I will also tell you about five excellent, little-known, low-cost disk utilities. However, there is not enough space to give detailed instructions on how to install the cables and jumpers, or how to low-level format, FDISK and high-level format.



In a Nutshell

For those of you already familiar with the terminology, here is the gist of the article:

- Buy a 1:1 interleave disk controller rather than a RLL. It makes your disk twice as fast for very little extra expenditure.

- If you are a novice, buy an EMM controller rather than an RLL, ARL, ESDI, SCSI or IDK.

- 28ms and under voice coil drives are the most reliable, accurate, durable and expensive. Choose 40 to 60 ms rack and pinion drives when you are on a tight budget. Avoid 40 to 108 ms stepper band drives altogether.

- Buy a disk drive with 10 1/4 or 5 1/4 inch cylinders. If you buy one with more than 10 1/4 cylinders, the part above 10 1/4 will probably be wasted.

- Buy a disk that exactly matches one of the entries in your AT drive table.

- Buy a half height drive rather than a full height. Make sure you have sufficient free bays to house the disk in your case. If you do not, insist on a full size case with five bays.

- Buy a disk with 40ms access time or less (faster).

- Buy a disk with 40 MB capacity or more. Every software package you buy will eat up 1 to 5 MB.

- Insist on getting spec sheets or manuals on both the controller and the disk.

- Stay away from DOS 4.01. Use DOS 5.0 and use standard 512 MB partition.

- If you buy a hard disk larger than 50 MB, you must get a mag tape backup. Floppies are too unreliable and time-consuming. Slow but reliable, IBM mag tape units can be had for \$400.

Each of these rules of thumb should sometimes be violated. I will explain some of the exceptions. I will also endeavour to explain, in English, what each of those statements means.

senting numbers, words, sounds or pictures.

The controller is a card containing the lion's share of the electronics to control the disk. It fits into one of the slots in the motherboard of your XT or AT.

A hard disk is something like a stereo turntable. The simplest hard disk is a platter coated with magnetic iron oxide, i.e. rust. It spins at 5600 RPM, one hundred times faster than the 55 1/3 RPM of a turntable. There is a "tonearm" that swings over the platter just like a stereo tonearm. The end of the arm carries, not a needle, but a miniature version of the magnetic head you might find inside a stereo tape deck.

Digital Magnetic Recording

The head can swing to any track on the disk, then wait for the desired part of the disk to rotate under the head. By sending an electric current through the head, the controller can place magnetic patterns on the disk. By simply observing the faint currents induced in the head as the disk spins by, the controller can deduce which patterns were written on the disk.

The real truth is somewhat more complex. For example, most disks have multiple platters with many heads, one for the top and bottom surface of each platter. The heads all move in unison across the disk.

Access Time, Latency and Transfer Rate

A disk and controller have three distinct performance delays. First, access time measures the delay for the head to swing into the correct position, averaging 10 to 90 milliseconds. Second, the latency is the time for the desired data to rotate around under the head, nearly always averaging 8.5 milliseconds. Third, the transfer rate is the speed of transferring the data once the heads get to it, usually 114,000 to 500,000 bytes per second.

When you buy a faster disk, what you are paying for is faster access time. Nearly all disks from the cheapest to the most expensive all spin at 5600 RPM, so they all have the same latency time. A "faster", more expensive disk will not transfer data any faster; it will just get to it faster. However, strange as it sounds, a good disk controller will allow your disk to read data six times faster than a poor one.

The Disk Drive

Specifications — MB and ms

There are two main specifications when buying a hard disk: the capacity measured in megabytes (MB) and the access speed measured in milliseconds (ms). A megabyte is 1,048,576 characters. Reputable dealers always quote the useable formatted capacity of a disk. Decent dealers will quote the legal unformatted capacity. A small hard disk is 10 MB. A medium hard disk is 40 MB. A large is 100 MB. Larger hard disks exist to 1000+ MB (a gigabyte), but can be more costly and less efficient than two small ones.

Why are two small disks faster than one big one? When you copy a file from one part of a disk to another part, the arm has to frantically back and forth between the two files. When you copy a file from one small hard disk to another, the two sets of disk arms hardly move at all, since the one set of arms can hover over the source file while the other hovers over the target.

The access time measures how fast on average it takes the arms to move to the

desired part of the disk; the smaller the number the better. A very slow hard disk is 90ms; a slow is 60ms; a decent is 40ms; a fast is 18ms; a premium is 22ms; a ridiculously expensive one is 110ms.

1:1 versus RLL Controllers

The disk controller determines how fast the disk reads the data once the arms get into place. 1:1 controllers are as fast as possible. 2:1 controllers run at half speed. Anything else is unthinkably slow. Later, when I cover interleaving, I will explain a little more fully what 1:1 and 2:1 mean.

Upgrading your controller is an inexpensive way to get extra speed. If you have an old Xebec 6:11 controller that IBM shipped with the original XTs, for \$85 you could replace it with a new Western Digital 2:1 controller tripling the transfer rate. If you have a 5:1 controller in your AT done, for \$165 you could replace it with a new DTC 1:1 hard/dospy disk controller that would double the transfer rate. If you are buying a new AT done, insist on a 1:1 controller!

Battle of the Bands:

Stepper Band vs Rack and Pinion vs Voice Coil

There are three kinds of disk stepper band, rack and pinion, and voice coil (sometimes called Whitney). Stepper band disks are the cheapest and voice coils are the most expensive. As you probably guessed, the voice coil disks are also the slowest and most reliable.

Stepper Band

The most commonly sold stepper band disk is the \$59 20MB, 65ms Seagate ST-225. Nearly all disks with an access time of 40ms or slower are stepper band type.

Stepper band drives use a stepper motor with detents. The rotating motor coils and uncoils a forked tongue (the band) reminiscent of one of those whoopee party favours you blow into. The band then pushes the heads forward and back across the disk. The band makes a distinctive squeak/thunk sound as it moves the arm. Learn this sound so that an dishonest dealer will not be able to pawn off a stepper band disk as a voice coil.

The stepper band mechanism has one serious drawback: it is blind. It simply pushes the heads out to where the track is supposed to be, not to where it is actually recorded. Thermal expansion and contraction of the platter moves the actual location of the track. The heads look in the wrong place and misread the data, or even worse, write it slightly off centre from where the data is supposed to be. The head mechanism also wears over time and drifts out of alignment. The net result is the all too familiar "Error reading drive C: Abort/Retry or Fail".

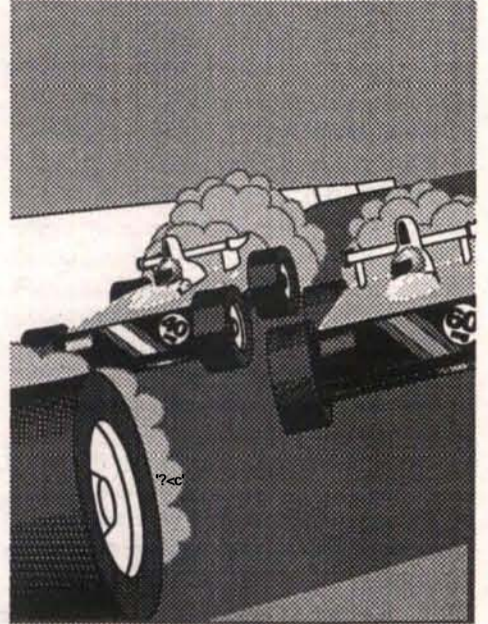
Another problem with stepper motors is they wear out quickly. With heavy use they last only a year or two.

I usually recommend against using stepper band disks. They are suitable for only light duty — spreadsheets and word processing only — no database or spell checking. Use them only in constant temperature offices.

Stepper band disks have two saving graces — they are cheap and they can be repaired right here in Vancouver. Nearly all the disks sold in Vancouver have stepper bands. Maybe that will change a little, now you know some of the drawbacks.

An Ounce of Prevention

There are four preventive measures



you can take to reduce the pain of owning a stepper band disk

One is to redo the low-level format every 6 months. With Gibson Research's SpinRite, you can reformat without destroying all your data. Reformatting re-centres all the data and sector header information under the new locations where the heads now tend to seek. To do the low-level format, you need low-level formatting parameters you may not have. I wrote a public domain program called HD Sniff to help find that information for you.

The second piece of prophylaxis is to use Peter Fletcher's shareware HDTest program at least monthly to find and remove marginal disk flaws before they become serious.

The third measure is to allow your computer to warm up for 15 minutes after you turn it on before using the disk. This gives time for the thermal expansion of the disk platters to stabilize.

The fourth measure applies when you do your low-level format. Make sure the disk is mounted horizontally if you plan to use it horizontally and mounted vertically if you plan to use it vertically. Gravity will pull the heads out of alignment otherwise. In other words, if you get the bright idea to turn your computer on edge to simulate one of those sexy new towers, redo the low level format!

Rack and Pinion

A rack and pinion disk is only slightly more expensive than an equivalent stepper band. For example, the 40MB, 45ms Miniscribe 8450 sells for \$550. This drive uses a stepper motor that turns a pinion gear that moves a rack gear in and out somewhat like automobile steering. This is more accurate, durable and thermally stable than a band. The heads make a whirr-thunk sound as they move. However, over the years, the gears wear and backlash becomes a problem.

If you cannot afford a voice coil disk, go for a rack and pinion disk, but follow the same 6 month reformatting precautions as for stepper band disks.

Voice Coil

Voice coil disks are the simplest, fastest and most durable disks. They are over ten times more reliable than stepper band drive. Unfortunately, they are considerably more expensive. For example, a 40MB, 28ms Mitsubishi hard drive sells for \$542.

The voice coil heads swing freely over the disk. Electrified coils of wire magnetically shove the heads back and forth. The simple design has almost nothing to wear out. The heads make a distinctive delicate clicking sound.

The other big advantage of voice coil disks is that they use a servo mechanism to home in on the track. If the disks get

What is a Hard Disk?

The Stereo Analogy

For the benefit of novices, let me first explain how a hard disk works. In many ways, a hard disk with controller is like a home stereo system. The hard disk controller is like the amplifier; the hard disk itself is like a turntable. Instead of recording analog music, the hard disk records magnetic, digital patterns repre-

Use one of these three brands of disk controller: Adaptec, Western Digital or Onit.

In summary, RLL is the cheap read to high capacity, risking reliability to some extent.

ESDI
KSDI (Enhanced Small Devices Interface) drives are quite a bit more expensive than MFM and RLL. For example, a 166 MB, 117 ms ESDI Miniscribe hard disk and Western digital AT controller costs \$1815. Usually KSDI drives are very high capacity and very fast. Normally, they are only justifiable in a network file server. The fastest ESDI systems can read up to an astounding 1.8 megabytes every second.

What makes them so good? First, they cram 56 sectors per track "Wheat", you say, "that's even worse than RLL's 26 sectors per track for reliability!" Strange as it may seem, ESDI can be even more reliable than MFM.

How can this be? Consider what happens when an MFM disk reads. The heads pick up a faint signal induced by the magnetized rust on the surface flying by. The signal travels over a 1/8 meter cable to the disk controller. The data separator on the controller then attempts to analyze the weakened signal. Nasty things happen to that feeble signal on its trip to the controller. RF noise from ether components interfere with it. When it gets to the controller, sometimes it arrives scrambled. When this happens you see delays while the disk recalibrates and retries, (those sawing noises) then, if you are unlucky, Error reading drive C: Abort, Retry or Fail"

In contrast, in ESDI, the encoder/decoder electronics for analyzing that faint signal are right on the drive. The weak signal does not have far to go. This means even weaker signals can be reliably detected.

In summary, ESDI is the way to go for high performance disks larger than 70 MB, particularly for LAN servers.

SCSI
Another even more expensive way to attach your disk is called SCSI (Small Computer Systems Interface) pronounced "scuzzy." For example, a 160 MS 17 ms SCSI Miniscribe disk controller and host adaptor costs \$2110.

You will find SCSI interfaces mostly in the Apple Macintosh, and only rarely in the XT/AT. SCSI suffers from a lack of a clear standard. IBM has so far snubbed SCSI. Committees are at work drafting a new, clearer, faster standard called SCSI II.

SCSI, properly speaking, is not a disk controller standard at all. You can even have both MFM and KSDI controllers tying into a SCSI interface which then attaches to the AT. SCSI is a way of attaching a motley assortment of up to eight peripherals to the AT. Some of the peripherals need not even be disks. For example they may be tape backup units, a scanner or even a serial port with modem.

SCSI is the most difficult type of disk interface to install. It also has more overhead than KSDI, so it usually runs slower.

Unless you are an expert, I recommend you stay away from SCSI, and wait for SCSI II which will probably eventually become the dominant standard for high end systems.

IDE
IBM took the ESDI idea one step further and designed the IDK (Integrated Drive Electronics) intelligent disk interface for its PS/2 model 50. ESDI places half the electronics on the drive; IDE places it all there. If you have a 40 pin IDE connector on your motherboard, you don't even need a controller card. You will find these connectors in the newer Compaq, AST, Zenith and Philips clones. Most other clones require a simple bus interface card however. IDE

controllers cram 26 or 28 sectors per track, about the same as RLL, but because electronics are right on the drive, this is reasonably safe.

IDE disks are inexpensive and fast. For example, you can buy an IDE 40 MB, 28 ms Miniscribe AT disk/controller for \$616.

The IDE disks usually come with 52 K or more of built-in hardware caching. This is wonderful since it speeds up your disk and takes up none of your RAM the way ordinary caching programs do. Hardware caching saves wear and tear on your disk. However, there may be no way to turn the IDE hardware cache off. This means programs that must run with caching disabled, (such as SpinRite and HDTest) will not function properly. In contrast, when you use software caching, (such as PC Kwik or PolyBoost) you can always turn it off.

There are other problems with IDE. If

you buy an IDE disk, you will not be able to use it later if you upgrade to an AT. Some IDE controllers may lie about the use of 26 sectors per track, giving the same problems that RLL does.

In summary, IDE disk controllers are an inexpensive way to get high performance, while sacrificing compatibility.

Interleave
This section contains the two most important pieces of advice in the entire article. Stay tuned!

What is interleave? To answer that properly is an article in itself. Cheap controllers cannot read the disk and pass the data to the computer simultaneously. So they read a sector, then let one pass by. While they are letting it pass by, they transfer the data just read from the previous sector to the computer. By reading every second sector, they take two revolutions to read a track.

In order to later read the data in proper

order, instead of storing the data in the usual order, the controller stores these sectors in a staggered, alternating pattern; hence 2:1 interleave. Older controllers can only read every 6th sector hence 6:1 interleave. Modern controllers can read every sector as it comes, hence 1:1 interleave.

It is frustrating that so many people are buying 2:1 interleave controllers when they should be buying 1:1 controllers.

**"If you see a 1:1
COAXIAL FOOT DISK controller
read it as fast as if
you use a 2:1 controller"**

This is heartbreaking. Even the most expensive 1:1 controller (the \$165 Data Technology Corporation) is only \$58 more than the cheapest 2:1 controller

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(the \$189 NCL). A 1:1 interleave controller is the cheapest, most effective upgrade you can buy.

Even after you get the right controller, you still must specify the optimal interleave when you low-level format. I estimate less than 1 in 5 AT/XT machines are formatted with the correct interleave

"If you specify the wrong interleave your disk will run from 2 to 17 times slower than it needs to."

For heaven's sake get help in low-level formatting & someone knowledgeable! Otherwise you might as well have burned the money you spent on your high performance disk.

Even though AT 1:1 interleave controllers are very common, you will have trouble finding a 1:1 interleave controller for your XT. Omiti was the only manu-

facturer and they stepped making them because nobody understood the value of the product. If you are lucky you might track down some old stock. 1:1 XT controllers will not achieve their full 1:1 potential on the old 4.77 MHz ones, but they can get 1:1 on 8 Mhz ones.

Autoconfigure

Autoconfigure applies to XT controllers only. There are two kinds of disk controller card, fixed and autoconfigure. With a fixed card, you set jumpers, dip switches, or insert an EPROM chip to describe your hard disk. With an autoconfigure controller you run a special program and key in the facts about your hard disk. Always buy the autoconfigure type!

Why? Sooner or later you will upgrade your hard disk, or add a second one. Perhaps your disk will burn out and you will need to buy a replacement. With an autoconfigure controller card you could

use the same controller with your new disk. With a fixed card, you would have to buy a new controller to go with your new disk.

Utilities

There are five utilities you must have if you are serious about hard disks.

HDSniff

HDSniff is public domain. It allows you to find out what parameters were used the last time your disk was low-level formatted. For routine reformatting you can then redo it the same way, even if you have lost the documentation. HDSniff can also warn you if the disk was improperly low-level formatted.

Ontrack/SpeedStor

Ontrack and SpeedStor are similar low-level formatting utilities. They allow you to handle disks not in the AT drive table. They perform partitioning larger than

20MB in BOSSed, though I recommend against using this feature since the drivers chew up RAM and since they may be incompatible with some programs. I also recommend avoiding large partitions in DOS 4.0 for similar reasons. These utilities even let you handle disks with more than 1024 cylinders, though some programs (such as HDTest) will fail if you use this feature. Ontrack also has online documentation about low-level formatting parameters for many disk models.

SpinRite

SpinRite can determine and correct year hard disk's interleave. With newer controllers this will be 1:1 or 1:1, but with older ones it could be as high as 6:1. SpinRite can also redo the low-level format in place without losing your data. You still need a backup, but usually you don't need to restore. SpinRite can also scour the disk for Saws, though use it with caution since, by default, it restores to active duty any bad spots it thinks are ok, even if the disk manufacturer considered them suspect.

HDTest

Shaware HDTest does a thorough, meticulous job of scanning your disk for Saws. It is less cavalier than SpinRite. It finds Saws that most other programs miss. HDTest finds the Saws, moves your data to a safer place, and fences off the Sawn sector from further use.

Norton Disk Doctor

Norton Disk Doctor is part of the Norton Advanced Utilities. Novices can easily use it to repair various kinds of hard disk damage such as overwriting COMHQID.COM or MSDOS.Q5.

Suamary

Learn More

I have found only one book, *Upgrading and Repairing PCs* by Scott Mueller (Que Books) that gave useful information on how to install a new hard disk.

I could not find any books to explain the mysteries of low-level formatting. I had to study the BIOS listings in the IBM XT and AT Technical Reference manuals. I also waded through opaque disk and controller technical manuals.

Then Byte Magazine asked me to write a series of technical articles on hard disks. Using Byte's magic name, I wrote hundreds of form letters to the manufacturers of disks, controllers and utilities peppering them with questions. I wheedled the phone numbers of hardware designers. I signed up with the BIX (Byte Information Exchange) electronic modem conference where I could pose questions to experts from all over the world.

I learned quite a bit more than I was able to squeeze into this article.

Why am I telling you all this? To show off, but also to convince you to complete my free half day course where I will attempt to pass on what I have learned about hard disk. I will hold it on Saturday June 17 from 10 AM until 1 PM. Phone: 6844529 to register.

Remember This

For a hassle free installation, stick with a 1:1 MFM controller and a voice coil drive that exactly matches one of the entries in your AT drive table. Stick with standard DOS S.S, standard partitions and xle device drivers.

Setting up hard disks can be more complicated than you would ever have imagined. Make sure you get documentation with your hard disk and controller. Get expert help installing and formatting.

Road's Greenie president of Canadian Mind Products, 0162-1020 Mainland Street, Vancouver, BC V6B 2T4, (804) 6844529. His company specializes in custom XT/AT computers both hardware and software. He has written ten public domain disk utilities including Park, HDSniff, Restore and Seat.



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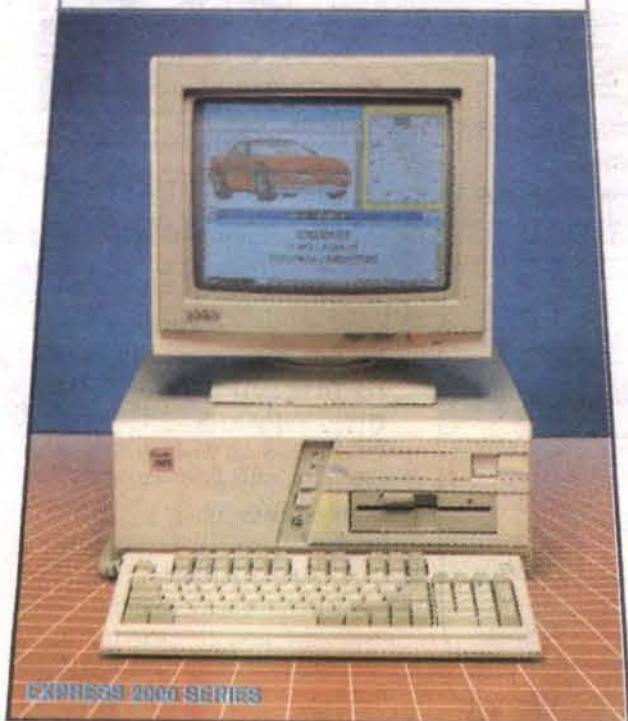
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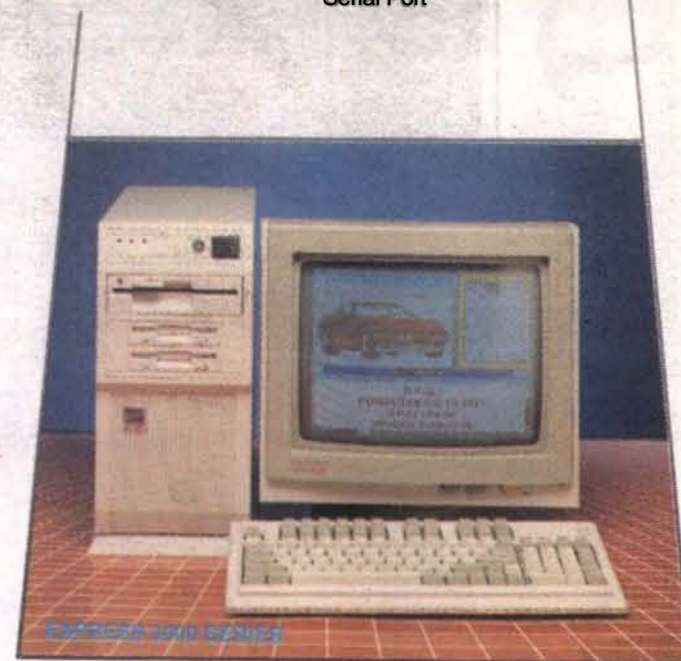
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BOOK EXCERPT

COPYING FILES WITH MS-DOS



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Introduction

Disk files are the primary storage place for data and programs. A knowledge of how to manage these files is essential. If you want to be in control of your work, you must be in control of your files. This section tells you how to copy disks and files, how to erase unneeded files, and how to rename existing files.

When you work with floppy disks, always keep the labels on your disks accurate. Use a felt-tipped pen and indicate the contents on the disk label as you work. Disks not labeled or labeled inaccurately are an invitation to lost data. If you do not label disks, you may mistake them for blank unformatted disks.

Key Terms

Source The disk or file from which you are copying.

Destination The disk or file to which you are copying.

Same as destination.

Condition The condition that results when a disk file is contained in sectors that are not contiguous because of adding and deleting files.

Default directory The directory that DOS uses as the default directory. The root directory is the current directory on the logged drive until you change to another directory with the CHDIR (CD) command.

Overwrite Writing new information over old in a disk file.

The DISKCOPY command makes an exact copy of another disk. DISKCOPY reads the input, or source, disk and then writes the data to another disk, the destination disk. DISKCOPY is good to use when you want to make a working copy of a master disk. You then can store the master disk in a safe place. DISKCOPY also copies the system files from a bootable source disk to make a copy that is bootable.

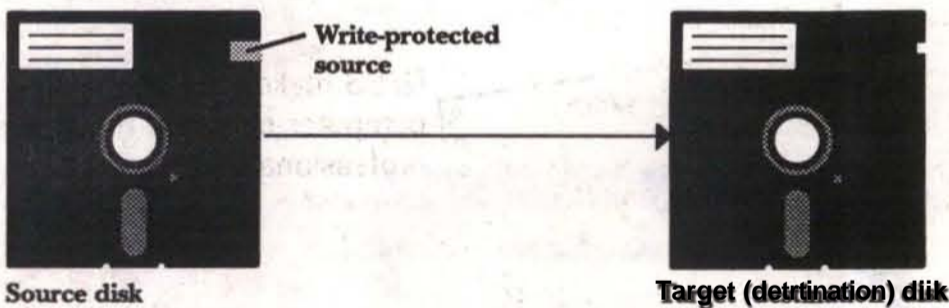
In this chapter, you will learn a simple form of the DISKCOPY command. The basic DISKCOPY command assumes that your source and destination disks are the same size and capacity. You may find another section, MS-DOS User's Guide, 3rd Ed., helpful if you need more information on DISKCOPY.

The DISKCOPY Command

DISKCOPY is an external command that you load from disk. You must have the disk that contains DISKCOPY in your default drive or set the correct path with the PATH command (see Chapter 6). Use the DISKCOPY command to copy floppies only. The correct syntax for DISKCOPY is

DISKCOPY source: diskname:

The source is the name for the drive



The DISKCOPY command makes an exact copy of another disk. DISKCOPY requires that the source and destination disks be the same size and capacity.

```
A>DISKCOPY A: B:
Insert SOURCE diskette in drive A:
Insert TARGET diskette in drive B:
Press any key to continue . . .
Copied 44 tracks
9 Sectors (Tracks: 2 Sectors)
Copy another diskette (Y/N)
A>
```

The command syntax for DISKCOPY in MS-DOS is: DISKCOPY A: B: DOS prompts you to insert the disks before the copy begins.

If drives or diskettes are not compatible you will get an error message and no copy will take place.

```
A>DISKCOPY A: B:
Drive types or diskette types
not compatible
A>
```



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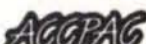
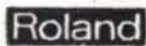
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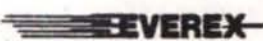
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that holds the disk that you want to copy. The effect of the `sd` is the name of the drive that holds the disk to receive the copy. As always, type a colon after the drive name. Insert a space between the source and destination drive names. If you use a blank disk as the destination disk, DOS first formats it. An example of the command is

DISKCOPY A: B:

After you issue the `DISKCOPY` command, DOS prompts you to put the disks into the proper drives. Make sure that you put them in the correct drives. If you write-protect the source disk, you safeguard its contents in case of a mix-up. Strike a key and the copy process will begin. When the copy process finishes, DOS asks if you want to make another copy. Answer Y or N. You can make another copy at this time. If you answer Y, you do not have to access `DISKCOPY` again because DOS has the program in memory.

If you leave out the drive names in the `DISKCOPY` command line, DOS uses the default drive as the specifier. To avoid confusion, always give both the source and destination drive names.

Comparing Disks with DISKCOMP

You can confirm that two disks are identical by using the external `DISKCOMP` command. `DISKCOMP` compares disk sectors by sector. Remember that the disks and capacities must be the same for both disks in the comparison. Any difference in disks made with `DISKCOPY` is a sign of a problem disk. Issue the command in the form

DISKCOMP *source disk destination disk*

Notice that the syntax for `DISKCOMP` is like the syntax for `DISKCOPY`. Load the two disks at the prompt, and DOS will confirm the comparison. Point out the differences. As with `DISKCOPY`, you can

repeat the `DISKCOMP` command. An example of the `DISKCOMP` command is

DISKCOMP A: B:

Again, if you omit a drive designator, DOS uses the default drive.

The internal `COPY` command is a DOS workhorse. `DISKCOPY` works with disks; `COPY` works with files. Because copy is an internal command, you can issue the command any time at the DOS prompt. You can use `COPY` to move files between disks of different sizes and capacities and to give new names to the destination files.

`COPY` is a versatile command that allows wild cards in the syntax. To teach you every use of the `COPY` command would be a large job. In this book, you will learn the `COPY` command that you are likely to use in daily computing.

The symbolic syntax of the copy command is

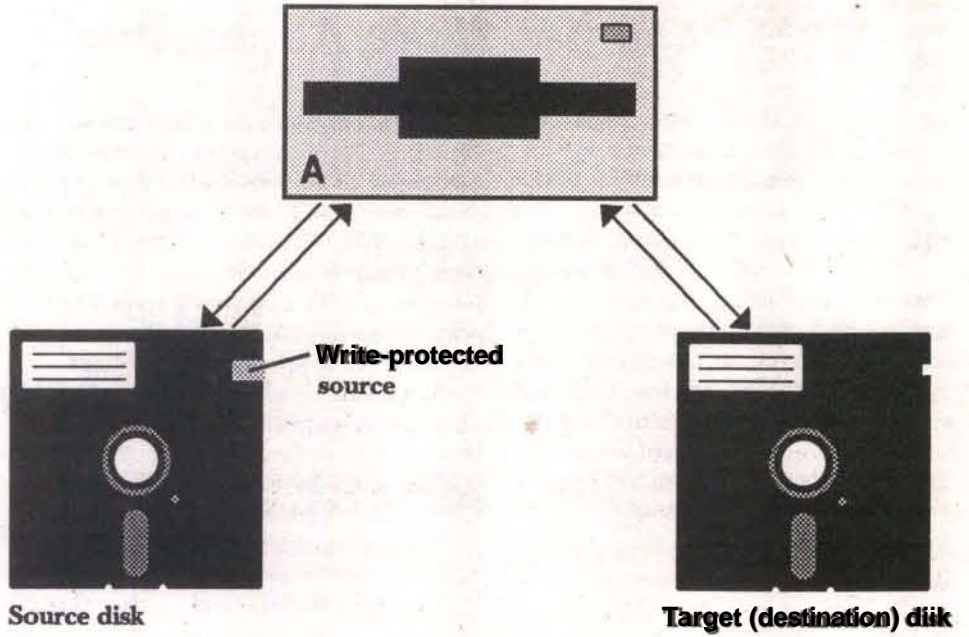
`COPY path file file source est disk path destination /V`

The `sd` is the source file's drive name and `dd` is the destination file's drive name. The `path` is the full path name for the file in the directory tree structure. The `/V` is an optional switch that tells DOS to verify that the copy is correct. A delimiting space separates the source and destination parts of the command. An example of the full `COPY` command is

`COPY C:\MISC\MYFILE.MEM`

`A:\KEEP\MYFILE.KEP /V`

`MYFILE.MEM` is a file located on drive C in the `QCISC` directory. `MYFILE.MEM` is copied to a new file named `MYFILE.KEP` in the `%KEEP` directory on drive A. In this example, you might omit some of the items of syntax without disturbing the copying process because of defaults.



If the `DISKCOPY` command is issued with no drive parameters, DOS will copy using just one drive. DOS will prompt you to alternately switch between inserting the source and destination disks. Depending on your system's memory, you will swap disks once or several times.

```

A:\>DISKCOPY
    
```

By entering `DISKCOPY` alone, you are telling DOS to use one drive. Make sure you don't get the disks confused during swapping.

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Another product which demonstrates features not found in AutoCAD is Arris 5-D modeling software. This product is available from Integrated Micro Tech (685-5542).

PC CAD

When first introduced in 1984 as an "information appliance", the then, underpowered Macintosh computer has grown with leaps and bounds in the last two years. This is especially evident with the higher powered Mac II series and SE/50 computers. This growth has also been reflected in the field of CAD.

Two years ago, MacDraw, a simple 2D object-oriented drawing package was all that was available on the Macintosh. This year, powerful packages including AutoCAD for the Macintosh, VersaCAD, MGM Station, Minicad, and Feeps demonstrate the vigour with which engineers and architects have embraced the Mac. Many of these products are from vendors who began with a software package only on the IBM side. They quickly moved to offer a Macintosh solution with the advent of more powerful machines. One particularly impressive package is MacArchitron on the Macintosh. Using this program, it is possible to design a building in three dimensions, and then actually move through the building with a zoom function. This gives designers new insights into their creations before they are actually built. A full colour version of this program complete with shading has recently been announced.

The user friendly interface of the Macintosh makes it an increasingly popular solution for buyers of CAD systems, who have learned that the initial cost of a CAD system can quickly be dwarfed by training costs and a steep learning curve.

Where The Savings Are

If you've been putting off buying out the Soar plan for the house of your

dreams because it costs too much to hire an architect, you have just run out of excuses — many CAD programmers are as friendly as your local librarian. This is not to say that having the keys to the drugstore makes you a pharmacist, but many simpler design projects now be done by nonprofessional users.

Rendering a drawing with a CAD program usually takes just as long as rendering a drawing by hand. The advantages occur later (as with word processing) when you begin revising and editing the drawing. Drafts can be quickly copied, mirrored, moved, rotated, stretched and distorted into new dimensions.

A critical feature of PC CAD packages is dimensioning which refers to the labels inserted into many mechanical drawings. Most programs will insert dimensions automatically. Just point to the start and end points of a line, give the appropriate command and the program will add a label that states the length of the line.

The Layered Effect

Another standard CAD feature lets you create a drawing in layers. An architect, for example, would use this feature for a template or basic floor plan that must be performed on each floor of the building. One such layer might layout the electrical system on a single floor of a highrise; this electrical layer could then be reproduced and edited for each floor of the building.

Instant Insights

CAD construction planning is the wave of the future. Spearheaded by Japan, a new home buyer there can get a sales rep to help design a new home in front of his monitor one afternoon and move into the completed customized structure four days later.

This technology is not available in Canada... yet.

Nlen Eerie is a Vancouver freelance writer specializing in business and technology subjects.

ESTIMATING SOFTWARE: - COMPUTER AIDED BIDDING

Many builders, architects and engineers have had their first introduction to computers for the more mundane matters of job costing and estimating.

Estimating and job management play a critical role in the profitability of the company. With the proper program it is possible to get a detailed breakdown of what it will cost to construct a building, down to the last nail.

Computers can also contribute to error savings. Manual estimates are fraught with potential for mistakes. Computers, while they can make mistakes, tend to do it systematically, and an error can be tracked down and eradicated.

A computer doesn't replace a human estimator, but it can make them more efficient, performing many of these tasks more quickly. One of the most valuable aspects of the human estimator is that they have experience to aid their judgement. A computer can only work with a fixed set of rules, which must be carefully input. Humans work with much more "fuzzy" stuff and their sources of input are not as limited as a computer.

With a computer, the estimator can produce as many as four times as many bids as through a manual system. The more jobs a company can bid on, the more chances to win contracts. Time is also a factor. A quick, accurate response often gets the bid.

A major function of estimating software is to keep track of price changes. With material costs subject to rapid increases, it is critical that the price of materials be kept current. Any unneeded increases can eat into profits quickly.

A good estimating program will have a



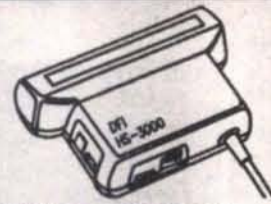
data base which provides prices of every item used in the project, as their prices change, the increase or decrease can be entered into the database. New estimates can then reflect the latest pricing.

There is a wide variety of estimating software available on the market today, but as with hardware, each business must find the computer software which meets its needs. A good rule of thumb when looking is to ask others in similar companies what they are using. See if they are happy with their programs and service support from the vendor.

We came across a sampling of estimating software in our research. Alcor Systems of Vancouver (492-5046) offers a Construction Estimation package that sells for \$295 Cdn. This program is recommended for use by trade or general contractors. Softouch Software in Portland, Oregon, (503-241-1841) offers Constructorm III, a cost estimating package for the Apple Macintosh. The program is a series of templates which run using Microsoft Excel a spreadsheet program. The package retails for \$195 U.S. Paul Manley (RR44155) who sells an estimating software package aimed at the construction market

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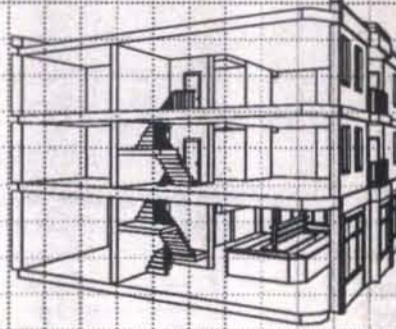


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The House of The Future



The CEBus chip

We all have fantasies about what the home of the future will really be like. Appliances that you can talk to and they talk back, the ability to phone home and turn on the microwave, the stereo and warm up the hot tub...

Standards Slow To Emerge
Up until now, the home of the future has been closer to science fiction than reality. Recent developments from a Victoria based company could help to change that. AISI Research Corp. has recently announced an industry standard chip design for makers of home electronics items to include in their products. With large electronics manufacturers such as Tandy, Panasonic, Sony and Johnson Controls building prototypes utilizing this technology, their prospects look good. The chip utilizes a proposed standard for home automation recommended by the Electronic Industry Association. It is called the CKBus or Consumer Electronic Bus.

What is CEBusP
CEBus is a detailed set of specifica-

tions describing how to encode and transmit information over a wide variety of different standard media. These specifications permit "interactive conversations" between dishwashers, VCR's, water heaters, microwave ovens, etc. The "Bus" in CKBus is a communication "highway" on which multiple devices can communicate. The CKBus standard includes a language that all electronic appliances can use to talk to each other on the highway. AISI is the first company to commit this standard to a microchip.

Other Standards
The big issue here, as in other areas of the computer field, is of standards. The consumer electronics and building industries are made up of hundreds of different vendors selling their wares. But up until now, there has been nothing to draw them together into a unified standard which gives guidance on how their products can interact with each other. Currently there are three directly competing standards in the world market. According to Ludo Bertsch, the head of R&D at AISI, the other two, HBS in Japan and IHS or Eureka in Europe lack the technical sophistication of CKBus. "CEBus shines like the sun when compared to the other standards." All three standards are at approximately the same level in terms of product development, that is, no products are yet on the market. The hope of AISI is that the CEBus standard will prevail and allow a world wide standard to emerge.

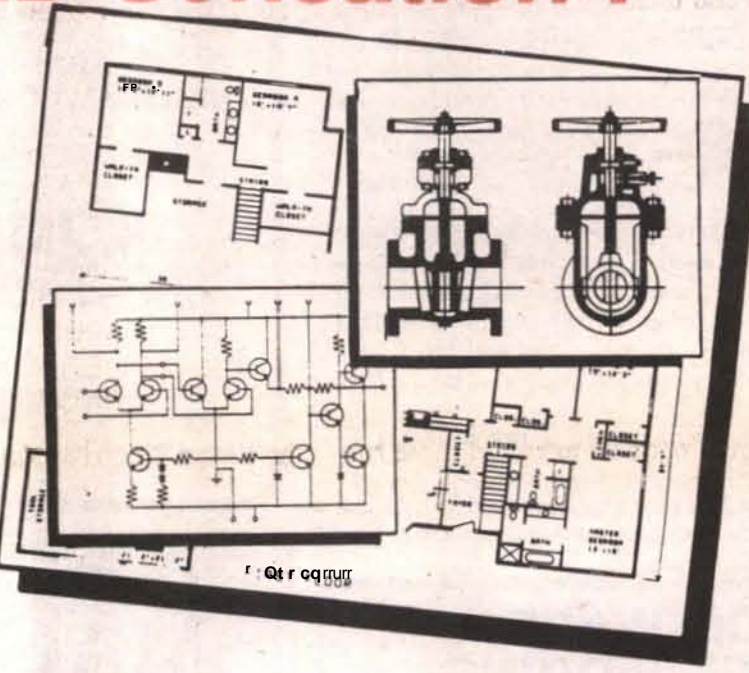
X10 Powerhouse and SmartHouse.
The CEBus standard can also be distinguished from two other systems for home control X10 Powerhouse and SmartHouse.

A group of companies using the X10 Powerhouse logo have sought to create their own standard of power line devices that allow control of electronic equipment. But in most cases, this control is limited to turning on or off an appliance, and it's a one-way control over hot power lines. The new CEBus chip would build interactive features into devices so that more levels of control could be possible, and feedback from the appliance would also be possible. CKBus technology, in addition to using both powered and unpowered electrical power lines, could also utilize coaxial cable, twisted pair, fibre optics, infra-red and radio waves to transmit signals. X10 Powerhouse has the advantages that it can be installed immediately, and a variety of products are currently available in quantity. X10 Powerhouse can also include either a radio or a voice interface so that products can be voice activated. This feature has allowed these products to be sold into homes customized for handicapped individuals.

CEBus also differs from SmartHouse, another proposed standard offered by the National Association of Home Builders which is aimed at standardizing wiring in new homes to a new type of cabling which would allow you to plug in a telephone, stereo speakers or a dishwasher into the same type of outlet. SmartHouse is aimed at reducing the "walls of spaghetti wiring" encountered by builders of new homes on current housing. Instead of having separate tradespeople do the wiring on the telephone, the TV cable, the burglar alarm and the electrical systems, SmartHouse would use a standard set of wires for all functions. In contrast, the CEBus standard would function over existing wiring but would offer additional functionality for more enhanced wiring systems. CEBus is also an open system in which all electronic product manufacturers are invited to take part. Unlike SmartHouse which is a closed M&D system which members pay to be a part of,

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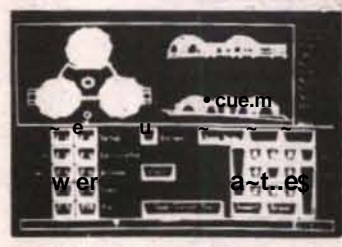


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there are no fees or royalties for use of the CEBus standard.

AISI's Product Line

The Spirit Chip: This is the CEBus micro chip to be put inside electrical products of all makes and models during the manufacturing process. The technology allows these appliances and devices to "talk" to each other over standard home wiring and communication networks, including electrical wiring, telephone wiring, television cable and remote control devices such as television controls or garage door openers. The first prototype batch of chips has been produced. Volume production has not started yet. The chip is being built by LSI/ASIC House an international company with offices in Canada but based in California.

SmartPlug Powerline Modem, which allows computers, cash registers, lab equipment etc. to communicate from an RS2M port through existing AC power lines without special wiring or extra cabling. This modem runs at a relatively low speed of 1500 Baud, but is useful in areas such as printer sharing, or where additional cabling is undesirable or unfeasible. AISI has developed C drivers so that programmers can address this modem from programs such as dBase. A data encryption layer is also available to protect the security of the system. According to the company, this product has been successfully beta tested in a number of markets. Price: \$199.

Other CEBus products on the way, include a sink block device, a phase coupler, a power line to twisted pair bridge, as well as a patentable technology for enhancing movement of information over AC powerlines.

When Will It All Be Ready?

The power line modem is the only product that AISI is currently shipping. The chip specifications are being completed now and they expect to ship in quantity to manufacturers soon. The formal standard for CEBus is expected to be announced in November of this year by the Electronics Industry Association.



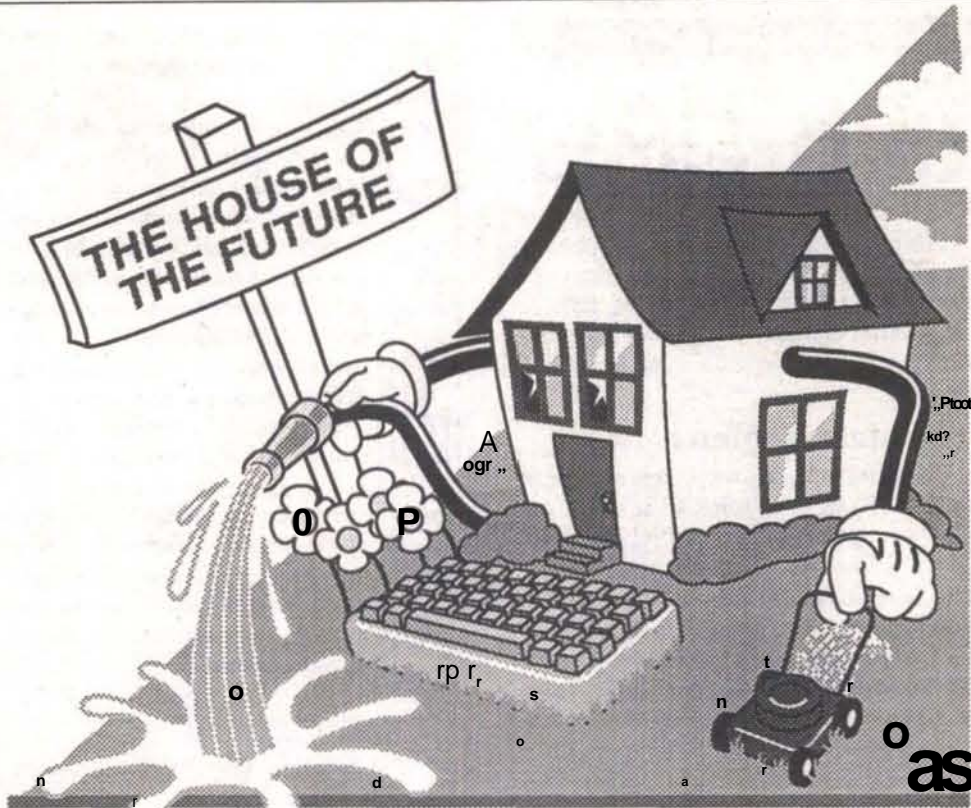
William Smith and Ludo Bertsch, CEO of AISI, with a TV set and a CEBus chip in the background.

AISI: The Company

AISI just went through a severe shake over a dominant VSE company Garibon Industries to get access to the capital markets in an expedient manner. The company itself is the product of four years of research and development by William Smith and Ludo Bertsch at the University of Victoria. AISI's CEO Smith, is a 10 year veteran of IBM where he was an Advisory Systems Engineer and Bertsch was an engineering manager at Develcon Electronics. Both were members of the CEBus committee which developed the standards for home automation communication.

Projections for Growth How Realistic?

According to AISI, they have a huge market to tap. Demand for smart home products is expected to be in the 100,000 range this year, 1,000,000 by 1990 and over 25,000,000 by the year 2000. Is this for real? Do home appliances really need to talk to each other? Some would suggest that you can fool some of the people some of the time with new features on home electronics, but by and large, that the market seems to adjust itself back to those products which truly do benefit from additional features. Electric can



openers that lie idle and overly sophisticated office telephone systems that never get used are good examples of technology gone wild. Manufacturers will only add these chips if consumers will pay the premium to have "smart" products.

Two areas where the effort may be worthwhile are:

1) **User interface enhancement.** Many of the features of appliances currently on the market are never used because of a limiting user interface. It is often difficult to get access to the wealth of features through the tiny LED displays used. If, instead of trying to get all that information through a small screen, you could pull up the programming interface on your trusty XT, you might be able to figure out how to record those late night re-runs of Hogan's Heroes after all.

2) **Energy conservation.** Increased energy efficiency is a obvious benefit of this type of technology. A water heater that turns itself down when it will not be used or hot tub that only comes on in time to heat up before you arrive home would seem to be worthwhile. If, as has been suggested, electricity companies begin billing at different rates based on peak usage hours, the products will quickly pay for themselves. Power companies are apparently considering this option because they often have to add new generating stations to provide power capacity during peak times. If they could provide an incentive to their customers to average their power usage more, the CEBus standard equipment could provide real advantages to consumers.

Bertsch divides his customers into two groups along a different set of lines. He sees the first group of customers as manufacturers integrating their own systems to allow data movement between two of their own products, so that say a thermostat can talk to the furnace controller. The other potential market he sees is for packages of products. Examples of this would be a TV providing an interface to control your furnace and air conditioning system, or a telephone to control your thermostat. In this sense AISI would become a manager between the manufacturers. According to Bertsch, "People who know TV or lighting systems, don't necessarily know networking issues. That's where we can help by making dds informadon standard and easily accessible."

As The World Turns...

The bottom line with all this is how much demand there actually is for this technology. Will housewives have to become systems analysts to troubleshoot their home networks? Will consumers really shell out more for a toaster that talks? or a VCR that can be programmed by computer? Tune-in early in the new century for the answers to these and

other intriguing questions.

SOURCES

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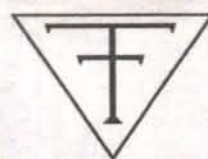
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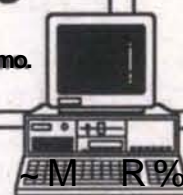
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 Price:

Introduction

Dreams is a mix between MacDraw II and some of the high-end CAD packages. It is designed to be a low-cost approach to Computer-Aided Drafting while keeping the familiar tools and methods used in MacDraw. While very

similar to its fewer-featured cousin, Dreams has a number of enhancements that makes it very attractive to anyone who wants to dabble in a bit of architectural, engineering, or cartographical drawing.

The Main Toolbox

The Dreams main toolbox is similar to the MacDraw II toolbox with some notable exceptions—the parallel lines tool, which allows the creation of a parallel line, a series of parallel lines, or a polygon with a double border; the ellipse tool, for creating ellipses (the tool under the rounded corner rectangle tool cre-



ates circles only); and the curve tool for creating Bezier or spline curves. Use of the tools is standard—click on the tool and then move into the drawing area to use it. However, an additional feature is included: click and hold on any of the tools below the text tool, and a pop-up menu appears allowing you to modify the action of the tool. Clicking and holding on the line creation tool, for instance, allows you to choose between creating an unconstrained line or one constrained to 90, 45, 50, 135, or 54 angles. Similarly, circle creation tool shifts between creating circles based on the diameter, the radius, or on three chosen points.

Parallel Lines

Definitely one of the niftiest features of Dreams—and one usually found only in the high-end CAD packages—is the creation of parallel lines.

Using the parallel line tool, you have three options: drawing parallel lines, drawing an open polygon with a double border or drawing a closed polygon with a double border. With all three options, you can specify the distance between the parallel lines, how the ends are to be capped (open on both ends, or closed on the left, right or both ends), and the alignment (whether the line you draw defines one or the other of the parallel lines or the median between



the parallel lines). Once you have drawn a line or object with a double border, you can fill the space between the lines with any pattern, shade or colour that has been defined. You can also change the colour or shade of the lines themselves, although you cannot alter the weight or style of the lines.

Dimensioning

Trying to draw plans for your dream house can be a problem if you are using most of the drawing packages available—you have to keep a calculator handy to convert from feet and inches that your plans are measured in to the inches and fractions of an inch shown on the screen. Dreams takes care of that by allowing you to choose the scale and measurement units that best suit your drawing.

For your house plans, for instance, you may want to choose to have one inch on the screen represent 10 feet on the plan. You have 24 different English measurement scales (from ones on screen equaling one-tenth of an inch to 1"=1000") and 20 Metric scales (from 10:1 to 1:10,000).

Dreams also eases the addition of dimension lines, allowing you to measure the distance between two points along a line joining the points, or the horizontal or vertical distance between the points. It then puts in the dimension lines and the actual dimension.

That measurement is dynamic—it will change as the distance between the two points being measured changes. The result is that you can dimension your drawing, then make changes to the drawing and the dimensions will still be accurate. You can even move the dimensions away from the original object—into a table of dimensions, for instance—and they will still change as the size of the original object changes.

Another type of dimensioning that is available is an area calculation. Given any closed or open shape, this feature will give you the area enclosed within that shape. This figure is also dynamic, changing automatically if a change in the shape alters the area enclosed within the shape.

Help

The Dreams manual is easy to read and reasonably well organized, with a few exceptions. The section on drawing parallel lines, for instance, starts on page 298 and extends through 249, but the section on filling the area between the parallel lines is on page 542. What's more, in the "Parallel Lines" entry in the Index makes no mention of filling the area between the lines—you have to look under "Filling Objects" to find that. There is, however, a cross-reference to that page within the parallel lines section itself.

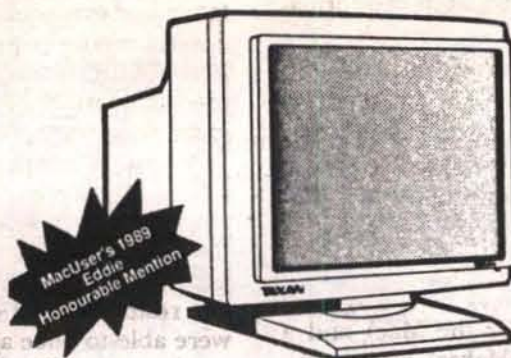
Dreams on-line help is adequate, although they make frequent and obvious

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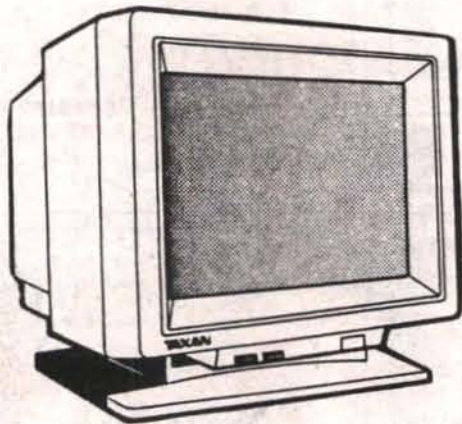
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Hotel Restoration Project Uses Macs
 The Empress Hotel graces the inner harbor of Victoria with its Victorian-era charm. The hotel was first opened back in 1908, and at the time was a very modern up to date classic hotel in the grand style of Victorian times. Over the years she has kept well, keeping that certain charm and elegance, but it was evident that she was growing a bit dowdy. The owners, CP Hotels, had recognized this fact and about two years ago launched the massive undertaking of restoring their 'Jewel of the Pacific' to its original splendor.

The scope of the work to be performed was immense. All the guest suites would be completely renovated. In addition to the public areas and all the working areas of the hotel would receive detailed attention as well. Work to be done ranged from new structural additions to enhance the workings of the hotel to major safety and comfort related upgrades. It also included the recreation of some original elements such as the glass covered dome in the Palm Court, and extensive work to refurbish the Crystal Ballrooms glassed ceiling. This was not just the usual redecorating job, nor just a renovation job, rather a restoration project. It is fitting that CP Hotels and their project manager James Consulting Inc. called the project "Resetting the Jewel".

The desire to complete the work in the shortest possible time within budgetary

guidelines is what made the Empress project special. Major renovations however usually mean a prolonged closure of the building as work proceeds. The recent restoration of the Moana Hotel on Waikiki Beach Hawaii, entailed a two year closure and \$50 million in costs to restore 224 guest rooms.

Dedicating unlimited resources to a particular task might ensure that it got done quickly, but then again it might not. To pull it all together, and effectively manage a project the size and scope of the Empress is a major undertaking. Just as the trades people on the project had their special tools the project managers also required tools to manage such a complicated work load. Their tools were a computer system and software to increase their efficiency.

Managing the project

A project is any task that involves managing time and resources. Today there are a wide variety of computer based programs that will allow the user to construct a model that enables simulation and calculation of alternatives that may impact a project as it develops.

At the Empress site John Hiebert construction manager for James Consulting Inc. set up a project team using the Macintosh as the computer system of choice. Each of the key members of the office and support staff had access to a Mac and the data that would be stored on it.

The computers were used as tools to manipulate the vast amounts of information that would be dealt with during the project. Basic word processing was the starting platform, since documents would be prepared ranging from daily work reports to transcriptions of site meeting minutes.

The next major function from the project managers standpoint was to account for all the costs incurred in doing the work. To do this work both a spreadsheet tool (Excel for the Mac) and a database tool (FileMaker) were used. The work in this area being twofold, first to prepare a budget figure based on estimates and quotations for all the work to be done, and then to track all these costs as the project manager disburses the owners money for the work done and agreed to. The spreadsheet capabilities of Excel were used to prepare extensive budget documents to model the finances involved in completing the project. FileMaker was then used as the database to track all incoming billings and expenses. Cost reports were then prepared and submitted to the owner in the typical progress claim format. The advantage of the Macintosh software tools in these areas was a combination of power, ease of use, and flexibility, especially when it comes to presentation. With the use of the Macintosh system top quality professional documents were always quick and easy to prepare, and use of a laser printer at the site ensured high quality fast output.

The most important use of the computer system was to prepare a master plan of how the project would be done, and to monitor the plan against actual to ensure that all work would be done on time and within budget. The budgets originally prepared for the job and the scope of work lists would serve as the baseline information. Using that information and standard estimating techniques, extensive lists of the activities to complete the project could be prepared. The next step would be to put all the

information about the project into a tool that would model the use of the resources on the project doing work over time. It would provide information for both the construction manager and owner that would indicate the status of the project.

The tool used at the Empress was MacProject II from Claris. This highly visual program is quite powerful in its capabilities for modelling a project and analyzing it. In MacProject II the data is input as sets of interrelated tasks. Each task is represented on the screen as a box containing the description of what is to be done. The tasks you create are then connected graphically, and a complete set of linked tasks will give an overview of how the work will happen.

The work to be done on the Empress was entered into a master plan in MacProject II. Using MacProject's sub-network capability, each major task was again broken down into a variety of subtasks, and each subtask then was broken down into the often hundreds of detailed tasks needed to actually get the work done. Once the master models were constructed it was easy to make changes to reflect what was actually happening. This gave the project team the ability to see what items were critical and might need special attention.

MacProject II made it easy to create a variety of presentation report formats that were used to communicate the vital information about the project. Sharing status information with other members of the project team so that actions can be taken and management decisions made about keeping critical items on track is possibly the most vital part of project management. MacProject II is a tool that made this easy.

By carefully planning their work and working their plan, so it was that early on the morning of April 12, 1989, as construction crews continued in the background with minor finishing touches, the restored hotel opened, and guests were able to once again check into the newly restored 81 year old CP Hotel. By the end of the day nearly 500 of the hotels newly restored rooms had been booked.

Even though there would still be work continuing on the site to finish all of the details including new construction such as a recreation facility, and new landscaping plus lots of other details, the main thrust of the project was a success. The major restoration work had been accomplished on time and within budgetary guidelines. In six months 400 workers had done the work that would normally have taken at least 18 months or longer. The hotel was again operating, and showing off her newly restored elegance to the public.

Macs played an important role in the \$42+ million restoration project. The site office used five Macintosh SE's networked to a laser printer to output all the numerous reports, cost control documentation and planning information needed to complete a project of this magnitude on time and within budgetary guidelines.

The use of computers enabled project manager, John Hiebert, and his staff to work effectively and efficiently, using the computer as a tool to get things done. Ease of use, the speed with which work can be done, and the high quality output were key choices in using the system.

Rolf Drommer is president of Harbinger Services, a Vancouver company specializing in project management for MS-DOS and Macintosh computers. 941-4789

CONTINUES FROM PAGE 32
 references to the printed manual and considerable information is missing from the online help — perhaps this is their method of copy protection.

The error messages one gets while using the program, however, are quite helpful, especially those associated with the tools. If, for instance, you click on the add tool, attempting to merge two shapes that do not intersect, the program will beep. If you double click on the tool it will come up with an alert box that says "Shapes do not intersect".

Other
 The use of colour and gray shades in Dreams is leaps and bounds ahead of MacDraw, with true gray shades represented onscreen (rather than more or less dense gray patterns) and colours are defined using the standard Macintosh Color Wheel.

Given two shapes that overlap each other, you can either add the shapes together, or use the top as a cutting tool to remove a portion of the underlying shape. The add feature creates a new object by outlining the intersecting objects. The original objects are then removed. Subtracting involves changing the shape of an object to go around all intersecting portions of the shape on top of it.

Often used objects — the symbol for an electrical resistor, a representation of a couch for use in architectural drawings, a mountain symbol for use on maps, etc. — can be stored in symbol libraries and then quickly called up and pasted into any drawing.

The objects stored in symbol libraries retain drawing information, such as scale and rotation, and can be called up by name, making their use quite convenient.

Cameron Smith, president of Concomital Communication Services, a computer consulting firm specializing in computers in the publishing industry. 581-2249

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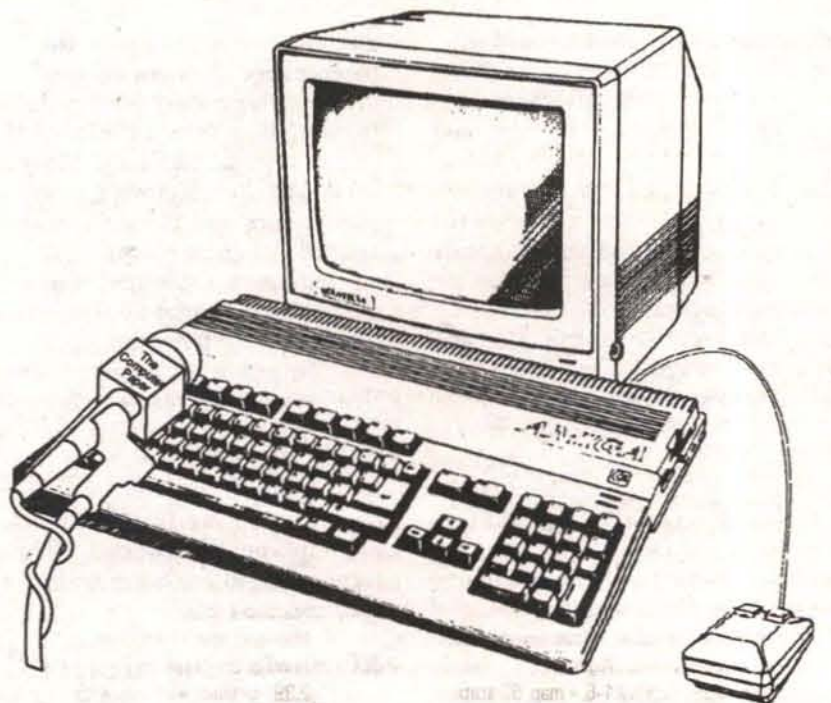
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INTERVIEW

Commodore Interviewed



James Dionne is President and General Manager of Commodore Business Machines of Canada. Commodore, started in Canada. It has been in business for over 30 years. It was an early player in the home computer market with the PET and C64 computers. A few years back it launched the Amiga series of computers. Recently it has brought out a successful MS-DOS compatible computer line. We recently had an opportunity to talk with Mr. Dionne when he was visiting Vancouver.

Have you been with Commodore a long time?

Yes, since 1978, I was hired as Commodore's original sales manager when we were just starting up. There might have been a couple of dealers signed on when I came on. We were selling calculators and Sling cabinets. In the early days, we had one dealer, Conti, in Vancouver. They still are a dealer here. Then we signed up Computerland. They no longer sell our stuff. We will be successful with or without them. Would we like to do business with them again? — sure. They have a big share of the reseller market. But we are not going to sit back and lose sales without them.

Our independents are very effective. Because we don't have a national chain, we have to look to our independents to carry the ball. It is more work for us to deal with them, but sometimes they are much more effective because they own their own stores. They will go the extra mile.

How do you work with your dealers?

We are dealing with corporations, but we let the dealers do the installations. There is still an incentive for dealers to go and talk to corporations. We get involved ourselves because some corporations will not deal with a small dealer. He may not be able to service their requirements across the country. So we work with the dealers and coordinate for them across the country. This is something fairly recent. We have just recently got the products that we feel are worth pursuing this way.

We have a very good AT. We have announced a 586 which will be available for September. It will be a total Commodore designed product, not just an OEM board. In the fall we plan to bring out the Amiga 5000, which will be a 68080 based computer. We are putting things in place to sell.

What is your sales break down? Where does the money come from?

I would say now the C64 and C128 computers account for about 20% of our revenues. Sales now are stable, but they have come down since 1986. We will do about \$100 million this year in total sales. In 1985, we did 100 million just on C64's. Our sales are growing, but they are growing from the MS-DOS and Amiga lines. That means about \$20 million in sales for the C64 line, and the rest about evenly split between the Amiga and the MS-DOS machines. The Amiga revenues are split between the 500 and 2000, though we sell many more 500's, but the 2000's cost twice the price. Revenue is evenly split.

What is the most profitable?

The G64 because it is older technology, not so much goes into development

now, then the Amiga, because we own the technology, and then the lowest profit margins are in the MS-DOS line. It is very tough to make money in the MS-DOS world. A lot of guys are in it that don't want to make money at it, and it is very competitive. We are not interested in being the cheapest. What we do is include a lot of features built right in. They are very advanced. What we always say is that we offer the best value. It is not the cheapest.

Where do you build your computers?

Right now we have switched all the production to West Chester, Virginia. We are looking right now at taking advantage of free trade.

What is your component break down?

Do you have more than 50% of the product made in the USA? (required to qualify for 3.9% duty exemption under the Free Trade Agreement.)

That is what we are looking at right now, many people don't realize that even if the machine is assembled in the USA, it may not qualify for the exemption, because the components come from off shore. Even with the duty free, on many of the machines, we are only talking about \$20-\$30 for duty. It is not as significant as many people would assume.

I like where our production is done because it is very close for us to get it in for our Toronto office. It cuts down on the amount we have to store in inventory. We can get equipment in 8 hours.

I also like the fact that it is made in the U.S. I think that customers feel more confident with equipment made in the United States than if it is made in Taiwan. Sometimes we do get equipment made in West Germany. That has a good association with quality as well.

Commodore is really big in Germany. Why is that?

Yes that is true. This year, 70% of the revenues of Commodore will come from Europe. We are strong in Canada, Australia. But in the U.S. some people don't even realize that Commodore is still in the computer business. Some of that spills over into Canada as well.

How many Amigas have you sold now?

In March, we just shipped the millionth Amiga. That is faster than the Macintosh got to its first million.

How many Amigas have you sold in Canada?

I would say 5040,000. Many of the 1 million sold are in Europe. In Germany they have gone completely crazy for the Amiga. At one point they were selling 15,000 machines a month. The pricing

is very attractive over there because the Deutsche Mark is so high. Germans also love the best technology. The German company has also done some good marketing. They got good name recognition by sponsoring sports teams. Many of our competitors in America are not so strong over there.

Another factor is that in the early days when we had a supply problem, the company would make more money on the machines over there, so they would ship the European supplies first. So quite often they would get the shipments and we would not. They built a stronger presence because of it.

We are starting to get a much stronger presence in Canada with the Amiga.

You scored a bit of a CSNP when you got the Ontario government to approve Commodore for education purchases. (previously the Education ministry had attempted to support their own "made in Canada" brand of computers the ICON.)

Yes, we worked for two years on that. It helped when the government changed. It was a poorly thought out policy. It is frustrating when you know you are right, and you can't get the other side to see it. They spent a lot of tax payers money to do that.

Many users comment that the Amiga lacks the polish on the operating system. Is Commodore planning to enhance the operating system?

With version 1.4, you will see a much more sophisticated operating system. We will be releasing a new chip set also which will give higher screen resolution. You will be able to upgrade 500s and 2000s to use Multisync monitors.

What computer do you use yourself?

Well, the most use I get on a computer is at home. I use the C128 only because over the years, I have acquired the software, and the kids like it. I have been meaning to make the change to the Amiga, but you know how it is with getting the time to change. In the office, we use PCs and Amigas and a System 58 (IBM). The PCs and Amigas work as terminals.

How can you network an Amiga?

The easiest way is to move to the MS-DOS side with a Bridge card and use Ethernet. We are developing a fully Amiga solution for the schools in Ontario. We are also looking at making it compatible with the more accepted standards like Ethernet. We can see using the new Amiga M00 as a Unix workstation. There are some third party cards around though.

Interview by Kitan Singh Khalsa

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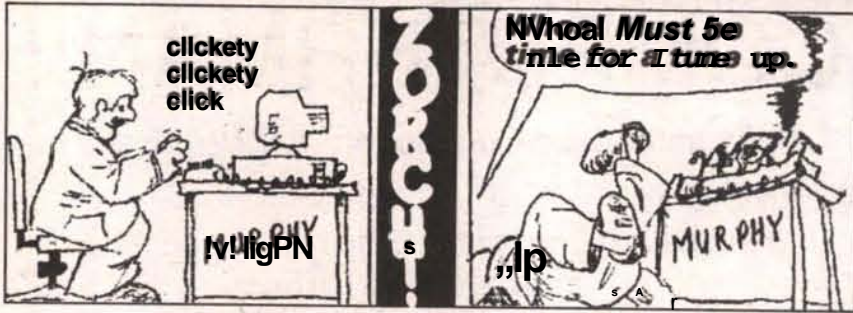
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Fixe Voice Connection

The march of progress is nothing less than amazing. Thirty years ago a 64K computer weighed fifty tons and filled the entire floor of a building. Ten years ago the leading edge 128K computer cost ten thousand dollars and users struggled to get something useful done. Today a computer can handle the world's economy or guide a spacecraft to any planet. And tomorrow... Well, with Texas Instruments quantum chips and gigabytes of memory on a device the size of a quarter, we are certain to see even more incredible changes.

Voice operated computers is the natural next step. Dozens of companies are working feverishly to solve the unique problems embodied in what comes to us so easily - speech. Efficient recognition and translation of speech sounds into data that the computer can manipulate will need the next generation of ultra dense and ultra fast chips. However, existing hardware technology already permits a peek at the future, and if you are patient, you can already control computers without touching the key board.

The Voice Connection Inc. of Irvine, CA, recently developed IntroVoice VI, a voice interface for IBM XT and AT computer. The system consists of a half card you plug into the motherboard, a microphone, speaker and the required software drivers. Installing IntroVoice VI takes just a few minutes. What follows takes a lot more time. IntroVoice VI is a voice input/output system device which allows you to enter commands or data the computer can understand. To do that you must first create vocabularies that store words or phrases. Up to 500 words can be stored and retrieved from the vocabulary. However, you can create any number of subvocabularies that reside on the disk, and using predefined words, you can switch and load different subvocabularies as needed. Each subvocabulary can contain up to 250 words. The switching time depends on the speed of your computer and disk drives. Expect 5-7 seconds delay. You can also link up five subvocabularies totaling 1250 words.

You must train the **vocalay** to recognize your speech sound pattern. An example session will ready you step by step through this procedure. Essentially, each word is repeated 5-10 times, more if you change voice inflections or the distance of the microphone from your mouth. Since all vocabularies and subvocabularies are stored on a disk and only one is active in memory at a time, the system allows several people to use IntroVoice VI. This is accomplished by creating and storing separate files for each person.

Before you can use IntroVoice VI to run application software such as word processors, spreadsheets, databases, etc., you create a dictionary of words which correspond to specific keys. A help menu is associated with the dictionary to help you remember the spoken words and corresponding key replacement you have selected. Initially you type the key replacement and the spoken word in the dictionary editing menu. Then you train the dictionary's spoken words to your voice sound pattern. Each key will then have a corresponding voice pattern stored in the computer's memory.

All functions can be replaced by voice commands. For cursor movement the keys are replaced by the spoken words; up, down, left, right, page up, page down, and so on. In fact IntroVoice transcends the language problem. There is no need to use English to control your computer. You can talk to your computer in German or French if you wish. Combining voice and keyboard input is also possible. Operation of IntroVoice VI is easy enough. Training the vocabulary is very time consuming, which leads us into assessing the practicality of voice interfaces in computers. For normal computer operation, don't throw out your keyboard yet. For special applications, such as CAD or when using two way radio links, IntroVoice VI can provide a direct data input link to your remote computer.

IntroVoice VI is probably a godsend to the physically impaired, immobile hospital patients, and as the system also includes unlimited text to speech synthesis and voice verification of each spoken command, it can be a useful tool for the blind as well. For the disabled it's an inspiring solution for maintaining contact with the outside world via telephone, modem, fax and other peripherals. The system can be used for real-time interactive control of household devices as well.

During the course of reviewing this product I encountered two occasions where re-boot became necessary. Other than that I found IntroVoice VI to be a workable tool, well worth considering for special applications. It is certainly more than a mere curiosity or toy, and the cost is reasonable.

For \$995.00 you get the complete system, which includes all the hardware, software and a small typewritten manual. In Canada IntroVoice VI is available from: Tech Speak Systems, 25 Frontona Ave., Scarborough, Ont., M1E-1V4 (416) 284-9055

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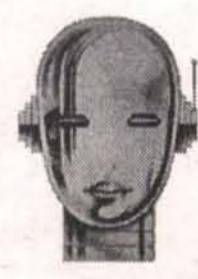
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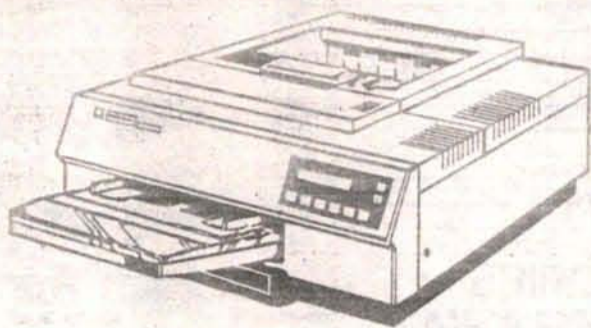
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"Good things come to those that wait."

Old Sayings

The old sayings have great wisdom in them. They tend to generalize a lot, but that only makes them more timely, so they last through the ages. Some things do that.

In the computer age, Word has been with us from the early days, growing as the industry grew. The latest version, 4.0, is finally shipping after a long delay. Has it been worth the wait?

Controlling The Power

Word has always been a powerful program. The trick was to control and manipulate that power. Word 4 gives the user this ability through customization of the menus. Any one of the numerous commands available in the program can now be placed on the menu for easy access. This is accomplished through the Commands dialog box which lists all of the available commands and even provides parameters to extend certain commands. Command placement and menu order are selected here through a simple interface. Command specific Help is also provided and makes for fast and to the point explanation of the command's function, as opposed to scrolling around in a main help section.

Speaking of dialog boxes, Word has slimmed down just in time for the 90's. The new dialog boxes sport a new streamlined look and feel. They've been simplified, regrouped and are less intimidating for the casual user. The power is still there (mere, actually) for those that need it, only it's been more efficiently designed and has a less cluttered look. The main reason for the streamlining has been the addition of dropdown lists that show available options. Also, links to related dialog boxes are provided for easy switching between dialogs (e.g. Page Setup and Document). Here are some of the additions and changes.

Locking Things In Position

A new Position dialog allows for a type of fixed positioning that "locks" a text

block or graphic into a certain spot relative to page, margins or column. Text is automatically wrapped around the positioned object. Any change to the main text doesn't effect the relative position, text merely re-traps around the object. The Show \$ command is quite useful in this context by showing the boundaries of text, tables and graphic objects for a visual aid in positioning.

A new Document dialog has been pulled out of Page Set-up options. Any thing that relates to the document itself is now in this dialog. It also has a new option that adjusts for work that is to be bound. The Page Set-up dialog now only contains options that directly effect printing.

Preferences

The Preference Dialog also sports new options. Custom paper sizes are now supported (mailing labels, etc). Picture Placeholders allow for faster scrolling in complex documents by replacing graphics by a empty picture box. The Smart Quotation replaces the standard keyboard "quotation" with real "quotation" marks like they use in the big time. Background repagination allows for automatic repagination as you make changes in the document. (This can be quite strange until you get used to it). Even the Paragraph Dialog has been reworked. New sub-dialogs exist for the manipulation of tabs and adding borders around paragraphs.

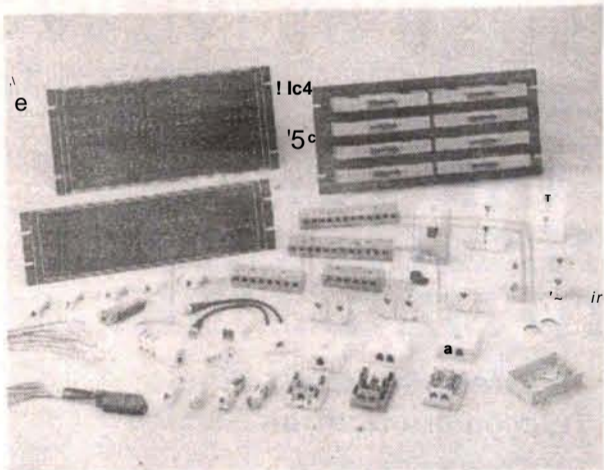
Faking WriteNow, MacWrite

All these options can get quite involved and readjusting them to suit different types of documents could be tedious at best. Word provides a solution by allowing a different settings file (menus, options, etc.) to be saved for each type of document you work with. These individual configurations change the main program to accommodate for different ways of working (e.g. financial reports, letter writing, resumes, etc.). An interesting working example of this is the supplied settings files for MacWrite and Write Now. Previous users of these programs can upgrade to Word while keeping same working environment (they are used to i.e. menus, document defaults, etc.).

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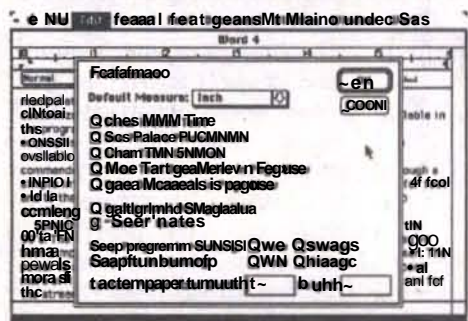
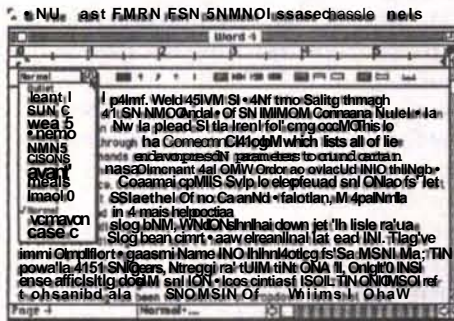
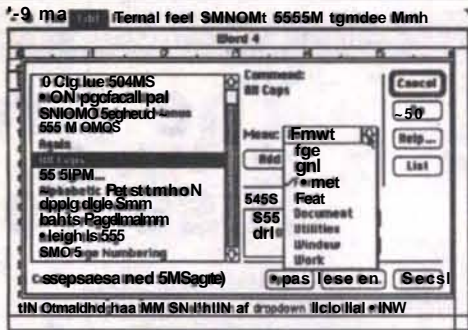
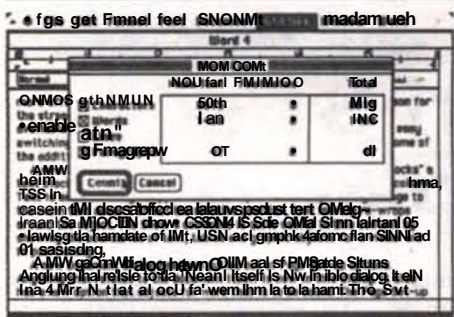


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you look at it that has changed. The new Page View provides a WYSIWYG image of your document. This is where you see how all the formatting elements such as page boundaries, positioned items and footnotes all fit together. They are displayed just as they will be printed on the page. This is not only a static view of the document either. All the features are still active so you can fine tune the document using this new perspective.

Outlining Improvements

Outlining has been enhanced by the addition of Heading and Body Text icons. Paragraphs can now be manipulated by simply dragging these icons to the appropriate level and position in the document.

Hot Spots

Active components called "Hot Spots" have been added to give you a dynamic page. Doubleclicking on these spots activate their associated functions. Some examples are:

- Ruler Labels bring up the Tabs dialog box.
- Page number panel activates the Go To command.
- Style name panel opens the Define Styles dialog.
- And on the reference itself
- Footnote reference mark opens the Footnote window
- Paragraph section marks bring up their associated dialogs.

The ruler itself has some component changes. The Style selection box, normally buried inside the Styles Dialog, has been added to the ruler as a dropdown menu. A Scale icon has also been added for altering column and page widths.

Tables

Tables can now be added and edited for setting up columnar and such as charts, forms, spreadsheets, newsletters and scripts. Existing text can easily be changed into a table and tabled information can be re-worked into text.

Odds & Ends

Here are some odds and ends. Additional glossary items have been added. Automatic date and time entries can now be used in a document to indicate time of writing or printing. Index and table of contents coding can now be inserted into selected text automatically. Document statistics such as characters, words, lines and paragraphs can now be analysed by the new Word Count feature. Go To and Go Back commands are great for sipping around a large document. Go Back features 5 levels of return.

Examples Included

Hats off for the support that's included in this package. Working examples that illustrate how to make use of all these new features is provided. They open up the power of the pro-

gram to the novice user (styles sheets, settings for labels, working with drop caps, etc). They also provide the experienced user with a template to help get along with the business at hand, and that business is writing.

Add-Ins: Thesaurus, Paint

It's also nice to see a working environment provided in the way of add on's. The Word Finder thesaurus is a welcome addition for any struggling writer. SuperPaint 1.0 has been provided to take care of graphic production. And the macro program AutoMacIII (somewhere between MacroMaker and Quick Keys in functionality) makes life a lot easier for repetitive sequences of action.

Support for other programs has some new twists, too. You can now open MacPaint files directly into a new window. Links to Excel 1.5 and SuperPaint 1.0 can be established so that material used from these programs can be easily updated as the original changes. Cut and paste is now supported in Rich Text Format (RTF).

Not Perfect

There is no Utopia, even in word processors, so I have a few reservations about this latest version. For one thing, in outlining mode, styles can't be defined. This may be important for the changing of the strange formatting of the default outline heading. The spell checker is also unavailable here, where much of the body text can be written depending on a writer's style (not to be confused with document style).

Hesitant Menus

The main dropdown menus are hesitant. This is probably due to the customization process of the menus. It's a minor point, but it is noticeable when you're flying around the program trying to get things done. Page redraw can also be slow in a complex document with graphics (this is where the Picture Placeholders come in).

Looking at the program as a whole, it is apparent that Word has matured into a very solid product. Even with all of it's new features, it still hasn't become an unwieldy monster (a la FullWrite Professional) so it's still viable for small systems and casual users. With the inclusion of such facilities as Word Count, Tables and Drop Caps, Microsoft shows it's commitment to the professional writer. Word's additional page layout qualities define new areas for a writing tool (is it still a word processor?). The overall support for the program is excellent and is one of the main reasons this is such a great "package".

It was well worth the wait.

Roger Stacey is president of MacSupport, a company that provides a wide range of support services for the Macintosh. Telephone (604) 681-9087.



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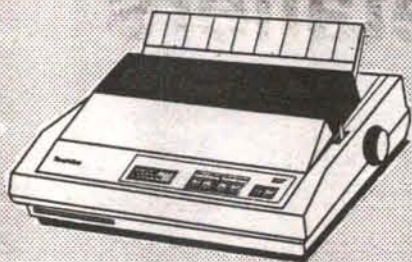


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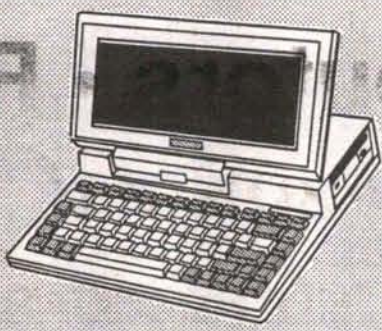
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MUSIC & COMPUTERS

The Atari ST's Rise To Power



The Atari ST computer has evolved to become a major part of the world music scene and will continue to do so. The Atari computer's quick rise to prominence in the music world began with the release of the Atari ST computer. In contrast to the Macintosh, its inexpensive price tag and processing power were attractive features however the two MIDI (Music Instrument Digital Interface) ports added to the computer's hardware helped create a preliminary buzz in the world music community. Having the two MIDI ports built into the Atari ST meant MIDI instruments could directly exchange information with the Atari ST computer adding convenience and flexibility and an additional savings because the user would not have to buy a dedicated external MIDI interface as is the case with IBM and Apple Macintosh users.

At first, it didn't appear to have the flexibility to accommodate synchronization to external devices but that soon changed via third party developers. The user interface, while not offering the slickness of the popular Macintosh computer, still featured a mouse and software that offered popdown menus at the top of the screen similar to the Macintosh. The Atari ST also offered a quick learning curve and a relatively transparent user interface.

In the North American marketplace however, the Atari ST made a slow start. Software companies were hesitant to make a commitment to the Atari because Apple and IBM computers were already well established in the professional industry and had a wide user base in all facets of film, music and audio production. The hidden potential of the ST was obvious to not only the industrial sector of the music industry but also to the growing number of semi-professional and amateur musicians who could take the Atari and IBM computer systems. This fact led to music manufacturers taking a more serious look into the future sales potential of the Atari ST in the world music markets.

Unlike North American companies, Europe welcome the Atari ST with open arms and a star was born. It is here that we can precisely pinpoint the life and times of the Atari's quick rise to computer stardom in the music world. The large European music community much preferred the price accessibility of the Atari ST to the Apple Macintosh. The ST's new popularity soon led to the appearance of the first major European MIDI product line. Germany's Steinberg Research introduced a line of music software and hardware which included the popular PRO-24 sequencer which featured 24 recording tracks, full editing capabilities, extensive copy, insert, delete and append functions and a dump utility. Steinberg's Soundworks software was designed to enhance sample editing of professional sample keyboards like the Akai S-900. Steinberg also released their Synthworks line of Editor/Librarians for popular synthesizers. North American markets were very receptive to Steinberg Research's efforts especially in lieu of the fact that Steinberg also offered free updates.

Clearly, German developers has gained ahead start on the American market and once distribution and translation diffi-

culties were cleared up the products gained more access and acceptance in North America.

The Atari ST has become very popular and in Europe, even the standard in the music industry. European Atari users were quick to give positive and productive feedback to software developers and update releases meant not only improvements to MIDI products but also a higher expectation from educated end-users. The sophisticated demands of the professional recording market led to the development of professional quality MIDI workstations complete with synchronization capability for film and video. Similar developments had been experienced within the North American music industry with the Macintosh and IBM computers and made these developments a natural next step for the Atari ST.

North American companies began showing some interest in the ST. Companies like Hybrid Arts, Passport and Dr. TT started producing products for the Atari. Digisign and Intelligent Music started porting their music software packages (originally developed for the Macintosh) for the Atari ST signaling a new acceptance.

Steinberg Research can be credited with establishing the Atari ST as a serious professional computer. Well-known European music groups like Tangerine Dream have been using the Atari ST for a number of years in their studio recording situations and live on stage.

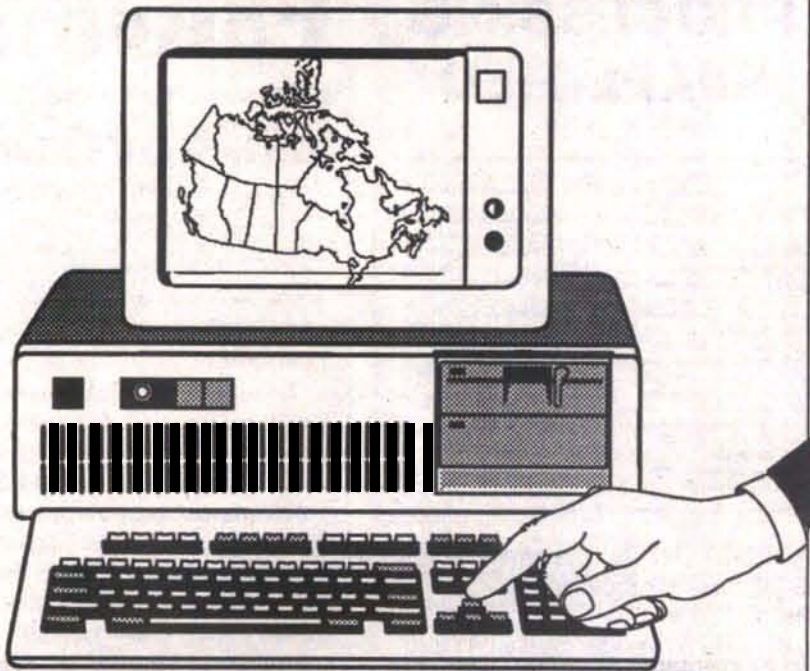
Not all was rosy with the Atari ST computer. In an attempt to keep costs down, manufacturers often release products that were inferior to the standards already set by the Apple Macintosh and IBM. Of course, this helped create an inferior image about the reliability of the ST and its dependability in professional music situations. As with most new software and hardware releases end-users experienced their share of bugs and crashes. Gyro's Mity between different manufacturers' products caused problems. Because of the distance factor, software that originates in Europe often entails long delays for update releases and slow movement of retail shipments much to the frustration of end-users and retailers.

The ST's MIDI port while being convenient, is a "dumb" interface with some simple internal software support. This shortcoming necessitated the need for professional quality external synchronizing devices for those in studio recording situations who require the capability to layer tracks using multi-track tape recorders. If the Atari ST is to become prominent in high-end audio applications, the availability of reliable and sophisticated MIDI hardware is a necessity. The demand for professional quality music notation packages for the Atari ST is another area of concern.



Danny Mott is a Toronto based computer products marketer specializing in music software and hardware. On Line Productions 179 Augusta Ave., Toronto, Ontario M5T 2L4

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With literally hundreds of word processing programs on the market today, why would anyone want to go to the effort of writing yet another word processing program? According to Raghu Lehdar, whose firm publishes and distributes MiniText Software, sells computers. Most of my clients, who buy equipment from me, are first time users. They are faced with learning many things at the same time. They must master the operating system conventions, how to name, copy, delete, move, create files, how to format disks, to print lists, etc. etc. This initial period of their computer learning is difficult enough. It need not be made more trying, by having to learn hundreds of program commands that are difficult to remember. MiniText is a program that has logical commands that are easy to learn, and more importantly, easy to remember, even weeks later.

He continued, "Most word processing programs use arbitrary key strokes to execute commands, like <CTRL><K><D> to save, or <SHIFT><T> to print. MiniText uses the <ALT> key with the first letter of the command, to execute it. This is very easy to remember. We use <ALT><S> to Save, <ALT><P> to Print, <ALT><L> to Load and <ALT><G> to Quit. How do you get the help screen in MiniText? <ALT><H>, of course! This, together with other easy to learn concepts, make MiniText the right choice for the first time user, or a person that doesn't use a word processor often."

I took a copy of MiniText home and put it through its paces. It is simple, and very easy to use. It produces ASCII files, which is handy for editing batch files. The printing utility runs quickly, and supports bold and underlined text. MiniText has many features found only in the very expensive programs. Alphabetical sorting, mail-merge, envelope printing, file encryption, are just a few of the features of MiniText, and they work well. On the other hand some functions fall short of what we came to expect from a word processor. The word search works quickly, but there is no automatic replace. Block commands move, copy, delete and re-format, but the size of the block is limited. The manual that comes with the program is not well written, but at least the on-screen help is adequate. I certainly would not want to write the Great Canadian Novel, using MiniText, but for writing letters, reports, telephone lists, and the like, MiniText fills the bill. It is an excellent program for the novice, and occasional user, and the cost is very reasonable.

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B. C. NEWS

**SELLING
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An article in the NENUBIXS section of last month's edition of The Computer Paper called **DELL HITS THE ROAD IN B.C.** caused something of a stir within the local computer manufacturing community.

The story, from The Computer Paper's international news service was about B.C.'s Ministry of Transportation and Highways plans to buy 500,4 million worth of personal computers from a firm based in Austin, Texas. The company also has a Canadian office in Toronto. This was the first many local bidders had heard of the competition's result.

Complained one local computer manufacturer (who wishes to remain anonymous to avoid jeopardizing future contracts from the B.C. Purchasing Commission): "The tenders were judged solely on price, not on value without regard for their (the B.C. Government's Purchasing Commission) expressed policy to buy locally."

"All things being equal in the tendering opportunities," replied Matt Farquhar, the Purchasing Commission officer most involved with buying Dell's System 510 PCs for the Ministry of Transportation and Highways, "the award would go to a B.C. company."

One reason the Ministry cited for their selection was Dell's unlimited technical support. Farquhar added: "The third-party vendor is Bull, formerly Honeywell Bull, which has a substantial technical support base in British Columbia."

"The service they're offering," he continued, "ought to be maintained for the duration of the warranty period" including hot line support by Dell.

Farquhar said there is a policy in place through "our Supplier Development Program to actively support and encourage B.C.-businesses to bid on government tenders."

Those wishing to bid their services or products to the B.C. Purchasing Commission should call 1-409-937-RES (Vancouver's Enterprise Development Centre) for instructions on how to submit bids.

Those specifically interested in manufacturing computers for the Purchasing Commission should call them directly in Victoria at 583-8100 for the Infomatics Group (ask for Frank Kickbush). They will let you know how to get on their CAM system.

But one word of caution: Just because you've on the government tender list, warns Farquhar, doesn't mean you should sit by your mail box waiting for it to fill up with government tenders. You're still required to sell to the Ministry. "It's up to the vendors to take their company and their products to the ministries and let them know what's available to them."

Once a ministry determines that they have a need for a product or service, it is taken to the Purchasing Commission which works with that particular ministry to assemble a bidders list. This will be made up of vendors who have been actively selling to them as well as from the CAM system.

Allan Earle

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Apples BC Computer Lorne 467-6062.
Apple II User Group BC Apple Society,
 Burnaby Rugby Club Kiyu Masuda 437-9935
Apple III SIG Monthly Kiyu Masuda 437-
 9935
Astute - Atari St. 1st Tues. of month 7:30
 Hastings Comm. Centre. Membership \$15.
 Dave Whalley 942-8301.
Beaver Valley Commodore Club Meets first
 Tues every month at Montrose School Li-
 brary. Call John Vink 367-6426
B.C. Regional Users Group. Society of
 Hewlett-Packard Users. Call Terry 420-1277
B.C. Unix User's Group meets 4 times a
 year. George Pajari 925-2555, 2545 Queens
 Ave, West Van V7V 2Y9.
B.C. Software, General meeting,
 Benedict's, 1170 West Pender, 7:30 p.m.
 June 15
Clipper Developers 1st Mon SFU 873-0747
Commodore Club 1st Tues Sunset Comm
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Data Processing Management Association,
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 271-1519
Mac User Group Meeting BC Apple Soci-
 ety, WCB Building, 6951 Westminster Hwy
 437-9935.
MacWest Computer Society
 2 monthly meetings for members, plus PD
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General Meetings - 2nd Wednesday 7:30pm
MacWest New User Meeting - 3rd Wednes-

day 8:00pm Room 203, Kwantlen College,
 Newton Campus 13468 - 77 Avenue, Surrey,
 PD Copy sessions: 2nd Thursday of the
 Month at various :Bob Scales at 464-3645.
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Mission Computer Users Group
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Maple Ridge Computer User Group
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New Apple Alliance, May Chow 224-9199.
NEC APC Users Group Lee 980-5825
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 Ave. Surrey. Third Tuesday of each month.
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 7609 last Saturday of month Kits Neigh-
 bourhood House.
TI Computer Club Texas Instruments 2nd
 Wed. 11339, 84th Ave., North Delta., Hill-
 side Boys Club, Attn: John Auperly.
TRACE (Richmond Atari Club) Thompson
 Comm. Centre Linus Lane Richmond, 272-
 5789 1st & 2nd Monday 7:30-9:30
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 Gilmore Way, Burnaby, Contacts: John Car-
 son 581-6690; Laurence Byers 525-9661;
 Steven La Favor 467-0923.
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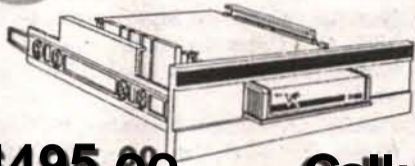
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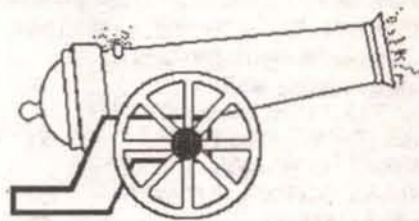
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