Volume VII Issue #6

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THE EPSON LIFEBOAT

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THE EPSON LIFEBOAT

Volume VII Issue #6

NATIONAL EPSON USERS GROUP

December-January, 1991

Correspondence, membership applications, dues advertising inquiries, products for review, technical questions, & items for inclusion in this publication should be directed to:-

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The Epson LifeBoat is issued 6-9 times per year, & mailed to fully paid up members of THE NATIONAL EPSON USERS GROUP (NEUG). Annual dues are $26.00 ($40 U.S. for Canada addresses), $45 U.S. Overseas, & only $22 for matriculated students of an accredited college or university). $180.00 for lifetime membership. Reduced individual membership dues are offered to local users groups who initially enroll 10 or more members; details on request. ***Second year membership includes participation in the Parts Replacement Service for one computer.***

Membership in the National Epson Users Group includes Epson LifeBoat newsletter subscription, participation in the group's Co-Op, access to the Group's Public Domain 1800+ disk software library (distributed on an as is basis), & participation in the Users Group disk program. New members will receive at least 1 free disk from the Users Group disk library (*except members paying the discounted dues schedules offered above*). LIFE MEMBERShip gets the member's choice of any seven UG disks. USPS First Class Delivery is available to all members for $6.00 annually. DUES **RATES HAVE BEEN RAISED IN 1991 DUE TO POSTAGE INCREASE!!**

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· limit of one per address

Members should check their address label. A membership number & an EXPIRATION DATE will be found on the first line. The membership number is needed to access the Epson BBS. All member renewals received ONE FULL MONTH PRIOR to EXPIRATION, may obtain a special UG disk for an extra $5.00. FIRST CLASS DELIVERY (for US addresses) is $6.00/year additional.

WE DO NOT MAIL RENEWAL/DUES NOTICES Have you checked your Expiration Date?

NEUG is the world's largest NOT FOR PROFIT Epson User Group, & maintains a library of more than 2,100 disks of Public Domain & User Supported software, money saving CO-OP for computer related items, a HARD/SOFTWARE MART, & is dedicated to supporting QX & PC compatible users. Even IBM PC users are welcome!

NEUG reserves the right to refund & thus terminate the membership of any individual whoose continued participation is not in the best interest of the overall membership. NEUG is NOT a marketing arm of Epson America, or any related commercial organization. NEUG supports users of all CP/M & MS-DOS computers, & our main goal is to make computing easier, more fun, & more comprehensible for all members.

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EDITORIALS

PRODIGY DOES NOT provide users with all it seems to promise! The public is supposed to believe the main difference between between the US & the USSR is Freedom, & the ability to have faith in contracts. Prodigy certainly has not demonstrated it is faithful to these concepts!

When Prodigy first came on line, it promised users a flat fee ($9.95/mo) service, including unlimited E-Mail messages. Then, they 'Bait & Switched' by changing the rules to $12.95/mo & adding a #.25 charge/message for each E-Mail message after the first 30/mo. Naturally, these changes were both resented & protested by early Prodigy subscribers.

A group of 10 subscribers carried their protest to a Conference on Prodigy called Cooperative Defense Committee (CDC). They actively grumbled about the change from a totally flat fee service, to a higher fee, & the innovation of E-Mail charges. According to an article in InfoWorld (11-19-90 page 35), Prodigy reacted. On October 30, the 10 CDC member found their Prodigy accounts had been terminated, & their on-line forum had been eradicated! Many Prodigy users feel the group was expelled, & the forum terminated because Prodigy management wanted to squelch any controversy! Prodigy is owned by SEARS & IBM.

This kind of non petitionable prior censorship is one of the reasons the founders of our country implemented the First Amendment! **According to InfoWorld, "This is not the first time Prodigy has closed a discussion area. In December 1989, the company closed the 'Health Spa' area after a fierce debate broke out between fundamentalist Christians & homosexuals."**

The whole concept of Personal Computing is to provide an easy way for people to communicate. Only in a free society, protected by the freedoms of speech & the press, will a Personal computer remain a Personal computer! When an institution attacks the individual right to Freedom Of Speech, that entity is attacking YOU!

Is the hard won right of Freedom Of The Press also being infringed? Some answers may vary, but I believe when a person's thoughts, musings, & even their complaints are once made public, ONLY the laws of Libel, Slander, National Security, or a judges decision that the published remarks are in aid of the commission of a felony, or infringement on the Constitutional Rights of another is being committed; can justify the censorship of the remarks, or the punishment of those making them!

Remember the quote, "I do not agree with what you are saying, but I will defend your right to say it!" Regardless of your opinion, or mine, as to the fairness of terminating the CDC group & their conference, we have a responsibility to REACT! As InfoWorld said, "something bigger than money could be be at stake for on-line users."

In repressive societies; Iraq, mainland China, VietNam, & South Africa; people are jailed, beaten, & even killed for expressing opinions, or even facts! In our country, a large amount of blood has been & is likely will be lost to defend these fundamental right of Free Speech. Many of us wore a uniform proudly to protect our rights, & those of others. If we allow Prodigy, or any other institution to infringe, even a little, on Free Speech, we ALL lose.

I do not lightly suggest every one should cancel their Prodigy account, but that might be a thought! We, as a nation, have taken a stand against aggressors. "***No aggressor should ever be allowed to profit by their act of aggression.***" I do believe everyone, Prodigy participant or not, has a responsibility to protest their actions. If I was still a Prodigy subscriber, I would use my 30 free E-Mail messages to publish this editorial on 30 different conferences.

If the unilateral decision to obliterate the opinions of the CDC is allowed to pass without a fight, each of us loses! A few electrons, or a bit of ink & a stamp can be the weapons. That's cheap, considering what it cost to gain our right to express our opinions, & what we could all lose!

Yes, Prodigy has subsequently attempted to respond positively to the nationwide chastising they have received. Yet, they continue to eradicate any messages 'not in the interests of Prodigy or any of our advertisers'. They must decide to restrain their Hussein-like censorship, & rejoin the free world. In the meantime, NEUG urges users to Boycott Prodigy. Instead, members might substitute GEnie.

To signup on GEnie, call 800 638 8368, when connected enter **HHH<CR>**, at the **U#=** prompt, enter **XTX99492,GENIE <CR>**. For more info on GEnie, call voice 800 638 9636. They offer a satisfaction moneyback guarantee, & charge only $4.95/month! Lots of Ex-Prodigy users will be online with GEnie with you!

This editorial might have some additional impact if members want it to. You might want to post it on the BBS's you frequent, or get your local UG newsletters to reprint it!

Are you abused?

The Software Industry has been abusing users! Anytime they need a few bucks, a new upgrade comes out. Or they put out their product, & it has bugs that might have been cleaned out with just a little more time & effort. There should be a some way both the user & the publisher can arrive at a fair arrangement.

The best suggestion I can put forth is also a simple one. When a user buys & registers a program, he could simply attach a dated proof of purchase. There after, he would be entitled to all updates & bug fixes for a period of 18 months from the date of purchase. There would only be a simple shipping & handling charge of $10 for the update or bug fix.

This would also serve the software publisher well. They could bring a program to market sooner, knowing they can fix the bugs as they are found. They would enjoy the income from the initial purchase sooner, & yet retain user loyalty as they are assured they will relieve a bug free program & perhaps an update.

The user would be able to have confidence he would soon receive any bug fixes in a prompt manner, as it is in the publisher's best interest is to get any fixes out before his installed base gets too large! And instead of facing the cost of annual updates, the user would have confidence knowing he would receive any new update, at a reasonable cost, during the first 18 months.

Today, we are faced with high initial purchase prices, & an unknown cost for future updates. The least we should expect a publisher to do for us is to declare his update policy ahead of time. If one publisher tells me in advance that updates will cost $150, & another tells me their updates will only cost $25, guess which program I am more likely to purchase?

The first publisher willing to adopt prior disclosure of update pricing, or a 12-18 month buyer protection plan will certainly gain a significant market share on their competitors. Certainly the current practice of granting free updates to those who bought the program only as far back as 2-3 months is despicable. Often it takes that long to gain a functional knowledge of the program! The publisher often can lose his market share by implementing an expensive & restrictive update policy. Lotus opened the door to Borland by charging $150 for updates, while Borland aggressively priced Quattro at $99!

The user is really screwed by MicroSoft's Windows 3.0, if they have a system has a drive with more than 1024 cylinders, or one of the other attributes that makes Win 3.0 crash a system. These individuals are entitled to a free upgrade to a functional program. As the system works now, MicroSoft doesn't care if it works or not, & has no incentive to correct the problems. So, some sort of "refund policy" is also long past due.

Perhaps the best overall solution is to have the Industry establish a standard bug-fix, updatc, & refund policy? They have successfully lobbied to make software rentals illegal, & changed the copyright protection policy of several foreign countries. Now it is

time for them to clean up their own house, & treat their customers fairly. As it stands now, it is entirely possible for a user to buy a major software package, & have to face TWO updates in the same calendar year!

Some of our members are wandering across the world, & not telling us about their new addresses. That means the LifeBoat will NOT ARRIVE. You have to tell us about your new location! If the USPS has to tell us, we both lose, it costs us $$, & they usually keep the issue anyway!! Some might want to consider adding the $6.00 first class postage fee to their next renewal to assure delivery, & get the LifeBoat much faster!

SHORTCUTS

Do It With a Macro! by Ted Smith

Macros are great gadgets for simplifying complicated programs, for saving time, & for automating long jobs. A PC does things. To make it do those things you have to hit keys, sometimes lots of keys. Then it does the things. Programmers write programs so you won't have to hit so many keys to accomplish the same things. A macro is a way of programming your PC to do complicated things without having to hit all those keys. But you don't have to learn to be a programmer!

What is a macro? A macro is a way to make your computer behave like a tape recorder. If there is something you do all the time, a macro records all the long steps you go through, all the keys you have to hit to get something don3e. The macro "plays back" all these steps whenever you tell it to.

The next time you have to do something complicated you have done before, imagine just being able to hit a "hotkey" combination, like the ALT key plus the letter X, or the CTRL key plus the letter A. You've just ordered your computer's macro to automatically repeat every last thing you used to have to do one step at a time, typing in all the keys.

More & more people are finding out how useful macros are. Just look at the number of software companies jumping on the bandwagon. Microsoft Works, WordPerfect & Lotus 1-2-3 have had macro capability for years. But now Ashton-Tate has added macro capability to the latest release of Ashton-Tate's dBase. Lotus decided to add macroing to Magellan, a simple new program for searching hard disks. Shareware programs now include macro capability. Affinity Microsystems in Boulder recently announced a macroing tool for Windows that even records mouse movements, in addition to keystrokes. So many people are interested in macros that one local bookstore has three different books each on the sole topic of WordPerfect 5.0 macros, & three more different books each on the sole topic of 1-2-3 macros.

Things Macros Can Do For You The best macros often are the simplest ones. My secretaries & I turn out a lot of documents that keep changing from double spaced to single spaced text on the same page. In the word processing program I use, to go from single spacing to double spacing, I have to use five separate keys, go through two levels of menus, & then hit <CR> three times. No way am I going to do that. I have two macros. I hit **ALT T** for [t]wo spacing. I hit **ALT o** for [o]ne spacing. It's as easy as that.

A very simple spreadsheet macro just makes words wrap around in a cell. That seems unimportant, but it makes it easy to type in comments in the middle of a spreadsheet.

Or how about this: I never remember to save to disk as often as I should, so how about a macro to save my work to disk automatically every five or ten minutes, without hitting any key?

The maybe not quite so simple things. Some macros are more complicated, because the things they do are more complicated.

I wrote a macro for my firm's secretaries. They press the **ALT** key plus **M** for [m]ail to start it. The macro asks them whether, for the letter they just finished, they want an envelope, a label for a package, or a Federal Express form. Then the macro reads the letter, finds the address block & automatically types the envelope or label or form. This saves time. Much more important, the secretary is happier. The secretary doesn't do the boring job of setting up a new file & retyping the name & address.

Another great macro for the office is the pop-up phone message pad. Does someone have to type & also answer one or two of the phones? Just use a word processor macro that pops up, automatically notes the date & time in the message & then asks the user to type in the message. Anyone on a network can access the messages, or the messages can be printed out.

For a very sophisticated example, everyone who came to the May MICRO meeting saw a spreadsheet macro that did a real sales job. It prompted for the entry of information -- lots of information -- about how a firm used computers. Then it figured the cost & benefits of adding new hardware & software. It quickly gave the computer consultant & his client a comprehensive analysis of the money the client could save by adding hardware or software. It wasn't an expensive or complicated program. It was a macro. (It even was a macro running on a shareware spreadsheet.)

When you write, do you use a lot of standard paragraphs? Why not hit a key & get a list of those paragraphs? Then hit 1 letter to pick out the paragraph & have it quickly typed into your document.

Suppose you write a lot of long form documents. They're always the same except that you have to fill in a few names & numbers, in many places throughout the forms. A salesperson writing a complicated proposal might do this. So might a lawyer preparing a will & trust package. Just use a macro that asks you once for the names & numbers everywhere in long & complicated documents.

Some printers leave the first page of a document on the bottom, so you have to go through & resort the pages one at a time. How about a macro to print the last page first?

How about something really wild? If you're a business school type, write a spreadsheet macro to evaluate decisions & risks by an automatically- generated decision tree.

These are examples of complicated macros. They take more time a to set up. But then they may pay you back by doing much more for you after you set them up.

Another thing to do with macros is to "rewrite" all or parts of your computer's keyboard. You could change your entire keyboard from the funky old QWERTY style to the super-efficient Dvorak keyboard, where the most frequently used letters are right beneath the rest positions of your eight fingers. (*Next, you can spend several years finding a typist to type on it.*) If you don't want to get that dramatic, you could customize a few of the function keys or other keys to start up some of the features you use most often.

Complicated New Releases, Simple Old Macros Macros become more important every time a new application program ships. WordPerfect 5.0 includes many new features, particularly desktop publishing tools. Lotus 1-2-3 Release 3.0 adds many features such as linkable three dimensional spreadsheets. The wave of the future seems to be to add new features for every kind of user. That's wonderful, but all the new features have to be packed into the same old ten function keys. If one function key is going to be the gateway to umpteen new features, you're going to have to work through a few menu questions about just what you're trying to do.

But you don't want to answer questions about picking all these magic features that enchant all sorts of other people. You want fast easy ways to start up the specific features you use.

Say that you used to hit only **SHIFT-F7** to get a simple thing done. The latest release makes you hit **SHIFT-F7** & go through one or two or three menus & questions to get the same simple thing done. You have to go through all these levels of prompts just so the function keys can include all the version's new goodies, most of which you'll never use. The only way to live with all these steps is to take the things you do most often & condense three or four more steps into one easy, hotkey triggered macro.

There are five basic ways to use macros.

Tape recorder. Many commercial & shareware programs include macro capability. Nearly all programs with macro capability have the "tape recorder" function. Usually all you have to do is find the appropriate "start recording" key in your instruction book. Press that key, & the program starts recording everything you do on the keyboard until you tell it to stop recording.

Standalone programs. Some programs aren't part of an application program like dBase or 1-2-3. Their specific purpose is to let you write macros to operate at the DOS prompt or within all your applications programs. I think the shareware program New Key is just as good as the commercial programs SuperKey & Smartkey. These programs allow the "tape recording" of many keystrokes so those keystrokes can be played back automatically just by hitting a single hotkey.

Macros from DOS. Old DOS hands already will have recognized that a macro does the same kind of thing a batch file can do. These are shareware batch file language helpers available. More complicated yet is the se of ANSI.SYS to invoke a DOS function like DIR by a hotkey like **CTRL D**, as described in the June 1989 *PC Resource Magazine*. This approach isn't easy, but may let you use your reassignment keys in different application programs.

Macro collections. CompuServe & other national on-line systems have collections of macros for Borland's Superkey & for WordPerfect & other specific applications programs. Many bulletin boards have some macros for different programs. Local users groups for specific programs have extensive collections of macros. (*The Denver WordPerfect users group have two free disks of excellent macros.*) The Data Base Advisor BBS has shareware programs that amount to macros for dBase. Gordon McComb's book *WordPerfect 5.0 Macros & Templates* is full of examples of time- saving macros, most of which are on the disk included in the book. To help you start, take a look at macros others have already written. Often you can edit them to fit your specific needs.

Macro programming language. Some applications programs allow you to write in their own macro programming language. Using the languages isn't easy, although it's certainly easier than programming from scratch. Using macro programming language is necessary to do certain things, like stopping in the middle of a macro to prompt for you to answer a question. Macro programming language of application programs is going to be easy for those who are already programmers, & not so easy for others. If the others for whom it is not so easy want complicated custom-made macros, they're going to have to pay the price of the learning curve.

Writing a Macro? How do you write a macro? The answer is different for different programs. Entire books have been written about macros for a single program. But there are a few simple principles for everyone.

First, spend some time imagining the way macros can save you time. Think about things you do on your computer that make you hit the very same four or eleven or twenty-one keys every time. Think of paragraphs that have to get retyped day after day after day. Think of complicated things you do on the computer that it could do automatically, particularly if it stopped once or twice to ask you for input or choices. These repeated things are what macros automate for you.

2nd, find out how to tell your program to start tape recording a series of actions. In WordPerfect 5.0 you hit **CTRL & F10**. In Lotus, Works, dBase, SuperKey, Smartkey & NewKey you start the tape recorder going by hitting other keys. Read all the instructions carefully. There may be problems peculiar to the specific program. For example, in 1-2-3 you must pick a location for your macro in your file that won't get overwritten by other tasks.

Third, start the tape recorder going in the way you've learned, & then go through the steps very carefully. If there are many steps, you may want to write them down first. One wrong step may foul up your entire macro.

Fourth, don't forget to stop the tape recorder going by hitting the keys necessary to stop recording the macro, & store the macro to memory. Save the macro under & easy to remember name, like **ALT E** for write an [e]nvelope, or **CTRL S** for [s]ave the file. use mnemonics. Now try the macro out.

Trouble shooting it. If you have trouble, there are several ways of trouble shooting. First, write down the steps you took while the tape recorder is running or print them out. Try them a step at a time (without any macro running) to make sure the steps do what you want. Second, understand that macros won't let you include some commands. No macro could record an adjustment you make to your monitor's brightness control. Some macro-writing programs may be equally unwilling to include some commands as easy as <CR> or a function key. Try again with a different command. Finally, check your manual for trouble shooting or debugging methods. WordPerfect 5.0, for example, lets you slow down your macro so you can watch to see the exact step where something goes wrong.

Nesting macros One macro can start another macro running. That's called "nesting." An example at the beginning of this article was a macro I wrote to let secretaries automatically generate an envelope, label, or Fed-X form. I wrote 3 separate macros to grab the address from the letter. One writes an envelope, one writes a label, & one fills in a Fed-X form. That way I kept each macro simple, so I could write each one easily. If there had been a bug, I'd have been able to work on the bug in each short macro one at a time.

Then I wrote a macro to ask the user which macro to use -- envelope, label, or Fed-X, & to start her choice of macros running.

Macros are much easier to read & to trouble shoot if you write them one piece at a time this way. You don't have to get into macro programming language to "nest" macros. when you are creating a macro by using a "tape recording" feature, everything gets tape recorded. If you want your new macro to trigger a macro you already wrote by pushing **CTRL X**, just push **CTRL X** when the macro "tape recorder" is running. The macro tape record will know what you want it to do.

> Keeping track of your macros

Make sure to keep track of your macros. If both **ALT** & **CTRL** keys can be used as hotkeys to start macros running, your total can be 52 or more macros. You could write a label of several letters or a word for many more macros. You could forget the name or the hotkey for one you haven't used for a while, or even forget that you even wrote a macro to help you.

Find a way to remember your macros. You could write a macro to pop up a menu of macros. Otherwise, keep a handy list of macros. You could have several pages in a notebook. You could even use one of the gadgets that holds a piece of paper at the side of your monitor to keep your list of macros hanging right in front of you all the time. For WordPerfect 5.0, shareware programs will either generate a list of all your macros, or will generate a copy of each step the computer takes in each macro.

The macros you write may represent a considerable investment of time. Invest just a little more time so next week or next year you have a way to find an old macro.

> Back To Complicated Macros, Simple Macros

Macro writing is very easy for simple macros. You just run the tape recorder once, & then let it work for you. If you are willing to invest the time of writing or collecting very complicated macros, your investment may pay off many times in frustration or time you or your firm saves in repetitive tasks. It may be worthwhile to have a designated macro writer for your business. It's either (a) stupid or (b) sexist, or (c) probably both stupid & sexist to believe a properly trained secretary/clerk can't be your macroing specialist.

Fly the Flag!

Macros aren't just for business. Try a macro to run the first few moves in a particular chess opening – or to write thank you notes - or to automate copying down a new recipe or golf scores.

Whatever you want to do, however you want to do it, do try doing it with a macro. You won't believe how much time, money & frustration you save.

Free demo disk from Cybertext If you would like a free demonstration copy of a preview page prep/typesetting software from Cybertext, call their bulletin board at 503-482-0733 & download the file called CYBERTXT.ARC, or send a check for $4.50 (*to cover disk duplication & handling*) to Cybertext Corporation, 702 Jefferson Ave., Box 3488, Ashland, OR 97520. The demo was developed for the non-professionals who have a need for page layout software. They have also developed software for the professional graphic arts market which has an editing module called microVISION, a tool for preparing complex pages for output to typesetters & laser printers.

Wandering with the Wizard by James Martin

Have you ever wondered about the great groups of people behind Windows 3.0? If you have 3.0, hold down the <F3> key & type WIN3, then release the <F3> key & hit the <backspace> key. The wallpaper will dissolve giving you lists of Magicians, Testers, User Ed, Program Management, Marketing Scenery, Special Thanks, & Moms & Dads. If you need to send a message to any of them, look at the E-mail addresses, including parent Bill Gates at billg@microsoft.com.

If you have an IIT-3C87 math coprocessor from Integrated Information Technology, be careful. 386 specific drawing programs may produce improperly formed ellipses because of a bug in an arctangent function. Specialty Software Development Corp. is handling warranty replacements, replacements expected in August. Specialty Software (800) 284-7732.

Most Toshiba T1000SE laptops contain an improperly routed cable that may cause floppy disk drive failures. Toshiba has devised a fix that can be implemented by either the owner or authorized Toshiba service representatives. If your machine serial number begins with 129, 010, 020, 030, or 040, you probably have a potential problem. A cable can protrude into the drive, coming into contact with the actuator arm. As the arm moves, the contact will wear a hole in the cable, causing loss of power to the drive. A booklet from Toshiba explains how to correct the problem. Users that fix the problem themselves will not void their warranty. If you do not want to reroute the cable yourself, an authorized Toshiba service rep will provide free repairs.

A new program from Rix Software allows many super VGA cards to emulate the 8514/A graphics adapter & to produce signals identical to those generated by true 8514/A cards. Rixai works with a variety of super VGA boards, but requires special 8514/A monitors for some of the higher resolutions. Programs that write directly to the hardware, like Microsoft Windows, will not work with the software, but about 95% of software with 8514/A support will work with the new package. Rixai is priced at $100 from Rix Softworks, Inc., (714) 476-8266.

Beware of the COPs - Computer Owner Protection software from Identifax that helps police identify stolen computers. Each time you boot the computer from the hard disk, a code is displayed on the screen & played through the speaker. It is not possible to reformat the hard disk without using the COPs program to remove the protection scheme. If police find a stolen computer with COPs, they dial the Identifax 800 number & hold the handset near the speaker of the computer during bootup. The audible tone will identify the owner. COP costs $49 which includes five years of owner registration in the Identifax database. Identifax is at 14 Research Way, Setauket, NY 11733; (800) 645-5404.

If you are using a 386 IBM PS/2 with the SCSI driver bundled with the machine, you're probably in trouble. With the driver installed, the processing rate slows to a crawl. In fact, the processing speed drops to about one-third of the speed without the driver. Without the driver installed, the machine might just lockup. A fair rule is that DISK386.SYS does not need to be used with programs that do not use virtual memory. Programs that use DOS extenders should be OK.

If you need a LAN, but can't afford all the trappings, O'Neill Communications Inc. has a Lawn wireless network available for $285 per workstation. The Lawn unit attaches to the serial port of a PC & uses radio frequency transmissions to let users exchange E-mail & files as well as sharing devices. The unit ships with its own TSR interface for E-mail, printing, & modem sharing. Version 1.1 is a free upgrade to registered users.

And, now, ladies & gentlemen of all ages, welcome to the Windows circus. The news from the Windows 3.0 world is overwhelming. In fact, so many users have called Microsoft that Microsoft has added a lot of new phone lines to help out. Windows support is now available from 5 AM to 7 PM Pacific time. When not available, an automated call attendant answers the most frequently asked questions. The new phone number for Windows is (206) 637-7098; the new number for Windows applications is 637-7099. The main support number at Microsoft is unchanged at 454-2030.

Jon Shirley, the president & chief operating officer of Microsoft since 1983, is retiring. After 25 years at Tandy, Shirley came to work for Bill Gates. During his time with Microsoft, Shirley watched sales grow from $50 million to an expected $1 billion at the end of 1990. Shirley isn't really hurting, though. He remains as a consultant to the board of directors & has about $25 million in Microsoft stock. At the gentle age of 51, I am sure Mr. Shirley has plenty of time to do whatever he wishes. Good luck, Jon.

If you have Word for Windows, try this one. Select FORMAT; select DEFINE STYLES; select OPTIONS; set NORMAL ON NORMAL; see "can't do that" message; OK CANCEL; select HELP; select ABOUT WORD; CAPLOCKS key ON; hold down the O, P, U, & S keys simultaneously, & watch the fireworks in the dialog box. The dialog box will then fill with the developer names & titles.

Another Peter List tip: for cheap lightning protection, tie five knots in your power cord as it comes from the wall!?

Operating Systems Reference Sheet by Paul Puffe

Explanation of Operating Systems Reference Sheet: I have recently found it necessary to use my college's MS-DOS machines to run certain specialized programs, & thus I had to learn the rudiments of MS-DOS. I re-read our newsletters & other magazines & prepared this reference sheet, which has been more than adequate for me. I included the TPM (& some CPM) commands because Craig F. had requested such a comparison sheet. Obviously, the sheet is incomplete, but it does demonstrate the fact that if you can use TPM, you will have no trouble using DOS. --Paul Puffe, president of the Austin EUG.

> Operating Systems Reference Sheet

(All use * or ? as wildcards.)

Command	TP/M [& CPM]	MS-DOS
Disk Control		
Erase Command Line	CTRL X	---
Reboot System	CTRL C	CTRL ALT DEL
Log to New Disk	D:	D:
Change Disk this Drive	CTRL B	---
Change Dir. this Disk	255: or [B16:]	CD name (of subdir.)
View Dir. List of Files	D[ir]	DIR --options:
	L	/P by page /W wide
	LIST /P	>PRN to printer
	SD	>fn.ft to disk file
		DIR *. view subdir. list
		DIR | FIND "<" only subdir.
Show Path flow in prompt	---	PROMPT pg

Path instructions	---	Path drivename;direcname;
Refer to root directory	---	\ = go back to root dir.
Refer to current subdir.	---	. = use this subdir.
Refer to parent directory	---	.. = go back one subdir.
Check Disk Space	SP (D:)	DSPACE [CPM=STAT] ---
Change File Protection	PRO name.fil	<> ---
Rename File	REN new.fil=old.fil	REN oldname newname
Copy File	ZPIP new.fil=b3:old.fil	COPY oldfile newfile (add /V to verify copy)
Erase File	ERA name.fil	DEL or ERASE name.fil
Batch Run Utility	@ name	[CPM=SUBMIT] BATCH
FILE CONTROL		
Run Program	filename	filename
Cancel Program Run	CTRL C	CTRL C or ESC
Print File	PRINT name1, name2 /P	PRINT name
Type File to Screen	TYPE name	TYPE name
Screen Scroll Pause	CTRL S	CTRL S
Screen Scroll continue	any key	any key
MACHINE CONTROL		
View Time/Date	TIME	TIME or DATE
Printer Echo	CTRL P	CTRL P
Printer formfeed	FORM	---

NOTE: TPM files SD, DSPACE, FORMAT, @, PRINT, FORM, & IOMOD are not included with Valdocs, but are part of the TPM Utilities disk.

GOOD/BAD DEALERS ?

We need the speed, because the Cheetah Gold has a new disk controller from Perceptive Solutions, Inc. (2700 Flora St., Dallas, TX 75201; [214] 954-1775). Write or call, & ask them all about it!!

Epson America Inc. has started the 1-800 support. Cindy the other day answered the phone & there was a call from Ilene Bradley, a lady in Illinois. This lady had called Epson America Inc. & asked about what to do with a couple of QX-10 computers she had gotten a hold of.

She didn't quite know what to do with them: Her first instinct was to sell them. Cindy explained our club's fees for non-member advertisements, & suggested she might be better off advertising with a group closer to her home, the CAEUG. WHen Ilene found out there was someone in her area who might be able to teach her how to run her two computers, she decided not to sell them. She wants to use a computer at her husband's job & also wishes to use one at home so she can do things at work or at home.

Because Cindy didn't have the number of the CAEUG right in front of her, she took Ilene's phone number & said she would call her back. Actually, there was an ulterior motive involved: CAEUG is a group that exchanges newsletters with us, but which had been silent for several months. This gave Cindy the perfect excuse to call them to find out their status. (*It wouldn't look too good if Cindy referred her to a defunct organization*!)

Cindy called & spoke to & Jim Stern's secretary (Jim was at lunch), was assured that the club was alive & well, & called Ilene back & gave her the Chicago club phone number. A little later, Jim Stern called Cindy back & thanked her for the referral (Ilene had been on the phone asking for him when he walked in the door from lunch!), & offered to talk to their editor, Judy Stultz, about the wayward newsletters. All in all, a satisfying day. And all because of Epson America's 800 number. Epson, keep it going. I can see how things in the future are going to grow for both of us.

As for the problems with the items ordered from Mark Bruzonsky, he did send the additional 256K Titan board & some of the Titan software. He did not send me the Valdocs 2 package which I was supposed to get or offer to provide me with the newer QX-10 keyboard which I initially requested. It was also interesting that a RAM chip on the Titan board went bad shortly after receiving the Titan card. He too should be added to my list of poor QX vendors.

by Joel S. Moskowitz of Byte

Something should have clicked in my mind when I saw my children bouncing a small gray ball as they ran into the car. Only later did I see my IBM mouse on the floor, its bottom off & it's ball...gone to the mall! I didn't know it then, but I had just been drafted into the ranks of consumer crusaders like Ralph Nader. Of course, Nader is out to save the planet. I just wanted my mouseball.

I called a computer store & ordered a new mouseball. Three days later, the manager called back & told me that I'd have to call IBM directly. The next day, I called IBM customer service. I work right next to IBM's headquarters, so I thought I could walk over & pick up a mouseball. Wrong. "I'*m sorry*," the customer service rep cooed with practiced sympathy,"*IBM has no part number for the mouseball, & cannot order one for you.*"

"Wait a minute," I replied. "*This mouse says 'IBM' on it. IBM manufactures this mouse. Somewhere, IBM has barrels of mouseballs. Of course IBM is able to get me a mouseball. What you're telling me is that IBM won't get me one.*"

"*I hope you understand*," you said. "*The part has no number. It cannot be ordered. Why don't you just buy another mouse? It's only $100 or so.*" Yes, I said to myself, I suppose that I will have to buy another mouse. But it sure won't be an IBM mouse.

While shopping for a Hayes "Smartmodem 1200", I found the best available commercial price with a new firm called DP Solutions, Inc./Raleigh. I saw them at the recent computer show at the Civic Center in Raleigh & explained my needs. They seemed to know nothing about the Epson QX-10 or its requirements, but they made up for it with energy, enthusiasm & constant communication with me in effort to clarify details. Located at Greystone Village Office Park, Raleigh, (919) 870-1207. Ask for Ronald McCrimmon.

Toshiba America Information Systems Inc. has set up two phone lines to handle potential problems with the floppy disk drive in its T1000SE notebook laptop. Company officials acknowledged that faulty placement of the disk drive cable may cause the drive to malfunction after prolonged use.

The problem, which affects only early production models of the five- month-old, 8086-based PC, can be fixed easily by users or Toshiba Authorized Service Providers, according to Bill Johnson, vice president & general manager of the Irvine, CA, company. The procedure involves rerouting the cable so that the arm on the floppy drive does not come in contact with it, he said.

Machines with serial numbers starting with 010, 020, 030, 040, & 129 are potentially at risk. Owners of these T1000SE laptops should call Toshiba's product support line, at (800) 999-4273, for instructions on how to inspect & adjust the cable, Johnson said.

Toshiba has set up another phone line, (800) 334-3445, to provide locations of authorized dealers for users who prefer to bring the machines in for an on-site inspection, he said. The firm is also sending out a pamphlet explaining how to reroute the cable.

Northgate's Art Lazere

Q>: *I have problems with my Ominkey & Lotus 3.0.*

A>: Call Brad at 591-9191 & have him set you up with the proper ROM/BIOS for your keyboard.

Q>: *Should we leave our machines on or turn them off?*

A>: Leave them on! Our research shows that most problems happen with that power surge when a machine is turned on. Shut off your monitors, though. AT LEAST use Screen DImmers!

Q>: *Why do you use SIMMs?*

A>: They're easier to upgrade, take up less space on the motherboard & use less power.

Buyer Beware by Allan Furber

I recently had the misfortune to break a plastic feed tray on my Canon Copier. I called the local distributor, IOS Inc. (previously know as IOS Canon). They told me it would cost $25.00 for a new one. Since this was nothing more than a one piece molded plastic part, which I felt was poorly designed in the first place, I decided to yell at Canon USA about both the cost & design.

Imagine my surprise when the national parts office in New York told me the cost was $4.00. They shipped one the next day. Evidently the $25.00 was a minimum charge for a "special order." Why a company the size of IOS, who is a listed distributor in Canon literature does not stock this kind of part I have no idea, but given that they do not, a policy which results in charging $25.00 for a $4.00 part is, to my mind, a rip-off. Buyer beware.

AST Research Inc. recently announced toll-free telephone support, making it the first non-direct, manufacturer to offer such a service, company officials claimed.

Although AST sells through reseller channels, toll-free support is now available Monday through Friday, 6 A.M. to 5 P.M. PDT, at (800) 727-1278.

One Saturday evening, not long ago, John Campbell was having trouble with a 13-month-old '386-based computer from Northgate Computer Systems of Minneapolis. In desperation, John telephoned the company for help. Amazingly, he got it. For four solid hours, a technical-support specialist guided John while he disassembled & reassembled the computer, trouble-shooting the problems. In the early morning hours, the machine started purring like a kitten, & John bid farewell to his telephone adviser. At 8:30 on Sunday morning, the telephone rang. Another technical support staffer called to see if the machine was still purring. John reassured the caller that the machine was working, & then he went back to sleep.

Recommended Vendors by Bill Lafitte

Hard Drive Crashed? T's Fixed Disk Service, located at 1209 N. Cascade in Santa Ana, has fixed several hard drives for me at reasonable costs. The turn around time is approximately 5 days & the repairs are guaranteed for 120 days. They also sell refurbished drives. Call Peter at (714) 542-1037.

Need Diskettes, Ribbons, Cartridges? I am really impressed by Espanore Ltd. which delivers via UPS from North Hollywood. Their prices are competitive & the service is the best. I have received items the next day! If there was a misunderstanding they were quick to do what was necessary to rectify the situation - no hassle. Call them at (800) 225- 8230.

QX & Obsolete Epson Repair Centers

Sound & Industrial, Inc., Birmingham, AL, (205) 942-5374
Data Fix, Lillte Rock, AR, (501) 562-3554
Accram, Inc., Phoenix, AZ, (602) 264-0288
Computer Horizons, Phoenix, AZ, (602) 230-1888
PCP Repair, Brea, CA, (714) 529-4066
Data Products Maintenance, El Monte, CA, (818) 350-4191
Softlink Support Systems, Los Angeles, CA, (213) 215-3022
Computer Support Service Inc., Orange, CA, (714) 532-3746
Transaction Equipment Supply Yorba Linda CA, (714)970-7881
Microlife Corporation, Aurora, CO, (303) 367-8333
Unified systems, Norwich, CT, (203) 886-1629
Data Systems Maintenance., Coral Gables, FL, (305) 665-3626
Advanced Computer Support, Orlando, FL, (407) 896-8155
Computer Support, Inc., Riviera Beach, FL, (305) 863-1410
Hands-On Computer Service, Tampa, FL, (813) 874-5769
Value Added, Inc., Norcross, GA, (404) 662-5995
Computers Plus, Des Moines, IA, (515) 243-3729
ECI Advanced Office Sys, Marshalltown, IA, (515) 753-6676
Service Solutions, Streamwood, IL, (312) 289-6222
MicroSource Tech Services, South Bend, IN, (219) 232-2211
Besco Electronics, Shawnee, KS, (913) 268-7633
Southern Technical, Lousiville, KY, (502) 585-5635
Interstate School Supply, Baton Rouge, LA, (504) 387-5131
Amann Business Machines, New Orleans, LA, (504) 522-0642
Mardek Computer Services, Brookline, MA, (617) 739-3100
Quality Computer Service, Holbrook, MA, (617) 767-5570
Teltronic Data Service, Silver Spring, MD, (301) 565-3300
Advanced Management Sys, Grand Rapids, MI, (616) 956-6686
ABL Electronics, Madison Heights, MI, (313) 588-6663
Northern T.V., Prudenville, MI, (517) 366-7644
Computer Laboratories, Bloomington, MN, (612) 884-9062
Pentech Computer Services, St. Louis, MO, (314) 962-4747
Micro Computer Resource, Charlotte, NC, (704) 845-3050
Micro Computer Resources, Greensboro, NC, (919) 854-5400
Service Department, Inc. (SDI), Caldwell, NJ, (201) 226-7436
Compu-Fix, Albuquerque, NM, (505) 884-3334
K-M Electronics, Akron, OH, (216) 724-9953
Cincinnati Typewriter, Cincinnati, OH, (513) 661-6888
Earthrise Micro Systems, Columbus, OH, (614) 451-1100
Professional MicroCare, Dayton, OH, (513) 223-2348
The Eighth Bit, Rocky River, OH, (216) 333-5010
On Line Computer Plus, Oklahoma City, OK, (405) 751-2781
Connection 80, Portland, OR, (503) 281-7640
Data Processing Depot, Carnegie, PA, (412) 429-0660
Computer Electronics, Oakford, PA (215) 752-2221
Software Center of RI, Warwick, RI, (401) 738-9800
CH Love Company, Abilene, TX, (915) 676-1109
Micro Center Inc., Dallas, TX, (214) 241-9926
George Dowling & Associates, Ft. Worth, TX, (817) 429-9166
Micro-Fix, San Antonio, TX, (512) 525-1902
Micro Repair Center, Salt Lake City, UT, (801) 972-2018
J.C. Services, Alexandria, VA, (703) 461-0860
Accurate Data Service, Spokane, WA, (509) 535-0590

APPLICATION CORNER

> by Richard Shoemaker

My goal, in this & future columns, will be to tell you how I have solved my application needs, & offer enough info to allow you to decide if the solution might be yours also.

It was the FIRST small computer scanner. Called the Omni-reader; it purported to be able to read text into your computer. The hardware was basically a flat work tablet, large enough to hold a standard typed page with a sliding pointing device attached. The user would align the device over a line of text, & slide the scanner across the page. The text would be read, & sent to the computer through a serial port.

I had one of the first produced. It worked, even on a QX-10! I merely connected the unit to the serial port, loaded HASCI WordStar, opened a new document file, & slid the unit across a typed page. The text appeared on the screen, sort of!

The Omni Reader can read text, but only a limited number of typestyles. It is reasonably accurate with type written pica & elite text. It will NOT work well with proportionally spaced or typeset documents. Because the user has to physically move the device across the page, & then very accurately realign the device over the next line of text, the performance is dependent on the patience & accuracy of the user.

My testing occurred over five years ago. The market place was not really ready for the scanning revolution. The manufacturer did a much larger production run than proved necessary. Over the years, the price of the device has plummeted from the original $399, to $179, & now only $99.95!

A fast touch typist might gain a better result than an Omni Reader user who uses a good spell checking program. At least that

was my conclusion at the time. I was limited to only a QX computer, & had not yet entered the exciting world of PC compatibles. Now I believe the unit is both priced fairly, & that it might perform better on a DOS computer if you need to move text from typed documents into computer files. It is Cat. # OB0010I from Computer Direct 800 BUY-WISE. They offer a 30 day home trial, so you will not have to pay for a pig in a poke!

So you are an *Agriculturalist*? And you own a computer! So What?

Well, you can be the beneficiary of some of the finest free computer information available in the world. And I do mean FREE. Not even your tax dollars are spent! Here is what, how & where.

The Agricultural Computer Extension of the Ministry of Agriculture & Food, Guelph Agriculture Centre, P. O. Box 1030, Guelph, ON -Canada- N1H 6N1 publishes both a newsletter, & a complete software catalogue listing all related available software. Top date, we have been successful in staying on their mailing list; for free! Although, we sent along a dollar bill with our request, they were nice enough to return it!

Their catalogue is divided into categories; Dairy; Nutrition, feed ration; swine; & so forth. Each program listed is briefly described, & includes the name of the publisher, the hardware required to run the program, & the retail price. The 80 page catalog includes an index (by computer type), & vendor addresses.

The Ministry also has established some local user groups, & invites users interested in establishing new UG's to contact them. They also publish a newsletter which includes articles like "High Tech Water Jets Trim Meat Cuts", & "Disk Technology & Terminology". Their newsletter is most suitable for the newer user & usually contains a listing of the UG's they have sponsored. The subscription form DOES NOT request any fees!

If you are, or know a farmer, this information should serve to put you on notice that very valuable information resource is available. I believe this is the kind of assistance our own government should be supporting, as it would be highly effective, considering the low cost of establishing such a service, & the exceptionally high cost of our own framing community's astonishing lack of computerization. The cost effectiveness of encouraging & assisting our own farmers, ranchers, & livestock producers to enter the modern world of computerdom is akin to that of educating our new generations so they can earn more money, & pay higher taxes! At the very least, it would enable many small agricultural enterprises to forgoe the related subsidy programs! Score one for Canada!

Many Windows 3.0 users have the Video Seven VGA card(s), & have been disappointed because they are getting only the standard 640 x 480 display. The drivers are available & can be ordered by calling 800 238-0101 or in CA 800 962-5700. These drivers & lots of other stuff, including technical support is available from their BBS (415) 656-0503

There is a NEW VERSION of Windows 3.0!! If you are one of those affected by the many bugs, you may be eligible to receive a free update, or to purchase the update for $10! This seems to be an either/or proposition, & it is somewhat unfairly done. If you are affected by one of the bugs, you need to call MicroSoft's support line & make the request. But when you get on the line, you will hear a message stating you may have to wait for 30 minutes or more! That's a great deal of time, considering it is NOT a toll free line. Otherwise, MicroSoft wants another $10, & will honor all mail orders.

Since Microsoft has record profits, & their new flagship product is flawed, you would think they would make a better effort to be sure a truly functional version was in the hands of ALL of their users!

The Cobb Group is attempting to make a large buck pushing expensive newsletter subscriptions on specific software programs like Windows 3.0. While most UG newsletters will eventually do a better job in this arena, their efforts have also resulted in the publishing of several books that directly relate to these newsletters. One of these, "Windows 3 Companion", costs less than their newsletter, & is certainly much more comprehensive. The MicroSoft manual is excellent, but not always easy to use. Most after-market books serve the user better because the authors are not limited to documenting the program. They can expand into the practical area of user tips, short cuts, & even undocumented features. If you are going to be a heavy user of ANY software program, I encourage you to seek out these related after-market books.

The more I use Windows 3.0, the more opinionated I get. There are time when I find the features fantastically desirable, & nearly indispensable. Other times, I feel more comfortable within the old DOS environment. I have come to the conclusion there are two different scenarios.

If you are an accomplished user, & have developed a reasonable level of expertise in several major DOS applications, then either Switch-It (SI) or Software Carousel (SC) are more productive additives than Windows. These programs will allow you to run your computer as you have in the past, with the added advantages of being able to quickly switch from one application to another. The selection of Windows involves a learning curve, & expensive software updates. If you are not willing to update your software, Windows does little for you that the SI or SC will not do better! In fact, you might well find your programs run slower!

If you are just moving into the clone world, & have yet to make your major software investments, then Windows is a very reasonable choice.

The real variable to the above statements is if you are using a true 80386 computer which has 4M or more of RAM installed. Using Windows in this kind of well endowed PC is going to prove to be an advantage in the long run, but only if you are willing to relearn how you use a PC to take full advantage of the Windows advantage.

Overall, I feel Windows has really many disadvantages to the advanced DOS user. While one of the touted advantages is a GUI (graphics user interface) interface, a GUI interface actually takes longer to use, & handicaps the power user by shielding him from all of the fine tuning he is used to using. In addition, to regain the advantages of any fine tuning obtainable under Windows, there is a significant learning curve. This learning takes time. Unless the user is somewhat of a hobbyist, there will be a long period of time before the time invested in that learning is recovered by the practical results of the effort involved.

My final opinion is sampler. Everyone will eventually have to at least partially adopt Windows, or skip to the OS/2 (more likely a yet to be released version of Unix) world. There is no real rush, if you are happy with the results you achieve now. If you have the time, move to Windows, but don't leave your DOS skills behind!

GAMES are a really fascinating way to blow off some steam! Many of us cannot play a pick-up game of football anymore. he last time I did, I blew my knee away! So I have (happily) turned to my trusty computer, & MicroProse games! There are two I recommend. Red Storm Rising has been my favorite, but I have basically mastered it. Now I have found one that is more than a touch more difficult. M1 Tank Platoon I think I choose it because I wanted to learn more about what our forces in Saudia might have to face.

Good games combine many elements of reality, & offer the user the rare opportunity to actually feel the mental difficulties of making irrevocable decision under pressure. MicroProse is a leader in simulation games, & can offer rare insights unattainable elsewhere.

Not everyone thinks computer gaming is fun! Wrong!, & it is one of the less expensive kinds of entertainment around. Most programs have a street price of $50. Each game is probably going

to take 200+ hours to either master or tire or. What can you do, that's fun, for 25 cents/hour? And even then, you have the rest of the family to pass it onto!

The Tank Platoon has a few flaws. It is a Key Disk system, meaning you need to have one of the original program disks in the A: drive, or it will not load. The keyboard overlays provided, do not fit all of the keyboards that are not exactly IBM size. The copy protection is reasonable, given the number of thieves in the gaming community. The overlays are necessary, as you otherwise would have a great number of commands to learn. If you have a bit of masking tape, you can make them fit.

The only other complaint I have about the system is that I would rather be playing it, than writing about it! MicroProse has some sort of fixation on producing temptations. To allay any suspicious boss, spouse or sibling, you can play it without the sound, & the ALT B command will blank the screen. Better yet, use Software Carousel, Switch It or Windows to multi-task, & you can hide it in a few seconds! Hidden fun, or out in the open, Gaming on a computer is fun! Write MicroProse, 180 Lakefront Drive, Hunt Valley, MD 21031 for their catalog. Decide if you want to command a F-15, F-19, a Tank Platoon, drive a stunt racer, or a Honda. Of course you could also play pirate, fly a gunship, be an Airborne Ranger, a spy, command a carrier or a starglider, or even play a fantasy game. Who can turn down an evening as Captain America?

It is not r-e-a-l-l-y sinful to enjoy "*computering*"!

> NEUG's 1990 Product of the Year Award

Windows is the most talked about product. But it is not the product of the year. In fact, few people know what that product is! It is almost a secret, because it is from a minor software publisher, & they did not have 10 million for advertising. It is everything Windows 3.0 is, & more. It is a GUI, an integrated software package (like Valdocs). And it will run on any PC/XT compatible with only 512K & Hercules Graphics or CGA/VGA/EGA graphics. Since it is a GUI, it does nearly require a mouse.

It is its ability to perform the same kinds of tasks as Windows, but to accomplish them without asking the user to spend hundreds to upgrade to a 80286 & 2M or more of RAM, that makes this product standout. It is even optimized for the lowly 9-pin printer, or a LaserJet. About the only negative I have found is the fact it is still version 1.0. As many of you know, I generally discourage the consideration of any 1.0 product. It does have some flaws, & some out'n out bugs. But there is nothing fatal about any of them. Oops, I almost forget to mention its name, "GeoWorks EnSemble" from GeoWorks, 2150 Shattuck Avenue, Berkeley, CA 94704

The Ensemble includes GeoWrite which is a true (Valdocs-like) WYSIWYG word processor supporting 9 fonts, 7 styles & 16 colors. It is as easy to use as Valdocs, but it does presently lack a spell check program (the publisher has promised a free speller to all registered users). GeoDraw is an 'object oriented' drawing program very much like ValDraw/Paint, but with the added advantage of supporting PCX & TIF file formats, while intergrating multi-page text. The appointments or daily schedules can be tracked by the GeoPlanner. It even includes alarm functions, names & addresses. The GeoDex is your Rolodex addressbook & *autodialer*. It will allow you to maintain multiple files, & includes loads of printing options. It links with GeoPlanner. GeoComm is a terminal emulator (VT100 & others) & telecommunications program with a built in editor.

The central part of the program is the GeoManager, which also acts as a DOS shell program or Xtree Gold. HASCI-like commands can be implemented by mouse clicks, & you can launch both GeoWorks programs & regular DOS applications.

One exciting part of the program which is not yet implemented is the America Online communications service. This is a new service, much like Prodigy, but fully implemented inside GeoWorks as an integrated function. The present package includes everything to get on line, without knowing more than how to connect your modem, & will work. They will be improving this part of the program in the immediate future. Now, I would consider this as a kind of Beta Test version of America Online.

There is as much meat to the GeoWorks Ensemble as there is in Windows 3.0. Where Win has an advantage, Geos counters with one of its own. There is one distinctive advantage many users will enjoy. It is possible to set the system up to display the interface it one of three sizes. The small mode is the default, but those of use with more age than we want to admit to might like to select the medium or LARGE. Large will relieve anyone's eyestrain! It even allows you to use more than the 11 characters for files names; something all previous Valdocs users will well appreciate.

When using it to run DOS programs, you are surprised. I am writing this article with WordStar from the Geos DOS prompt. It allows me a full 574K of RAM to run DOS programs. Where Win allows you to multitask programs, including many text based DOS programs, Geos can only multitask Geos programs. Win makes the user build PIF files for each DOS program he wants to run, thus shutting the experienced user away from the many utilities & BATch files he is used to using. Geos automatically creates icons for every executable file, & offers the user a greater flexibility to move around. Geos & Win can both swap out to the usual DOS prompt, & will return with the command exit.

There are more PC & XT powered computers out there than AT & 386's. If you are one of those who quietly creep out of the room when the AT/386 owners start talking, get this program! You will have many of the advantages of the 386 user's GUI interface, but for a much lower cost!

Will Geos find a following? Will it reach critical mass, so that software companies write for this new GUI? I would like to be 100% sure. I would like to be the prophet for 1991. I honestly believe it has more than a 50-50 chance. In fact, given the inherent value of the built-in functions, I feel it is worth the purchase price, no matter which way things go. Since I even find myself running it from Windows, its utility will not fade if you upgrade to an AT!

Will it run on a QX-PC-III? Yep with a mouse! But you do need a hard disk, as it requires more than 3M's of hard disk space to install. I will even go so far as to say it is the GUI Valdocs we have all been hoping for! Including the long descriptive file names!

Power users, who want both the advantages of a GUI, & multi-tasking please take note. Geos is compatible with Switch It, & probably Software Carousel too! This means you can equip a lowly XT computer with all of the processing power of a computer that costs thousands more!! Better yet, Geos is compatible with CD-ROM drives!

The only thing that keeps Geos from being qualified as a Micro-Framing selection is that it is still version 1.0! By the time you read this, that situation may have changed. Remember, Windows is not yet in the MicroFrame category yet either!

Who should have GeoWorks Ensemble? Certainly everyone who wants to make full use of their present DOS software, or who is a sheer novice. Geos would be a super boon to any 1st time DOS user! It has a list price of $199, but the WYSIWYG word processing & printing ability it offers maybe all you ever need. Certainly Geos is the NEUG 1990 Product of the Year! How good is it? I bought a few copies as Holiday gifts for my computing friends!

Soon to come, an extensive treatise on building your own clone. I will explore the methodology of choosing the individual components, selecting vendors, & making it all work together. The goal will be to assemble a computer with all of the necessary hardware to reamin a useful PC for at least 5 years of happy micro-framing! This project has be in the works for nearly 9 months.

PRINTER TIPS

Printer Ribbon Re-Inking

Research & Thesis by Dick Shoemaker

$Saving dollar$ & being interested in conservation of the environment CAN be partnered into a satisfying relationship!

Most printer ribbons are made of nylon fabric. It is the fabric that performs the real work of transferring the impulses sent to the printer into visible output. The plastic & metal parts used to manipulate the ribbon are durable, & can generally be used several dozen times longer than the ink will last. The less astute user (*defined as* one who hasn't joined a UG!) will usually throw the entire cartridge away!! WRONG!!

Re-inking is your answer. Sounds simple, but many users have considered it, & given it up as a bad thought. Others choose the wrong methods, or were bludgeoned by the cost of a commercial re- inking machine. It still remains a fact that re-inking is both an economical & a common sense environmental activity.

There are several methods to accomplish the task.

Felt Patch Method Sta-Blk ribbons, or the Infinity Inking Kits offer the simplest method for the average office user. The former incorporates an ink reservoir system that feeds a felt pad. The latter includes a small bottle of ink & felt patches that are glued to the ribbon cartridge. Both apply a small amount of ink to the ribbon as it re-enters the housing. This method is only appropriate for those who use the printer on a regular basis. After a period of inaction, the ink can dry & perhaps foul the printer. It also offers some level of risk to the printer. Felt pads can come loose & muck-up the the mechanics of the printer or the paper trail.

Mechanical Re-Inker Several companies offer electric re-inkers. These devices rotate the ribbon past felt covered ink reservoirs. Depending on the model you choose, the device can replenish a ribbon in as little as 20 minutes. The most common models cost about $50, while a heavy duty unit can go for as much as $200. If you need to process a ribbon or two a week, the $50 unit will pay for itself in 2-3 months. A heavy duty unit re-inker is designed to handle 1-10 ribbons daily, & will pay for itself in about the same time.

There are a few tricks to using a re-inker. Ink should be added to the reservoir in small amounts. More can be added after the ribbon has cycled through. Test the ribbon with your fingers. WHen you can slide the ribbon lightly between your thumb & forefinger & it turns just a little black, the ribbon is finished. The re-inked ribbon should then be stored in a zip-lock type plastic bag for a few days before the it in stalled in the printer. Ideally, you should have 3-6 ribbons. One in the printer, & the rest in plastic bags with dated labels. Each ribbon should be discarded after 25-40 cycles, or when a hole appears. Some cartridges will have a mechanical failure over time; this usually happens only to the generic products, & even then it is rare. Many cartridges can be reloaded with fresh ribbons. This is called re-stuffing. It is a dirty job.

When you buy a new ribbon, you do not know when it was manufactured. Ribbons are like bread. They have a shelf life of about 6-months. It is a good practice to 'freshen' up a new ribbon by re-inking it with a small dab of ink before using it the first time.

Tip:- There is a reason to keep one "*old*" ribbon handy. Some special printer programs try to create "laser- like" output, or do PostScript emulations. The output is likely to be TOO DARK if you are using a new or freshly re-inked ribbon. If you use these programs, store this "old" in a labeled plastic bag.

Tip:- You can recoup your re-inker investment by offering others a re-inking service. The going price is $1-1.50/ribbon. 2 oz. of ink sells for about $5, & will re-ink about 30-40 ribbons. Since the re-inking process can be done unattended, you can earn your investment back in a few weeks. Many local UG's provide this service for members.

Tip:- Some Epson ribbons designed specifically for 24-pin printers will also fit 9-pin printers. They cost a few dollars more, but they handle the re-inking process better. They also give a crisper impression!

Tip:- I have some additional confidence if I add a single drop of Remington's Teflon oil per ribbon (*available at K-Mart's Sporting Goods)* to the reservoir. This will eventually reach your printhead, & acts as an extra lubricant for the pins. Also, when setting up to do your 1st ribbon, I find the felt needs to be saturated with ink before you get a good result. I simply fill the reservoir with ink, add a drop of Teflon oil, & wait 6-8 hours for the felt to dampen.

DIrect Application Ink is applied directly to the ribbon. This is the best solution for those who only need to re-ink every 30-60 days. The usual method is to use one of the new battery powered screw drives to move the ribbon. There are usually slots on the underside of the cartridge the printer uses to advance the ribbon. These will fit the screw driver head. As the ribbon moves through, the ink is applied. It works! BUT, most people screw it up! There have been reports of WD-40 being used. Other similar solvents or lubricants have been used. These just dilute the ink, & redistribute it. Too much solvent, & you get smears.

Others have tried stamp pad ink which includes a pigment. Any pigment is abrasive, & will damage print heads. (Might work for daisy-wheel printers!) Epson specifies unpigmented inks.

The solution is **Ribbon Re-New** ($4.50 ppd. from V-Tech, 2223 Rebecca, Hatfield, PA 19440 (215) 822 2989). This (RRN) ink is designed to be applied directly to the ribbon. But, I differ with the instructions supplied with each bottle of ink. The procedure they suggest is probably the most efficient, but I find it to be both messy, & too difficult. V-Tech wants you to open up the cartridge & apply RRN directly to the ribbon inside.

My technique is easier. I clamp the ribbon to a work table & use a battery screwdriver to start the ribbon moving. (example FX ribbon) As the ribbon emerges from the case, I put a drop of RRN on. As each drop disappears into the case, I apply another. I keep to the suggested rate of no more than 4 drops per yard. So I know where I started, I put a drop of liquid paper on the upper edge of the ribbon. After I have finished applying RRN, I let the ribbon cycle a few more cycles. 12-24 hours later, I cycle the ribbon a few more times, & then I bag it. I'll let the ribbon 'age' for about a week before I use it. This method takes about the same amount of time, but it is easier. The results are about the same. Either way, you are applying the same 80 drops of ink!

V-Tech also describes how you can super glue felt to the cartridge & re-ink as you go. If you do this, I'll bet you will end up with inky fingerprints all over your printer! V-Tech also handles electric re-inkers & regular re-inking ink. RRN is only for direct application. And, they offer re-inking support during normal business hours.

Myths:- ***"I only use 3-4 ribbons annually. Re-inking is not economical for me! "*** If you buy 4 ribbons annually for 7 years for $4.00 each, you will spend $112. The cost of 4 ribbons, a re-inker & a 7 year supply of ink is only $75! Re-inked ribbons offer better output, & fresh ribbons keep a print head cooler. The average printer lasts 7-10 years. Your real profit is in lower maintenance costs, & better quality output. The ribbons may actually outlast your printer! You are a prime candidate for an electric re-inker. Besides, you are likely to increase your printed output over time!

"I only use 1-2 ribbons annually. Re-inking is not economical for me!" A dry ribbon has little lubricated ink to cushion & cool the fibers. Your printhead may not last 7 years. Not re-inking may cost you a new printer! You are a candidate for RRN re-inking.

"I only use company provided ribbons. Re-inking is not an option at my company!" The more ribbons your company uses, & disposes of, the more non-decomposable trash is generated. And

the smaller the bottom line! A heavy duty re-inker (to be reviewed in a future issue) can reduce company ribbon costs by 95%. It only costs about 15 cents to re-ink! Even poor quality ribbons can re re-inked a dozen times! NEUG's used the same ribbons for three yrs!

Summary:- There are about 40 million computers in the US. If 30 million use re-inkable cartridges, that's a bunch of space in a dump that's being poorly used. Re-inking can save that space, & a good hunk of the user's computer budget! It's a good idea. V-Tech has what you need. It's up to you!

Dots per inch by Kent A. Russell

While dealing with laser printer owners, I get asked quite often to explain how a laser printer works. To the vast majority of people, these things are mysterious black boxes. Some people think that there is a high power laser inside that actually "burns" the image into the paper (after all, the paper does feel warm when it comes out). This, of course, is not so.

A laser printer is, in a real sense, just like a copy machine. Where a copy machine reflects light off a document onto a print drum, the light source in a laser printer is the laser beam itself. The rest of the printing process is essentially the same.

Inside the laser printer is a six sided wheel that is spun by a very sophisticated motor. Each side of this wheel has a mirrored surface. The laser is focused onto this wheel & as the wheel spins, the laser beam is deflected left to right as each mirrored surface reflects the beam. The beam then goes through some more optics for focusing & then impacts another mirror that is angles at 45 degrees. This mirror reflects the beam downward into a long narrow opening on top of the toner cartridge where it passes through & contacts the surface of the print drum.

The electronics in the printer turns the laser beam on & off. Each time the laser is on it "writes" onto the surface of this rotating photosensitive drum. The surface of this drum is coated which a photo organic conductor which reacts electronically to the laser light. Every place the laser exposes an area on the surface of the print drum, an electrical "charge" is established on that area.

In the Canon-based laser printers (HP Series II, Apple LaserWriter, etc.) is a toner cartridge that does most of the printing. The toner cartridge contains this above mentioned print drum, the developer assembly which contains the toner supply, the take-up assembly which cleans off any unused toner from the surface of the print drum & the primary corona which removes any "charged" areas from the print drum. Each of these assemblies [lay important parts in the process.

These areas on the print drum where the laser scanned will pick up toner from the developer section. As the laser printer rotates this drum, these toner-covered areas will rotate downward where a device in the laser printer called the transfer corona will pull the toner off the drum. This is where the actual printing process takes place. The laser printer paper mechanisms pass paper underneath the print drum & above the transfer corona so the toner is actually deposited onto the top surface of the paper as it leaves the print drum. Not all of the toner is removed during the printing process & it has to be removed or it would accumulate & cause print defects. The take-up assembly has a rubber-blade (kind of like a squeegee) that physically scrapes the toner off the drum. The take-up assembly has a mechanism inside that transfers the unused toner into a holding cavity.

Now, the print drum is clean but the electrical charge is still present from being scanned by the laser beam. This is where the primary corona comes into play. The primary corona will saturate the surface of the print drum & remove these charges. Now the print drum is clean & electrically "relaxed" & ready to be scanned again as the process simply repeats itself over & over. To print an 8.5 x 11 inch paper, the Series 1 print drum will rotate about 2.5 times & a Series II (being smaller than the Series I) will rotate about 3.5 times.

The only thing left in the printer is the fuser assembly. During the printing process, the toner is just lying on the surface of the paper. Right before the paper leaves the printer, it goes through two rollers. The upper roller is coated with teflon & is heated. The lower roller is rubber coated. This upper fuser roller melts the toner into the paper. That is why the paper feels warm when it comes out of the printer.

That is the process in a nutshell. These are several other things that go on in the printer while the printing process takes place: high voltage power supplies kick on, paper sensors keep the on-board computer updated as to the location of the paper, a paper alignment mechanism keeps the paper straight, a registration assembly which makes the printing start at the top of the page & many others. All these combined make a printing device that is quiet, fast & versatile.

GoScript Review by Geoff Day

GoScript is a printing utility which gives your printer, be it anything from a nine-pin dot matrix to a laser printer, the ability to use the PostScript Page Description Language (PDL). That short description belies the powerful features that become available: access to many different fonts, scalable to any size, rotation, outlining & other enhancements; line & shape drawing; portrait or landscape orientation. All this is printed at the highest presentation or publication quality. GoScript is supplied with either 13 or 35 fonts, giving 5 or 11 different typefaces. Others from third party sources (e.g. Bitstream) can be added.

In Use GoScript works entirely in software, so no adjustments or modifications need to be made to your printer. This has two immediate drawbacks. You have to quit from your application to produce a printout, &, unless you have a powerful machine with plenty of RAM, it can be slow. The advantage I think outweighs these, namely that you can continue to use your printer with applications which can't produce PostScript.

Installation & use are both straightforward. The former is simply a case of copying all the files from the distribution floppy onto your hard disk, although a menu driven installation is available for users unfamiliar with the necessary DOS commands. To produce a printout from an application the PostScript printer driver supplied with the application must be installed & the output supplied from the application's print command must be sent to a disk file. That file is then run through the GoScript program, & out comes the completed work. The alternative is to give PostScript commands to GoScript interactively, line by line. This would only be useful to someone who knows the ins & outs of PostScript - I don't, so I couldn't test it - or for someone who wants to learn PostScript.

Compatibility Clearly, GoScript is only useful if you use applications which can produce PostScript output, principally DTP & CAD packages, & high end word processors. Conversely, the PostScript produced must follow strictly the rules of the language. The latter is of course hard to check, but if you have Microsoft Word make sure it works with your version first: I had a few problems. Your printer must also be supported by GoSCript. The major names are all supported, & since a lot of laser printers will emulate the HP LaserJet, & most dot matrix printers will emulate the IBM ProPrinter or the Epson range, there shouldn't be any problems. Again, check first, as there's no facility to create your own driver if you have an odd printer. Although GoScript's minimum requirements are a PC, PS/2 or compatible, 640K or RAM, a hard disk & DOS 3.0 or later, if you'll use it for anything more than occasional work, extra RAM & a 80286 or 80386 plus a faster printer quickly become necessary luxuries.

Documentation This is clear & thorough, with useful tips for speeding up printing. There is a good explanation of bit map & outline fonts, which makes informative reading if, as I was, you are vague about the differences. If you use Microsoft Word, Word Perfect, Ventura, Pagemaker or Quattro then life is made especially

easy for you, since step by step instructions are included for using GoScript with these applications.

If you want to give your printer a new lease on life, or if you're in the market for a new laser printer, take a look at GoScript - you could save yourself a LOT of money.

by Jim Baker & Emerald Jones UCLA PC UG

Oops! Your Hewlett-Packard LaserJet breaks. If a specific set of chips has been fried (the input circuitry), you are stuck with a big repair bill. Hewlett-Packard will not honor a warranty if your LaserJet printer has been operated from an A-B mechanical switch box. That's because the mechanical switch boxes have a habit of frying some circuits &, besides, the Hewlett- Packard documentation contains a caveat warning people to use only electronic switch boxes with these printers. Hewlett-Packard recommends you use an electronic switch box which, because of its internal wiring, doesn't endanger Hewlett-Packard's input circuitry.

The threat to input circuitry on any peripheral exists when a mechanical box is used to switch between the peripherals. HP's are known to be sensitive to this condition. Comparable difficulties have been reported on Okidata printers & surely affect others.

Note that the equipment is at risk regardless of whether the connectors are serial or parallel, 25-pin or 36-pin, regardless of which type of mechanical switch box you are using. Scenario: Two printers are attached to one computer through an A-B mechanical switch box. One is a Hewlett-Packard LaserJet, & the other is a conventional dot matrix. The operator works on the computer, using the switch box to change between one printer & the other. All equipment is turned on all the time.

When either printer is used, the signal (or logic) ground to the other is disconnected. In other words, when the dot matrix printer is being used, the signal ground between the LaserJet printer & the A-B box is interrupted. Since it has its own power source, the LaserJet's internal logic ground level settles to a slightly different level than when it is connected through the box.

When the box is switched to connect the LaserJet printer, if the power happens to go to the signal pin first, the LaserJet input chips & circuitry must absorb the energy required to equalize the levels. These chips cannot handle the transient energy & are stressed. The damage is cumulative & may eventually destroy the chips.

Whether the power goes to the signal pin first or to the ground is a function of the switch box. Usually it is random. To determine if these is a power-switching hierarchy requires looking at the power switching with an oscilloscope. Not a realistic choice for many people. Note that turning off the LaserJet printer when it's not being used, & not changing the A-B switch box position when it is plugged in will not necessarily isolate the printer from all surges. This is because EMI filters on the computer connected to the printer can bleed into the printer's input circuitry. It is possible for the computer ground to pass voltage from the computer (on) to the printer (off).

To eliminate the hazard, make both signal ground & the shield (chassis) ground contiguous between the printer connectors to the computer connector within the switch box, regardless of which unit is operating.

<b>1>. Connect a wire in the box to make the signal ground circuitry contiguous from connector to connector within the switch box.

<b>2>. ALso make sure that the shield ground (carried by the cables) is good from one printer through the box to the other printer. Tighten all screws connecting cables, & check continuity with an ohmmeter.

Option: Use an electronic A-B switch box. For design reasons, the logic ground in these boxes remains intact regardless of which printer is on-line. The "newer cheap ones" are about $100.

The following describes the pins to be wired, depending on the connector type. It involves soldering between the pins within the box. Do not attempt to do this unless you have some experience soldering electronic components. While it's fairly simple, it should not be attempted by the novice. For one thing, should you do it incorrectly, you jeopardize some expensive equipment. While every effort has been made to clearly describe this procedure, if you attempt it & damage your equipment, the authors of this piece cannot be responsible.

Mechanical boxes come in two different types: Those with 25-pin "DB" connectors (either parallel or serial) & those with 36-pin Centronics (parallel only) connectors. In effect a "Y" structure, the box has a connector for the computer &, in our A-B example, two connectors for the printer.

Solder a minimum length of insulated wire from any of the pins on the computer connector to the corresponding pins on the printer connector, i.e., pin 19 to pin 19. On the serial connector, all pins to pin 7. Then check your work with an ohmmeter. This will ensure that the signal ground is contiguous, regardless of which unit is connected.

Appropriate Pins: Any one of the pins noted is appropriate to use with standard cables.

WORDSTAR NOTES

Sort Columns

The WordStar column command (CTRL K N) provides an easy method for sorting a file created with WordStar 5.0 so that text appears in columns. Follow these steps:

<b>1>. Position the cursor on the first letter of the first column you want sorted.

<b>2>. Enter a CTRL K N key sequence to turn on column mode.

<b>3>. Enter CTRL K B, which will mark the beginning of a defined block.

<b>4>. Move the cursor & enter CTRL K K to mark the entire column on which you want to base the sort.

<b>5>. Enter CTRL K Z to sort the marked block.

<b>6>. Select A or D to specify ascending or descending order, respectively.

You could use this procedure to sort a mail-merge file by last name to print an alphabetized list of its contents, then resort that same file on the zip code column to organize mailing labels.

Tussling with WordStar 5.5

Recent articles on 5.5 prompted me to comment on some shortcomings & pass on what might be helpful tips based on my attempts to get 5.5 up & running. I have used all versions of WordStar from 2.26 to 4, but gave version 5 a miss. Maybe some of my problems with 5.5 would have been solved if I had wrestled with version 5.

My first frustrations were in trying to get rid of right justification. Turning it off at the installation level did not do anything. I tried going directly into the patch area to turn it off there. Apart from having no effect, it led me to the discovery the patch list shows wrong addresses. Label INIEDT, according to the list, is at address 0D30; a knock on the door revealed that INIEDT does not live there, but at 0F30. All the addresses seem to have an offset. An interesting bit of trivia, perhaps, but why provide a patch listing at all if it is wrong?

But back to right justification. If one wants right justification to default to OFF, then it has to be changed in each of the paragraph styles. That led to another interesting discovery - the phantom paragraph style menu.

The mini-manual says, in effect, "press CTRL O F & a menu appears." Nothing happened apart from OF appearing in the status line. It seems CTRL O F doesn't work when the help level is set to 0 or 1, but the menu appears if help level 4 is set. The problem is how to gain access to the paragraph style menu when one wants to

work with the screen cleared of all unnecessary bell-&-whistle stuff. Well, if seems help level zero or one users are deemed not to need the menu. Instead one has either to change the help level or directly access each item by entering three letter control codes. To edit a paragraph style enter CTRL O F D & the appropriate screen appears. Buried away in the README file is some information about the other CTRL O F codes, which include CTRL O F D=directory of styles, CTRL O F P=reactive previous style, CTRL O F E=rename a style, & so on. The third code follows the menu illustrated at page 20 of the mini-manual.

Paper Chase Setting continuous paper length to A4 was a problem until I realized that, unlike earlier versions, 5.5 has a default of form feeds ON. If continuous paper is being used, make sure form feeds is OFF. The default 11-inch page length appears to present no problems if form feeds is left ON, probably because it matches with most dot matrix printer page length defaults. However, when I set A4 page length with WSCHANGE, some extraordinary things happened. The first page printed at the correct length, then came an 11-inch form feed, then a printed page of 11 inches, & so on. Turning form feeds off solved the problem. Incidentally, there is no metrication in WordStar. All dimensions have to be set in inches. Two decimal places are accepted, such as A4's Imperial equivalent of 11.69 inches.

While a laser printer is on the wish list of most users, the fact is the ordinary folk have to be satisfied with dot matrix machines. WordStar, like it's competitors, is pitched to laser printer users. That may be a valid commercial decision, but it is no excuse for failing to provide better documentation for the humble dot-matrix printer, which continues to improve in quality of output & is likely to be around for a long time. Which leads me to another observation. Those offers of Bitstream fonts, which accompany the leading word-processing packages, are also directed at laser users, but Bitstream, unlike Adobe, is not confined to PostScript printers. SoftCraft, makers of Fancy Font, supplies Bitstream fonts for various don-matrix printers. It is a pity MicroPro does no make some effort to provide them for non-laser users.

I could live without PC-Outline (a well-known shareware program from Brown Bag) & all those other peripheral programs which occupy some of the 21 disks & much of the manual. The amount of disk space & memory needed for word processing, database & spreadsheet programs must be a source of resentment to many users. Remember the time when Ashton-Tate's dBase could live in a 90 KB bed-sitter? Now it needs two floors of the Hilton. The pendulum of user friendliness has swung too great the other way & A kind of Parkinsonian law has evolved: programs will develop, regardless of what users might want, to use as much space as is conceivably possible.

Outer Space Apropos proportional spacing, there is a quirk in 5.5 (& probably 5). When the delete word F6 or CTRL T) command is used to pull a line up, so to speak, it does not work. For example, if automatic hyphenation is on & an incorrect or unwanted word break occurs, it is convenient to delete the hyphen & use F6 to pull the rest of the word back up on to the line & then insert the correctly placed hyphen. In non-proportional mode it presents no problem, but in proportional mode the second part of the word just bounces back to its original position. The same thing happens if one attempts to delete a word on, say, line two by using F6 when the cursor is positioned at the end of line one. Margin release (CTRL O X) will solve the problem.

Hyphenation always presents difficulties when an algorithm is used instead of a look-up dictionary (such as Ventura employs). Incorrect word breaks cannot be avoided. For example, "photograph" & "photographer" are broken quite differently for hyphenation, but when an algorithm rather than a look-up dictionary is used that distinction is ignored. Anyone anxious to turn off automatic hyphenation & rely on a manual system, such as referring to Collins Gem Dictionary of Spelling & Word Breaks. Hyphenation dictionaries require a fair amount of space, but I would have preferred that from MicroPro rather than PC-Outline, a thesaurus & definition dictionary.

5.5 by Hunter Morey & Kathy Arizon

Q>: *Should I set my default editing settings in WSCHANGE or the default paragraph style sheet?*

A>: In WordStar 5.5 Revision C, you may change your settings in either place. For WSCHANGE settings to take effect: If you created a library version of a default paragraph style, delete it & don't create another one. After you exit your document, the WSCHANGE settings take effect.

In Paragraph Styles: While editing a file, press CTRL O FD to change the settings in the default paragraph style Body Text, F10 to save, Y to save to the library. Whenever you create a new document, the new values take effect.

Q>: *How do I install my new third-party laser fonts in WordStar 5.5 so I can use them with my Hewlett-Packard LaserJet Series II printer?*

A>: First, use the LSRFONTS program to add the fonts to the font database (Printer Data 0) before you add them to your printer description file (PDF). If your font files are not in the current subdirectory, specify the drive & directory where they are located. Select the fonts you wish to add to the database & follow the directions on the screen.

Second, use PRCHANGE to copy the font information from the database to your PDF. Then either create preview screen fonts (Page Preview) or create them later. To create a download batch file to later download your new fonts into your printer, choose "Create download batch file" from the PDF modification menu. Then, specify the location of your font files. To download these fonts to your printer, log on to the drive or directory where the batch file is located, type the name of the batch file & press <CR>.

You are now ready from within a WordStar document. When editing a file, press CTRL P ? to verify the correct printer is connected to your file. Press CTRL P = to choose different fonts. For more information, please see the Customizing section of your WordStar 5.5 Installing, Customizing, Printer & Monitor Information booklet or Sec. 11.3 of the README program.

SPREADSHEET NOTES

Designing a Spreadsheet by Lin Fowler of FLEA

<▷1)) Use graph paper, pencil & eraser for preliminary layouts. Don't waste time trying to design spreadsheets on the screen. There it's too easy to overlook something which should have been included. There is NO easy way to setting up a good spreadsheet!

<▷2)) Start by planning column position & widths. Write these into a 72 col blank form (Tops #3609 recommended). This draft will control what appears on the first page of your spreadsheet.

<▷3)) Think up a good title. Spell it out in capitals on the top row of the form starting at the far left margin. Erase penciled words & replace with any that describe better the subjects to be included. On Row 2 underneath it type: Updated 1/15/89 to provide warnings of when the page was last revised.

<▷4)) Allow about 46 characters for the title & follow immediately after it with a file name on the same line. This will be used to save & recall your spreadsheet. Maximum size for file names is 8 characters plus a 3 digit extension. Don't exceed 72 characters on row #1 or you'll be in trouble.

<▷5)) Now decide what to show in column A (far left). This depends on whether entries should be posted sequentially by date or alphabetically by name:

<▷<▷a. if by date, allow 9 characters for entries in standard calendar format 10/18/88, 12/2/89, etc.

<▷<▷b. if by names, count characters in the longest name you might use sometime in the future.

<▷6)) The most common format for column A is by date which consumes 9 characters. So draw a vertical line 9 spaces to the right of the form's left margin & pencil a capital A just under your new title. Below it enter the number 9. Otherwise use longest name count found in step 5b above for alphabetical postings.

<▷7)) Next under A, pencil in your column heading such as: "DATE" or "CUSTOMER NAME". Then plan layout for the remaining characters.

<▷8)) What will you use column B for? If "CUSTOMER NAME", start at the vertical line you just drew & pencil in the longest one found in your mailing list. When finished with that entry, add 2 spaces & rule another vertical line. This defines the planned width of column B. Again write in the number of characters used just below the initial B.

<▷9)) Finally plan layout of columns for numerical entries. A simple approach is to determine the most digits needed for individual entries. Examples: $22.35, 1,250, 507,000 etc. Consider probable sizes of sums or other calculations to be made by your spreadsheet.

<▷10)) Start with column C & pencil a tentative heading to show what will be entered there. Now add two characters to whatever size numbers you plan to post under C & show that column's proposed width. Draw another vertical line on your form where C will end. Continue with columns D, E, & F, or until no space remains before right hand margin of form.

<▷11)) By steps 6 - 10 you positioned columns & estimated their widths. Now use a hand-held calculator for final width adjustments if any are needed. First add up all those numbers you posted under column letters. Be sure their sum doesn't exceed 72.

<▷12)) To finish the design, adjust any difference between 72 & the sum now showing on your calculator. If only a few characters remain:

<▷12a)) Add them to a cramped text column to widen it;

<▷12b)) Or add 1 character to each numerical column;

<▷12c)) If 3 or more characters are left over, reserve the right hand column for adding your own codes in the future to flag special situations.

Finally, pencil in a text name at the top of each blank column.

<▷13)) Now boot your spreadsheet program in the computer & format a worksheet from the design just completed. Type title & file name into row 1. Use row 2 for recording revisions by typing "UPDATED 10/18/88" & any other notes needed as reminders.

<▷14)) Change column widths to match all numbers you posted under column letters on the paper form. Then SAVE this empty with its same file name except use the extension .FRM so it can be retrieved intact as a shell with which to start new spreadsheets in the same format. (A great time saver!)

<▷15)) Activate your printer & take a hard copy. Proof read it carefully against your pencil draft & correct errors while it's still there on your screen. Then be sure to SAVE the corrected spreadsheet under its proper file name.

<▷16)) Print out two record copies, one for file, the other for noting future changes or additions. This can serve as a posting medium for accumulating data between sessions at your computer.

<▷17)) To widen your spreadsheet beyond this first page, hit the <GOTO> key & jump to top of first column beyond it.

<▷18)) Immediately COPY A1 & A2 blocks to that particular cell. This will transfer your identification texts to top of the second page without having to retype the title, file No. & update data.

<▷19)) Now repeat steps 1 through 16 to plan the format of page 2 starting with a blank piece of graph paper.

<▷20)) Additional 72 character pages may be added quickly by this method up to the col capacity of any spreadsheet program.

Most 1-2-3 users find they frequently need to reuse spreadsheets with new data. But if a lot of formulas are included on the worksheet, it's difficult - & dangerous - to use the Range Erase command to eliminate your old data. You might accidentally erase some of your formulas.

Instead, retrieve the file you want to reuse. Put the cursor on cell A1 & press the commands <F>ile, <C>ombine, <S>ubtract, & <E>ntire File. Quattro users should substitute the commands <F>ile, <C>ombine, <S>ubtract, & <F>ile. This subtracts the file from itself, leaving all values set to zero & all formulas intact.

Calculating the interest & principal components of loan payments

Quattro's @PMT function makes it easy to computer the fixed period payment required to amortize a loan, given the amount borrowed, the periodic interest rate, & the term of the loan. Once you know the periodic payment, you can determine the total amount paid on the load to date simply by multiplying the result of the @PMT function (the periodic payment) by the number of payments you have made.

In many cases, however, you'll want to know more than just your periodic payments & the total payments you've made to date. For example, you may wish to calculate the interest & principal breakdown of the current payment, the interest & principal paid to date, or the interest & principal yet to be paid.

You can compute these values by building an amortization table. However, such tables occupy quite a bit of space & consume a lot of memory. In this article, we'll show you how to calculate the interest & principal components of the current loan payment, the interest & principal paid to date, & the interest & principal yet to be paid without building a table. Instead of calculating these six values for every loan payment at once, will will calculate them individually for any period during the term of the loan.

Building the worksheet Cells B1..B4 in this worksheet contain simple values that describe the loan you want to analyze. Cells B1..B3 contain the principal, periodic interest rate, & term of the loan, respectively. Cell B4 contains the number of periodic payments made on the loan to date. Cell B5 contains the function B5: **@PMT(B1,B2,B3)** which uses the values in cells B1..B3 to compute the fixed periodic payments required to pay off the loan.

The formulas in cells B7, B8, B10, B11, B13, & B14 calculate the principal & interest remaining after the current payment, the principal & interest paid to date, & the principle & interest components of the current payment for the loan described by the entries in cells B1, B2, B3, & B4.

Calculating the principal remaining after the current payment The principal remaining to be paid at any time during the term of a loan is simply the present value of the remaining payments. The function **B7: @PV(B5,B2,B3-B4)** in cell B7 calculates this amount. The first argument of this function, B5, identifies the periodic cash flow as the periodic payment for the loan. The second argument, B2, identifies the interest rate for the loan as the rate of interest to be used in the present-value calculation. The third argument, B3-B4, specifies how many cash flows remain in the life of the loan. Since B3 contains the total term of the loan, & B4 contains the number of payments that have been made to date, this argument calculates the remaining life of the loan.

The result of this present-value calculation is the amount of principal remaining to be paid after the current payment is made. As you will see, this result is fundamental to the calculation of the other five interest & principal components.

Calculating the interest remaining after the current payment To calculate the interest yet to be paid, subtract the remaining principal from the total of the remaining payments. We used the formula in cell B8 **B8: (B5*(B3-B4))-B7** to perform this calculation. Since cell B5 contains the periodic payment for the loan, & the formula B3-B4 returns the number of periods left in the life of the loan, the formula **B5*(B3-B4)** calculates the total of the remaining payments. By subtracting the result in cell B7 (the un-

paid principal) from this amount, we get the amount of interest that remains after the current payment is made.

Calculating the principal paid to date You can also use the amount of principal yet to be paid to calculate the amount of principal paid to date. To calculate this amount, we used the formula B10: +B1-B7 in cell B10. Since cell B1 contains the total principal of the loan (the amount borrowed), & the function in cell B7 returns the amount of principal yet to be paid, the difference between these two is the amount of principal paid to date. This amount includes the principal component of the current payment.

Calculating the interest paid to date Once you have determined the amount of principal paid to date, you can use that result to calculate the interest paid to date. We used the formula in cell B11 B11: (B4*B5)-B10 to perform this calculation. Multiplying the entries in cells B4 & B5 calculates the total of the payments made to date. Subtracting the principal paid to date (the result of the formula in cell B10) from this amount returns the amount of interest that has been paid on the loan to date, including the interest component of the current payment.

Calculating the principal component of the current payment The easiest way to calculate the principal component of the current loan payment is to subtract the principal remaining after the current payment from the principal remaining after the previous payment. The formula B13: @PV(B5,B2,B3-(B4-1))-B7 in cell B13 performs this calculation. Cell B7 uses the function @PV(B5,B2,B3-B4) to determine the amount of principal remaining after the current payment. The formula in cell B13 subtracts that amount from the result of the function @PV(B5,B2,B3-(B4-1)), which returns the amount of principal remaining after the previous payment was made. The result of the subtraction is that principal component of the current payment.

Calculating the interest component of the current payment Once you have calculated the principal component of the current payment, you can determine the interest component of that payment simply by subtracting the principal component from the total amount of the payment. To do this, we used the formula B14: +B5-B13 in cell B14. Since the function in cell B5 returns the periodic payment for the loan, & the formula in cell B13 returns the principal component of the current payment, this formula calculates the interest component of the current payment.

Using the worksheet Once you have created this worksheet, you can use it to analyze the interest & principal components of any loan at any point during the term of that loan. For example, suppose you want to calculate the paid-to-date, remaining, & current-payment principal & interest as of the 12th payment on a 30-year, 9.75%, $100,000 mortgage. To do this, you would enter the value 100000, the principal amount of the loan, in cell B1. You would enter the formula .0975/12, which returns the monthly interest rate for a 9.75% APR loan in cell B2. Then, you would enter the formula 30*12, which computes the term of the loan, in cell B3. Finally, because you want to analyze the loan as of the twelfth payment, you would enter the value 12 into cell B4.

As soon as you make these entries (& press <Calc> if your worksheet is set for Manual recalculation), the worksheet will execute. Cell B5 tells you that the monthly payment for this mortgage is $859.15. Cells B7 & B8 reveal that $99,414.44 of principal & $199,571.30 of interest remain after you have made the 12th payment. Cells B10 & B11 tell you that, including the 12th payment, you have paid a total of $585.56 in principal & $9,724.29 in interest. Finally, the results of the formulas in cells B13 & B14 reveal that the principal & interest components of the 12th payment are $51.00 & $808.16, respectively.

By changing the value in cell B4, you can analyze this loan at different times during its term. For example, you could calculate the interest & principal components at the end of the fifth year. By changing the parameters in cells B2 & B3, you can analyze the loan at different rates of interest, over a different term, or both. For example, you could calculate information about a $100,000 9.75%, 15-year loan, after the 60th payment.

Conclusion Quattro's @PMT function makes it easy to calculate the periodic payment on a loan, the total of the payments made to date, & the total of the payments yet to be made. In many cases, however, you'll want to know more than just these gross payments - you'll want to know how they break down into principal & interest. The simple six-formula model presented in this article provides a quick, easy, & efficient way to calculate these interest & principal components as of any period during the term of a loan.

Take advantage of a hidden feature when embedding printer-control codes in your Lotus worksheets.

Unless you have memorized them, printer-control codes are difficult to tell apart. Editing a report containing embedded printer-control codes can be quite confusing.

I discovered data located in the cells to the right of an embedded printer code will not print. This means you can enter messages that will not be printed but that will help document the printer codes you include in your report.

Links in Excel, Quattro, & Release 3

Lotus 1-2-3 Release 3, Borland's Quattro Pro, & Microsoft Excel all provide linking capabilities that aren't available in 1-2-3 Release 2.2. They let you view more than one spreadsheet at a time, & they're flexible when it comes to linking.

With Release 2.2, the worksheets linked to the one you have onscreen are out of sight - & sometimes out of mind. You may forget to update one of the sheets on which your links are based & never see the mistake.

Excel & Quattro Pro let you open all of the linked worksheets simultaneously. Let's assume that you're handling the Blizzard Ice Cream Company's calculations. You could load the five linked worksheets & display them all at once - one change to the inventory spreadsheet would ripple through the links to the others. If you wanted to modify a specific spreadsheet, you could zoom its window to full screen, make your changes, & return the window to original size.

With 1-2-3 Release 3, you could either load the five spreadsheets into memory separately or use the programs 3-D capability to treat the five spreadsheets as one sheet with 5 levels. With the 3-D option, each spreadsheet is assigned a letter, starting with A, & you can view three of the spreadsheets at once. As with Excel & Quattro Pro, all spreadsheets are immediately updated whenever you change one.

Release 3, Quattro Pro, & Excel also permit more elaborate linking formulas that can eliminate the intermediate step of linking several ranges separately & then using a formula in a separate cell to manipulate the results of those links. For example, the calculations in CONSOL.WK1 that require all the cells in range B6..B12 could be reduced to a single cell with a formula similar to:

+<<NORTH.WK1>>SALESINCOME
+<<NORTH.WK1>>PRODUCTIONCOST
+<<NORTH.WK1>>OVERHEAD

This additional muscle, however, comes at a price. Excel & 1-2-3 Release 3 require an AT-class machine with expanded memory to work well. Quattro Pro is less demanding but still requires more memory than 1-2-3 release 2.2 does. If you don't have the memory for the more sophisticated programs, Release 2.2's more modest capabilities will still help you do the job more easily than you ever did it before.

Financial Users of Quattro Beware!

As a tool for presentation of financial information, Quattro Pro contains a fatal flaw. When using currency or comma formats, both of which are common for financial information, Quattro Pro can only produce aligned columns of numbers con-

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taining positive & negative values using a simple monospaced font. For all practical purposes, that eliminates your option to use the much richer & more professional-looking Bitstream & Hershey fonts. Having used both Lotus 1-2-3 with Allways & Microsoft Excel without any problems presenting well-aligned numbers, I was surprised & disappointed when my copy of Quattro Pro produced poor-looking output. I hope Borland responds rapidly with a fix for this flaw in an otherwise impressive product. –Dick Speer, Hudson, New Hampshire

MS - DOS

by Gottfried M. Knoll, Eschborn, Germany

I'm an expansion board freak who is running out of slots in his AT clone. Before settling for the obvious solution - throwing out a card to make room for a new one - do you know of a bus expansion device that allows me to add more cards?

What are your options? Well, for one, you could buy a tripped-down, inexpensive XT or AT clone (*or build your own*) & use it as a slave machine. The story "Building Workgroup Solutions: Zero-Slot LANs" in the April 24, 1990, issue of *PC Magazine, discusses the software you'd need to use & gives you an overview of the capabilities you'd get.*

Also, SCSI (Small Computer Systems Interface) devices, which haven't yet come into their own but are certainly becoming more common, allow you to daisy-chain. So for instance, you could conceivably connect a SCSI-driven tape backup to your SCSI-driven CD-ROM drive, at the expense of only one slot.

Cache Software by Gary Guth

In addition to the investment for the software itself, a disk cache will also require a substantial chunk of main memory, expanded memory or extended memory. Although there are some disk cache software programs available as shareware, most of these programs will have to be purchased. The software can be had for between $50 & $100, although owners of PS/2's current COMPAQ machines & some other compatibles usually receive the facility with either the hardware or as part of the manufacturer's version of DOS.

A disk cache is an intelligent extension of the DOS buffer system. The cache software carves out a large buffer pool from main storage & uses it to keep data read from the disk as long as possible in case it will be needed again. When there is no more space available for new data, the cache software may use an algorithm such as LRU (least recently used) to determine which buffers to reuse. Some programs will attempt to read ahead on a given track in order to anticipate your next read request. Whenever a program issues a read request to DOS, the cache software intercepts the read & sees if it can satisfy the request from a record currently in the cache buffers. If it can, no I/O is needed & the record is returned immediately to the program. When the program issues a write request, the cache software will immediately write the data to disk & also store it in case it's needed again. The immediate write is a must if data is not to be lost in case of a power or software failure.

Almost all of the cache software packages will keep some statistics on the amount of disk activity requested, actually performed & satisfied from the cache buffers so that they can justify their existence. Many some with a demo program to show just hoe good they are, but frequently these demos show how effective they can be by randomly reading a 50K disk file with a 64K cache. The effect, of course, is to turn the cache buffers into RAM disk.

Some packages allow the user to restrict the cache to certain drives. For example, it may not make sense to cache a diskette drive when your major concern it the hard disk. All packages allow you to set the size of the cache, & most allow you to place the buffers in main, expanded or extended storage. Some may let you specify that certain files & programs are to be made cache resident which gives you some of the benefits of a RAM disk, although you will lose some cache capacity to do it. These options are provided to allow the user to fine tune his system. Unfortunately, unless you have a real grasp on all the things that can happen to the system, they may turn out to cause more harm than good.

Like the BUFFERS in CONFIG.SYS., the difficult question is determining whether or not a cache will help, or even if it will, how much cache is enough. Like the DOS buffers, a cache doesn't provide a great benefit if most of your disk access is sequential. On the other hand, even sequential access usually results in a rather random treatment of the FAT entries. In general, if you have a megabyte or more of main storage & a processor that runs at 10 Mhz, the benefits of a disk cache of 100K or so are real & measurable. Below that, it really depends on your particular applications.

FASTOPEN When DOS 3.3 was released, it contained a new command called FASTOPEN. FASTOPEN facilitates access to files by building an internal table which contains the directory entry for a specified number of files & directories. The number of entries can be specified by disk volume. Although the user cannot specify which files & directory locations are to be saved, one can try to set the number of entries to be a reasonable approximation of his working set of files.

You can specify from 10 to 999 entries per disk, with a default of 34. Since some entries are used to keep track of directories, the value has to be a number greater than the maximum nesting level of your directory tree structure. Although it may seem to be difficult to estimate how many entries is enough, you will probably discover the nature of your work limits the number of files you hit on a typical day.

FASTOPEN only comes into play when a data file is opened or a program is loaded. It will not help you access data within a file once it is open. Since FASTOPEN is a standard DOS command, it can be placed in your AUTOEXEC.BAT file.

> Access Method Buffers

Some data base packages allow the user to specify that the data base manager is to provide its own disk buffering mechanisms. As usual, you will be trading main memory for disk performance. As usual, you will have to experiment to find out how much memory to give up before the performance increase stops. Usually this facility is included in the price of the data base manager.

The advantage that data base buffering has is the data base manager is not groping in the dark about the performance considerations of different records. The DOS buffers & cache software treat all records equally. However, the data base software understands the relative performance implications of keeping index records in main storage as long as possible as opposed to random data records. Assuming it can tell them apart, it has an advantage over a simple cache & may perform better with less main memory allocated to it. The real question is whether or not to combine the advantages of the data base buffering, a cache program & the DOS buffers. Only a bit of experimenting will tell you that.

Defragmenting Files As disk files are created & deleted, holes appear in the disk. Then you create a new version of a program or a file, the new version if added to the disk before the old version is deleted. The result is that space is made available where the previous version previously existed. If a small program or file is then created, part of the hole may be used. If it is a fairly large file, the remainder may be used, along with an expanse of disk located elsewhere on the disk. The FAT allows files to be fragmented down to the cluster level, & they frequently may do just that. The result is that sequential access to the file may result in a great deal of arm activity as the system chases the file all over the disk (in addition to following the threads through the FAT).

The only way to defragment a disk without special software is to unload all of your data & programs onto another medium, &

then reload the files & programs one after another with a copy or xcopy utility (but not a DISKCOPY). This is terribly inconvenient & time consuming. In addition, since the fragmenting activity keeps occurring, you would have to keep carrying out this activity on a regular basis.

Defragmenting programs attempt to do the same job in place on the hard disk. They work by moving around the clusters of a file to put the files into contiguous clusters. Many of these programs will allow you to customize. they might, for example, place all sub-directory files after the root directory, or attempt to put the oldest files first. The main thing is that after the programs are finished, the files & programs fill up the system as sequential clusters with no holes in the FAT.

Once the disk has been defragmented, it is relatively easy to keep it that way if the process is rerun regularly. The first time a defragmenter is run, it will likely run for several hours, especially if the disk is large & badly fragmented. Also, it is usually a good idea to back up a disk before defragmenting it. Should power fail during the process, the disk may be scrambled & unusable, although this is a function of the particular program.

Defragmenting a disk is not a substitute for BUFFERS, a cache or a RAM disk. It may provide healthy performance gains for some users. Like all performance tools you must measure its usefulness in your environment. For example, if you work in a development environment, your compilers, editor, & Linker may all migrate to the front of the disk & stay there. The programs under development will be at the back, be fragmented & also tend to migrate out of the system on a regular basis. In that environment, the defragmenting program may only make sense when new compiler versions are installed.

> Altering The Disk Interleave Factor

The last technique involves changing the disk interleave factor. The interleave factor indicates how many revolutions of the disk are necessary to read all of the sectors off the track. Ideally, a ratio of 1:1 means that all of the sectors on a track could be read in sequence in one revolution. However, even at 1:1, a track with 17 sectors of 512 bytes using a 2048 bytes cluster must read through five clusters which means four trips back to the FAT even on a defragmented disk. It is important to remember this because going from a factor of 3:1 to 1:1 will not triple disk performance. For example, on a 17 sector per track disk at 3:1, a 2048 byte cluster can be read in sequence within one disk revolution. While the actual dwell time over the disk during the read is still three times longer than at 1:1, it still does not require a second disk revolution. The ultimate culprit, will still be the frequent trips to the FAT.

Most of the software packages that alter the interleave factor will first run a test on your disk to determine if the interleave factor can be altered, what it can be set to, & what the projected improvement in performance might be. Some of these packages can alter the interleave with your files in place, but as with any package that alters the position of disk files, you are safest if you first backup the disk. One important factor to keep in mind in altering the interleave factor is that performance is based not only on the disk, but mainly on the speed of the CPU. Consequently, a fast AT is more likely to be able to take advantage of a change in interleave than an XT.

Summing Up. For a change, the best things in life are free. Three performance tools, BUFFERS, VDISK & FASTOPEN are distributed with DOS 3.3. For some versions of DOS, a cache system may also be distributed as part of DOS. Since the facilities are free, they should be your first line of attack. Your next step, if you have the memory & CPU speed, is the cache system. Disk defragmenters can be effective in certain instances, but only after other techniques have been tried. Finally, altering the interleave factor can have a very positive influence. The most important factor in choosing a disk optimization scheme is not the package or the price, but in understanding your applications. Although any of these techniques may provide some improvement, the best first step is a simple paper & pencil analysis of your activities. Think through your activities in light of how the hard disk is used by DOS & try to determine which tools will alleviate the bottlenecks. Sometimes the best first high tech step is low tech.

Power Tip by Robert Luhn

To track down a single questionable word with the *Microsoft Word spelling checker*, you must select Lookup from the Library Spell menu, type in the word, & press <CR>. As a faster alternative, try the thesaurus. By pressing <Esc>LE (or <Ctrl F6>), you can confirm whether your suspect word exists &, if so, whether it's misspelled. The thesaurus also suggests other words you might be looking for - often, the correct one.

DOS Tips - The Use of "." & ".."

by Stephan Cooper, San Francisco PCUG

Have you ever wondered why, when you type the DIR command at the top of a sub-directory listing you see "." & ".."? If so, read on...

The easiest way to think of directories & sub-directories is by visualizing a family tree. At the top you have the most senior parent & branching down from that you have the children, grandchildren, etc. With DOS directories, that top most position is known as the "root directory" (*as in an upside-down tree - at the top would be the root*). All levels lower than the root directory are known as sub-directories.

When you get a directory listing which display a "." & a ".." at the top, you're looking at a sub-directory. "." is an alias of the directory you're currently looking at & ".." is an alias for the directory directly above the one you're looking at. ".." is called the parent directory.

How can this information be useful? ".." can be used as a quick shorthand for specifying the directory path that leads to the parent directory of the one you're currently logged on to. For example, let's say you have four directories on your disk. C:\ would be the root directory. The sub-directories would be C:\WP, C:\WP\DATA, & C:\WP\LETTERS. C:\ would be the ".." of C:\WP, which in turn would be the ".." for both C:\WP\DATA & C:\WP\LETTERS.

Now, as an exercise, let's assume that you're currently logged onto C:\WP\LETTERS, you could go about it two ways. First, you could type the DOS command **CD C:\WP\LETTERS**. Or, by using "..", you could shorten that to **CD C:..\LETTERS**. Simple?

Let's add another directory called C:\WP\DATA\REPORTS & assume you are logged onto this one. To make your way to C:\WP\LETTERS, the ".." shorthand would become **CD ..\..\LETTERS**. In effect, you've told DOS to Change Directories to the LETTERS sub-directory of the parent of the directory that you're currently logged onto.

These aliases can be used any time you need to tell DOS a directory name. Some of the DOS commands where this shorthand is appropriate include: CD, DIR, ERASE, & RENAME. Give it a try & give your fingers a rest.

& Length of Directories in MS-DOS

Well, according to the MS-DOS Encyclopedia, the root directory has a maximum size associated with it because it is allocated when the disk drive is formatted. The size for each root directory depends on how big the fixed disk is. Smaller disks will have smaller root directories. Sub-directories, on the other hand, are not bound to a size limit. They can grow as you add more files because they are really made up of a linked list. Each new file is added by searching the directory chain for an empty spot to add the file name; if one does not exist, the file is added to the end of the sub-directory. Therefore, the maximum number of sub-directory entries is determined by the total amount of available disk space.

The size & the physical location of the root directory can be obtained from data in the BIOS parameter block (BPB). This & more data about the BPB can be found in the MS-DOS Encyclopedia.

Advice Never play cards with a man named Doc. Never eat in a place called Mom's. Never sleep with a woman whose troubles are worse than your own. And, according to the San Diego Computer Society's August "P.S. Journal", never use those clear plastic bags that 3.5" disks come in to store the disks. "They can create static electricity as you slide the disk in them, possibly corrupting your data. Find another way to keep your disks clean & protected," they say.

Path Command SEZ PDN Software

Those with a hard disk system are probably familiar with the PATH command. PATH is an internal DOS command used to navigate between drives & sub-directories. Those who are using only floppy disk systems might be surprised to learn that they, too, might have a use for the PATH command.

Specifically, the PATH command tells the computer where to look for files. A single PATH statement can be used on a one-time basis when one wishes to execute a command in a different drive or sub-directory. EXAMPLE: **B:WS** or **C:\WORD\WS**

Both of these command would tell the computer to look in a specific drive as in the first example & execute WordStar. The second command would tell the computer to read the "WORD" directory & execute WordStar.

Typing a command path each time you want to use a certain program could become very tedious. There is a way to tell your computer that each time you send it a command it should look at other drives or directories if the requested program is not found on the logged drive or directory. EXAMPLE: **PATH=B:** or **PATH=C:\UTIL;C:\WORD;**

The first example would apply to floppy disk systems. Assuming the user always worked from drive A:, this command would tell the computer to check drive B: if a requested program is not found on drive A:.

The second example would apply to a hard disk system & directs the computer to check both the "UTIL" (Utility) & the "WORD" (Word processor) directory if a program is not found on the active logged directory. The PATH command can be included in the AUTOEXEC.BAT file & will automatically be loaded when the computer is started without having to enter it each time one starts one's computer.

Those not familiar with the PATH command might already start seeing its value. Frequently used utilities can be accessed at any time, regardless of the active drive or directory. No more jumping around or typing lengthy commands, right? Well, almost.

The PATH command has certain limitations. Without modification, the PATH will only access fully executable (.COM or .EXE) or BATCH (.BAT) files. That means that a program such as WordStar that requires supporting overlay (.OVL) files will not operate if called from a different sub-directory via the PATH command. This would also apply to many other programs that often use overlay, data, & other supporting files extensively.

All is not lost. There are several programs, both commercial & Shareware, that refer to themselves as "Path Extenders." PDN has two programs (DATA PATH 3.0 & SEARCH PATH) that remove the directory limitations from the PATH command. This adds an enormous amount of flexibility to one's computer use.

WordStar 3.1 would provide an excellent example. Say one has WordStar installed on a hard disk in the C:\WORD sub-directory. One can then move to another sub-directory that contains only letters written to customers in New York (C:\WORD\NY). WordStar 3.1 does not permit PATH statements used when calling files so under standard conditions these letters could not be accessed without moving them to the C:\WORD sub-directory. With a "Path Extender" one can switch to the C:\WORD\NY sub-directory, type WS & WordStar will appear as if it were in the sub-directory & use only those files written to customers in New York.

Another example applies to a multi-user machine. Each user can have his own sub-directories without the need to keep duplicate copies of the application program. This would allow user BOB to go to his "LTR" sub-directory (C:\BOB\LTR), read, write or revise letters without worry about bothering letter created by the other users or having other users read or alter any of his files.

"Path Extenders" work well with most programs although it may take a little fiddling to get a specific function working exactly as desired. It should be noted, LOTUS 1-2-3 1a has a statement in its config file that tells where data is stored & does not lend itself to modification with either the PATH command or Path Extenders.

All this does have some implications for those who use only floppy disks. Assuming a system has a full 640K of memory available, it's possible to set up a RAM disk that contains only frequently used utilities, access these with the PATH command & regardless of what disk is in the drive, have these utilities always available at one's finger tips. In fact, one could set up a 128K RAM disk as drive C: and, using the PATH command and/or Path Extender with PATH=A:\;B:\;C:\; have a machine that acted as if it were one large 848K disk drive.

For those not familiar with RAM or VIRTUAL disks, these are phantom disk drives that exist only in the system's memory. The computer looks at them as if they are an actual hardware disk drive & they can hold any number of files up to the size of the RAM disk. Caution has to be taken that any new data written to a RAM disk is copied to a real drive before turning off a machine. Once power is gone, these drives & any data they contain disappear & all information is lost forever.

What to append a file? I recently spent a few precious minutes paging through my manuals trying to append a file to another file. I examined my DOS guide & it said "Append: Set search path for data." - not the connotation I was looking for. I next checked the index. Under append it said "See copy command." I quickly looked up copy command & found the information I was attempting to locate.

If you wish to copy file1 & file2 into a third file, with your text editor create file 1 which says "This is" & file 2 which says "great!". Then type **copy file1 + file2 = filenew**. If you examine filenew now, you will see that it says "This is great!" Note the order the files are copied in the sentence "This is great!" Multiple files are copied in the order listed following the copy command.

by Don Simpson TCS Member

Q>. I recently replaced A: drive (5" 360k) with a 3" 720k drive. The new drive works fine, except that it formats new diskettes to 360k rather than 720k. Is there anything I can do?

A>. There are two ways to solve this problem. One is to use the command line parameters /n:9 /t:80 each time you format a diskette in that drive: **format a: /n:9 /t:80**

Alternatively, you can load the DRIVER.SYS in your CONFIG.SYS file with the following parameters:

device = drive.sys /d:0 /f:2 /n:2 /s:9 /t:80

Your A: drive will be designated as a 720k drive. Note that this assumes that the file DRIVER.SYS is in the root directory of the boot disk. This has the added effect of assigning the first logical drive beyond the existing drives in your system to the first diskette drive. In other words, if you have two floppy diskettes (720k A: & 360k B:) & a hard disk (C:), D: would be the same as A:. Thus: copy **A:*.* D:** will allow you to copy files from one diskette to another, using only the 720k drive.

Q>. Is there a way for me to automatically maintain a log of each time my office computer is booted?

A>. You can put the following lines in your AUTOEXEC.BAT file:

```
echo.|date|find "Current" >>bootlog.txt
echo.|time|find "Current" >>bootlog.txt
```

The "bootlog.txt" appends the date & time to the file "bootlog.txt" (if the file doesn't exist, it is created). See the discussion on checking the date & time in the May 1989 (V8N5) issue of the TCS Journal for an explanation of the left side of the instructions. In order for this to work, your computer must have a battery system clock, otherwise the log of all the boots will only be:

Current date is Tue 1-1-1980
Current time is 0:00:0X.XX

New ROM DOS Frees Space for Applications

Microsoft has developed a version of DOS that executes in the computer's ROM rather than in RAM. The company is aiming the ROM-executable DOS at makers of laptop computers & embedded systems - Poqet Computer, for example, is using ROM MS-DOS in its hand-held PC. Several computers come with DOS in their ROM chips, but they first load the operating system into RAM.

The main advantage of ROM-executable DOS is it saves approximately 40K bytes of RAM, which is then available for other applications. Designers of embedded systems will be able to build DOS directly into the hardware & then will be able to run MS-DOS applications. The ability to build MS-DOS into embedded applications will make it easier to develop software for those systems, according to Microsoft product manager Mark Chestnut.

ROM-executable DOS is "preconfigured" in the host computer system, thus eliminating boot procedures from disk or time delays while the operating system loads into RAM.

Microsoft had to significantly rewrite MS-DOS to make it ROM executable, program manager Tom Lennon told BYTE. "We had to completely reorganize the segmentation areas in memory," said Lennon. The ROM version is actually a "split system," using small portions of RAM for accessing "modifiable" data, such as the file structure, he said.

Microsoft will supply a "binary adaptation kit" to OEM licensees, which includes the code & instructions necessary for "burning" MS-DOS into the OEM's ROM chips. Emerson Radio Corp. & Headstart Technologies have licensed the product. Vadem Corp. will distribute ROM DOS for its Intel 80186-based embedded processor systems.

Power Up Software Corp. (*NEUG thinks highly of this company & its products*!) recently released an upgrade to its low-end Express Publisher that gives users increased control over generating & managing fonts.

The $149 version 1.1 of the PC-based desktop-publishing program now adds support for Hewlett-Packard Co.'s Laser Jet III Printer, allowing users to create scalable fonts on the fly. Express Publisher 1.1 also supports most standard LaserJet soft fonts, including those from Bitstream Inc., according to officials at the San Mateo, CA firm. Users of the current release of Express Publisher can upgrade to version 1.1 for free. Power Up Software can be reached at (415) 345-5900.

McGinley's Tidbits by John McGinley CPC

So you thought other than the 80386, that the Weitek 3167 coprocessor was the only on, hmmm? Wrong again. There's the IIT 2C87 & the Cyrix FasMath 83D87. Don't know too much about the former but the latter says it is 10X faster than Intel's chip. Intel has been doing some badmouthing of the chip so there must be something here.

The downside is the chip costs double the 80387, & PC Mag tests (2-27-90) show only in real floating point calculations it is faster & then only by 30%. In real applications such as 1-2-3 & AutoCAD they could see no difference. Next? (*Oops, that's a trademark now.*)

Got an HP Laserjet IIP printer? Might have a bad power supply if your was made before Jan. 90. When it goes, you shouldn't be alarmed by the puff of smoke: it's only for effect. You get an "Error 50" on the front panel. Take it to your dealer under warranty or call their unpublished 800 number (?).

The new Symphony (2.2) will support expanded memory, has file linking (you can have a window in your sheet to scan other files looking for the data you want, not unlike Personic's Look & Link which will do that in 1-2-3 but which, with SQZ, is really slow because the searched files must be progressively unSQZ'd), uses Personic's @Base to utilize dBase files, has Allways integrated into it, & a better memory management capability. Upgrade is $150. Might be better than going to 1-2-3 Rel 2.2 for the same price. Stay tuned.

Prediction of the decade: Apple Chapter 11 or sold in 5 years! I think it is a dead-end company, mainly because it refuses to do anything in the IBM standard. They are slowly being squeezed out of many markets which are or have gone IBM wholly. The market for the one-use Macintosh is quickly getting saturated. Apple has no other niche. And they are too big to come up with something revolutionary; they can never be a Next, etc.

> WARNING ! Be careful WHERE you BUY!

I just got a bill from CT for tax owed on $1250 worth of computer equipment I bought from 47th St. Photo in 1987! You may find one in the mail for something too. Talked to an accountant friend & he says it's all quite legal. NY & CT now have a reciprocal on trading such data. NY gets the records from 47th St. (CT can't directly) & sends it to CT! Even mass catalog mailers who have no office in this state are being hit for info; anyone who mails many catalogs into the state is a local merchant & must collect tax (check the bottom of the order blank to see if the catalog qualifies, it will list the states in which they must collect tax). If you live in one of these states, BIG BROTHER is watching! You might want to consider buying from companies NOT in one of these anti-Liberty & Freedom states!!

As Big Brother computers get bigger, & faster, users' privacy & pocketbook will be more & more the target of tax hungry government. I can't believe this is what our Founding Fathers fought for!?! Our only weapon will be to expose this kind of government action, & to take our business to non-participant states. The more $$$ government gets, the more they spend to get more!! They still spend more than we can pay, & take pay raises too!! Let's not encourage the system falling into their tax traps, or by voting for incumbents who have proven their inability to manage OUR $$$!!

Laptop batteries, the bottom line. Two problems you run into: 1) constant trickle charging puts crystals on the electrodes & 2) normal recharging charges some of the component cells more than others. Also there's the memory problem where is you only use 1/4 of the charge & then recharge, after time it will only produce 1/4 of what is could if you drained it way down each time.

The solution: Unplug the machine from the wall, turn it on & run it for 24 hours (about 4 times battery's normal life) to get the battery all the way down. This will help get rid of the crystalline growth, too. When the machine has turned itself off - "died" - turn it back on & recharge for two days; an extra day to get those weak cells up too. Now do the whole thing again. The performance notch because of the crystals should be gone & the component cells should be realigned equally to each other.

Speaking of laptops, here's one of the best deals I've ever seen. The NEC Multispeed EL is the best reviewed non-hard disk machine going. It sells discounted for over $1400. Software on ROM is excellent word processor with spelling checker (1), note pad, dialing program, communications program with XMODEM including a module allowing the machine to be operated remotely by another (a la PC Anywhere!), an outliner, & a database/filing program. & a special context help key on the keyboard. Wow! You can set up a RAM disk, it has 640K, runs at 9Mhz, removable/replaceable battery, has a backlit supertwist screen, 2 720K drives, a good keyboard & will run 4-6 hours on a charge. You can hook a monitor to it, turn off the screen, & it has serial & parallel ports.

Have a SUPER New Computing Year!

Order from Damark item #B-449-127713, only $899 while they last. 800-729-9000. Can't beat it. I know, I got one. Why no hard disk? 3 times the battery life. Carrying ten 720K floppies is no hardship; do you use more than 7,400K in a week? On the road?

Rupp Corp has a $39.95 ten year (1) replacement Batac battery for your AT. It gets recharged when the machine is on. 212-517-7775. Gates Energy has developed a new NiCad battery with 25-40% more capacity. Will be in laptops SOON! 800-627-1700.

PC Tools has fixed many of the bugs, calls it Version 5.5 & charges $20-25 for the privilege.

Putting a BBS in your shop instead of a buggy network? Steve Gibson says Galacticomm has no second it is so good. See article InfoWorld 7/31/89 or call 305-583-7846.

Did you know IBM has no rights to the name PC-DOS? DEC owns the name. Seaware has no rights, despite recent lawsuit, to ARC. Datapoint owns it (attached resource computer). You cannot put something into the public domain. All you can do is renounce your rights to a program; then someone else can come along & claim those rights!

Tricks: If you have a choice, use COM2; it's faster than COM1! Liquid Paper thinner gets the sticky off your floppies at the protect notch. You have several text files (say *.TXT) you want to scroll through all at once. Use COPY *.TXT CON <CR> (Fox Valley PCUG).

Ever /S out of Lotus & forget you have? You load another copy of Lotus & now have two in there, right? Add these lines to your 1-2-3 batch file to change the prompt to: "Type EXIT to return to 1-2-3 CA123". Add:

PROMPT Type EXIT to return to Lotus 1-2-3$_$p$g
123 (runs 1-2-3)
PROMPT pg (returns prompt to what it was)

Daffynitions: A girl who'd rather be with the computer than guys is an infomaniac. A computer nerd wipes his feet on a format. And don't forget the human side of computer: praise your machine occasionally by saying "data boy!"

DOS 4.0 sales still slow, half of 3.3's. Make sure to get Microsoft's 4.01 if you must, upgrades not available. It couldn't handle exPanded memory well, larger than 33.5M files are hard to manage to do without, IBM's won't address disks not formatted by IBM DOS versions, a lot of utilities & TSR's won't work with it - & many are not being changed so they will!

From a friend in Texas, here's what they put in their prompt command (needs ANSI.SYS in CONFIG.SYS file). Type it exactly:

PROMPT$e[0m$e[1;44m*$e[41m—
$e[47;34m$p$e[0;30;46m

Xmodem CRC is faster & more accurate (99.9969%!) than Xmodem & similar to Xmodem-Checksum (rarely seen). Relaxed Xmodem is similar to the latter but it sends ten times as much data before checking but takes 10 times longer to find an error. It was designed for Compuserve because Xmodem works so poorly there. Xmodem-1k is like Xmodem but sends 1024 byte blocks instead of 128 & should always be used instead of Xmodem or Xmodem CRC is possible. Ymodem (batch) enables sending multiple files. It is sometimes referred to a Ymodem & Ymodem Batch; they're all the same. (*All this good stuff taken from the QMODEM manual. I do read them occasionally*!)

Know what you get when you cross a computer nerd with a pig? Answer: nothing. There are some things a pig just won't do!

What To Do When Faced With a Disk You've Never Run

Make a copy of it! Put it in the A: drive, a formatted blank disk in the B: drive & type: **Copy A:*.* B:** <CR>

Read your DOS & BASIC manuals. If you do not have manuals, buy or borrow them. We suggest you go through a DOS Tutorial & keep DOS Help (in the library) handy. Reference books can be helpful; There are many available at bookstores or libraries.

Make sure you know the DIR, TYPE, COPY, DISKCOPY, DELETE commands, & how to load BASIC programs.

> For the New User

<b>1>. Loading the Diskette: After booting up with DOS, put the disk in drive A:.

<b>2>. Directory Listing: At the A: prompt. type DIR/W & press <CR>. DIR/W will provide you with a listing of the files on the disk in columns & usually won't run off the screen the way DIR does. Try them both. DIR/P stops when the screen is full.

<b>3>. Information/Help Files: Look for HELP.DOC, READ.ME, or any file with a .TXT or .DOC extension (e.g. manual.txt, or readme.doc). These files, if available, will provide information on how to run the programs.

<b>4>. Viewing the Documentation: To read the .txt, .doc, or read.me files you have chosen, enter: TYPE: <filename>.txt at the DOS prompt (e.g. TYPE: manual.txt). The text will start scrolling on the screen for you to read. To stop the scrolling: Hit the CTRL S keys. To begin scrolling again, hit any key.

<b>5>. To Print a Documentation File: Turn on your printer & enter **Copy <filename>.<ext> PRN** <CR>.

Starting Programs If there are documentation or text files on your disks we suggest you read/print them, you will save yourself much time & effort.

<b>1>. Executable Files have an .com or .exe extension. They can be run from the DOS prompt by entering the filename (e.g., you run Startrek.exe or Startrek.com by entering Startrek <CR>).

<b>2>. Batch Files have a .bat extension & can be run from the DOS prompt the same way you run an executable program (e.g. <filename><CR>).

<b>3>. Basic Files has a .bas extension. They are written in the BASIC programming language. You need a BASIC interpreter to run the program files. The interpreter usually comes with your DOS. (BASIC is also known as BASICA or GWBASIC.) Or you can buy a commercial program like Quick Basic or the like.

<b>4>. To Run Basic Programs: For instance, to run PAC-MAN.BAS, first boot up with DOS. Then on a -

> Hard Disk System:

<b>a>. insert the PAC-MAN disk into drive A:.

<b>b>. from the sub-directory which has your BASIC or BASICA program in it, enter **BASICA A:PAC-MAN**, or **GWBASIC A:PAC-MAN** at the DOS prompt.

Floppy system: After booting, insert your GWBASIC or BASIC disk in drive A:. At the A: prompt, type BASIC or BASICA <CR>. Then place the disk with PACMAN.BAS into drive A:. From BASIC's OK prompt, type **LOAD "PACMAN** <CR>. Then type RUN <CR> & you're off & running.

Another alternative would be to copy the GWBASIC.EXE of BASICA.EXE onto the game or program disk in the A: drive & at the A:> prompt enter **GWBASIC <filename>** or **BASICA <filename>**.

<b>5>. Archived Files have been compressed for storage purposes, & can not be executed in compressed format. Most bulletin boards compress files or groups of files to save space. These files have an extension of ARC, LBR, ZOO, or an extension with a Q in the middle (e.g. PCCHESS.EQE).

For information on how to use the uncompress utility (e.g. XARC, UNSQZ, PKXARC, PKARC, or UNZIP, etc.), read the doc file that comes with these programs.

A time or two ago I reported on an article in InfoWorld on 16-bit VGA boards & incorrectly identified the one they picked as best. It should have been the Ahead Systems VGA Wizard at $199 (408- 435-0707). If you took away its price advantage - next cheapest was $275 - it scored as well as the Everex, Boca Research, or Genoa Systems.

To get back some of your valuable 640K RAM, kill the buffer command if you are using disk caching. If not using disk cache (although you don't know what you're missing if you don't; I go

crazy when mine if off!), use BUFFERS=10 for a PC in your CONFIG.SYS, 15 buffers on an AT & 20 or more on a 386.

The 486 chip? You guessed it, there's another bug! Even after they shipped the new ones early this year. This bug is esoteric & you probably wouldn't come across it. Intel says there's a "workaround." Great.

Other than last month's TAPCIS for CompuServe, there's also AutoSig (download ATO58B.ARC & ATODOC.ARC from the IBM Communications Forum [GO IBMCOM], Library 1). Did you think CompuServe was the only one? Try The Well (415-332-4335), Echo (212-255-3839), Metanetwork (703-243-6622), Genie (800-638-9636), Delphi (800-544-4005), Bix (603-924-9281), &, ah, er, Prodigy (800-822-6922).

Thinking of getting a SCSI drive? Did you know it doesn't reliably work with OS/2 & DOS 4.01? You need special drivers, maybe only now available, they say. Some kind of a bug between the drive & the AT BIOS. Single operating system setups seem OK, but if you change systems or want to run two, check for the drivers first. (*NEUG suggests the LARK ESDI controller w/64K cache & a Maxtor ESDI 4380E as the best hard disk solution!*)

Running a modem, FAX, & an answering machine all on the same line? Hmmm? Got a solution for you: $199 will get you a box which knows which is which & will route the incoming call to the right spot. Has a lot of options. (800-422-2832, High-Tech Resources in ME).

In data-recovery reviews, both Norton & PC-Tools rated higher than MACE Gold! Best diagnostic utility was Manifest by the makers of Desqview (only $60).

Steve Gibson now says he's got a monitor he likes much better than the Sony for his dream machine: the Seiko 1440. Lower cost, better styling, a permanently installed cable, handles super-VGA autosizing with alacrity, & will turn itself off automatically when there's no video signal. (NEUG uses a Seiko 1430 & agrees they make super displays!)

Have an IBM Model 70? Having software problems running Windows/386 with it? Not your fault; another IBM bug they didn't tell you about. Supposedly there's an IBM fix on the way (where?) but as of the first of the year, even Microsoft didn't have it!

Here's how they should have done it. Microsoft discovered a bug in their DOS 4.01 last spring & put the fix (DSPATCH.ARC) in Data Library 1 of their CompuServe forum. If yours was shipped after 4/7/89, don't worry, it's fixed.

Supercalc 5 has revision C out free to users (yet to hear from them about mine) & PC-File has another version out combining it with the DB version & using dBase files! Two goodies. Fontspace (212-967-2424) which squeezes those gigantic font files into about 10% (9meg to 430K!) of their former size & expands them as you need with a little TSR (3K). Why don't the programs do this themselves? Then there's DBMS/Copy (713-667-4222) which switches back & forth among some 50 different file formats.

Did you hear of a little-known trip to Panama last November by Denver Broncos quarterback John Elway? The CIA heard he was good at overthrowing. Thaa..sall folks!

> **The latest DOS versions include enhancements that enable users to increase system speed.**

FASTOPEN (DOS 3.3 & higher) helps DOS load files faster by eliminating a step. Without FASTOPEN, DOS must read the file allocation table (FAT) on the hard disk to find the location of the file before it retrieves the file. FASTOPEN stores the location of files in RAM so the disk is accessed only to retrieve the file.

EQUITY TIPS

Quickie Batch Files by Finley Eversole

I'm a strong advocate of batch files, using them for just about everything - abbreviating DOS commands, loading applications, frequently-used files, etc. Here are a few quick, easy-to-create batch files which you may wish to copy, or modify to suit your own needs.

First, if you do not have a BATCH directory in your root directory, you may wish to create one & place it in the Path command in your AUTOEXEC.BAT file. To do so, proceed as follows:

At the C:\ (or root directory) type md batch<CR>

Also at the c:\ (or root directory) type the following command:

type autoexec.bat<CR>

This will display your AUTOEXEC.BAT file as it presently exists. To modify it to include your newly-created BATCH directory, you will copy it exactly as it is, except for inserting C:\BATCH; immediately after C:\DOS; in the PATH= portion of the file. Having typed **type autoexec.bat<CR>**, you have a copy of your existing AUTOEXEC.BAT file on the screen in front of you. You will copy it EXACTLY except for adding C:\BATCH; to the path.

To retype your AUTOEXEC.BAT file, type the following at the C:\ prompt: **copy con autoexec.bat**

Now copy everything exactly as it is except for inserting the BATCH directory. Example.

Let's say your current AUTOEXBC.BAT file looks like this:

```
echo off
cls
prompt $p$g
path=c:\;c:\dos;c:\wrdperf
```

To add the BATCH directory to the Path command you would type as follows:

```
copy con autoexec.bat<CR>
echo off<CR>
cls<CR>
prompt $p$g<CR>
path=c:\;c:\dos;c:\batch;c:\wrdperf
```

Now press the <F6> key which inserts a ^Z to mark the end of the file. And <CR>. Your AUTOEXEC.BAT file has now been modified to include a batch directory, & whenever a batch command is issued, your system will search the batch directory immediately after searching DOS for it.

Creating Batch Files Now at the C:\ type **cd batch<CR>**

This places you in your BATCH directory. You are now ready to create batch files which can be accessed from any command line in any directory or sub-directory.

To create a batch file in your BATCH directory, always begin by typing **copy con** followed by one space. Then assigning the word or letters which you will use to execute the batch file, plus .bat, which is the batch file extension.

EXAMPLE **copy con d.bat** ("d" for DIR)

This one-letter batch file will display your files in any directory or sub-directory in a wide format, with screen pauses if needed. Here is how this batch file is written:

```
copy con d.bat<CR>
dir/w/p
```

(Then press <F6> to add a ^Z to end the file & <CR>.)

Batch files may be used to load programs. Here is one which allows me to load my word processor by pressing only one key- "w"

```
copy con w.bat<CR>
cd c:\
cd word (directory containing Microsoft Word)
word (command to install Microsoft Word)
```

(Press <F6> to add a ^Z to end the file & <CR>.)

Now to load my word processor at the C:\ prompt or from any other directory or sub-directory command line, I only have to hit the letter "w" & press <CR>.

An application & frequently-used file may be loaded together with a similar batch file. For example, "Address" in a sub-directory called "Friends" in my "Word" directory. With a single batch file I load both my word processor & the "Address" file. That batch file is created as follows:

```
copy con address.bat
cd c:\
cd word (Directory containing Microsoft Word)
cd friends (Sub-directory which contains "Address" file)
word address.doc ("word" here is the command which
loads the word processor & "address.doc" is the name of the
file which is automatically loaded by the batch file along
with the word processor.)
```

(Press the <F6> key to add the ^Z to end the file, & <CR>.)

To load my address file from any command line in any directory or sub- directory, I merely type the word "address" & <CR>.

As you've guessed, my word processor of choice is Microsoft Word. MS Word automatically creates & saves a backup copy of the last version of each document when a new version is saved. From time to time, I want to clean out all these backup files (which have the extension .BAK). I've written a batch file which will remove all .BAK documents in any directory or sub-directory from the command line where I issue my cleanup batch file. That batch file is written as follows:

```
copy con cleanup.bat
erase %1*.bak
```

(Press <F6> to insert ^Z to end file & <CR>.)

Now to remove all .BAK files from the sub-directory "Letters" in the directory of "Word," I type **cleanup \word\letters <CR>.**

You can quickly access your batch file directory from any command line & be ready to write batch files if you will create the following:

```
copy con b.bat
cd c:\
cd batch
dir/w/p
cd c:\
```

(Press <F6> to mark end of file, & <CR>.)

Any time you want to go to your batch directory from any command line, see a listing of your batch files, & write new ones, you need only press one letter - "b" (for "batch" & <CR>.

Batch files such as these can be created in a minute or less & can simplify tasks & save much repetitive typing. In the examples provided, I've tried to convey the design concept behind the use of the batch files so you can create batch files to fit your own needs & style of working. Enjoy!

Reading & Copying Floppies by John Hoover

In as much as I work both with an AT 386 & an earlier PC, I have, on more than one occasion, had difficulty treading or copying to a 360K disk that had been formatted on the 386 when the disk was inserted into the PC. I have been told my problem was everything from the disks involved to the way I held my mouth during the formatting process. After many hours of frustration & consultation with others, I decided my problem was in the DOS format command & any time I formatted a 360K disk in a 1.2Mb, I should be using the DOS command: **FORMAT A:/4** (*assuming I had placed the disk in drive a*).

In spite of this revelation, I found I still, although not as much, had trouble. Well lo' & behold, I read an article in the November 1988 issue of CTRL ALT DEL, the newsletter of the UCLA PC UG, which I believe clarifies it all. I quote the article below:

"Several members have correctly pointed out the article *All Floppy Disks Are Not Alike* was, at least, misleading in its statement that one should "have no trouble reading or writing to a disk on a PC &/or AT" after formatting a 360K disk in a 1.2Mb (quad or higher density) drive using the command: **FORMAT A:/4.**

(Ed's note: *FORM360 is a shareware program to solve this problem, it is in our library.*)

In fact, you *may or may not* have trouble. As with any commentary, opinion, or suggestion offered in these pages, a user should always investigate other sources for additional information affecting the suitability of the data for his or her application. In this case, a quick check to the DOS manual, under the FORMAT command, would have found the following: "[Use the... 1/4 [parameter] to format a double-sided disk in a high- capacity drive."

This parameter is intended to allow use of double-sided disks in high-capacity drives. However, the disks formatted with the /4 parameter specified may not be reliably read or written in a single- or double-sided drive.

In other words, the /4 option has a specific purpose: it allows you to use a double-sided disk in your high-capacity drive. Nothing more! Any disk so created may or may not perform appropriately in any other drive. It's up to you to check out whether it works on the machines &/or drives you use."

After I read the article, I quickly thumbed through my MS-DOS manual, & bingo! there it was in black & white, just as the article said it was. Moral: When all else fails, read the directions.

DESQview reviewed by Tracy Lebenzon, M.A.

PC News & Reviews, Pacific Northwest PC UG

Part I General Overview If, during the course of a session using a computer you find you have to stop what you are doing, save the data you are working with, exit the program & then start another program to retrieve or work with other data; then save the data for that program, exit it, & return to the first program, find the file you were working on, find the place in the document you were working with & go back to work -- you will understand the frustration involved with using a combination of programs to try to get anything done. Wouldn't is be great if you didn't have to perform this ritual every time you wanted to access information? Actually, it is both possible & easy to avoid the process of saving, starting, & finding, again, & again, & again. The possible solution? DESQview, very impressive software enhancing the capabilities of your IBM 100% AT compatibles in 5 distinct ways. Quarterdeck Office System's (150 Pico Blvd., Santa Monica, CA, (213) 392-9851

Fast Access DESQview gives you fast access to your programs, & is easy to use. DESQview enhanced the operating system of your computer to permit many programs to run at the same time, & always provides a menu (with extensive help & references) at the touch of a key. Switching to a program requires as little as one keystroke, or a maximum of four. Due to this, it is not necessary to stop what you are doing with one program to access data in another program. Fast access means that time spent saving & opening programs may be utilized much more productively.

Multi-tasking Second, DESQview is multi-tasking. Multi-tasking means that a program (or number of programs) can be working in the background while you are doing something else in the foreground. Multi-tasking provides the ability to, as an example, have a file or document printing in one or more windows, while you are running a spelling check on a document in a different window, Multi-tasking further increases productivity by eliminating 'stand around' time while long documents are printing.

Virtual Memory Third, DESQview utilizes "virtual" memory. Virtual memory provides a means of having access to more programs than will fit into memory at one time. Virtual memory is achieved by "swapping" programs from memory to the hard disk when they are not needed. This means that you only have to load your program one time. You may also select which programs may & may not be removed from memory.

Rapid Data Exchange Fourth, DESQview permits the rapid exchange of data between programs. Data may be "Marked" in

one program & "Transferred" to another program or to any number of other programs. Further, by the use of special file names, data may be saved in one program & read into another program without having to remember where the file was saved.

Keyboard Scripts Fifth, DESQview provides "keyboard scripts," which are a means of having DESQview learn keystrokes & later play them back at the touch of a designated key (or two-key combination). By the use of scripts, you can have DESQview set up any & all programs you want to use at when the computer first starts up. Additionally, you can use a script to have DESQview execute only a single task. The most conspicuous aspect of DESQview is you can run any program by pressing a maximum of 3 keys away, &, more importantly, you don't have to save & exit from the first program to use another program. The combination of quick access & not having to stop what you are doing to use another program makes for a great time saving & convenience amounting to increased productivity, & fun.

DESQview can make virtually any number of program perform beyond what even the best "integrated" environments will permit.

DESQview allows you to use virtually any combination of programs you want to use together, without annoyances. And, unlike integrated environments, you may have any program continue working for you while you are working with another program. This is because DESQview permits multi-tasking.

At its most fundamental level, DESQview is a menuing system offing you quick & easy access to your programs. In fact, with DESQview you can have easier access to any program than you could be using DOS alone.

DESQview will run on any IBM PC, PC-XT, PC-AT, PC-386m & PS/2 or 100% compatible computer with 640K or more memory. DESQview is compatible with Monochrome, Hercules CGA, EGA, VGA, & Genius graphics monitors & video adapter cards. It is also compatible with PC Mouse, the Microsoft or compatible mouse & mouse drivers, as well as IBM, PC Mouse, AT&T, Maynard, Logimouse, (without a Microsoft driver), VisiON Mouse, & many others. Further, it is compatible with floppy drives, hard drives, & controllers conforming to the MFM, RLL, ARLL, SCSI, & ESDI formats. In short, it will work with most any hardware you are likely to have.

If you use more than 1 program, you will immediately find a productive benefit provided by DESQview. As just 1 example, with DESQview you can run your favorite word processor in 1 window, your favorite data base program in yet another window, & even a Modem or FAX in another window. This means you can review data in a fraction of the time it would otherwise take.

As another example, DESQview allows you to send data to the printer from one or more programs, &, at the same time, send different data to another printer, potentially from many programs, as DESQview will permit you to stack up printer jobs. While this is occurring you can send or receive data by use of a modem, or two modems. While all this is going on, you can work in another program. Anyone who does work with accounting systems, desk top publishing, computer aided design, & any # of other programs will understand the time saving benefit DESQview provides.

If you ever have to transfer data from one program to another, you will see further benefit. With DESQview's Mark & Transfer functions, you can capture text & ASCII graphics from any non-graphics based program & transfer it to virtually another other program or any group of programs - including graphics programs. This means you only have to key in data once.

Moreover, DESQview's Mark & Transfer functions permit a variety of formatting options. DESQview's Mark & Transfer are very easy to use. All you have to do is type two keys, position the cursor, type one more key, highlight the text you want transferred, then tap the <CR> key. This can even be automated, so all you have to do is type one key. Transferring data to another place in the same program, or to another program, or to a number of other programs is equally simple, & requires only three keystrokes.

The means of automating keystrokes indicated above is facilitated by DESQview's Learn feature. For most any program, you can use Learn to record virtually any combination & any amount of keyboard entries, & have Learn play them back, automatically, at the touch of one or two keys.

With Learn you can, for example, configure DESQview to start up Micropro's WordStar, select the directory you want, open the file you want, & go to the place in the text you want. You can even have Learn stop at any pre-designated place & wait for you to specify instructions before the macro continues! Learn will also work with most any program's automatic features, such as a search & replace feature, to significantly enhance the capabilities of a search & replace procedure. DESQview can even integrate its Mark & Transfer functions with Learn to transfer any section of all of a document from one program to another, automatically, at the touch of a single key. Learn is a very powerful & useful feature & will provide a great productive benefit. DESQview also offers a special file sharing technique which permits you to write a file with some special characters in the file's name to any point on any disk drive, & read it from any other point on any other disk drive. This feature means you don't have to hunt down a file to use it. In fact, you don't have to even specify a directory. DESQview also works with almost any type of program, & it is compatible with programs made for GEM, Windows 1.0 - 286, Run-time Windows, Topview - & of course, DOS - including applications which use Extended & Expanded memory.

DESQview also allows you to control how your programs appear on the screen in many different ways. If you use a color monitor, you may use the DESQview Palette, which has five default configurations, one each for your original palette, a BIOS default palette, a Windows palette, a GEM palette & an Enhanced palette. You may use the default configuration for any of these palettes, or you may set the colors for any of the default palettes to your taste, & store them for later retrieval. In fact, you can make as many variants of each of the color palettes you want, & store them as well. Further, by using Learn, you can retrieve any stored palette almost instantly! Additionally, DESQview permits you to change the colors used by many programs by use of DESQview's "Change Colors" command.

If you use an EGA monitor, DESQview will let you run programs in 25 or 43 line mode, as well as all graphics modes. If you use a VGA monitor, you may use 25, 50, or 66 line modes, & all graphics modes. When used with Genius displays, DESQview will give you use of the full screen display for your program windows. With the Genius or Genius plus (model 420), DESQview can arrange the screen to view 25, 41, 66, or 82 lines by 80 columns. On the Genius (model 1000), DESQview can arrange the screen rows & columns to: 25x80 or 66x80 or 66x127. DESQview window sizes can be set to use the entire screen or view several full normal applications screens (25 lines x 80 rows) simultaneously. DESQview will also support all graphics modes the Genius display uses. *(As inferred by the capabilities of using a Genius monitor, DESQview works splendidly with Desk Top Publishing.)*

With any monitor, DESQview permits you to display many programs on the screen at the same time, & choose the portion of the screen where you want each program displayed.

DESQview also uses "virtual" memory. Virtual memory is useful to keep more programs loaded (but not running) than there is memory in the computer. DESQview uses virtual memory to "swap" a program to Expanded memory, a RAM disk, or the hard disk, depending on the configuration & available memory in your computer. By using Virtual memory, you can have many programs open & ready to use. The time required to access any of these programs, is the time it takes DESQview to read the program from the disk drive. If you have a Modem or two connected to your computer, DESQview provides an auto dialer. The auto dialer is compatible with modems running at 300, 600, 1200, 2400, 4800, & 9600 baud. By using the auto dialer, you can mark a phone number in any non-graphics based program & have DESQview dial the number for you!

Learning to use DESQview takes about five minutes. However, as with any program, additional time spent on some of the finer features is well worth the time investment.

Part II Memory Requirements The power of DESQview to do multi- tasking & go well beyond the DOS 640K memory limitation is dependent on two things: 1) using memory hardware which conforms to the EEMS hardware specification, & 2) configuring as much of the computer's motherboard memory as possible so it is configured as EEMS memory.

If you are using an 8088, 8086, or 80286 based computer, & want to use more memory than the 640K of memory your computer has, you will want to set your computer's motherboard memory to its minimum setting, & let the memory from the EEMS memory card "back-fill" as much of the computer's motherboard memory as possible. For 8088 & 8086 based computers, the minimum motherboard setting is usually 128K or 256K. For 80286 based computers, the minimum setting is usually 256K or 512K. If you are using an 80386 based computer, or an AST Research Premium 80286 based computer, all of the memory on the computer is capable of being configured as EEMS memory. For these computers, all windows (to the limit of the computer's memory) will be nearly the same memory size (within 15K) of the first window! For 8088, 8086, & 80286 based computers, the minimum motherboard setting determines the memory size of any windows other than the first window. As an example, if your computer's minimum motherboard setting is 256K, then any window other than the first, will have a maximum size of 384K. As you may notice by this, the difference between the minimum motherboard setting & 640K is the maximum size of the window; 640K - 256K (minimum motherboard setting) = 384K (the maximum size of any window other than the first.

For 80386 based computers, there are two requirements: 1) having more than 1 Megabyte of memory, & 2) the addition of the DESQview companion, called the Quarterdeck Expanded Memory Manager-386, or QEMM-386. QEMM-386 will convert the memory of an 80386 based computer into memory conforming to the EEMS specification, & give DESQview even greater power than it has with 8088, 8086, & 80286 based computers. The power of DESQview to multi-task beyond the DOS 640K limitation is directly related to the type & amount of memory available. To get the most from DESQview, the computer's memory must be compatible with the EEMS specification. This point can not be over stressed. Memory hardware which is only compatible with a LIM memory specification (3.4 or 4.0) will not necessarily provide what the computer needs. Hint: if you don't want to take chances on the type of Expanded memory card you get, purchase Expanded memory cards made by AST Research.

The best way to determine what your needs are for ultimate performance is to find the amount of memory each of the programs you intend to run requires, including requirements for Conventional memory & Extended &/or Expanded memory, if any, & then add 200K for the combined requirements of DOS & DESQview.

Often, a person purchases DESQview to work with one program while another program is performing a background function, such as printing, uploading, or downloading a file by use of a Modem, or any number of other possibilities. But as soon as she or he finds out it is as easy to have access to four programs or more (up to 250) as it is to have access to two programs, the utility of more memory becomes apparent. For this reason, 2 megabytes of memory is a suggested minimum, & three or four megabytes of memory are very useful.

Note:- DESQview does not need to have this much memory to work, but the memory is very useful when you want programs to run in the background, &/or you want to have lightning quick access to any of your programs.

What can you do with two megabytes of memory? Run Xerox Corporation's Ventura Publisher 2.0 along with Microsoft's Word & PC Paintbrush. Or two copies of Generic CADD, each using 450K of Expanded memory for drawings. Or all of Macola's Ac-Foxbase. Or four 400K DOS windows. Or virtually any combination of programs.

In summary, if you are looking for a way to increase your productivity, without having to use all new programs, & make using a computer easier, more fun, & otherwise enhance the functioning of your programs, you will find DESQview delivers everything promised by Windows & OS/2, & you can have these enhancements without needing to use the specialized software necessary for Windows & OS/2. More importantly, you can have these enhancements today.

The Floppy I/O Plus from SOTA Technology

This product saved the day when I was doing my review of the Award XT BIOS. It is a 1.2 size card supporting up to 4 low or high density internal floppy drives, 2 serial ports, & 1 parallel port. The first serial port is standard & has a 9 pin connector. The second serial port is option & has a 25 pin connector. Also included is a cable for two floppy drives & a device driver to allow 5.25" HD or 3.5"HD floppies to be used with machines lacking BIOS support. I didn't test the device driver.

It also has pins on the back to allow it to be plugged into a Sota 286i or 386si accelerator card as a daughter board. Where my own clone controller has no documentation, this product comes with a nicely done 28 page manual, & tech support is available, too.

PC Connection sells SOTA (State Of The Art) products, so I gave them a call to check their pricing. Currently they are selling it with 1 serial port for $99 & with 2 serial ports for $125. Not cheap, but remember, it worked when my clone failed. SOTA Technology, 559 Weddell Dr., Sunnyvale, CA 94089, (408) 745-1111

LIM/EMS 4.0 Confusion for Consumers

Randy Brook, Pacific Northwest PCUG

Expanded Memory Usage This article started out as a simple evaluation. This article is a tale of memory usage on AT-clones. These are computers with 80286 processors, or "286 machines." The other article is called "Turbo EMS - Software Emulated Expanded Memory," also in this issue [immediately following]. Since I'm trying to give a consumer viewpoint, I'll try to minimize the technical details. I also won't talk about the more powerful & expensive 386 machines. They handle memory very differently than 286 machines.

Most 286 machines come with "1-meg RAM," about one million bytes of memory. Sounds better than the 640K (about 640 thousand bytes), the old standard, doesn't it? But when you set up the machine, you'll find the extra 384K is "extended memory," generally useful only for a RAM disk, a disk cache, or a print spooler. It can't be used too run larger programs, or to run more than one program at a time (multi-tasking). Programs can use extra memory, like Lotus 1-2-3 & Excel for bigger spreadsheets, WordPerfect 5.0 for faster execution with big documents, & others, all want "expanded memory," also called EMS memory.

Very few 286 machines come with expanded memory (the AST Premium 286 is one). There are three ways to have it. You can buy a separate memory card for several hundred dollars. You can buy an "All Charge Card" (about $450) to turn your extended memory into expanded memory. Or you can spend about $75 on an "ex-

panded memory emulator," which makes your extended memory look like expanded memory to some programs. Each method may have different results, depending on the kind of expanded memory your end up with.

A basic form of expanded memory is LIM/EMS version 3.2. "LIM" stands for Lotus, Intel, & Microsoft. A program like Lotus 1-2-3 can use EMS 3.2 memory for the data contained in large spreadsheets. Next came EEMS, or enhanced expanded memory. AST, Ashton-Tate, & Quadram started with EMS 3.2 & added features to create EEMS. Most importantly, EEMS requires the memory board have special memory management hardware not found on EMS 3.2 boards. Unlike EMS 3.2, program code can be stored in EEMS memory & used almost as quickly as if it were in regular DOS memory. A program like Desqview can multi-task, or run more than one program at once, if it has enough EEMS memory.

Eventually, the LIM folks realized they had to catch up to the AST group. Both groups joined to create a new memory specification, LIM/EMS 4.0, released in August 1987. As InfoWorld described it, EMS 4.0 "provides the functionality of both EMS [3.2] & EEMS." According to an Intel representative with whom I spoke about this article, the InfoWorld description was wrong. He said EMS 4.0 was intended only to be a specification for software. I defined how various features should be implemented, but the choice of features to include is left to each manufacturer. Most important, it does not require EEMS-type or any other specific hardware. Unfortunately, he said, the press reports made it easy for consumers to assume EMS 4.0 meant multi-tasking & other features associated with EEMS hardware.

I find it hard to blame the press for the confusion. The industry started with a well defined EMS 3.2 & EEMS standard. Before EMS 4.0, EMS 3.2 meant more data space in memory & EEMS meant EMS 3.2 plus multi-tasking. The main reason to set up a new standard was to standardize memory control for multi-tasking. If the industry wanted flexibility, it could easily have published EMS 4.0 with compatibility levels, or some other way to designate how much of the full standard a product met. Instead, with the simple designation "EMS 4.0," there is no way to know what you are getting without reading all the fine print.

The ambiguity of the term EMS 4.0 has had unfortunate consequences for buyers. Many people have purchased memory boards marked "LIM/EMS 4.0 compatible" only to find they were useless for multi-tasking. For example, Intel designed its best-selling memory board, the AboveBoard 286, for EMS 3.2. When EMS 4.0 was released, Intel did not have a product w/EEMS or EMS 4.0 hardware support for multi-tasking. Intel changed the AboveBoard's software to meet the EMS 4.0 software standard, & marked the packaging as EMS 4.0 compatible, but did not change hardware.

Intel never did claim its AboveBoard would multi-task with Desqview. But given the general understandings about EMS 4.0, its sales certainly benefited from the impression that an EMS 4.0 memory board would multi-task. Even Intel itself was confused. It donated an AboveBoard to out user group specifically so we could upgrade our BBS with Desqview & two simultaneously running BBS programs & phone lines. Of course, the AboveBoard was useless for this task.

I don't mean to denigrate Intel's generosity. It subsequently gave the user group a much more valuable piece of hardware, & Inboard 386, which should allow superb multi-tasking. But if Intel's own people are confused about EMS 4.0 & their product's capabilities, imagine the problem end users have.

It seems as if every board manufacturer has a different view of EMS 4.0, even when they include hardware support. The low priced Bocaram AT Plus card supports multi-tasking under Desqview, but only if the programs in expanded memory are no larger than 128K. InfoWorld rated the board "poor" in EMS 4.0 capabilities (12/12/88) for this reason. In an almost bitter reply, perfectly illustrating the problem with a flexible specification, Boca Research insisted its board supports "those features [of EMS 4.0] we consider to be the most useful & cost-effective." (Review of Responses 2/13/89). (Contrary to the Intel person I spoke with, Boca stated in its letter, the EMS 4.0 specification outlines hardware support capabilities.) Fortunately for its readers, InfoWorld consistently looks at EMS 4.0 claims in light of hardware performance. This makes sense, since 48% of its surveyed readers who purchased memory boards were interested in multi-tasking.

Another example of partial EMS 4.0 hardware support is the new Intel AboveBoard Plus. This board can multi-task without the 128K memory window limit of the Boca board. However, it has its own limit. You can't handle 9600 bps file transfers in the background with the Intel board. This may not matter to many people yet, but it sure does to BBS operators, especially as 9600 bps modem prices come down. Only the AST Rampage Plus 286 boards have all the hardware (alternate register sets, to be specific) for high speed background communications. Of course, the AST boards cost more. By the way, you can upgrade the hardware in your older AboveBoard to the Plus model's level for about $100.

What is a consumer to do? Since the "EMS 4.0" standard tells you almost nothing, you have to read a lot more of the fine print & ask a lot of questions. If you have memory intensive software, it is important to you, like Excel or other Windows applications, ask the software company whether a particular computer or memory board fully supports the software. That the memory board is marked "program X compatible" is not enough. Even & expanded memory emulator can be "Desqview compatible" is you mean Desqview without multi-tasking (see below, Turbo EMS). Finally, as the Intel representative suggested to me, if you want to multi-task with fast communications, but a 386 machine or an AST board for your 286.

Turbo EMS Emulated Expanded Memory Many AT-clone computer owners have only the original 1-meg of RAM, or have memory cards to provide extended memory only. They would like to have the advantages of expanded memory without spending $400 or more for the new memory card. Enter the software solution, a program to use extended memory to emulate expanded memory. Turbo EMS, $75 from Lantana Technology, Inc., San Diego, CA, is one of these expanded memory emulators. Above Disk & V-EMM are two others I have not tested. (*PC Magazine reported on older versions of those programs in its 12/31/87 issue.*)

Make no mistake, expanded memory emulators on AT-clones ("286 machines"), as opposed to those on 80386 PCs are "kludges," or inelegant but workable solutions to a difficult problem. They don't work with all programs, & they are much slower than true expanded memory. PC Magazine reported the best emulator took 80 times as long in a Lotus macro routine as an expanded memory board. My tests with Excel & Turbo EMS were not quite as bad. Also, you cannot multi-task with an EMS emulator. For some purposes they are a cheap & effective product.

On my Wyse 2108, an AT-clone with one megabyte of RAM, I have only about 123K of regular DOS memory available for Excel spreadsheets once I load the program. By using an expanded memory emulator with my 384K of extended memory, I can increase the maximum spreadsheet size to nearly 500K. The tradeoff is a speed penalty. A moderate size spreadsheet on the Wyse takes many times as long to recalculate as the same sheet on a machine with true EMS memory of any type. If all you have is an extra 384K of extended memory, the cost of a program like Turbo EMS ("TEMS") is far less than an expanded memory card. It does the job with Excel or Lotus 1-2-3, though it is not very fast. TEMS is a well-designed program. Installation is automated & very simple. You can do it without the (very good) instruction book & without any technical knowledge of memory usage. The smooth Install program goes through your various choices, such as whether you are

going to run a Windows-based program. Each option has its own help screen that appears automatically to guide you. You have control over the drives & sub-directory name TEMS uses, a lack that is extremely annoying with some other programs.

To run TEMS, you need a device driver in your CONFIG.SYS file. You may load the driver with various parameters, or wait until you actually start the program. Most important & unusual, you can change any part of the TEMS configuration without rebooting. This is a real advantage with several programs requiring differently set up EMS. You can also temporarily suspend TEMS if you need to run an incompatible program. (Some programs will crash any EMS emulator.) There is a default location in memory for the program. You can easily choose alternative tailored to specific programs. Depending on where I load it, TEMS leaves 503K or 569K of lower memory for programs on my Wyse.

I compared TEMS to the expanded memory emulator supplied by Wyse with my 2108 AT-clone computer. The Wyse EMS emulator can only be started as part of the CONFIG.SYS file. To remove the Wyse emulator, you have to change the CONFIG.SYS file & reboot, It also takes a large chunk of lower memory, leaving a maximum 470K for programs. However, its use of total memory is only about 14K greater than TEMS. It leaves less lower memory but more emulated expanded memory.

The TEMS manual & READ.ME file on the disk describe various situations that may need special treatment. TEMS coexists with VDISK without conflict, according to the manual. I didn't test this. A much more complex match would be with the most recent version of Windows. You would need to look long & hard at the Windows manual as well as the TEMS manual to avoid conflicts.

According to the TEMS manual, it should be possible to have Windows use the SMARTDRIVE for swapping to extended memory, while programs running under Windows can still use TEMS' emulated expanded memory for data. Again, I didn't test this. I should note the Excel manual section on memory usage is long & complex. It is not easy to choose the best setup for Excel, a Windows-based program, even when you have true EEMS or hardware based EMS 4.0 memory available. I think I would use the simplest installation possible when also using TEMS.

Another feature of TEMS is the ability to swap to disk rather than to extended memory. This would be useful if you had an application needing more memory than you had, or if you had no extended memory at all. For example, you could set aside 10 megabytes on your disk to emulate expanded memory for a gigantic spreadsheet. Of course, using a disk as memory can be incredibly slow. I tested an Excel spreadsheet that used 42K of memory & had fairly simple formulas. Copying the sheet once (that is, doubling it) & recalculating took 21 seconds in TEMS emulated expanded memory & more than 5 minutes with EMS memory emulated on disk by TEMS.

I also tested TEMS with WordPerfect 5.0. WP can cache (store) part of its code in expanded memory. It can also use expanded memory to speed sorts & large document handling. Unfortunately, I couldn't test the code caching. WP needs a minimum of 385K to do it, too much for a "1-meg" AT-clone. (*TEMS gives about 370K in emulated EMS memory from the total 384K of extended memory available.*) I could test sorting, however. As a speed test, I took a document with 2,734 lines & sorted alphabetically on the first word of each line. Without TEMS the sort took 2:34 minutes. With TEMS it took 1:46.

A general limitation on emulated expanded memory is compatibility. Programs use expanded memory differently, & the better emulators are compatible with most programs. TEMS appears to be one of the better ones. In fact, with all its features & ease of use, I'd call it an excellent EMS emulator. Unfortunately, it is not as good as Lantana's promotional materials imply.

Lantana claims TEMS is compatible with Desqview ("DV"). Not sure what this claim meant, I called Lantana & told them it sounded too good to be true. I phrased my questions carefully, to be sure we were both talking about multi-tasking with DV on a 286 machine. That's about the only reason for using DV on a 286 machine. The rep assured me the company had actually demo'd the program at Comdex with DV. I tried it. It took only a few minutes to learn I had been right: It was too good to be true.

In a literal sense, TEMS is compatible with DV. Unlike the EMS emulator from Wyse, TEMS won't crash DV. TEMS just does not, & cannot, multi-task with DV or any other program. In fact, many memory boards can't multi-task either. All these boards & TEMS can do is allow DV to use the emulated or actual expanded memory as a place to swap programs out of memory. Only one program runs at a time. This is an incredible inefficient use of DV. Loading DV plus TEMS leaves only about 350K for running programs, regardless of how much extra memory you have. In contrast, DV with a fully compatible EMS memory board can run several programs simultaneously, with each using over 500K. The number of programs depends on how much extra memory you have. (TEMS is bundled with Epson laptops, & is a good product for anyone on a budget who also owns a very fast hard disk)

So, what's the bottom line? If you have only extended memory on a 286-machine, & an application like 1-2-3 or Excel for which you need more data space but don't need maximum speed, Turbo EMS may be the cheapest way to go. If you want to swap programs quickly use a program like Switch-It or Software Carousel which takes up very little memory. If speed counts, or you want multi-tasking, look for a memory board with full EEMS or hardware-based EMS 4.0 support. And pay a lot more.

GENEALOGY INSIGHT

Computers: Changing the Face of Genealogy

by Richard A. Pence, Capitol PC Monitor

Following the tremendous interest generated by Alex Haley's book *Roots* a dozen years ago, & the subsequent TV program of the same name genealogy, the search for one's ancestors, has been the nation's fastest growing hobby. If it's not today's most popular, it certainly ranks right up there with other perennial favorites such as collecting stamps or coins & even with personal computing. And, for the past several years, the hottest thing in genealogy circles has been the joining of seemingly disparate avocations: genealogy & personal computing.

While a few isolated genealogists began experimenting with using home computers to organize their data as soon as these machines came on the market, the lack of good software (& adequate experience) made for rough going. In 1981 "genealogical computing" really got its start. That year saw 3 significant events: A major article on personal computing in the staid *National Genealogical Society Quarterly*; the appearance of the first sales booth featuring personal computers & genealogical software at the Society's annual conference; & the launching by Paul Andereck of a bimonthly journal called, naturally, *Genealogical Computing*.

Early the next year, the Society authorized the formation of a computer interest group (called NGS/CIG), which launches its own bimonthly newsletter, the *DIGEST*. Now the genealogical computing world is awash with a bewildering myriad of programs, genealogical interest groups fostered by computer organizations, & linked by more than 200 electronic genealogical bulletin boards.

Growing Amid Debate To many, the marriage of computers & genealogy was one made in heaven. The aptitudes of the computer, such as storing & organizing large amounts of data & its willingness to do repetitive tasks such as generating traditional genealogical forms (ancestral charts or "family group sheets") were just the ticket. To those who have worked long & hard to raise the professionalism & quality of genealogical research far

above heresy & guesswork, it was the devil's own invention.

Even today, there is a continuing & sometimes sharp debate between genealogical "scholars" & genealogical "computerists." The scholars are convinced the main contribution of computers will be to flood the world with machine-generated pedigrees which are dubiously researched & poorly documented - a mountain of "trash genealogy." The computerists see a wonderful new research & record-keeping tool & plunge headlong into technology, spurred by dreams of on-line access to such staple research sources as U.S. Census records or even a gigantic "linked" database of "the family of man." For the average family historian, the computer is an undeniable boon & time saver!

The impact of computers was unmistakable at this year's NGS conference in St. Paul. A computer learning center played to day-long full houses with hands-on computer trials, training sessions, & software & hardware demonstrations. A "serious" genealogist was even spotted at a luncheon sponsored by the NGS/CIG! And, say computer genealogists, the best may yet be coming.

A Language of Its Own In these few years, computer genealogy has developed to where it even has its own jargon - a language sometimes unintelligible to either genealogists or computerists. Witness this message, recently spotted on a genealogy bulletin board: "OK, I got the tafel. You will have to call ROOTS-BBS direct & request a matching report yourself through the TMS menus & call back subsequently to download the report." And followed by this message:

> From: New User To: All Subject: Help

I am fairly new at genealogy. I have seen some things I don't understand. Could you PLEASE tell me what tafel is, what ROOTS-BBS is & what TMS means?

This jargon, as we shall see, represents an excellent example of how genealogy has been adapted to computers & vice versa.

Genealogical Software The world of genealogical database software can generally be described as the "big three" commercial programs, plus a large handful of fine shareware programs (see list at end of article), all of which can make the job of organizing & reproducing genealogical information much easier, but none of which meets every need. Most top-of-the-line products are in the IBM & compatible sphere.

That the programs are less than perfect isn't surprising when you consider the complexity of the prospective database. Try to visualize what is needed by considering what the upper parameters of such a database might be: What's the maximum number of marriages an individual can have? How many children are the most you will encounter? How would you handle two or more conflicting dates for a given event? How many given names should be allowed for? What about name changes? Calendar changes? Illegitimacies? Adoptions? Surname spelling variations? How many places of residence should you provide for? How many footnotes should you have for each piece of data? How many biographical details (church preference, military service, occupation, etc.) should be included?

Take the following real or imagined person, used by one computer genealogy interest group as part of an adequacy test for genealogical software: This individual was known by a number of names in his life. When he was born in St. Petersbourge, Russia, on February 29, 1990, Julian. He was known to his parents in Hebrew as "jhdtm," for which the English equivalent would be Mordachai. Then, his family had no surname.

After the revolution of 1917, the new Russian government began requiring surnames & gave him a new name, Mikhail Benesovich. They also gave him a new birthdate, March 17, 1900 (by switching to the Gregorian calendar) & a new birthplace, Petrograd (by renaming the place). By the time he came to America via Liverpool & Toronto in 1926, the place had been renamed again, this time to Leningrad.

In America, he was naturalized in 1935 with the name Marcus A. Bench. The "A" didn't stand for anything, but he thought it looked good. He was known to his family & friends as "Micky." When he dies in St. Petersburg, FL on Feb. 29, 1984, his tombstone carried his name as Mark Bench.

That's enough to challenge the most proficient programmer. Given the complexity, the result is nearly always with some sort of compromise in program creation & execution, since there's a virtually unending stream of unexpected exceptions.

The Mormon Church & Computers The Church of Jesus Christ of Latterday Saints (commonly called the Mormon or LDS Church) in Salt Lake City has emerged as a leader in the computerization of genealogical records & data. At the risk of over simplification, a belief among its adherents is that ancestors must be identified & baptized into the church, & this doctrine has been a driving force in placing the church at the leading edge in using computers in genealogy.

It has computerized (*on one of the world's largest & fastest mainframes*) the International Genealogical Index (IGI), a collection of 121 million event-related records (*for example, a birth date & parents for an individual or the marriage of one couple*). The IGI is indexed alphabetically by surname within states & is generally only available at libraries on microfiche. However, you can now access this database & extract information to a floppy at special PCs in the church's main library in Salt Lake Cit. The IGI has been put on Compact Disk (CD) & is being distributed for testing to selected stake (local) centers. Later sales to individuals are expected, with the price of search software plus the CD expected to be about $60. An excellent value even considering the cost of a CD-ROM drive, as it could save 10 times that in travel expenses!

The church continues to test & add to a mainframe database it calls the Family Ancestral File. This is a linked (parents to child, husband to wife) database primarily built from FGS forms submitted by church members or others. This database eventually will have records on tens of millions of individuals. Access likely will be limited to on-line or CD-ROM searching at the Salt Lake City Library, at least until data integrity can be assured. CD-ROM should eventually reach stake libraries, &, in fact, is reported to be undergoing testing in Los Angeles now.

To aid members & to provide a means of simplifying data input to the Family Ancestral File, the church has developed & marketed "Personal Ancestral File" (commonly called PAF), a genealogical database program. Files generated by PAF can be put on floppy & submitted to Salt Lake City for direct absorption (*after stringent validity checks*) into the Family Ancestral File. The cost of PAF is only $35, one reason why it is the most-used genealogy software package available. PAF, along with "Family Roots" by Quinsept, Inc., & "Roots III" by Commsoft, Inc., are known as "the big three" & account for the bulk of sales of commercial genealogical software. All are excellently supported.

The LDS Church has developed GEDCOM (for GEnealogy Data COMmunications), a specification designed to allow interchange of data between dissimilar systems, usually electronically. The GEDCOM specification relies on a series of hierarchical "tags" to identify various events & "levels" beneath these events. For example: - INDI identifies an individual;- BIRT identifies a birth event;- DATE identifies information to which it is subordinate;- PLAC identifies a place to which it is subordinate

An example of hierarchical levels:

```
0 INDI [data]
   1 BIRT [data]
   2 DATE [data]
         2 PLAC [data]
```

A 0 level "closer tag" ends that record & begins another. All serious genealogical software packages have utilities that support this specification (*at least to the degree they will import data from other systems*), & there are a growing number of user-created utilities to allow transfer of data between the most popular commercial or shareware programs, as well as creating ASCII files for importation into generic database programs. Support for GEDCOM has become a major criteria among genealogical software shoppers. Both Roots & Family Roots (as well as PAF) have GEDCOM utilities, & both have utilities approved by the Mormom Church for data submissions to the Family Ancestral File. Some proficient computer genealogists use two or three programs & freely move data back & forth to take advantage of various special features (such as, easier data entry or record updating in one program, better or easier form generation in another).

However, the GEDCOM specification is not yet a "final product." It exists in its "pure" specification form & in "implemented" forms, & the latter are not always fully compatible. Software differs in the kinds of data included & swapping databases can result in field losses. But complete specifications are available to developers for $5, & almost all are climbing on the bandwagon.

The BBS Connection The National Genealogy Conference is now among the top half-dozen most popular "echoes" on the Fido bulletin board network. (Echoes are topic-specific forums shipped via least-cost phone lines to distribution points, then to participating bulletin boards.) More than 200 BBSs carry this conference, & there are an average of about 100 new messages a day.

In recent months, the "National" in the conference name belies its scope. Besides a host of Canadian boards, these are regularly participating boards in England & Scotland, & off-&-on participation by BBs in Australia, Holland, Belgium & Sweden. Links are being put together to France &, possibly, South Africa (which already has its own BBS genealogy conference).

Most of the messages in the conference are of the "query" type (*I'm looking for information on the parents of John Doe, born Anytown, US, in 1814*) or seek advice on how or where to research a particular problem (*Does anyone know if marriage records for Blank County, US, exist? Where can I write if they do?*). These are spiced with about equal numbers of perplexed beginners trying to find out what's going on (in either genealogy or computing) & accomplished veterans swapping inside tips on how certain software can accomplish wonderous things or imparting their experience to newcomers.

Considering genealogists, who use computers, comprise a small subset of genealogists, those with modems an even smaller subset - & still smaller is the group with access to a local genealogy BBS - the success rate of fruitful data exchanges is remarkable. The conference is replete with the cry of "bingo," signifying a genealogical find. Even more worthwhile are the knowledgeable responses to research problems. The very success & popularity of the echo has spawned other echoes.

The first of these was the Jewish Genealogy Conference, which caters to the specialized nature of that research. In the past few months, software-specific conferences have been started. Already these are sophisticated message exchanges among users of PAF, Roots III, Family Roots, & Family Edge (a popular shareware program that also have a commercial incarnations). Usually the software developer or a technical specialist for the company is a regular participant on these echoes. There are specialized echoes for North Carolina genealogy, Spanish genealogy, one that concentrates on pioneers who used the Oregon Trail in their westward travels, one for missing persons, & one for adoptees.

Genealogy system operators keep it all going by swapping messages in their own private echo. Often the BBSs which carry these echoes do so only as a service to one of the many specialized user groups, but there are several dozen boards existing primarily for genealogists. Examples of the latter are the Commsoft BBS in Mountain View, CA, & ROOTS-BBS in San Francisco.

Commsoft BBS, operated by the publishers of Roots III software, was started by its president, Howard Nurse. Howard's successful regular exchange of messages with Down-East Roots in Rye, NH, marked the beginning of the genealogy echo in 1985. ROOTS-BBS, operated by Brian Mavrogeorge, is likely the oldest operating genealogy BBS. Mavrogeorge now serves as editor of the NGS/CIG DIGEST, a task he accomplishes via a modem hookup to the NGS - a testament to how much computers are "infiltrating" genealogy.

Two other strictly "genealogy boards" are the NGS/CIG BBS, operated by the National Genealogical Society's Computer Interest Group, & the CPAFUG BBS, operated by the Capitol Personal Ancestral File UG. A wide variety of genealogical shareware, utilities, & research aids can be downloaded from these & other bulletin boards. Membership is not necessary to use these boards, but it does upgrade your access.

The Electronic Age Remember "tafel" & "TMS," those befuddling terms in the messages quoted earlier? to computer genealogists with modems, these are easily recognized - & in them lies the potential for a great explosion of information swapping. Genealogists, by nature & tradition, are like computer hobbyists; they are a sharing bunch. A researcher seldom worries about what is being given away in that big package of records being sent to a fellow researcher - even though its contents may have taken years of work in libraries & archives or hacking through over-grown cemeteries. Genealogists also operate on the "there's a pony in there somewhere" theory: Somewhere there's someone who has that one bit of elusive information needed to solve a genealogical puzzle that's been festering for years.

A common way of trying to find that person or information is to post genealogical queries in the most popular or localized genealogical publications or to enroll in surname-match programs operated by businesses or individuals. The advent of the computer & BBS Networks is revolutionizing this kind of match-making.

In 1985, Paul Andereck noted the growing number of genealogical databases & said "users needed a shorthand was to describe what was in those databases so they could more easily share information". He put forward the concept for "tiny tafels," now commonly called tafels or TTs by computer genealogists. The expression "tiny tafel" was derived from the word "ahnentafel," which is a list of ancestors or - literally from the German - an "ancestor table." In an ahnentafel, a person is assigned the number 1, his father the number 2, his mother number 3, his paternal grandfather number 4, & so on as far back as you can go. The numbering system allows a person (or computer) to readily identify the relationships for two individuals from the assigned numbers. A tafel is a compact way of describing a family database so the information can be scanned visually or by computer.

Acting on Paul's idea, Commsoft's Howard Nurse developed the first set of specifications for a tiny tafel, relying on a method called "soundex coding." This coding system was used to overcome the vagaries of surname spellings during indexing of U.S. census records during the 1930s. In short, a soundex code consists of the first letter of the surname, plus three numbers representing the SOUNDs of the succeeding letters. In it, vowels aren't coded, sound-alike letters are assigned the same number according to a value table, & double letters or side-by-side sound-alikes are coded only once. Thus, the soundex code P520 (for Pence) would locate not only those surnames spelled that way, but those which may have been misspelled as Pens, Penns, Pense, Penz, Pans, or many other variations.

Data on soundex codes & programs for coding surnames can be found on almost any BBS which caters to genealogists. These programs represent 1 of the most basic types of software for genealogy. (*Try GENKIT15, freeware which has a soundex code & a number of other genealogy utilities, including a daylage finder.*)

Commsoft's TT specification calls for information lines (name, address, etc.), plus any number of data lines. The data consists of a soundex code, year of birth or the earliest ancestor in a line, year of birth of the latest descendant in the line, the family surname, & places of both births. A "Z" line before the data tells how many lines of data will follow, & a "W" line at the end closes the TT & tells when it was created.

Thus, a valid TT could consist of just a few lines. Example:

N Richard A. Pence
A 3211 Adams Court
A Fairfax, VA 22030
Z 2
P520 1740 1900*PENCE/Shenandoah
Co. VA/Warren Co. IN
S354 1630 1910*STANLEY/Topsfield
MA/Brown Co. SD
W 1 May 1988

The asterisk is an expression of relative interest, one of several possibilities. Optional information, such as phone number, genealogy program used, hardware used, BBSs frequented, etc., can be added in additional "header" lines with appropriate initial code letters. You can have as many data lines as you wish, so long as the "Z" line reflects the correct number. Complete specifications for TTs can be found on genealogy bulletin boards in a file generally called TTSPEC.ARC. Using these specs, you can create a TT with a word processor. Most major genealogical software will generate a tafel from information in a family database file, & a stand-alone tafel generator is also available, usually under the name TTGEN12.ARC. Following general acceptance of these specifications, Commsoft developed a program called the Tafel Matching System (TMS). This software will machine-read a submitted TT, compare it with other tafels in its files, & generate a report of names & other addresses of the submitters of other tafels which contain matches - that is, those which contain the same soundex code. A list of matches is part of the report.

Best of all, the system will pass the report on to a succession of similarly equipped computers. You can enter your TT in the appropriate area of a local BBS, request a matching report, then sit back & await the results. The initial board scans for soundex matches, generates a matching report & ships the tafel & report to the next BBS, where another scan is made & the report expanded. In a week or two, the final report is back at the originating board & you are automatically notified the next time you call.

Right now, at least a dozen genealogial BBSs, with hundreds of tafels, are participating in a carefully established & quickly growing round-robin. Commsoft makes the TMS software available free to any bulletin board participating in the National Genealogy Conference, provided no charge is made for its use.

Admittedly, a tafel is less precise, & the system often generates a bundle of false leads. But as users gain knowledge of how to tailor their tafels to more precisely define their research needs & as the number of participants increase, the system is bound to improve. Even now it can effectively accomplish the equivalent of several Saturdays at the library poring through genealogical "swap" publications.

What's Next? Even with the revolution already underway, computer genealogists are panting for the future. Some day, they hope, the LDS Church will open its vast computerized databases to wider remote access. Seemingly, things are headed that way - but only one agonizingly deliberate step at a time, with checks & double checks to make sure no gigantic goofs are commited.

There are other possibilities, too, For example, the entire 1860 U.S. index for the state of Illinois has been loaded into the mainframe computer of a cooperating university. It's available principally on microfiche, but selected portions (one surname or soundex code, for instance) can be loaded onto floppy disks & transferred to individual family databases with little manipulation.

The price for getting data on floppies includes a rather hefty set-up fee & is probably more than most hobbyists are willing to pay. The notable thing about this project, is that the input was accomplished under direction of a historical society by volunteers using PCs. It could serve as a model for computerizing other census records using armies of eager PC volunteers. A missing ingredient for many state & local groups is the mainframe needed to handle the full database. And there are questions about ownership of & access to such databases.

In Washington, D.C., the National Archive has embarked on experimental programs involving scanning & computerizing many of the old records entrusted to it. Such scanning doesn't make the document contents a part of a database, but computer-aided enhancements can make badly faded documents legible. Also, these is less worry about long-term preservation. Another dream of genealogists is on-line access to the vast Archives resources. Meanwhile, computer genealogists are already using their "toys" to do much more than store & manipulate their familiar databases. They use them to communicate, to organize research needs for field trips, to answer correspondence, to analyze problems - & to help with their income taxes.

Are You Ready to Be a "Computer Genealogist?" Perhaps genealogy is something you're interested in as one more use for your computer. For starters, you may be cut out for it. Both computers & genealogy require similar inclinations. Inquisitiveness & a knack for analyzing & solving problems are just a couple. (Stubbornness is another.) Whether your computer is ready is another matter. Keep in mind the complexity of what needs to be done.

A genealogical database is far from simple, & it takes a lot of software & hardware power to usefully manipulate it. Growing numbers of genealogists are finding their first computer isn't really up the handling today's memory-gulping software & their expanding databases. The First Law of Genealogical Computing is: "Memory & disk space are just like money: Plenty is never enough." Maximize your hardware $investment$ by buying as much speed & storage as you can afford, & skipping color.

An XT-type machine is likely adequate, but an AT-type 286/386 will save a lot of time if you have a large family database. A hard disk (the bigger the better) is almost a must, & you'll want 640K bytes of memory for better programs (extended databases may need more). Color support is common in genealogy programs, & some users like graphics for maps or other diagrams.

A new & growing facet of genealogical computing is scanning & storing original source material or old photos. You'll probably want a modem (at least 2400 bps). And, of course, a printer to suit your fancy. With a program such as Roots III, for instance, you can generate a quality genealogical book on a laser printer - complete with table of contents, text, charts, footnotes, & index. Surveys show that computer genealogists usually have about $3000 tied up in hardware. The amount has stayed the same over the years, but the power it buys has greatly increased. Thousands of genealogists are getting by on much less, but this usually means splitting database & intricately juggling floppy disks, or long periods of waiting for data to be manipulated or reports to be created. One last thought: If you think your computer swallows up huge hunks of your free time, stay away from genealogy. It's as bad or worse. But, hey, it's alot of fun too!

Looking at it from the other side of the fence is the Second Law of Genealogical Computing: *"The time saved by computerizing genealogical records is equal or less than the time spent monkeying around with the machine."* As Andereck once put it,*"Who with a computer has time to do genealogy!"*

Popular Genealogy Programs Choosing a genealogy program is a lot like choosing a restaurant: an awful lot depends on what you want. Below are some popular commercial & shareware

genealogy programs. All have special features to endear them to their users, & most will do much of what you need done. All of the following shareware programs & demos of some of the commercial programs are available on many genealogical BBSs.

Brother's Keeper - Shareware ($25 registration) by John Steed, 6907 Childsdale Rd., Rockford, MI 49341.

Family Edge - Shareware ($10 registration, +$5 for disks if ordered by mail) & Commercial version ($99) available from Carl York, 150 E 30th St. #2E, New York, NY 10016. Shareware data is limited to one disk.

Family History System - Shareware ($35 registration, disks available for $6 - specify interpreted or compiled BASIC) by Philip e. Brown, 834 Bahama Dr., Tallahassee, FL 32301.

Family Roots - Commercial ($185, trial disk & guide is $9.50, full manual with no disks is $18.50) available from Steve Vorenberg, President, Quinsept, Inc., 20 Grassland St., P.O. Box 216, Lexington, MA 02173; (800) 673-ROOT. Quinsept BBS on-line 6PM-8AM at (617) 641-1080. Specify version, available for PC (requires hard disk), Apple, Commodore, TRS, CP/M & others (Macintosh version is not a port & being released in increments).

Family Ties - Shareware ($50 registration) & Commercial (major upgrade) version ($139.50) available from E. Neil Wagstaff, Computer Services, Inc., 1050 E 800 S, Provo, UT 84801; (801) 377-2100. Versions available for PC, CP/M & Mac.

Genealogy on Display - Shareware ($35 fee suggested) by Melvin Duke, P.O. Box 20836, San Jose, CA 95160; (408) 268-6637.

Notes & Sources - also by Melvin Duke, allows additional documentation for data in GoD. Both are available on many BBSs.

Personal Ancestral File - Commercial ($35) from Church of Jesus Christ of Latter-day Saints, Salt Lake City Distribution Center, 1999 W 1700 S., Salt Lake City, UT 84104; Orders Only, (800) 247- 3892. for information, write the Church in care of Family History Department, Ancestral File Unit 2WW, 50 E N Temple St., Lake City, UT 84150; (801) 531-2584. Specify MS-DOS (stock number: PBGS 1642 for 5.25" disks, PBGS 1788 for 3.5" disks), Apple (PBGS 1653), or Mac (PBGS 161A).

Roots III - Commercial ($250+$7 S&H, demo disk & sample book is $10+S&H) available from Howard Nurse, President, Commsoft Inc., 2257 Old Middlefield Way, Mountain View, CA 94043; (800) 32- ROOTS; normal business line, (415) 967-1900; bulletin board, (415) 967-6730. Often called the "Cadillac of Genealogy Programs," it supports GEDCOM & LIM expanded memory standard (required for databases larger than about 3,000 individuals). Users get the newsletter, ROOTS RAP.

Genealogy Bulletin Boards & Subscription Services

NGS/CIG BBS is operated by the National Genealogical Society, Arlington VA; (703) 528-2612, Don Wilson SysOp. Part of the Fido network, it carries all available genealogy echoes & has a wide range of genealogical shareware programs & utilities available. SEARCH.ARC or .ZIP is a beginner's guide to genealogy, & other help files are available. Recently upgraded to two lines & new equipment.

CPAFUG BBS is operated by the Capitol PAF UG, Columbia, MD: (301) 290-9530, Barbara Bennett, SysOp. Part of the Fido Network, it specializes in PAF help & utilities, but has other utilities & programs available. Carries the PAF echo & the Jewish Genealogy echo in addition to the National Genealogy Conference.

A complete list of U.S. & other genealogy BBSs is available on the NGS/CIG BBS as GBBSxx.TXT or GBBSxx.ZIP (where xx is the number of the latest version).

GEnie Genealogical RoundTable - For information: Phone (800) 638- 9636. Address: GE Consumer Services, 401 North Washington St., Rockville, MD 20850. Melvyn Magree is RoundTable SysOp.

CompuServe Genealogy Forum - For information: Phone (800) 848- 8990. Address: 5000 Arlington Centre Boulevard, P.O. Box 20212, Columbus, OH 43220. Richard Eastman is Forum SysOp. Type GO ROOTS after you have access to CompuServe.

Other Genealogy/Computer Sources NGS/CIG - National Genealogical Society/Computer Interest Group, 4527 17th Street North, Arlington, VA 22207; (703) 525-0050. Dues are $5/yr, & include a subscription to the bi-monthly newsletter NGS/CIG DIGEST; members must first join NGS ($30/yr). Meets 10 AM, 3rd Saturday each month (except December), at the National Archives, 8th & Pennsylvania NW, Washington, DC. Meetings are open to all.

Capitol PAF UG, P.O. Box 177, Bowie, MD 20715; information: George PAge (301) 283-2275. Membership is $15/yr & includes the newsletter, ABT-PAF. Meets 1 PM, 3rd Saturday, at Washington Stake Family History Center, 10000 Stoneybrook Dr., Kensington, MD. For all Personal Ancestral File users; not associated with LDS Church.

Genealogical Computing - a qtly publication by Ancestry, Inc., 250 S 400 E, Suite 110, Salt Lake City, UT 84111. Subscriptions are $25/yr, & usually about 48 pages, with reviews, updates & tips.

Additional assistance can be obtained from NEUGism Dr. Chris Gregg at (814) 237-7679 3-6PM Eastern Time.

GUEST EDITORIAL(s)

from Sanyo PC Hackers Newsletter Internt'l

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BASIC TIPS

by Samuel P. Cook

It is easy to write a program using the Basic random number generator to accomplish this same task more efficiently with a personal computer. The random number generator which is included in the Basic Interpreter & Compiler generates a sequence of numbers between 0 & 1 which are uniformly distributed over this range & seemingly unpredictable. It is a simple exercise to convert them to random integers covering any desired range. There is only one problem with this approach: the same sequence of numbers is generated every time, but there is a cure already provided by Basic. The Randomize command can be used to change the "seed" of the random number generator, & with every different seed a new sequence of random numbers is created. The basic line RANDOMIZE TIMER will use the current value of the seconds timer as a seed for the random number generator.

Using these ideas, here is a basic program which does just this. This program will generate 100 random numbers less than or equal to a given number N. Take the first one as your choice, & the rest are just to demo that they are indeed uniformly distributed over the desired range & chosen without pre-arranged order.

Basic source code for selecting 100 Random numbers less than or equal to a given integer N. The same integer may appear more than once in the list of 100 as each trial is independent of all preceding choices.

```
100 'SAVE"PICKNMBR.BAS",A  'Generates 100 Random
    numbers less
110 KEY OFF   'than or equal to N
120 CLS
130 LOCATE 5,5: INPUT"How Many Players are
    Present: ",N
140 PRINT
150 LOCATE 7,5: PRINT"100 Random Choices from
    Integers 1 through " N
160 PRINT
170 RANDOMIZE TIMER
180 FOR I=1 TO 100
190   PRINT INT(1+N*RND),
200 NEXT I
```

Why Do I Like Basic?

by Samuel P. Cook, Southwest PC Users Group

We are not married, it is a relationship of convenience. I have only agreed to continue to live together as long as it is a comfortable & satisfying relationship. Frequently my eyes wander after I read of highly praised features & benefits of alternative language partners. I can get very excited over new possibilities & sometimes I give them a trial run. After the initial excitement dies down a little, if I have urgent work to do I usually return to one or another Basic dialect. Maybe it is because I am not really a professional programmer, but someone who needs to get my work out, who is willing to make practical compromises between an illusive search for perfection & the need to finish the task in hand, & get on with the job.

Why do I keep returning to the first computer language I learned? Two very good reasons are its price is right & you can find it nearly everywhere. Nearly everyone who owns a computer has already bought a fairly decent version of Basic bundled together with MS or PC DOS. The version supplied with IBM machines is completely equivalent with the GW Basic supplied with IBM clones. There is a very slight different inasmuch as IBM's Basica version of Basic relies on a little code in ROM which is loaded entirely into RAM for the GW-Basic version. Consequently, wherever you go in the IBM/IBM-clone world you readily find available a usable version of Basic. True, it is only an interpreter, but it executes with reasonably speed, as it is written, & the source code can be compiled later by any of a number of compilers. To this day I still prefer the original Basic interpreter's editor & the ease with which trial source code can be debugged to the way later versions of Basic handle this task.

It is very hard to beat the interactive capability of the original Basic interpreter. Forth has this, as does Logo, & some other languages, but not Pascal or C. Okay, so there are interpreted versions of almost every language, but you must have a very fat wallet to afford to purchase them as they have a limited market & are priced accordingly. Anyone buying Pascal or C will gravitate to fairly reasonably priced versions by Microsoft or Borland, which for all their virtues are not interpreters, & do not have the interactive capability of interpreters regardless of the advertising hype.

Why does one need an interpreter? To quickly & easily check out the logic of a program or procedure! Just because a program has no syntax errors & will compile does not mean it will give correct answers. Only be introducing sample data to a procedure can you instantly prove logical errors by a counter example! Useful programs usually contain fairly abstruse logic which can easily hide logical errors. To have confidence in the result you must test the logic with sample data. The latest screw up in the space program should teach us, if we didn't already know it, test out your procedure before launching the satellite! Since apparently the mirrors for the Orbiting Astronomical Satellite were calculated & fabricated by the same company which makes military "spy" satellites, I wonder about their image quality. It took civilian astronomers to find this fault, of course, it is their profession to seek diffraction limited images. I hope our "spy" satellites aren't also suffering from spherical aberration.

Where does Basic fall short? For someone not already an expert, Basic will be much more productive. Considerable study & practice in Pascal & C is required to learn their more complicated systems before we can get useful programs written. Both are fussier in all details of programming, leaving relatively little flexibility. Most things need to be explicitly declared, nothing is left to chance. Assuming we are only comparing experts in Basic & other languages, Basic may require a little more self- discipline as it does not require so much in formal declarations. Possibly, C & Pascal will compile down to a slightly shorter code. That is strictly a problem with available compilers & not of the language. Possibly C & Pascal with their elaborate libraries & techniques will be more productive for experts, but only after an extensive learning period. All languages are stuck with the limitations of the operating system (DOS).

Basic, since it is so widely used, is serviced with numerous add on material which pretty much makes up any difference in origina capabilities. Crescent Software is one supplier of neat additions to the language. They call their Basic toolbox QuickPak. You can pick up a demo diskette of their product, simply request it from Crescent by calling them at (203) 846-2500.

HARD DISKS

Interleave Explained by Dave Chalmers

Interleave is the sequence of physical sectors on a disk as it relates to the logical sequence of the sectors. An example of this might be a word processing file that is 10K in size. A single sector on a hard disk is usually 512 bytes, so the word processing file needs approximately 20 sectors of disk space.

The first logical sector would contain the first part of the file & the last logical sector would contain the last part of the file. On the drive the first logical sector might be, for example, physical sector 2,163. The next logical record will not necessarily be physical sector 2,164, even if that sector is available. Where it will be stored depends on the drive's interleave.

A disk drive with an interleave of 1 (1:1) has physical sectors in the same order as the logical sectors (unless data are already stored in some of the sectors, in which case they'll be skipped). In other words, as in the above example, the second logical sector in the word processing file will be at sector 2,164. The third logical sector will be at physical sector 2,165, & so forth. This would be a simple way of doing things except that some computers are not fast enough to do it this way. A computer needs enough time to read a physical sector from the hard drive, transmit data to memory, & then be ready to read the next sector. If the next adjacent physical sector comes up too quickly, the computer might not have enough time to respond. This means that the sector will have to do one complete revolution before the next physical sector can be read. If a hard disk has to make one revolution before each sector can be read, the hard disk access will be quite slow.

The solution to this speed problem is to use an interleave value of 2 (2:1) or more. With a 2:1 interleave, logical records are written no closer together than every other sector. Using the example given above, the first logical sector is still on physical sector 2,163, but the next logical sector will be at physical sector 2,165. This staggering of physical sectors allows the computer the time to digest the data from one sector before having to read the next sector. The bottom line here is increased access speed.

Hard disk formatting programs will commonly use a default interleave. This default frequently assumes that you have a slow computer & will format the disk with a large interleave (for example, 3:1 to 6:1). Original XTs were shipped with interleaves of 5:1 & the 6-MHz ATs with interleaves of 3:1. If you have a fast computer, this large number for interleaves will slow performance. Our testing used an interleave value of 2 (2:1), which was the best for our 8-MHz IBM AT model 339. Some new computers & disk controller cards can even use an interleave of 1 (1:1). Before accepting a default value, talk with your dealer about the optimum interleave value for your system.

We're in Big Trouble Up Here!

The Space Coast PC UG newsletter quotes a new study cited by "Florida Today" as finding "*it might be better to store computer disks in relatively high humidity.*" (Sorry 'bout that, Coloradoans!) "FT" says "*Conventional wisdom stresses storage of hard disks, which store large amounts of data, in a cool dry place. Researchers at Northwestern University found tiny wear particles are created each time a disk is started or stopped. In humid air, these particles are oxidized, creating very small pieces of debris that cause little or no damage. In dry air, larger particles form & eventually clog the system. In 50% relative humidity, hard disks could last as much as 5 times longer than in dry air & 50 times longer than in a vacuum.*" (Shall we move...& then install air conditioning?)

Hard Drive Backups for Valdocs

by Bob King & Bill Lafitte of Byte Sighs

Why Back Up? Hard drives & SemiDisks certainly speed production & are much more convenient than floppies. Deleting & adding files causes file fragmentation (pieces of the files spread out all over the disk as they fill available disk spaces) so it takes longer to find & assemble the pieces. So changing programs & retrieving & storing data gets slower & slower. MS-DOS users have programs to put the files back together & restore the retrieval/storage speed but I am not aware of such a utility for TPM/Valdocs. Also with use & time the magnetic patterns on the hard drive become less defined which then causes errors in placing & locating files. Hard drives require periodic reformatting & partitioning to restore the magnetic maps & to defragment the files as they are copied back. You must reformat before you start receiving error messages because, if you wait for errors, then you may not be able to get an accurate copy of the file. Plan to reformat at least every six months & more often if you are very active in deleting & adding files. Reformatting will erase your data & programs. The entire disk should be backup up (TWICE) before you reformat.

But you can't wait six months to backup. Hard drives & SemiDisks will fail & you will lose your programs & data. The coming crash is a certainty, you just don't know when. Your drive may fail before you finish your current document! This means you must backup every new or changed document or risk losing it. The documents we produce on our computers consume a lot of irreplacable time. It may take a crash to convince you, but backing up takes less time than redoing a large spreadsheet, - or even this article. You make two backups in case something goes wrong in the backup or recovery or in case your child, dog, ...

Why Not Stick With Copydisk? Valdocs furnishes a backup routine under COPYDISK, but it is not adequate for the power user. Some of us are operating 40 meg hard drive plus 4-6 megs of SemiDisk & logging many QX hours daily. In this article I describe Valdocs COPYDISK backup & the CRUNCH program I now use, giving advantages & disadvantages of each. (Squeeze & Unsqueeze can do the same things)

The COPYDISK Routine The Valdocs backup routine is accessed through COPYDISK Which offers a **<H>ard-disk** backup option when a hard disk is installed. Selecting this option gives three more choices: **<E>ntire disk, <N>ew or changed files,** or **<R>ecover from backup.** The first transfers files from each user area of the designated logical drive (A:, B:, etc.) to the corresponding user area on a designated floppy disk or other drive. When the first floppy disk fills, the program prompts to insert the next blank disk, etc. Be sure you number the backup disks sequentially. If the disk is not blank the program will give the option of using the disk anyway. Don't do this! Too many users have lost their backup with this choice. Use only freshly formatted disks for backup. The **<R>ecover from backup option** puts files back into the designated hard drive logical drive (A:, B:, etc.) in the same user areas from which they were copied. The program prompts when to change floppies. Be sure to insert the floppies in the same order as when the backup copy was made - that's why you were careful to number them. The backup completely fills disks, so a file may be split between two disks. It looks for the balance of the file on the subsequent disk. I do not use the **<N>ew or changed files** option as it has been reported as being unreliable.

This backup & restore system seems to work fine for the 10 meg. Comfiler. It is menu driven, takes less than an hour to back up or restore, & replaces the files in the same user areas with no operator direction. You may also use this program for backing up a SemiDisk or 20M Pro hard disk.

COPYDISK Drawbacks It requires 28 floppies for a full 10 megs & it backs up entire logical drives rather than specified drive/user areas. I have over 20 megs of Valdocs files on my hard drive & SemiDisk which would require more than 60 floppies to back up. Also, I like to backup my new or changed files daily. And I always keep two backups. One backup is not safe enough.

CRUNCH & UNCR(unch) Introduced I use CRUNCH & UNCRunch to backup. This CP/M utility works fine in TPM with Valdocs. It quickly copies or restores specified files or whole user areas - & it crunches the files so you don't need so many floppies. For example, a Valdocs drive/user area containing 1,576K of

Editor documents is CRUNCHed down to slightly less than the capacity of a single floppy (376K). The indexed documents, index, form definitions, active views, etc. are CRUNCHed to the floppy & may be accurately restored & transferred using UN[illegible]gle files may also be selected to UNCRunch to a specified de[illegible]ion.

COPYDISK & CRUNCH/UNCR Compared CRUNCHing & UNCRunching changes the protection level <3> that Valdocs indexed files are given when they are indexed to <0> upon restoration, but so does the Valdocs copydisk backup utility. The indexed description of CRUNCHed files cannot be read from the INDEX. The INDEX is not available for the Valdocs backup either. With the Valdocs backup, you can use the TPM utility, VERSION, to get the first line of the index description along with the accompanying TPM file name. VERSION will not read the CRUNCHed files indexed description. The CRUNCHed files are specified by their TPM names except the middle letter of the file type designator is replaced by a Z (90501001.VZL). So, I print out the VERSION information before I CRUNCH a user area (i.e. **A0>VERSION B17:*.* CTRL P <CR>**) & slip the listing into the disk jacket. You may pick a single file to UNCRunch & use. COPYDISK splits some files between disks so they cannot be retrieved without going through the backup routine.

How to Use CRUNCH/UNCR Copy CRUNCH.COM & UNCR.COM to the A) drive/user area/ I TPM log onto the floppy drive & user area to which you want to CRUNCH files. (i.e. **A0:>C0: CR or A0>D2: CR**). Now log onto the drive/user area which you want to CRUNCH to the floppy (**C0:>B13: CR or D2>A117:CR**). This is what must be done to have a CP/M program link two TPM drive/user areas.

Now type at the prompt, **CRUNCH B:*.* C:** & press <CR> (i.e. **B13>CRUNCH B:*.* C: CR or A117>CRUNCH A:*.* D: CR**). In the first example all files in user are 13 of drive B will be CRUNCHed to user area 0 of drive C. The second example CRUNCHes from A117 to D2. The files on the drive/user areas you CRUNCHed are not erased or altered. If you want to CRUNCH only Valdocs Editor files you could use - **CRUNCH A:*.VAL**, or for spreadsheets - **CRUNCH B:*.SPR**, etc. How about all Editor files on a specific day? - **CRUNCH B:90430*.VAL.**

When a disk fills, CRUNCH deletes the incomplete file from the destination disk & prompts you to insert the next disk. This doesn't work in TPM! Use CTRL C to exit to the TPM prompt & use **SD DISK**, or **COPYDISK <N>on-indexed** to find the last file transferred. The files are transferred in numerical & alphabetical order. Now you can use a CRUNCH switch to complete the CRUNCH backup. **B13:CRUNCH B:*.* C: /T.** The switch, /T, will list all the files on B13 in numerical alphabetical order. The remainder of the files to backup may be tagged for CRUNCH backup by pressing T as each file is presented.

Rarely is more than a single floppy required to backup a drive/user area. The /T switch is most often used to CRUNCH specific files for backup. You can decided which files you are interested in CRUNCHing by using the TPM type, date, & order designation or VERSION.

Use UNCR to recover from a CRUNCHed backup. The procedure is basically the same. Log onto the two drive/user areas you want to UNCR files between (i.e. **A0>A117: CR, A117>D2: CR**). Then **D2>UNCR D:*.* A:**. This UNCRunches all the CRUNCHed files on D2 to A117. Here, too, use wildcards to pick subgroups of files (i.e. *.VZL, or *.SZR, or 90430*.VZL, etc.). The /T switch also works with UNCR.

This utility works well for me. It is great for Editor, Spreadsheet, & Cardfile files, CRUNCHing them to 20-25% of their Valdocs size. Programs are reduced to 60-75%. It does not significantly reduce *.PIC files & wastes time trying to compress them noting they are no smaller, & then copying them without CRUNCHing. I use DISK, Copydisk, or ZPIP to copy *.PIC files.

I keep 2 complete data disk backups updated monthly (shouldn't you?). On a daily basis or after writing some important documents I back them up to disks reserved for each data drive/user area. I use wildcards or the /T switch to designate the files to CRUNCH to the backup disk. Remember to copy the associated INDEX.* files also. I also copy my application data list, CPL's, Schedule data, & personal dictionaries each time they are updated.

Where to Get CRUNCH/UNCR The EUGOC disk library of course! It is listed as CRUNCH24.LBR. It is also available on many CP/M BBS. Further documentation is included with the program in the LBR file. CRUNCH Version 2.4 was written & copyrighted by Steve Greenberg on 9/15/87. It is Freeware, but available for non- profit use only. He lists phone numbers for questions & bug reports, but I haven't tried to reach him.

My QX-10 is setup with DXCC's TPM version 3.89 & boot ROM. I don't know if it affects the operation of CRUNCH/UNCR. I may look at the COPYDISK <N>ew or changed files option some more. I'm also considering a second hard drive reserved for backing up the first. Sometimes I will CRUNCH all the files from a single logical drive to another logical drive & then reformat only the single drive, following with UNCR to restore! What I would like is a modified COPYDISK to reliably pick out new or changed files, compresses as it copies, & is really fast. Call or write me if you have questions, discoveries, or other backup systems you like.
Bill Lafitte (714) 548-1741

HDD Controller WD1002A-WX1 (8-bit)

Factory Settings

Jumper	Position	Description
W1	N/A	Not used.
W2	N/A	Not used.
W3	1 to 2	BIOS ROM is enabled (on controller).
W4	2 to 3	Device address 320H.
W5	*hard-wired 1 to 2	BIOS ROM size (32K or 64K).
W6	2 to 3	Reduced write current (<=8 heads).
W7	*hard-wired 1 to 2	IRQ 5.
W8	2 to 3	Disk controller I.D. (set to be the first).

> HDD Controller WD1002S-WX2 (8-bit)

Factory Settings

Jumper	Position	Description
W1	1 to 2	Required for this configuration.
W2	1 to 2	Required for this configuration.
W3	1 to 2	BIOS ROM is enabled (on controller).
W4	2 to 3	Device address 320H.
W5	*hard-wired 1 to 2	BIOS ROM size (32K or 64K).
W6	2 to 3	Reduced write current (<=8 heads).
W7	*hard-wired 1 to 2	IRQ 5.

> HDD Controller WD1003-WAH (16-bit)

Factory Settings

Jumper	Position	Description
W1	1 to 2	Status read is latched.
W2	No jumper	Primary address selected.
W3	*No jumper	Required for this configuration.
W4	2 to 3	Required for this configuration.
W5	2 to 3	Standard configuration.
W6	2 to 3	Standard configuration.

> HDD Controller WD1002-WAH (16-bit)

Factory Settings

Jumper	Position	Description
W1	1 to 2	Primary base address.
W2	Center to NL	HDD activity LED only lights when the controller accesses the drive.

> HDD Controller WHDC (16-bit)

Factory Settings

Jumpers	Position	Description
*JP1 (J1)	*2 to 3 (B to C)	Primary address selected.

Have a SUPER New Computing Year!

*JP2 (J2) *1 to 2 (A to B)	Status read is non-latched (select=drive busy).
*JP3 (J3) *1 to 2 (A to B)	WAH mode (dual HDD controller).
JP4 to JP8	No jumpers pins. Hardwires to factory settings.

Hard Disk Troubleshooting

1701 error A 1701 error is a BIOS error code sent from your controller during the controller's 'self test' routine. To correct this, check the power cable attachment to the drive & the cable connections to the controller. This is a common error & means that the computer does not recognize the hard drive.

1780 Error or Hard Disk Controller Error This occurs only on AT machines & is somewhat like a 1701 Error. The 1780 Error is telling you that there is no controller present. To correct this, check your cabling to make sure no cables are backwards & all cable connections have been made to the proper controller pin connectors (i.e. J1 to j1, J2 to J2, etc.).

1790 Error This occurs only on AT machines & is a hard drive initialization error. The hard drive has not been low-level formatted properly. To correct this, low-level format the hard drive & proceed with partitioning & high-level formatting.

Controller Translation Misjudgment On various models of Western Digital controllers, the controller translates the number of cylinders at 939 not the correct 615 cylinders. This is a normal occurrence & needs no correction. This is simply how the controller works. Proceed on with your software installation normally.

Seek Error A seek error is created when the controller sends a message to the hard drive to locate a certain sector, & the hard drive cannot locate the requested sector. The best solution for a seek error problem is to try low-level formatting the drive with a different interleave. If this doesn't work, try a new controller, drive, or cables if you have such access.

Drive Doesn't Fit If your hard drive doesn't fit in your CPU's case, you may want to try moving your floppy drive to a different location or purchase either a half-height drive or a Card Drive.

Error Reading Fixed Disk There are two different types of solutions for this problem:

<b>1) For most machines all you have to do is low-level format & proceed on with partitioning & high-level formatting, or

<b>2) For Tandy 1000A machines the controller card has not been modified for Tandy operations. This is a controller specific problem & you should call HDI for tech support (602) 967-3133.

Track "0" bad-disk unusable If you are using DOS version 3.1, everything is fine. This is a 'bug' in DOS 3.1. To correct this simply make the following entries with your DOS disk in drive A: Type **Sys C:** & hit <CR> Then type **Copy A: Command.Com C:**

Now you are ready to go just as if you had formatted the disk with the Format C:/S command. If you are not using DOS 3.1, you will not ever encounter this error.

Tandy Autoformat Program Do not use this program. Use the software provided or format the drive from the controller card level. Follow the installation process for a PC/XT.

Power Supply won't turn on The power supply may be overloaded or a bad connection is occurring. At least a 135-watt power supply is necessary for sufficient power.

Computer Compatibility Problem Check to make sure that your particular BIOS supports a hard drive. You may have to get an upgraded BIOS from your computer manufacturer. If you have an IBM from Oct. 27, 1982, you will have to get an upgraded BIOS from IBM. Check with your computer manufacturer for specifics & more information. This is especially true with RLL controllers. If you have an original Tandy 1000, you will have to get the BIOS upgrade to 1.1. This version supports a hard drive. If you have an older Corona, AT, AT&T, Zenith, or Leading Edge you may be a candidate for an upgraded BIOS. Call HDI Technical Support at (602) 967-3133.

> Cabling Hard Drive

The # 1 rule in cabling is: **The type of cable you are using will determine who you need to set the jumpers on your drive.**

In order to cable your hard drive & controller card, you will need one 20-pin data cable & one 34-pin cable of some type. The 34-pin cable is where the differences start. The 34-pin cable determines how the drive(s) will be jumpered.

Most AT/386 machines use a dual drive cable with five wires twisted, while most XT's have only a single drive cable. The dual hard drive cable is very similar to the floppy cable in all but one way. Each cable has some wires twisted near the end. The hard drive cable has 5 wires twisted, the floppy cable has 7 wires twisted. This is the only way to tell the difference between the hard & floppy dual drive cables. If you are using a 5 twist dual drive cable for cabling your hard drives, the jumper settings on each drive (if you have 1 or 2, regardless of whether it is a PC/XT/AT/386) will be for an AT/386. If you have only one drive in an AT/386 with a 5 twist dual drive cable, attach the drive to the end with the twist in it (the end connector). Most ATs, 286s, & 386s have combined hard disk & floppy disk controllers built into a single, 16-bit full length card which means that most of the time all you need is the hard drive itself. Be sure that your controller matches your drive - whether it is MFM, RLL, ESDI, or SCSI.

Most PC/XT machines use a single drive cable without a twist or dual drive cable without a twist. If you have a single drive cable or a dual drive cable without a twist (regardless of whether it is a PC/XT/AT/386), the first drive should be jumpered for an XT machine. Notice that both cables have a red stripe down one edge. Also notice that there is a slot cut in both cable connectors on the hard drive. When you attach the cables to the connectors on the drive, be sure that the red stripe on the cable is toward the slot on the connector.

Two Drives on One Controller Cabling is very important for dual drive installation. When installing two drives, you will need two 20-pin cables & a 34-pin cable for your cable attachments. There are only two types of dual drive, hard disk 34- pin cables - one with five wires twisted & one with no twists. You may be using either type of 34-pin cable for your dual drive installation along with the two 20-pin cables (one for each drive).

When using a 34-pin cable with a twisted end connector, you will want to keep in mind that this type of cable will invert the placement of your drives. For example, if Drive 1 is connected to the twisted end connector, your computer will actually read Drive 1 as Drive 2 due to the inversion.

There are 2 possible drive select combinations for each type of 34-pin cable depending on which drive you designate as Drive 1. The examples below illustrate the 2 possible cabling combinations per each type of 34-pin cable & each combination's drive select. The examples are for drives with drive selects numbered DS1-DS4. The jumpering may vary for drives with DS0-DS3 select.

If you are using a 34-pin Cable with a Twisted End Connector &:

<b>a) You install Drive 1 on the End Connector & Drive 2 on the Middle Connector, your drive select for both Drive 1 & Drive 2 will be DS2.

<b>b) You install Drive 1 on the Middle Connector & Drive 2 on the End Connector, your drive select for both Drive 1 & Drive 2 will be DS1.

If you are using a 34-pin Cable with a No-Twist, Flat End Connector &:

<b>a) You install Drive 1 on the End Connector & Drive 2 on the Middle Connector, your drive select for Drive 1 will be DS1 & the drive select for Drive 2 will be DS2.

<b>b) You install Drive 1 on the Middle Connector & Drive 2 on the End Connector, your drive select for Drive 1 will be DS1 & the drive select for Drive 2 will be DS2.

Note: For the flat 34-pin cable, the first drive you attach to the

cable, whether to the end or middle connector, will always be Drive 1 & a DS1 drive select.

Resistor Termination Packs. When installing two drives, you must remove the resistor termination pack from the hard drive attached to the middle connector on your 34-pin cable. Attach the resistor terminator pack to the hard drive attached to the end connector of your 34-pin cable.

Note: If you lack a power connector you may need a power splitter to add additional power connections for your second drive & controller combination. A power splitter simply forks power from one connection to two separate connecting ports.

Two Drives & Two Controllers The installation of two drives & two controllers is done primarily with XT machines as a 8-bit controller in an XT can accommodate both primary & secondary controller addresses. The 16-bit controllers in AT/386 machines usually cannot accommodate the secondary controllers.

Hardware Installation: The hardware installation process for installing two drives & 2 controllers is the same as if you were installing one drive. The only difference is that you may need to use a power splitter if you lack connections from your power supply.

Software Installation The software installation process for installing two drives & two controllers is basically the same as if you were installing one drive, with the exception of a software entry you must make for to give your second drive a secondary address. The software entry must be made during the low-level formatting process for the second drive. Follow the instructions for Seagate & Western Digital controllers.

Seagate Controller as a Secondary Controller To make your Seagate controller secondary, place the jumper over the two right hand pins in the middle of the card. When you low-level format your drive, use the entry **g=d800:5** as the BIOS address.

Western Digital Controller as a Secondary Controller To make your WD controller secondary, move the jumpers at W4 & W8 from their current pin positions 1 & 2 at W4 & W8. When low-level formatting use the entry **g=ca00:5** as the BIOS address & choose DRIVE D for the drive to be formatted.

A Resistor Termination Pack is an electrical unit that must be attached to either a single drive or the last drive in a chain of drives. The resistor termination pack prevents electronic signals from being reflected & sent back up your chain of drives. The resistor termination pack keeps all electronic signals at the end of the chain to ensure quality data transmission.

For Single Drive If you are installing one drive, you must leave the resistor pack installed.

For Dual Drive If you are installing two drives, remove the resistor pack from the drive attached to the middle connector & put the resistor termination pack on the drive attached to the end connector of you 34- pin cable. The resistor termination pack must be attached to the last drive in the chain of drives.

Common Hard Drive Questions

Q>: *Can I use an 8-bit controller in an AT machine?*

A>: Yes, All you have to do is inform your AT machine that *'There are no hard drives installed'* by entering Delete in your CMOS configuration. Your entry depends on your particular AT machine. Check your AT user's manual for the proper entry.

Q>. *Can I mount my computer case sideways with my hard drive in it?*

A>: Yes. The hard drive will work sitting sideways when your computer case is standing on end. You will want to be sure that the drive is not turned upside down when you stand your case on end.

Q>: *I cannot see the drive light on the faceplate go on. What does this mean?*

A>: This could mean that 1) your power connection may be weak or hooked up improperly, 2) your LED Display (Light Emitting Diode) may be bad - this is the most common problem, or 3) your hard drive is defective & must be replaced.

Q>: *My Miniscribe drive light is blinking red. What does this mean?*

A>: This simply means that your drive is bad.

Q>: *I have an AT & the drive light stays on constantly when the power is on. Is it supposed to do this?*

A>: Yes, this is normal. This is simply the way the 16-bit controller card used in AT machines is designed.

Q>: *On my controller, can my hard drive cable connect where my floppy cable was connected?*

A>: No. Hard drive interface & a floppy interface operate at different speeds. You must connect the hard drive cable to the specific 20-pin & 34-pin connections on the controller card for the hard drive. Each 20 & 34-pin connection will vary per controller card.

Q>: *Where does the power cable attach to on my drive?*

A>: See your hardware installation sheet shipped with your product. The power connector on your hard drive is usually located next to the 34-pin connector near the back edge of the hard drive.

> Hard Drive Reference List

The letter codes for each of the drives are as follows:
ST = Seagate MS = Miniscribe MC = Micropolis

Drive	Cyl	Heads	Size(MB)	Type	Misc Info	Access
ST225	615	4	20 MB	MFM	MFM Only	68ms
ST125	615	4	20 MB	MFM	MFM Only	40ms
MS8425	615	4	20 MB	MFM	MFM Only	61ms
MS8225	805	2	20 MB	RLL		61ms
ST138	615	6	30 MB	MFM	MFM Only	40ms
ST138R	615	4	30 MB	RLL		40ms
ST238R	615	4	30 MB	RLL		65ms
MS8438	615	4	30 MB	RLL		61ms
MS8450	805	4	40 MB	RLL		61ms
MS3650	809	6	40 MB	MFM		62ms
MS3053	1024	5	44 MB	MFM		23ms
ST251	820	6	40 MB	MFM		40ms
ST157R	615	6	48 MB	RLL		40ms
ST277R	820	6	65 MB	RLL		40ms
MS3085	1170	7	73 MB	MFM		23ms
ST4096	1024	9	80 MB	MFM		28ms
ST296N	820	8	80 MB	MFM	Host Adapt	28ms
MS3180E	1224	7	150 MB	ESDI		17ms
MS9380E	1224	15	340 MB	ESDI		17ms
MC1558	1224	15	340 MB	ESDI		17ms

The following Technical Assistance numbers are provided for your use. The technicians at these manufacturers are expert with their products & can assist you should you need additional info.

> Controllers	Telephone Numbers		
Western Digital	800-777-4787	Adaptec	408-945-2550
Omti	919-292-8072	DTC	408-262-7700
Perstor	602-894-4601		
> Drives			
Seagate	800-468-3472	Miniscribe	800-356-5333
PTI	805-581-1000	Micropolis	818-718-5117

A Hard Case for Hard Times

by John McMurtry of MICROscope

Why would anyone reformat their hard drive? Not just a normal old format, but a low level format! ALl the manuals say that this is done, in most cases, by the manufacturer. It is something that needs to be done only once.

The truth of the matter is that a hard drive will slowly change speeds as it is used more & more. This is a cause for data read errors. Often a drive will have to make several attempts to read a sector, resulting in slow access time.

Reformatting a drive will set the drive to the speed it is currently running. Hopefully this will take care of the I/O problems. Drive speed access should also be improved.

WARNING Be sure to backup the drive before you re-format!

Depending on the type of machine you have this can take from several hours to a few minutes using the utilities that came with DOS 3.2. Mine is one of the slowest using the packaged DOS utilities. For this reason I've looked for & found a faster method, which I share later in this article.

To reformat a hard drive I suggest you read the manual that came with DOS 3.2 or higher, or the information that came from the drive manufacturer. I will go through the steps one needs to take, but this is for my machine & may be different for other brands &/or configurations. Read Your Manual First!

To lay out the ground work, my machine is a Tandy 1000SX with an internal hard card. The card has a Western Digital controller that allows DOS to think it is talking to a MFM type drive & converts to RLL for the drive. There is a lot of opinion on which is better. I have no interest to engage within the debate, I only offer the information as background, period!

The first step is to Backup the Hard Drive! You can do this using the DOS utility BACKUP. However, BACKUP is slow at best. There are several high speed backup programs on the market & they all do a good job. Here again there is a lot of debate as to which is the best. I'm not going to get into this one, either. I will convey what I'm using as a point of information to the reader, I use PCBACKUP that comes with PCTools Deluxe.

After the drive has been backed-up, you're ready to do the low level format. DOS 3.2 comes with a program named HSECT that will do a low level format. To use HSECT type the name at the DOS prompt. Do Not Call It From The Hard Drive! Use HSECT from a floppy. First you'll be asked which drive to format. Next HSECT asks if you want to lock out bad sectors. These are the sectors marked bad on the drive itself by the manufacturer. If you answer yes, you'll be queried for the sectors. Enter a blank to end. On some versions you are prompted with: **Are you sure you want to do this? — This is your last shot to back out!**

The hard format will take some time, different systems will have different time frames. You will be told that DOS will be needed to reboot at the end. Put a DOS system disk in drive A & press **CTRL ALT DEL** together to reboot. No It Won't Boot From the Hard Drive, You've Waxed it Clean!

This long version of low or hard format can be shortened on some systems. My hard card uses a Western Digital controller. There is a low level format routine in the BIOS on the controller card. This routine can be called by using DEBUG. The following are the steps I use to call the routine.

type **DEBUG** & press <CR>
type **G=C800:5** & press <CR>

The utility "Super Formatter" is then invoked from the controller card's BIOS. The first thing you'll be asked is, to select drive to be formatted. Then you'll be asked for the interleave. My drive manufacturer suggests 3 or 4, I use 4. Next the program wants to know if the drive is to be dynamically formatted. I answer no to this question as advised by the drive manufacturer's manual. The last question is the back out option. You're asked to press Y to start. I would assume that pressing N would abort the format. However, I've never tried to type anything other than Y. Formatting takes about 10 to 15 minutes for my drive. A lot better than the HSECT program.

Step two is to use FDISK to set multiple MS-DOS partitions. If your drive is 32 meg or smaller you need only one partition. However, if your drive is larger, you need to make more than one partition. Keep in mind that 32 meg is the maximum that DOS will work with as one partition. Commonly with a 40meg drive is set up with one 30meg & one 10meg partition. Each partition will be referred to as a different drive (the 10meg as drive C & the 30meg as drive D).

Now to do the high level format. This is the same as formatting a floppy disk. Type **FORMAT n:** where n is the drive to be formatted. If you're formatting the boot drive C:, then you would type **FORMAT n: /S**. The **/S** is a software switch to tell the format program to copy the system or DOS files to the boot sector of the drive; this includes COMMAND.COM. The drive is now ready to be used.

NOTE: You must format each drive, as on a forty meg drive divided into two logical drives C: & D:. Use the **/S** switch on drive C: in install DOS & the standard format on drive D:.

The last step would be to re-load the backup data on the drive, This is dependent on the method you used to backup the hard drive to start with. Read the manual for the utility you used.

I, however, do one more step. Using PCTools Deluxe, I verify the drives' sectors. I do this by using the COMPRESS utility program. This check will examine each sector & lock out any bad ones before I could have DOS try to write to them. In doing the reformat, I have found that all the bad sectors have been recovered & verified as good.

If you had trouble understanding, or you are unsure of the steps I've outlined, I strongly suggest that you DO NOT attempt this process on your own. Get some help from a more advanced user than yourself. I've offered this information as just that, INFORMATION. I am not responsible for how you apply it.

TELECOMMUNICATIONS

HELP, help, help! As of NOW, the "NEUG LifeSaver BBS" is **NO LONGER on-line!** NEUG was NOT happy with the Sysops' lack of coordination with NEUG. They were making changes in the BBS, its features, and even to the collection of fees from users. We decided to pull our hardware from the installation in late November! Now, we need a NEW SYSOP and location! If you are interested, we hope you will contact NEUG promptly, so we can reinstate the service, and improve the kinds of services it can offer members.

2400 baud...Actually 600 baud!

by Glenn Travers Palm Beach UG

Yep, that's right. Pay attention! That new 2400 baud modem you just purchased or were about to purchase runs at 600 baud! I'll explain. What we're talking about here is transmission rate--sending codes over telephone lines. Remember Mr. Morse & his code? Or currently, ASCII (American Standard Code Information Interchange)? Well, the guy whose name we are using is Emil Baudot. (I guess he's a Frenchman.) We no longer use his code, but his name lives on to describe the transmission rate "baud." If you're still with me, I'll spell out some technical stuff. Baud is used to reference the division second times 1 bit per baud, or 300 BPS.

A 1200 BPS modem signal is different. **Example:** You might expect each second (time) to be divided into 1200 tiny, tiny pieces. Not true, Magoo! 1200 BPS modems actually divide each second into 600 tiny pieces. Using a technique called four-level phaseshift keying, each tiny piece can represent a string of 2 bits!

Now you're getting it! Still with me? Each baud can be in one of four phases, each representing 2 bits. Multiply 600 baud per second (time) by 2 bits per baud & you end up with 1200 bits of info per second (1200 BPS).

Now for 2400 BPS modems. **Example:** Remember the last example in four-level phaseshift keying? Well, this is called sixteen-level phaseshift keying! Each piece or baud is represented by a string of 4 bits. Multiply 600 baud per second by 4 bits per baud & you have 2400 bits of information per second.

Now about that? Clever schemes pack more than 1 bit in each baud. Bits per second (BPS) is the better term to replace the commonly used term "baud." Sorry, Mr. Baudot.

Stop Modem Mess-ups

by Betty Rutter, Hayes Tech Support

You're sitting at home or in a hotel sending from your laptop to a computer back at the office. There's a beep on the line. You have another call coming in. The "beep" knocks your modem off the air. Your data call is destroyed.

Solutions: The obvious one: Turn off call waiting, or use a line without call waiting. The less obvious one: Modify your modem. Here's how: In all Hayes & Hayes compatible modems, there is an S10 register. It tells the modem how long before it hangs up after losing carrier. In Hayes modems, the S10 register is set for 1.4 seconds. The typical call waiting tone is 1.5 seconds. Solution: Increase the S10 register to six seconds (to be sure).

Use your communications software. Go to terminal mode, then type: ATS10=60. You have to put this value in every time you power up, because the Hayes 1200 modem, & others, has volatile memory. But the Hayes 2400 & 9600 have non-volatile memory. They remember the six seconds after they've been switched off. The command to write this to memory is: ATS10=60&W. [*Editor Note: Those who use Procomm & have volatile memory modems can add the command S10=60 to the init string.*]

A Small Loss of Faith

Hooray! I got my new modem, with speeds of 300, 1200, 2400. Wow! It was installed for me & ready to use. It came with Procomm 2.4.2. On the first few days I tried to log on to the Melb PC User Group BBS. Paradise! I logged on, & enjoyed a good browse (I had already registered). But the urge became too strong & I decided to go all the way & download some files, so I pressed the magical F for the files menu. Pressed F again for the titles. I found one I wanted (I actually found about 60 I wanted) pressed D for download, & Y for Ymodem (Procomm 2.4.2 doesn't have Zmodem).

But alas, I got the bad news: File transfer aborted. I was about to see this many times. After about an hour, I was dragged away from my by now dreaded computer & modem in a daze. What had happened to my friendly technology?

Betrayed? I had an emotional problem. I had just begun to love my computer, but now, because of my modem appearing to break down, I though of it as an alien, only to be trusted for playing games. Still I was determined to solve my problem, at all costs.

After hours, weeks, & months of working & guessing, I got the answer, which of course was right under my nose. I wore a hole in my shoe kicking myself. I had set Procomm up so it was trying to download its files into a non-existent directory. I changed it to A:\ & away we went. It was not all for nothing. I am now enjoying files streaming down my line. More importantly, I learnt a lot about a good workman not blaming his tools.

P.S.: I am 14 & would like to hear from younger members of the computer world. I want to contribute to this group as much as I can. I can be contacted on (059) 522-962, AUSTRALIA.

Using ARC & ZIP Archives

by GIK, Chicago Computer Society

If you download files from a Bulletin Board System (BBS) or purchase Public Domain or Shareware software, you will soon discover files ending in an ARC or ZIP extension. These files are called archives, a space saving format for combining & sharing files throughout the PC world. This article is intended as an overview of archives & the programs used to create & maintain them. Use it as a supplement to (but not a substitute for) reading the documentation provided with the archiving programs described below.

What Are Archives? An archive file is created with archiving program which compresses together one or more files. An archive containing more than one file is sometimes termed a library. Archiving a select group of files decreases the size of each file & combines them into one file. For example, the 3 files in the directory below have been combined into the ARC file ALLFILES.ARC.

Note the three individual files take up 32,600 bytes, but the archive, which contains all three in compressed format, only requires 21,158 bytes:

```
FRAGMENT.TXT 11563    REVERSE.EXE 11828
LIST.COM      9209    ALLFILES.ARC 21158
4 File(s) 315392 bytes free
```

Archives can be a mixture of many types of program, data & text files such as COM, EXE, BAT, WK1, DBF, DOC, TXT, PRN, etc. An unarchiving program (often different than the archiving program) is needed to extract & restore each compressed file from an archive to its original file format before it can use used or viewed.

Why Use Archives? Archiving a file makes it smaller & therefore faster to transfer from PC to PC using modems. Archives also save space when copying to, backing up or sharing files on disks. Therefore, archived files extend the capacity of any disk. For example, a lowly 360K floppy disk may hold the equivalent of 700K or more of text files after compressing them into one or more archives. Archiving programs compress text files the most, since text contains a lot of air (repetitive spaces). A typical documentation file will often archive into 25% to 50% of its original size. Executable binary files, such as (COM/EXE), compress less, since they contain little air & in general have fewer repetitive characters.

Recommended Archiving Formats The two most accepted file compression formats are ARC & the newly developed ZIP. Phil Katz (founder of PKWARE) is primarily responsible for development of both standards & is considered a master of compression technique. Because of legal restraints, Katz can no longer develop programs using the ARC format or name, & therefore has created an all new ZIP archive format. In an unsuccessful attempt to avert litigation, Katz renamed his last version 3.61 of PKARC/PKXARC to PKPAK/PKUNPAK. ZIP format archives are created & maintained by Katz's evolving program combination PKZIP/PKUNZIP. Though other ARC format archiving programs are available, this author recommends the PKWARE ARC program combination PKPAK.PKUNPAK & the ZIP program pair PKZIP/PKUNZIP. Please note ARC & ZIP formats are NOT compatible. A Zip file created with PKZIP cannot be unarchived with PKUNPAK & vice versa. All four programs are highly recommended additions to anyone's program arsenal to survive this dual archiving standard for the immediate future.

Where Can I Find the ARC/ZIP Programs? The archiving set PKPAK/PKUNPAK, related utilities & documentation can be found as a self-extracting archive named PK361.EXE. Currently, the parallel PKZIP/PKUNZIP programs & documentation are combined into PKZ092.EXE. Both EXE files can be found on bulletin boards & downloaded from the files section. Once you have these program, they should be placed in a directory such as C:\ARC. This directory should be included in your path:

PATH=C:\DOS;C:\UTIL;C:\ARC... so these programs are available anytime from any drive & directory.

What Are Self-Extracting Archives? Self-extracting archives must end in an extension of EXE instead of ARC or ZIP. This type of archive contains a small extracting program copied to the front of a previously created ARC or ZIP archive. Therefore, PKUNPAK or PKUNZIP is not needed to unarc a self-extracting archive called BUDGET.EXE, simply enter: **BUDGET x:...** where C=Cx:D=D is the drive\directory to receive the unarchived files. Making an archive self-extracting defeats some of the purpose of an archive by making it slightly larger (13-15K) than an ARC or ZIP file alone. Therefore, use them with a purpose - & NOT for files uploaded to the BBS. It makes sense that BBS archives PK361.EXE & PKZ092.EXE are self-extracting, since it must be assumed the person downloading 1 or the other does not have an unarchiving program to handle ARC or ZIP files! See the ARC or ZIP manual for instructions on creating a self-extracting archive.

How Do I Unarc an ARC or ZIP Archive? ARC files are unarced with PKUNPAK & ZIP files are unarced with PKUNZIP. Before unarchiving, you may wish to know the amount of space needed to hold all the unarchived files. For an archive called ALLFILES.ARC, enter: **PKUNPAK -V ALLFILES**. The above command will create the following verbose listing:

```
Searching Archive: ALLFILES.ARC
Filename Length Method Size Ratio
FRAGMENT.TXT 11563 Crunched 3878 67%
LIST.COM 9209 Crunched 8255 11%
REVERSE.EXE 11828 Crunched 8936 25%
0003 32600 21069 36%
```

The listing tells us the unarchived files will need 32,600 total bytes of space. The unarchived length, compression method used, archived size, & ratio length-to-size percent are also shown for each file. To unarchive ALLFILES.ARC, enter:

PKUNPAK ALLFILES or
PKUNPAK ALLFILES B: or,
PKUNPAK ALLFILES B:FRAGMENT.TXT

The 1st example above restores all files in the archive to the default drive & directory. The 2nd example restores everything to drive B. The 3rd example restores only 1 file (FRAGMENT.TXT) to drive B. Use PKUNZIP instead of PKUNPAK for a ZIP file.

Archiving Files Together Files are recommended to be ARCed together with PKPAK & ZIPed together with PKZIP. The simplest way to archive a select group of files together is to place them all in the same drive & directory. To create TRIAL.ZIP, enter:

PKZIP -A TRIAL or
PKZIP -A B:TRIAL *.TXT or,
PKZIP -A B:TRIAL FRAGMENT.TXT

This 1st example archives all files in the current drive & directory together. The 2nd example archives only files with extension TXT together on drive B. The 3rd example archives only file FRAGMENT.TXT. Use PKPAK instead of PKZIP to create an ARC file instead. The appropriate ARC or ZIP extension is automatically added to the specified archive name by PKPAK/PKZIP.

What are Archiving Shells or Managers? Archives are a great way to organize files & use disk space more efficiently. But working with a growing number of archives, some ARC & others ZIP, can be a tedious task. To the rescue come the archiving shell managers! ARCMASTER & SHEZ are two outstanding products to make PKPAK/PKUNPAK & PKZIP/PKUNZIP a breeze to use. Both offer menu screens & pop-up help to aid in remembering just about anything you need to do with archives. Both use a point & shoot style (highlight & hit <CR>) to select from a list of files or commands. Creating a selective group of files for archiving or unarchiving is done by tagging from a list. Both use Vernon Buerg's LIST program to view text files, whether they are archived or unarchived. For better overall understanding, learn to use the archive programs on their own. Then try SHEZ or ARCMASTER & see & feel the power & ease at your finger tips! As of this writing, ARCMASTER, SHEZ & LIST are available on the BBS as AM42.ZIP, SHEZ33.ZIP, & LIST64A.ARC, respectively. However as new versions become available & are uploaded, these names may change without notice. Check the BBS file listing for the latest, greatest.

Which is Better, ZIP or ARC? If higher compression is important, than ZIP is better. But with a trade off: the higher the compression, the longer PKZIP takes to create an archive. Not a lot longer, but noticeable. PKZIP allows you to choose one of four degrees of compression among many other options. The default compression of PKZIP is close to both in speed & compactness to PKPAK. Information is also redundantly stored in a ZIP file in a way to allow recovery of most files in a partially corrupted ZIP archive. The program PKZIPFIX is supplied with PKZIP for this purpose. An option in PKZIP is the ability to store sub-directory information along with files in an archive. When extracted, the sub-directories will be created as needed & the files placed back into them. Such an option could be used for selective hard disk backup & restore. PKZIP is missing a few options (available in PKPAK) such as individual file comments & password encryption. But Katz implies in his manual these will be available soon. Katz has introduced PKZIP/PKUNZIP with a version number less than 1.0 (currently 0.92), admitting these programs are not fully mature.

Is There More? For creative & curious minds, there is always more to learn. Add to what you have learned here by careful reading of the author's documentation. There are many other options to discover. ZIP is an exciting new standard. New versions with added features are just around the corner. Keep watch! If you appreciate the programs described here, don't forget most of them are shareware & the result of untold hours of programming. PKPAK, PKZIP, LIST, ARCMASTER & SHEZ are some of the cream of non-commercially distributed software. Support these authors with a check. Read their documentation for the requested registration fee or donation.

Addendum: Since this article was written, another compression format arrived from Japan created by Haruyasu Yoshizaki. His LHARC program both arcs & unarcs files, using an extension LZH. It currently has better compression than PKZIP & creates self-extracting archives only 1K+ larger than the LZH files alone. Though it does not contain as many features as the ZIP format, LHARC promises to be a contender. To obtain a copy of the program, download the self-extracting file LHARC112.EXE from the BBS you generally use.

Modem Errata

GO PLACIDLY among the line noise & baudrates, & remember what boredom there was before BBSing. As far as possible, do not covet your neighbor's HST. Answer your Email clearly & without typos, even to the nerds that pester you, for they have something to say even if you can't figure out what it is. Avoid female impersonators in chat, for they are dangerous to your ego. If you compare yourself with others, you may consider suicide; for there is always someone more proficient in Zmodem than yourself. Label your disks. Keep interested in your own career, however humble; even after staying up all night downloading. Exercise caution in your business affairs; because you need the money to pay your CompuServe bill. But let this not blind you to what enjoyment there is on your local BBS; many persons strive for the most recent shareware; & uploads get you more time on line. Be yourself. Especially, do not lie about your age or looks when responding to Email from "Sexylady." Do not post messages in all caps. Neither be cynical about donations to the sysop; for in the face of all reality, he needs the money for the phone lines. Beware of viruses. Take kindly the counsel of Phil Katz & Chuck Forsberg, gracefully admitting that they know more than you will ever learn. Nurture strength of spirit to shield you from sudden hard disk crashes. But do not distress yourself with needless worry. Many Register your shareware. You are a child of the universe, you have a right to buy a 9600 V-Series Hayes. And whether or not it is clear to you, the communications program is understandable. Read the docs. Therefore be at peace with the sysop, no matter what a jerk he is, & whatever your BBS plans may be, take your wife out to dinner occasionally. With all its bad documentation, high registration fees, & aborted downloads, it is still better than paying for commercial software. Be cheerful. Strive to pay your phone bill.

For weekend modem drivers, dialing for dollars - calling long-distance bulletin boards at rates as high as $10 an hour - has just gotten cheaper. The MCI telecommunications service now offers a SuperSaver plan that reduces out-of-state calls in the continental United States to $5 an hour.

Restrictions apply, naturally. The SuperSaver plan only applies to the 24 hours of Saturday. And MCI subscribers to its other discount plans, such as its week-night & weekend PrimeTime plan, can't combine those savings with SuperSaver.

But you don't need to be a prior MCI subscriber to take advantage of the SuperSaver plan. And you don't need to change your existing long- distance service to take advantage of it, (Although you'll have to use a five-digit access code). MCI will send you a separate bill. (*With a minimum charge of $5 a month, prorated; my first bill was for 16c, for one day's membership.*)

AT&T's cheapest long-distance rate is its Reach Out America plan. Current rates: $7.20 the first hour, $6.90 for additional hours.

The truly hooked hobbyist may benefit from a service such as PC-Pursuit, which provides 30 hours of long-distance calling a month for $30, during its generously defined off-peak hours. Those 30 hours, however, include time 'parked' on one of PC-Pursuit's distant modems, waiting (& sometimes it's a long wait) to connect with a busy BBS. If you're interested in subscribing to MCI SuperSaver plan, call 1-800- 444-3333 for information.

ZIPPED? What's Zipped?

copyright 1990, by Richard G. Heck

I'm sure you have either used zipped programs or have heard conversations in which zipped files were mentioned. For those who have never heard of zipped files, read on. - Zipping is the same as compressing or squeezing. File compression or squeezing is the process of taking a computer program or data file, just about any program, & reducing its size. You can compress a file by using utility programs such as ARC or PKZIP. There are several other similar, but less popular programs, too. But before you can run any zipped program on your computer, you must uncompress or unsqueeze the file with a program such as ARC or PKUNZIP.

The advantage of compressing programs is not only to save disk space, but to allow the transfer of more data from one location to another more efficiently. Many computer operators I know compress or squeeze non-copyrighted programs or data before trading them with their friends. This saves space & allows then to use fewer disks when swapping. Compressing programs will also cut costs when sending programs through the mail.

Bulletin Board System (BBS) owners love compressed files because they save hard disk space & therefore allow more files to be available to BBS members. The compressed files, being smaller, also take less time to transfer over the phone via modem. Most BBSs have compress & uncompress programs available to download, so one can use these BBS files immediately.

In the early days compressing was pretty much dominated by the System Enhancement Associates (SEA) program called ARC. ARC was used by everyone. Noticing this near monopoly was Phil Katz. He felt a little competition couldn't hurt, so he started a company called PKWARE & produced two efficient programs called PKARC & PKXARC. These programs were compatible with ARC but were significantly faster. They also offered an additional file compression format. It was more efficient than ARC but not compatible with ARC. These programs were highly praised.

In 1988 SEA decided PKWARE had gone too far by not paying a licensing fee for using their file format & by using the .ARC extension when creating a non-ARC compatible compressed file. SEA filed a lawsuit against PKWARE for violating their copyrighted file layout & the .ARC file extension. This suit resulted in Phil Katz & his PKWARE company agreeing to cease using the ARC compatible techniques & the .ARC extension.

Phil started over & created his latest shareware programs called PKZIP & PKUNZIP. This became the familiar .ZIP extension. The new PKZIP program is reported to have considerable advantages over the older ARC compression program.

PKZIP offers several options to mix time versus size & enhanced data recovery. Also, the new program offers better transmission error reduction for BBS use. After reviewing most BBS file extensions, PKZIP & PKUNZIP seem to be the programs of choice. PKZIP & PKUNZIP are shareware &, as mentioned above, can be found on most BBSs under the name PKZ102.EXE or PKZ110.EXE. They can also be obtained by writing to: PKWARE, Inc., 7545 N. Port Washington Road, Glendale, WI 53217-3442, (414) 352- 3670 The cost of registering PKZIP/PKUNZIP package is $47.

National Electronic Newsletter Exchange An Open Letter to All Editors from by George Rowcliffe, Editor

Newsletter exchanges are a wonderful source of information & an even more marvelous source for an editor looking for something to fill up the space. I have written before on the value of passing along information from your newsletters to my members. Often they will have no other way of learning the information. But there is one serious drawback - keying in the articles is time consuming, error prone, & worst of all it's hard work. This is a proposal to eliminate that problem for all of us.

The COEPUG Bulletin Board, The Eagle's Nest, is prepared to serve as a central location for a national newsletter exchange. Through the courtesy of our President & Sysop, Hal Posey, there is now a conference established for that purpose. Any editors who are reading this will be free to download files from the conference. Hopefully you will also upload your files for others to use.

There are some problems. The BBS is operated on an 80386 DOS machine. In order to save disk space & transmission time it is desirable although not absolutely essential, that the files be compressed. The compression system in use it PKZIP. This means that those of you who do not have a DOS machine will need access to one to unzip the files & also a means of converting DOS files to CP/M or TPM files with Uniform or a similar program. If this is an unbearable burden, we will look for another solution.

Now to some technical details. The system operates PC-Board. The MODEM operates at 300, 1200, or 2400, using MNP-5 error correction if you have that available.

The settings are the usual you would expect; 8-N-1. You are given full access immediately on sign-on. When you fill out the registration form, identify yourself as a UG Editor. There are no other requirements. The # is 614-875-1360 The BBS is up 24 hrs.

The conference is currently open to the public & anyone can download the files. If it is the consensus of the editors that they prefer a closed conference this can be modified, though we see no reason to complicate the access with passwords. This would also require a delay in access to validate your identity. You wouldn't be able to get into the conference until your second call.

We propose to start by having all articles submitted in plain ASCII text compressed with either PKZIP or PKARC. The ARC files are converted to ZIP on receipt. If you don't have access to this capability, then compress them in a CP/M library program or leave them in ASCII text. The LIB files will probably be left alone; the ASCII files will be ZIPPED.

On the heading of each article add the credit line you wish displayed so that the source isn't lost in the unzipping process. Something like the line below:

MY ARTICLE by Joe Jones, COEPUG

The file name should reflect the source, the month & year of the issue, & the file format in the form xxxxyyzz.abc where:

xxxx is a four letter mnemonic for your UG
yy is the month of publication
zz is the year of publication
abc is the compression method, ZIP, ARC, or LIB.

For example, my file of this newsletter will be named COEP1089.ZIP.

My articles for the last couple of months have been uploaded & the conference is open waiting patiently for your call. I hope that many of you will participate & that we can improve this as we go

to provide a valuable service to the Epson UG community. Suggestions are invited.

MISCELLANEOUS

Disk Tip-Floppy Disk Labels
by Anne Fresoli Palm Beach UG

It took me a year & a half to uncover a serviceable way to label the jacket of a floppy disk. I cringe when I think back to the minutes I wasted trying to restore a disk to its original appearance after a sticky, almost unremovable label had been applied. Q-tips saturated in Fantastik, nail polish remover or Liquid Paper thinner (*the incontestable winner; that stuff should be available in the gallon size, it cleans anything*) were time consuming & tedious.

This situation needed rethinking; back to square one. I started off using Scotch removable tape (the blue box) because someone in their marketing division had the smarts to list "floppy disk labeling" as one of a myriad of uses for the new product. This worked very well except it was almost transparent when applied to a black disk & normal pen or pencil markings were difficult to read; a heavy marker had to be used. When I saw one of my coworkers preparing a draft of a report & applying while tape over a portion of verbiage he wished to replace, the answer was close at hand. It does stick to plastic jackets as well as paper, & it is easily removable. It will stay there forever, too.

This mysterious stick um is call Post it Correction & Cover up Tape. Other companies make similar products & they all work well. Since the tape is the same color as paper, ordinary markings are easily readable. As I format my disk, I apply a neatly perforated piece of tape, all ready to write on. But I just got this box of blue, orange, plum, yellow, & green floppies, perhaps Post it will manufacture this tape in as many colors as their memo pads....

Low-Tech Computer Aids by Christine Rivera

When I first purchased my system, I found I was getting a sore neck. Based on my office experience, I knew a needed a copy holder, so I purchased one by mail from Visible Computer Supply for about $40. You can buy less expensive stands that sit on the desk, but I opted for one with a movable arm that clamps onto the desk (without screws), & it's been a pleasure to use. Make sure you buy one that's **non-magnetic**, so it doesn't play havoc with your data.

My monitor has a built-in swivel base, & I found that placing it on the desk, rather than on top of the system unit, also relieved neck strain (the screen is at eye level, so I don't have to keep looking up). If your monitor doesn't have a built-in swivel, you can purchase one for as little as $30.

Ending Your Back Blues Sitting at a computer all day can put a strain on your back. When I found myself uncomfortable, I shopped for a new chair. I wanted to try out one of those kneeling chairs that take the weight off your back & claim to improve your posture as well. Since I wasn't sure whether I'd like a kneeling chair, I didn't want to spend a lot of money. I bought one by mail you assemble yourself with a screwdriver from Hanover Square for about $50. I've been quite happy with it - I can sit for long stretches without my back bothering me. At times my knees need a rest, but that's OK, because it forces me to get up & walk around every once in a while. Doing that gives your eyes a break, as well as the rest of your body.

Protecting Your Equipment A surge protector is a must. Not only does it protect your equipment against damage caused by spikes & surges in the power lines, but it can make powering up your system a breeze. I place mine on the desk, rather than the floor, & leave my computer & printer switched on. I then use the surge protector's on/off switch to power up the entire system at once. Not as elegant as a Masterpiece, but much better than fumbling for multiple switches to power up my system.

By the way, many novices are fooled by inexpensive "power strips," thinking they are the same as surge protectors. They are not. Power strips provide multiple outlets, & that is all. They do not provide any protection against surges & spikes. Make sure you purchase a real surge protector - the box should say "surge protector" or "surge suppressor," & will usually specify that it protects against harmful voltage increases. Typical prices for decent surge protectors are in the $50-$100 range.

Eliminating Printer Frustration Dealing with printers is enough of a hassle; having a printer on your desk with cables & paper all over can be a real waste of time, since each time you print you have to make sure the paper doesn't tear, get caught on the cables, etc. If you're budget conscious, try an inexpensive stand ($20-$30) that sits on your desk & allows room for the paper to feed. Stands that include paper output baskets are the best.

I decided to get the printer off my desk entirely & purchased a full- sized printer stand from Visible Computer Supply that I assembled myself with a screwdriver. This also turned out to be a best buy; for about $89 I got a stand with casters (I like to be able to move things around easily), a basket in the front for my paper, & a basket in the back for printouts. It made using my dot matrix printer a snap. When I upgraded to a laser printer, I just placed it on the stand (*it's very sturdy, holding up to 200 pounds*) & removed the paper output basket, since the laser printer has its own paper output tray.

Easy Access to Manuals I got tired of my computer manuals & books taking up space on my desk, so I found some inexpensive shelves from Barnes & Noble. About $40 apiece, these are unfinished pine bookshelves (*the open kind, with window-like sides & back*) that open up to provide three shelves each. You can stack them, so I purchased four of them to create two full height units. You can varnish the shelves yourself, if you like. I've left mine unfinished, & they look just fine.

About the Author: Christine Rivera is a microcomputer consultant & trainer whose specialties include using laser printers with various software applications. She can be reached at 212/344-6676.

Q>: *How can you get British date formats in dBase III+? I have used Set Date British & @E in the template, but I keep getting American format.*

A>: You only need the Set Date British so remove the @E & it will work.

Q>: *dCONVERT will convert dBase II programs to dBase III. Is there any utility to convert programs the other way? (III to II?)*

A>: It is unlikely, because dBase III programs may use features not available in version II.

Q>: *What would be a good project management program for a medium sized tool room?*

A>: Timeline from PC Extras is very good. You may want to learn using version 2 then switch to version 3.

Q>: *Why am I having trouble downloading using Zmodem with Telix & Boyan using 1200/75?*

A>: There have been a number of problems people have had with Zmodem. If the download directory is misspelled, the download appears to work but it has not. It may be you are using the latest version of DSZ that is not compatible with the earlier version still being used by some BBS's. [*There was also some difference of opinion as to whether you needed1200 full duplex to run Zmodem.* -JS]

Q>: *When using my Epson LX1000 in compressed mode with 1-2-3 it wraps around if more than 200 characters are printed.*

A>: Check you have the correct printer driver installed.

Q>: *Is it worthwhile re-inking ribbons?*

A>: RMIT thinks yes - there is someone in Heidelberg who does it. They get them re-inked 3 or 4 times. You can replace the ribbon in the plastic cartridge for less than the cost of a complete

new ribbon cartridge. One member reOinks his own, using ink for metal stamps with a little Singer sewing machine oil. He takes the top off the cartridge & pours the mixture over the coils of ribbon & winds the ribbon through. It takes some time for the ink to soak in properly. Another way is to spray the ribbon with WD40. A word of warning! These may cause some expensive repairs for 24-pin printers, as the proper ribbon has special lubricants & this process could require a new print head at $500 or more. Also remember that printing on the platen can damage the print head.

Q>: *What is the best public domain spooler for an XT clone?*

A>: It depends on your specific objectives. Do you want the computer to come back quickly, or the ability to restart printing or the ability to purge files? One alternative is to use the PD program LPTX to "print" The file to disk, if your software doesn't allow for this directly. Then use the DOS PRINT command to print the files in the background.

Q>: *Are there any good public domain statistical packages?*

A>: Quickstat, Mystat, & Epistat are worth trying.

Q>: *In some advertisements for computers there is a reference to NEAT. What does this mean?*

A>: It stands for New Enhanced AT & refers to the chip set used. The NETA chips provide a simplified motherboard design.

Q>: *My AT is losing the CMOS data & it is not a battery problem. Is there a virus that causes this problem?*

A>: No known virus does this. It is always a good idea to take a screen dump of the setup parameters so you can reset them properly if this should happen. There is a set of PC Magazine utilities to save thee setup data to floppy & restore it later.

Q>: *My Tandy T1000 has all its slots used & I want to speed it up. Will the V20 chip do this for me?*

A>: It will probably give around an 8% improvement.

Q>: *When using PC Write I would like to print a letterhead. I there any way to call up a program to do this from PC Write?*

A>: You should Shell from PC Write, execute the letterhead program & then Exit back to PC Write to print your letter.

by John C. Dvorak

When did users stop complaining about sloppy programming & needless complexity in established programs?

<▷1)). Ridiculous code size chewing up all available memory. I've seen too many word processors using only 25K & 60K in code size to accept one 250K or larger. It's ludicrous. It's a bad sign. & its expensive disk space the user's gotta pay for!

<▷2)). I'm stupefied when I run into software so poorly written that the disks contain hundreds of overlays & drivers & who knows what. Some of it in inaccessible squeezed format too!

<▷3)). It's annoying when a program fails to save the color settings & cursor type you were using in a previous session. How rude! That's really rude!!

<▷4)). I've run into otherwise good products that have an impossible or naive installation procedure with virtually no error handling. They don't even check to see if sufficient space is available!

<▷5)). I no longer believe every program should use the WordStar diamond for cursor control (although I still prefer it & your editor thinks I am wrong!). But I would like to see software writers use commands that are more uniform, & logical.

Intel says its 2-million-tansistor 586 will show up in 1992, & the 4- to 6-million-transistor 686 in 1996. Will this madness ever end? By the year 2000, the expected technology breakthroughs will allow the company to have 100 million transistors on the 786. It will crank out 2 billion instructions per second at a clock speed of 250 MHz!!! Sheesh. The company confirms these assertions.

The latest rumor from the world of Windows 3.0 is that we can expect to see Windows on a Chip, perhaps sold on a card to be inserted into an AT slot & possibly becoming an "instant on" device.

BBS Dept.: When you get your modem on-line, you might want to call some of the bulletin boards around the country. This month I looked at The Compact Disc Exchange. The BBS number is (415) 824-7603. These guys use a bulletin board system to broker new & used compact audio disks. If you have disks to sell or if you want to buy some obscure disks, then give this particular BBS a look.

Waaaa! Waaaa! Peddling Dept.: I've heard of software licensed to one CPU before, but this software is licensed to one baby! It's called *Your Baby's Nutrition: From Infant to Toddler*. It's from Gerber, the baby food people, & it's available directly from the company for $15, including shipping & handling. Write to Gerber, General Offices, Fremont, MI 49412; Attn.:Steve Poole; or call 800-4-GERBER. It's the perfect gift for the yuppie couple who dote on their hapless child, then leave it with the nanny for a month. The package includes a small notebook, a disk with nicely written software, & a parent's guide to baby nutrition.

Ask Uncle Elmer

Q. *I have finally understood how to use the DOS wildcards, but have also found they do not work with the TYPE command. Is there any way to make this work?*

A. While many DOS commands work with wildcards, the DOS TYPE command unfortunately does not. However, there are some ways around this.

Since wildcards do work with the COPY command & DOS permits you to redirect output, you can COPY files to the screen. For example, to display the contents of all files that begin with T (in effect, TYPE T*.*), you can use the **COPY T*.* CON**

This will cause the COPY command to send a duplicate of each file to your monitor (or CONsole in IBM speak) instead of to disk.

Another solution is to create the following batch file:

FOR % %f IN (%2) DO %1 %%F

and naming it, say, W.BAT. You can then have the TYPE command (or other DOS command) use wildcards by simply placing the W batch name before it. For example, to display all files that begin with T, you'd simply enter the command: **W TYPE T*.***

Q. *What is a batch file & how are they created?*

A. A batch file is a series of DOS commands placed in a file much like a program. When instructed, the DOS commands will be executed one line at a time. Sounds simple enough, so let's try a short batch file.

Let's start with a situation that a lot of people may face with their computers. You have a 3-1/2" floppy disk drive capable of handling 1.44 Mb floppy disks. We will call this the A drive. If your 3-1/2" floppy disk drive is designated B then substitute B for A in the following examples. Sometimes you would like to format the floppy disks in a 1.44 Mb format. And sometimes you would like the 720 kb format, so you can trade files with your friends. To format the floppy disks in the 1.44 Mb style all you do is type: **FORMAT A:** & then press <CR>. This is typed at the DOS prompt, such as C:\. However, if you want to format the floppy disks i the 720 kb style you must type:

FORMAT A: /N:9 /T:80

and then press <CR>. This command is straightforward but we can simplify the process. First, start you favorite word processor program & begin a new file. If you like, use the EDLIN to type the following command. Type:

FORMAT A: /N:9 /T:80

Now we must save the file in DOS format. Most word processors have a feature to save files either in DOS, ASCII, or in a generic word processor format. The purpose of this is to allow DOS to read the file without special characters in the middle of our commands. Save the file as **FORMAT72.BAT**. The extension "BAT" is very important. This tells DOS that this is a batch file with executable commands. We also must save or store the file with our other DOS commands & files. This was DOS can always find out batch file. Call a friend if you have problems with this. Now we can format the 3-1/2" floppy disks in either format style with a

simple command. If we want to format the floppy disk in 1.44 mb style, type: **FORMAT A:** & press <CR>. To format the floppy disk in 720 kb style, type: **FORMAT72 <CR>**. DOS will read the file we made & execute the commands we put into the file FORMAT72. In this case, the floppy disk will be formatted in the 720 kb manner. This is just a simple use of the batch file but it shows how the computer can work for us. If you will, we have two commands to format the floppy disks, or for either (720kb/1.44mb).

Q: *I keep getting the message "Driver not installed, Microsoft Mouse not found," but my Mouse still works fine. What's up?*

A: MOUSE.COM will not install if the number of buffers in the CONFIG.SYS file is large. The Mouse can be fully operational, but the message will still appear. The solution is to lower the number of buffers to a more reasonable number, such as 20 or 30 (*few applications require more than 20 buffers*). This excess of buffers takes up the memory area used by the Mouse.

When you install the MS Mouse, setting the IRQ (interrupt request) can be tricky. The jumper on the bus Mouse version should be checked before the card is installed in any computer, especially if the card is moved from one machine to another. IRQ lines are used to facilitate information transfer from such I/O devices as disk controllers & serial ports. The board's jumper controls which line is used. The jumper avoids IRQ conflicts with other devices already installed in the computer. Under each pair of pins on the card is a number between 2 & 5 (inclusive). The jumper selects the IRQ line. Microsoft ships the boards with the jumper set to IRQ 2 for installation in a typical IBM PC or PC/XT. Because IBM has changed the IRQ architecture in the PC/AT by using IRQ 2 for the second IRQ controller, the bus Mouse jumper is usually set to IRQ 5 on an AT.

MORE:- After a few years of banging about the keyboard on your PC, you think you know almost everything. Some of you likely do. But from time to time something weird occurs or someone asks you something on the spur of the moments about some computer topic you cannot definitely answer. Here's a quiz to see how you do on some of the things you might encounter.

<▷ 1>. After what command does DOS prompt you with the phrase "Are you sure?".

<▷ 2>. You are located in \LETTERS (sub-directory LETTERS). You type the following after the DOS prompt: **copy ..** What have you done?

<▷ 3>. There is more data on track 1 of a floppy disk than on track 38. Is this statement true or false?

<▷ 4>. You issue the command: **copy news.txt + ,,** What have you done?

<▷ 5>. Write a DOS statement that will write your directory files (using dir) to disk, sorted by date.

<▷ 6>. Floppy disks can be destroyed by airport X-rays. True or false?

So you know all about your PC, do you? Here's the answers:

<▷◁▷1>. This prompt is issued before you do a global deletion of the form *.*. Did you know that if you typed **delXXXX** where XXXX is a sub-directory, you will also get the same warning message? If you answer "Y" you will delete all the files in that sub-directory.

<▷◁▷2>. The command: **copy ..** copies all files in the directory above the one you are located in (in this case the root directory) into the current directory \LETTERS. You could copy only files with certain extensions such as ".txt" by issuing the command: **"copy ..*.txt."** The double dots refer to the directory above the one you are located in while the single dot (seen when you do a dir from a sub-directory) refers to your current directory. The "\" in a command refers to the root directory. Suppose you were six levels down, i.e. \word\pgms\let\us & wanted to copy a single file (loopy.txt) from the "root directory" into the "us" directory, simply type: copy \loopy.txt & it's done!

You can really get creative with this: copy ..\..\..\feb will zip you up three levels & copy the file feb into your current directory.

If you think I knew these shortcuts before writing this quiz, think again. I found them out by experimenting...

<▷◁▷3>. False. There is exactly as much information on Track 0 as there is on Track 39, except that it is not packed as densely.

<▷◁▷4>. This copy operation will read your file into memory & rewrite it with the current date & time. If you are dealing with binary files (non-ASCII) it must be written: **copy xxxx/b+ ,,** where xxxx is the binary file.

<▷◁▷5>. **dir|sort /R/+24 sortdate** The explanation for the above goes as follows. The output of the dir command is "piped" (that's the term used when one program sends its output to another... the "|" is the pipe symbol). As we wished to sort by date, we had to tell the program what column to use as the sort field. The date field in a directory listing begins in column 24. Sorts are ordered from A-Z but can be reversed with the /R command. As I wished to have the newest files listed first, I used this option. The symbol redirects output from the first two programs into a file called sortdate. If this had been omitted, you would see the output on your screen.

Read your DOS manual. It's filled with goodies. (Note: *DIR is an internal DOS command, while SORT is an external DOS command. DOS must be able to find sort so you should set a path to this program if you have a hard disk.*)

<▷◁▷6>. False. If disks do get scrambled, blame it on the motors running the conveyer belts.

Q>. *How do I make a copy of all files in a sub-directory onto a floppy disk when there are more files than a single disk will hold?*

A>. With PC DOS version 3.0 or higher or MS-DOS 3.3 or higher, you can use the XCOPY command with the /M switch option. When the first disk fills up, a message will prompt you saying the disk is full. Change disks & reissue the command. XCOPY will resume copying where it left off & copy the remaining files.

Trouble-shooter 'by Bob Todd, Amateur Computer Group of New Jersey

"Hello.... Yes, I remember you. I got the xerox of your disk. Yes, both pages."

"Yes, I know it was double-sided. That was not quite what I meant when I asked you to xerox your disk & send me a copy."

"That's OK, let's try to solve the problem over the phone. Put the disk in the disk drive. Close the door..."

"Fine, now close the disk drive door." (I hope he doesn't use *Windows.*)

"No, no. You don't have to close the windows too - or pull the blinds..."

"Try striking the space bar. When we get the message 'Strike any key' on a machine which does not have an 'any' key, we generally find that the space bar seems to work just as well."

"What! Your monitor just went blank? Look in the back of the computer & the monitor to see if the cable has become disconnected."

"It's too dark? Oh, you've just had a power failure & the lights are all out...& you are going to open the blinds to let light into your office."

"I'll tell you what, why don't you call me back after you get the power back in your office & we will try again, OK?"

"Sure. We are out of stock right now, but when the next shipment of cursors comes in, I'll personally see that one gets sent right over to you. Bye."

"Ms. Smith, I'm going for an extended lunch. When I get back I will be in conference all afternoon. Please hold all my calls."

> Komo Computer Bank & Washington Users Groups join in to provide computers & support to needy individuals & organizations.

To: potential donors
From: Brook Stanford & The Komo Computer Bank

Any & all types of computer systems will be accepted as the recipients' needs are varied. If you would like to volunteer your time, or volunteer equipment, or need further information, please write to: Komo Computer Bank, 17730 15th Avenue NE, Suite 223, Seattle, WA 98155 Phone 206-778- 2966 & leave a message or Chris Swedberg (TAPCUG) 752-0145.

McGinley's Tidbits by John McGinley CPC

Steve Gibson of InfoWorld has just completed his series on VGA boards & VGA monitors. His advice? Don't spend the extra money for extra RAM on the board (256K to 512K total) for no programs even use it. Don't spend extra for a 16-bit board because after the video is thru with the software, you can't tell the difference - the eye is only so fast. What's the best? For a board, get the Paradise VGA Plus, not the Professional I mentioned some time back or the Plus 16, just the Plus.

He was sent all manner of monitors after he made his monitor choice & after testing them too, stuck with his first choice, the Sony CDP-1302A. There's another Sony with numbers close to this, so make sure you get the right one (about $650).

Need to convert word processor files from one format to another? Two programs at least will handle as many as 25-30 formats. Word for Word (Mastersoft 602-277-0900) & the more flexible Software Bridge (Systems Compatibility 312-329-0700).

Spinrite (714-830-2200) 1.1 has been updated to handle SCSI, ESDI, & some non-standard controllers. Hint: when formatting or reformatting, warm up the disk for half an hour before doing so; a small expansion occurs as the disk gets warmer & but then it stabilizes, which is where you want to do your thing. *(NEUG does NOT like SpinRite II, suggests using Disk Technician instead!)*

Don't buy Toshiba laptops. Waits for repair parts are in terms of quarters, not months, if then! Printers don't seem to be affected.

OS/2 bug areas. The print spooler, especially on networks; you can only be sure if you load up one file at a time; lack of tools to write device drivers hampers programmers.

IBM Model 80 & 65 are not good with some powerful hardware servers because true multi-processing operating systems or critical add-on products don't exist. RS/6000 machines are hampered because neither Novell Netware nor OS/2 run on them. PS/2 Model 50Z & 55SX have been in short supply & may well still be. I've not yet heard much on the new PS/1 line.

A company has introduced a chip to go on a disk controller board which compresses data before going onto the disk thus increasing capacity by several factors. Infochip Systems (415-960-1300) has a $199 Expanz controller which triples the size of a drive (on some files it produces a factor of 10-15), but it works so fast it doesn't slow the drive down. (NEUG is enthusiastic about this product).

While Traveling Software's Lap-Link is great, they also produce a little-known product called Desk-Link, a superset of Lap-Link which is much better. Neither machine has to be a slave, it only uses a two wire phone wire, & it makes disk & printer sharing a snap. (NEUG hope to review this soon!)

MCI Mail hints: don't send 12 pitch documents because they roll off the edge of 80 column screens (telex is 69 column); forget graphics & fancy fonts; don't send WordPerfect files saved with **F10**, use **CTRL F5** (text out) instead. To send files with the indents, columns, margins, tables of contents, & indexes intact, <I>print<D> the document to a disk file by switching to the **DOS TEXT** printer & use **SHIFT F7 S.DOS TEXT PRINTER.** The resulting file, DOS.TEXT will contain all the non-specific printer instructions in place. This can be sent via MCI Mail. For power MCI users, there's a book you want: The Complete MCI Mail Handbook ($22.95).

You don't need PC Magazine's utility to change the volume label on a drive. Use DOS' Label command: **LABEL C:NEWDRIVE.**

Words: Helvetica is a TYPEFACE, so is Times Roman. Helvetica 28 point bold is a FONT, so is Times Roman 12 point italic.

The two best books on Ventura Publisher: *Inside Ventura Publisher* by Cavuoto & Berst, New Riders Publ. $24.95 & *Ventura Tips & Tricks* by Nace, Ted, & Will-Harris, Peachpit Press, $24.95.

WORD PROCESSING

Evaluation Copies Available to Schools

Under WPCorp's evaluation program, a school or university may write & request permission to review any WPCorp product for a 90-day period at no charge. At the end of the evaluation period, the software must be returned or purchased. Educational discounts are available to qualifying schools & individuals who wish to purchase the software after reviewing it. Interested schools may request the evaluation copies by writing to: Educational Evaluation Copies, WordPerfect Corporation, 1555 N. Technology Way, Orem, UT 84057

> Educational Pricing for PlanPerfect 5.0

PlanPerfect 5.0 is available at an educational discount for $135. Updates from any previous version of MathPlan or PlanPerfect are $75. To update, send the title page from your MathPlan or PlanPerfect manual along with a PO or pre-payment of $75 to: PlanPerfect 5.0 Update, 1555 N. Technology Way, Orem, UT 84057

WPCorp Certification Programs

WPCorp's Certified Instructor (CI) & Authorized Training Center (ATC) programs now boast approximately 80 CIs & 30 ATC's in 23 states. To obtain a current listing of CIs & ATCs, call WPCorp's Information Services Department at (801) 225-5000. Selection of WPCorp Certified Instructors is based on the successful evaluation of the following criteria:

<b>1. A minimum of one year in software training business or equivalent experience.

<b>2. The completion of an application & submission of courseware, outlines, resume, videotape of a training segment, & client references (minimum of five teaching references in a classroom setting of five or more).

<b>3. A product knowledge test (which takes most applicants an average of 40 hours to complete). Current versions of WordPerfect & WordPerfect Library are required to complete the test, & applicants must score at least 95 percent to pass.

Selection of WPCorp Training Centers is based on WPCorp standards for courseware, facilities, & training personnel. Each ATC must employ at least one full-time WPCorp Certified Instructor & must have been in the training business for at least one year.

A new Certified Tutor (CT) program has been established to create a relationship between WPCorp & persons who teach WordPerfect & other WPCorp products to individuals or small groups. Selection of Certified Tutors is based on the same evaluation criteria used for Certified Instructors with one exception: the five teaching references do not need to be from a classroom setting.

WPCorp Authorized Training Centers, Certified Instructors, & Certified Tutors are evaluated on a yearly basis. To request an information sheet about WPCorp's CI, ATC, & CT certification programs, call WPCorp's Information Services Department at (801) 225-5000.

Word Perfect 5.1 Has EMS Conflicts

Some users are experiencing problems with the just- released Word Perfect 5.1 in conjunction with certain implementations of EMS memory, such as Above Software's Above Disk. Officials at Word Perfect said it's a problem with the EMS drivers, rather than with the word processor, but that they will fix the problem in the next interim update. Above Software officials said they will release a version of Above Disk that is fully

compatible with Word Perfect 5.1.

A WordPerfect Tip

Your editor has just discovered (right now as this is being written!) a shortcut in WordPerfect 5.0. Normally when one wants a horizontal line separator across the page or across the column, like the one just above, you follow the steps "by the book". First press the graphics key **Alt F9**. Enter **L** for "line". You are confronted with just two options, Horizontal line or Vertical line. If you respond **H** for "horizontal", you see a four option menu from which you choose option 1, **H** for "horizontal position". Then there's another menu of 5 options, from which you choose option 4, **B** for "both left & right". This, I always thought, was a real pain, & also illogical, since horizontal position is meaningless for a line which extends all the way across.

Quite by accident, this time I pressed **Alt F9** followed by **L** then **H** then, in a hurry to be done, pressed **B**. Remember, B (for "both") is not a displayed menu option at this point! Yet the correct line code was inserted into the document, saving a keystroke!

More interesting than the keystroke saved, is the fact that this is a quite natural & easily remembered sequence: GRAPHICS, Line, Horizontal, Both left & right.

I'm always astounded when software does something sensible & natural, especially when it is undocumented. I scurried to the WordPerfect manual, & found no mention of this shortcut. I pressed **<F3>** the help key, & found nothing either.

On the suspicion that this undocumented option must have been intentional at some point of the software development, I wondered whether Both was intended to be an option 5 on the four option menu. I pressed **5** instead of **B** &, sure enough, got the same result!

Now, I wonder how many other menu options are built into WordPerfect, but somehow escaped documentation & were left out of the options lists which appear on the screen. The possibilities boggle the mind. *I'm convinced that programmers don't talk to the people who write documentation, & vice versa. Anyway, I get to do it again, right here, What fun!*

ASCII Text Files By Dana Snow, Utah Blue Chips

ASCII (American Standard Code for Information Exchange) dates to the era of the teletype machine & remains the "lowest common denominator" for the transfer of data between different programs as well as different computers. The ASCII standard, based on a seven bit code, provides 32 control codes & a 96 character set of 128 possible codes. Each of these codes (000 through 127) represents a character, number, symbol, or a control code. The IBM PC uses an 8 bit combination known as the byte for data storage. This allows 256 combinations, the first 120 of which conform to the ASCII standard. You may have heard mention of the "high" bit (or bits). It is the eighth bit which, when on, adds a value of 128 to an ASCII character & makes it what is known as a "high order" character. The PC uses this high-order character set which includes the characters used to draw boxes, math symbols, & A slew of others - 128 of them. A complete list of the IBM codes can be found in the BASIC & Technical Reference manuals.

Many word processors set the high bits on; they use the high-order codes for special commands. Others use the full 256 character set. Each program knows what the codes mean to it & will print or display their own files with no problem. The same file will often either not load or will be unreadable when accessed by a different program. If you wish to create files suitable for use with various word processors, you must have your program output only ASCII characters. Some programs provide an im/export function allowing the loading & saving of ASCII files. Other programs provide a way to "print to disk". This works reasonably well if you specific a left margin of one (1) & do not specify any special functions such as bold, expanded print, or underlining. If possible, avoid the use of tabs as they confuse some programs. This technique will most likely require the removal of carriage returns by the receiving program if the material is to be reformatted.

A test for a generic file is simply to type it on the screen, i.e. type **TYPE FILENAME.** If all you see is text scrolling up the left side of the screen, it will probably work just fine. Incidentally, the best way to submit articles to a club newsletter is in ASCII format. To do so use a standard length line of 65, no paragraph indentations, no justification or proportional spacing, no indents, no special formatting or tabs; follow the period at sentence end with two (2) spaces &, especially, an extra line between paragraphs.

An Easy Solution to a Troubling Problem
by Leonard Korney, UCLA PC UG

Most of us are aware a file name can have at most eight letters or numbers, plus an optional extension of no more than three letters or numbers. No spaces are allowed.

I'm seventy-nine & my kids wanted to know the story of my life so I'm writing my autobiography. One small section happened over 30 years ago was so unusual I have wanted to write about it many times but just put it off.

I had hit a block where I couldn't go on, so I wrote that little item. In my pleasure at finally getting it off my chest I inadvertently saved it with the title of the piece,"A Musical Experience." That is just not a legitimate file name. First, it's too long, but more importantly, it has a space in it. The shocking realization of my error was brought home real fast when I saved it & the computer beeped.

I wrote it with WP 5. I hit **F5**, <CR>, & looked to see if I had the file. Surprisingly, it saved it with that space so I thought I was okay. It was there, all right, listed as "A Musica" - seven letters & a space. That was a relief because I thought I had lost it. I hit <CR> to look at it & got the message "Can't find file." I tried to rename it & got another similar message. I tried everything I could think of & the miserable file still stayed hidden to the computer even though it showed in black & white on the WP directory.

With each unsuccessful attempt to get it back, my spirits sank farther & farther. I called the few knowledgeable people I knew & none could give me any help. I even used Xtree Pro which has an editing feature with no luck. I was stumped with a sad, defeated, feeling & was on the verge of giving up & rewriting it when a friend suggested I call WordPerfect. I never even thought of that easy solution so I looked up their number & gave them a call.

A man answered almost immediately & asked what my problem was. I told him & he asked if I could rename the file. I said,"No." He then said,"Get out of WordPerfect & go into DOS."

I did as requested & he said,"All right, now change the directory to WordPerfect." I did as he asked & then he said,"Type REN A?MUSICA & give it a new name." I did & voila, the new name was accepted & I was back in business. The question mark wild card did the trick.

I was profuse with my thanks & then asked,"*How did you know to do that?*" *I looked all through the manual & couldn't find the solution.*" He replied,"*It's not in the manual. It's a DOS wild card command.*" I thanked him again & we hung up. After he said it, I remembered that the ? was a DOS wild card but had never had occasion to use it. The *.* & combinations of that command are part of my standard repertoire, but it never dawned on me to try the ? which now turns out to be a very useful symbol. Since it is a standard DOS command it should work with almost any similar problem so I'm passing it on to those of you who in a moment of enthusiasm might forget & find yourself in the same hole.

Just to make sure that it worked in all situations, I typed a date & named the thing **1 to 7r** & saved it. I went back to DOS, got in the WordPerfect directory, typed **REN 1?TO7?R STOP** & there it was in the WordPerfect directory with the new name, STOP. For those who are new to DOS, **REN** is the DOS command for rename.

Whacking the Mac

WordPerfect has compromised its long time commitment to an uncluttered screen & keyboard commands by adding the option of pull-down menus, & mouse support in version 5.1. This will please some users, & the company probably expects it will gain them sales. But for myself, I say "ho-hum."

I have the same feeling about the "look & feel" of the Mac computer, which many folks love with a passion, but which I consider distinctly unfriendly & user-hostile. The mania for Windows, Icons, Menus, & Prompts (for WIMPs) can be largely blamed on the Macintosh computer, though Apple stole the idea from Xerox.

Why should I be forced to move a pointer around the screen just to make the computer execute a command? Why should I have to guess what some tiny, cryptic icon means? Why should I have to search all over the screen to find (or guess) the appropriate icon? Why should I have to partly obscure the document I'm working on with a pull-down menu? When you pull down several menus, some of these screens begin to look as cluttered as my desk. Computers are supposed to simplify & organize our lives, not make things look messier.

Why should I have to reserve an area on my already cluttered desk so the mouse can run around? Why should I have to look down from the screen to find where I left the mouse (or grope around for it) & take my hands from the keyboard to use it? [*A trackball would take care of this problem, of course.*]

I've never understood the appeal of this working environment. To me it seems inefficient, & an unnecessary imposition upon the user. If it were only endemic to one computer, such as the Mac IIe, it would be easily avoided. But this insidious "look & feel" has crept into otherwise excellent software. Publisher's Paintbrush, for example, operates this way. Now, a mouse or trackball is an appropriate tool for drawing & CAD programs, but why must I also use it to select menu options, when the keyboard is sitting there virtually unused?

This look & feel had great appeal for new users, especially if they are a bit fearful of computers. But when they become comfortable enough with the program to become "power users" this environment gets in the way of speed & productivity, & the hardware & software may not provide any other options. The user has come to accept the "crutches" by habit, & has no incentive to "throw away the crutches" & become free.

I have seen other examples of this. I have seen secretaries who had been using the old WordStar for years, still using it with the full menu occupying the upper third of the screen, even though the software provided two other options, with smaller menu screens. The user was still dependent on the crutches, or hadn't read the manual to discover there were options.

I do give WordStar credit for one good idea, the "touch typist" commands. One should never be forced to look away from the screen when word processing. This is why I like my keyboard, where the function keys are in a horizontal row just above the number key row, within easy reach of the fingers. You can easily extend your touch typing skills to include them. Other computer keyboards have them in a horizontal row, but often displaced so far up you have to relocate your hand position to reach them. The early IBM computers had them at the left, in two columns, & the little finger of the left hand was hardly adequate to the take of finding them reliably.

Valdocs to WordPerfect Graphics Conversion by R.E. Menzel

I am currently writing a number of procedures for my business in WordPerfect 5.0 which allows you to import graphics into your document. Since I have a number of applicable drawings in Valdocs, I thought it would be nice to bring these drawings into WordPerfect. It can be done using several utilities which are available. The utilities you will need are as follows:

<>1>. VALGIF by Chris Hopkins
<>2>. TPM2MS by Roger Amidon
<>3>. MSBOOT by Greg Tarnowski
<>4>. GIF2WPG by W.J. Hinkle

I will first describe the procedure in general terms & then step you through the menus of you can bear it. First, locate the VALDRAW file you wish to convert in Valdocs. You must then pass the drawing to valpaint & store it as a non-indexed file. Use the TPM utility VALGIF to convert the Valdocs.PIC file to a TPM.GIF file. Convert the TPM file to MSDOS using the TPM2MS utility. Leave TPM & reboot into MSDOS using the MSBOOT utility, & finally convert the MSDOS.GIF file to a .WPG file for use by WordPerfect.

Detailed Procedure In this example, we will assume you have a QX-16HD computer & in Valdocs, your systems are on hard drive A, your data on drive B, & that the floppy drive is drive C. When in DOS, the left drive is A & the hard drive is drive C. The Valdocs file to be converted is 8K in size.

<>1>. Go to the VALDRAW module & select the drawing you wish to convert. Pass this drawing to Valpaint. Press CTRL Q & store as a non-indexed file. Give it a TPM file name. The program automatically adds the .PIC extension. In this example, we will call the file TOOL.

<>2>. Go to MENU & the Menu of Applications on drive A. Select VALGIF.SYS. The menu will appear & ask for the file name to convert. Enter TOOL.PIC. Select <O>riginal size, & the image appears on the screen. Now press STORE & the menu asks if you want to convert the file to another format. Responding YES, you are given a single choice: GIF. It will ask the name of the file to store. Enter TOOL.GIF. The program now begins the conversion, however there is no <Working> message so you may think it has "hung." Since the conversion takes 11 minutes with practically no obvious disk activity, there should be a message of some sort. Upon completion of the conversion you are returned to the MENU.

<>3>. From the MENU select TPM2MS. Place a formatted MSDOS disk in the left floppy drive before proceeding. The message: **Destination (MS-DOS)Drive>** appears. Enter C. The message: **Enter Name of file to transfer>** appears. Enter B:TOOL.GIF. The conversion takes only a few seconds. You may convert another file or return to the MENU.

<>4>. Remove the left floppy containing the MS file TOOL.GIF which is now only about 4K. From the MENU select MSBOOT. This will automatically re-boot into MSDOS from TPM. If you do not have this utility, you will have to manually reboot into MSDOS.

<>5>. We will assume you have a WordPerfect sub-directory in which are contained all of your graphics files as well as the conversion utility GIF2WPG. If you have other graphics files with .TIF or Lotus .PIC extensions as well as many others, no conversion is necessary since WordPerfect automatically converts them. It does not presently recognize .GIF files, so we must make the conversion now. Assume our files are in a directory called GRAPHICS. Go to the system prompt & type: **cd c:\GRAPHICS**. Then type **GIF2WPG/V TOOL**. Notice we have added the /V switch, which invokes reverse video. If you do not use this switch, the background prints black & uses a gallon of ink as I found out the hard way. This conversion takes 7 minutes &, as in the previous program, gives no <working> message. The resulting .WPG file inflates to an incredible 114K & Should now be located in your GRAPHICS directory for use by WordPerfect.

Update on WP 5.0 Bug by Randy Brook, SLUG

I have spent more than 30 hours working with Word- Perfect tech support trying to isolate the problem. The bad news is that we have not succeeded; the good news if that the 1/3/89 release of WP 5.0 seems to have accidentally eliminated the problem. At least I have not been able to duplicate the loss of text since updating my program.

WordPerfect Corporation usually provides free updates to people who report bugs known to have been fixed in a later release though I didn't know if an accidental fix qualifies. Otherwise the updates are $10 for a set of new disks. You are allowed to update multiple copies of WP 5.0 from a single set of update disks & are also permitted to update from a release belonging to a friend or dealer. I have found two other bugs in WP 5.0. The first is rather esoteric. If you are saving a document in 4.2 format & the document has a date code (not a text date) in a header, footer, or in a footnote, the conversion will fail. The computer may lock up if you try to view the document.

The second bug is another problem with long documents. Table of contents listing will occasionally be off by one page. Also, if you have indent codes in the section headings of the table of contents, generating the table will remove one or two indents now & then.

WordPerfect tech support is working on both of these problems. Incidentally, if you call tech support with a problem, be sure they log it. The priority they give to fixes is proportional to the number of logged reports about the problem. If you just talk about it & it isn't logged, it doesn't count. Remind them to log it.

ASCII FILES

If you wish to create files suitable for use with various word processors you must have your program output only ASCII characters. Some programs provide an import/export function that allows the loading or saving of standard ASCII files. Other programs provide a way to "print to disk". This can work reasonably well if you specify a left margin of one (1) & do not specify ANY special functions such as Bold, expanded print or underlining. If possible, avoid the use of Tabs as they confuse some programs. This technique will most likely require the removal of carriage returns by the receiving program if the material is to be reformatted.

A quick & dirty test for a "generic" file is simply to type it on the screen, i.e. TYPE <filename>. If all you see is text scrolling up the left side of the screen it will probably work just fine.

DESKTOP PUBLISHING

Software Garden review by Don Nydam

Do you own a Hewlett Packard or H.P. compatible Laser printer? Do you find you are not able to print the documents you want because of the limitations of your word processing program? Do you find you are needing to do repetitive printing? This may be the program for you. Dan Bricklin's PageGarden program is the laser printer utility for repetitive printing tasks. Dan Bricklin is the man along with Bob Frankston, who wrote Visicalc, the first electronic spreadsheet. This program is designed for applications that require you to print in the same format over & over again, but using different data. This is not a new desktop publisher where "what you see is what you get". The program was made for HP Laser Jet Plus, series II, IID, or PostScript printer, or 100% compatible. It can be customized for HP cartridge fonts. You do not need a special video adapter. If you use a desktop publishing program you need a powerful & fast PC with scads of memory & a high-resolution screen. This program works well with a 384K 8088-based IBM PC or clone. You do not need a hard disk to run this program. If you are having problems on your hard disk put the complete program & all the samples on a High Density Floppy & use it when a need arises. The install procedure is easy. The whole program with all the demo files takes up about 740K. If you run the Demo file it will print almost 40 pages of samples of what you can do on your printer with this program. In order to use this program you must export your data from your word process, spreadsheet, or database program to an ASCII file. You can use preset "description" files or create your own. The description file lays out the page form & the style & size of print. You then run the "LSR" (for laser) program that reads your ASCII file & sends it to the printer. One advantage is its speed, it prints very quickly. The manual is well written & easy to follow. You are led step by step through a tutorial section so that you not only use existing files but you are taught how to modify the demo files. You are also taught how to create your own description files. What dose it do? It does a beautiful job of formatting & printing reports. Do you have four pages of spreadsheet that you want to print small & place on one page horizontally? It does it very nicely. Do you want to include on the bottom a small box with the date you revised the document? You may customize design documents to include various fonts, circles, box lines, & shaded pattern. If you need to print badges, or tickets this may be just the ticket for you. Number the tickets, & set up the seat numbers & rows to fit the auditorium or special event. Matching numbers may be placed on the body of the ticket & a stub. The program will print graphics files from PC Paintbrush (PCX). Scan your logo & place it as a letter head on tickets & badges. A stamp of CONFIDENTIAL, or another attention getting word may be placed on any document as you print the page. You may rotate the "stamp" to be at a number of different angles. It does a wonderful job of printing labels. I used an existing description file with a scanned PCX logo file, & ran a mailing list with all the labels showing the organization logo, name & address as a return address. On the bottom half of the label it prints the name & address in a different style & size of print. There are a number of description files all set up for using the different Avery labels. I really put it to the test when I had a page that I need to print that was to large to print on one page with the setting of my word processing program. I exported the file to ASCII, copies the file to the correct sub-directory & ran the program with a description file & out it came just as I wanted. The drawbacks. This is not a program for the beginner. You need to understand how to do some programming. My suggestion: In the next release make a menu driven shell for those of us who will not be using it every day.

Summary: It is a fine program, with great potential. If you have a laser printer this program may solve your printing problems. For $70.00 it's a good program for special needs. The publisher can be reached at P.O. Box 373, Newton Highlands, MA 02161

Hand Scanners by Jack Stock, MPCUG

If you're like me, interested in having pictures that help your words tell a story, or making illustrated signs & posters, or trying some desktop publishing with pictures, why not try the low-priced road when starting out?

If you feel Ventura or PageMaker are too pricey for your budget or too advanced for your needs & too difficult to learn, you might try either PFS First Publisher, Publish It! or the equally good, Express Publisher as your starter program. Not a bad choice since all are fairly easy to learn. And if you don't own a laser printer, you can handle graphics quite well, even on a nine-pin dot matrix printer, & none will require a first mortgage to afford. All 3 come with some good graphics included, & additional art work is available on supplementary picture libraries at additional cost.

However, why not create your own graphics at a fraction of the cost? You can copy a great variety of newspaper & magazine drawings & screened photos that can fit in perfectly, to illustrate your printed ideas. How? By digitally transferring images into your computer via scanners. Not the expensive 600 DPI full page scanners running into thousands, but a serviceable hand scanner at a penny-pinching budget price.

I picked the Logitech Scanman because:

<> 1>. You can buy it for less than $200.

<◇ 2>. It can scan at a range of 100-400 DPI (Dots per inch) Even expensive laser printers do very nicely at 300 DPI.

<◇ 3>. It comes complete with an easily installed scanning board & its own paint & scanning programs, PaintShow Plus & Scanman. The two furnished manuals are very user friendly.

<◇ 4>. It can cover a scanning area of 4" x 6" or longer, in one pass, depending on the amount of RAM you can muster.

<◇ 5>. It has provisions for contrast & DPI control, plus line or halftone capabilities.

<◇ 6>. It can scan in TIF or PCX formats which can be converted or used directly by almost all Desktop programs.

Recommended requirements for starting: At least 2 meg of memory. 5 meg of storage space available at all times. Graphics files take up lots of bytes. <◇ A graphics oriented printer. Nine pin is OK but a 24-pin printer will give you much finer results, almost rivaling the quality of a laser printer.

<◇ A supplementary program like PC Paintbrush or Publishers PaintBrush will help to refine both text & pictures. Both are sold by Z-SOFT. Here are a few starting tips not found in the manuals that maybe useful:

<◇ 1>. Get a 11x14 clip board for use as a good flat scanning surface. The metal clip will hold your 8-1/2 x 11 cut sheets. Magnetic picture album pages are handy for holding smaller clipped illustrations flat & in alignment.

<◇ 2>. To help the hand held scanner get an accurate parallel sweep necessary to prevent distorted images, attach a solid wood strip to the right edge of the clip board to serve as a guide. Also cut & shape a piece of styrofoam to fill in the gap on the right side of the scanner's hand position, the side where there's no interference from the scanner's control buttons. It makes a good template for controlling you hand sweeps.

<◇ 3>. During the learning process, pick simple inked line drawings with sharp details. Set your scanner at 200 DPI.

<◇ 4>. Set your density at medium to slightly dark settings for newspaper clippings & slightly lighter for smooth coated magazine clippings. After some experience with pure black & white images, you might want to try scanning half-tones & photographs. Don't scan at more than 300 DPI unless you have printer capabilities for higher resolutions.

<◇ 5>. Measure the area being scanned & use these dimensions when saving pictures. This will give you a constant pixel resolution for editing & printing your pictures. Unless of course you must have enlarged or reduced pictures to fit your copy. Then I would advise saving these images in an exact proportion to your original, to avoid distortion.

Other good picture sources are inked illustrations from books, annual reports, technical manuals, maps, etc. I even use scanned images as substitutes for photo copies or credit card receipts, & any smaller than 4 x 8 documents with excellent results. With experience, it is possible to join several 4 x 6 sweeps to form a full page image. Remember, full page scanners are even better!

Naturally, reproduction of copyrighted artwork is limited to your own private use & you must contact the author/artist for permission for commercial use. If you have problems getting started, call me most evenings at (305) 945-3667. I may be able to help.

by Will Harris

If you often work with the same Ventura chapter file, you can create a batch file that simultaneously loads both Ventura & your chapter. Copy & rename your VP.BAT or VPPROF.BAT file; include the complete path & filename of the chapter you want loaded after VP or VPPROF in the new batch file. Be careful not to change anything else in your file, or Ventura may not work. The /S= tells Ventura what screen driver to use; the /M= tells it which mouse to use. The batch file should look something like the following:

```
ECHO OFF
D:
CD\VENTURA
DRVRMRGR VP your.chp /S=SD_GENS5.VGA/M=01
```

When preparing text for a Ventura document, it's common practice to separate paragraphs within that text with a single carriage return. That's because Ventura itself lets you specify how much space should precede each paragraph.

Old habits die hard, however, & some writers still separate paragraphs with double carriage returns, the way they used to do for typewritten documents. This interferes with Ventura's own paragraph spacing. Ventura provides an easy way to eliminate these carriage returns during file import.

While editing a document in a word processor, insert the following line at the beginning of the troublesome word processing file:

When Ventura reads in a file that begins with this command, it strips away any double carriage returns the file contains, saving you the trouble of eliminating them manually or using a complex search-&-replace routine.

COMMENTARY

Trade Show Signals Changes in the Industry

Indications are that 1990-1 will be a year of even more rapid change in what has always been a rapidly changing industry. The failed merger of Novell & Lotus, Microsoft's introduction of Windows 3.0, the abrupt plunge of Adobe's stock on may 25, & renewed uncertainty about Apple's prospects are among the signs & portents on the industry landscape.

Yet another can be seen in the unusually sharp confrontation between Comdex/Spring in Atlanta & PC Expo in New York just two weeks later. This battle of the trade shows is yet another important sign of change.

It would be easy to dismiss it as merely an accident of scheduling. The usually late date for Comdex/Spring attributable to constraints on the availability of facilities in Atlanta, has resulted in the two shows' being virtually on top of one another.

So, it's not surprising that some vendors chose not to exhibit at both shows. IBM, in particular, decided to pass over Comdex in favor of PC Expo. Several others followed IBM's lead.

In previous years, such trade-show choices would have been most unlikely, whatever the schedules. Now, it indicates an underlying caution about how robust demand is in the industry & a heightened concern about expenses. That nervousness was what took a lot of other industry stocks down, along with Adobe's.

In IBM's case, the decision very likely signals yet another shift in its distribution strategy. In passing over the dealer-oriented Comdex in favor of the user-oriented PC Expo, IBM reveals the likely nature of that shift.

IBM halted, at least temporarily, its decline in microcomputer market share last year by concentrating on giving the dealers what they wanted. What they wanted, however, was largely lower & more competitive prices.

The result for IBM, while satisfactory in terms of market share, wasn't satisfactory in terms of profitability. Its efforts to boost margins this year, however, are again making competitive brands more attractive & threaten to make the firm's market share resume its decline. Viva clones! IBM's response appears to be to create more pull through by going over the dealer's heads & concentrating directly on the final buyers. Bypassing Comdex in favor of PC Expo is certainly consistent with that.

In addition, there are signs that IBM plans to dust off its old PCjr strategy with a low-end system that will be sold through mass merchandisers, bypassing resellers entirely. This is already causing an uproar in the dealer channel. They call it the PS/1!

Unwilling either the accept the necessary trade-offs between

margin & market share or to maintain a consistent distribution strategy, IBM seems determined once again to change the rules & alienate dealers. The result is likely to be a renewed opportunity for IBM's competitors, who were in Atlanta, building their relationships with resellers.0

VALDOCS TIPS

from Epson Loop

Now onto what's new. DX Computer Company has announced another product due out soon. Their Valdocs Update will include some improved & updated V+III modules as well as a number of Valdocs utilities that I wrote. This update will only be of benefit to V+III owners since only those specific V+III modules that have been updated will be included in the package. One of the Valdocs modules includes a newer version of INITIAL.INI. This version of INITIAL.INI contains some improvements for loading Valdocs on a system that uses a RAM disk to hold the INDX.OVL, EDIT.OVL, & SPRD.OVL files. A newer version of GDRIVER.CHN is also provided. There are improved versions of CPYD.CHN, SETUP.SYS, & MATRIX.SYS as well as a new version of MENU.CHN. There may be other Valdocs modules included in addition to these depending upon how much time Roger Amidon can devote to this product. A number of utilities I wrote will also be included in this update. Many of these programs let you perform simple functions with a minimum of hassle. There are utilities to clear the display screen (CLS.SYS), display the date from "raw" TPM (DATE.SYS), set the "super expert mode" of Valdocs (SUPREX.SYS), & set the Editor file protection delay to a value better suited to your typing habits (DELAY.SYS). There are utilities to initialize the Valdocs system & data drives (DISKINTL.SYS), initialize Valdocs (VALINIT.SYS), display the CMOS Calendar Clock chip RAM data (CLOCK-RAM.SYS), & perform other helpful functions. Also included are a series of printer selection utilities that ease the switching between two different Epson printers as well as modem selection utilities that enable switching between different types of modems. I will be providing additional information on this exciting new product as well as a review in future issues of this publication. For additional information on the Valdocs update or other DXCC products, contact: DX Computer Company, Box 189, Hopewell, NJ 08525, (609) 466-2092

Using Spelling Proofreader with Valdocs

Spelling Proofreader by Peachtree is a valuable tool for the QX-10 user. Simple to install & use this program makes the tedious task of proofing your documents a painless job indeed. The following procedure will take you through the installation & use of Spelling Proofreader.

Spelling PRoofreader occupies a great deal of disk space so it is suggested that you install on a disk to be used specifically for this purpose/ Files to be proofed can then be copied from your data disk to the proofing disk using Copy/Disk. Once proofed the file can be saved back to your data files using the same procedure.

Steps for Installing Spelling Proofreader

<◇1>. Make a new Data Disk using a blank (or junk) disk & the Copy/Disk procedure.

<◇2>. Take <S>ingle File Copy option on the Copy/Disk menu.

<◇3>. Select <C>opy file, then select <N>on-indexed file.

<◇4>. Place your working copy of Spelling PRoofreader in Drive A & indicate Drive A at the appropriate prompt then <CR>.

<◇5>. A directory of your S/P disk will now be displayed on the screen. The three files which must be copied to your disk are SP.COM, SP.PTR, & RHD.DIC.

<◇6>. Using the cursor control keys select these files one at a time & press <CR> to begin the copying process.

<◇7>. Indicate the Destination Drive as B & store each of the three files as <N>on-Indexed Files.

<◇8>. Spelling Proofreader is now ready for use!

Using Spelling Proofreader with Valdocs

<◇1>. Create a document under Valdocs as usual, STORE it as you would normally.

<◇2>. Using the Quirks menu (Remember, to use the Quirks menu you must be in the Expert experience level) <S>tore as non-indexed file your document.

<◇3>. Using the MENU key, <R>un a specific program. Replace your system disk with prepared S/P disk & select A drive.

<◇4>. The program to run is SP.COM, you will need to press <CR> twice to run Spelling Proofreader.

<◇5>. Using the directions on the screen run the proofing programs. When prompted for the file name use the name you gave your file when you stored it as a non-indexed file.

<◇6>. When finished with S/P exit back to Valdocs. Your proofed document now resides on your proofing disk. Using the <C>hange data disk option on the Misc Menu, exchange the data disks so that your proofing disk is in Drive B.

<◇7>. Again using Quirks, <R>etrieve your proofed file, make the corrections then store it as a Valdocs file.

This process can be shortened two ways. One is by installing Spelling/Proofreader on all your data disks which eliminates the need to move files back & forth. The disadvantage is the space that S/P uses, almost 90K of disk storage. The second is to eliminate steps 2, 5, & 7 by using the Valdocs file reference number instead of storing the file as a non-indexed file. The file number is available when using <D>irectory option under the Quirks menu. The reference # has the same value as the date & version number listed opposite the Valdocs file name on your index name.

Don't Forget the Capture Buffer

Because it disappears when you turn off the QX- 10, the capture buffer might disappear from your thoughts. But the next time you write a memorandum about the National Association of Longwinded Association Names, try this: Press SHIFT & the division sign (old keyboard) or SHIFT & the plus-minus sign (new keyboard). You'll hear a beep. Type in your Association names, & SHIFT plus the sign, again (no beep this time). Thereafter, whenever you press CTRL & the sign, you'll get the full longwinded name, fast.

An elegant use for the capture buffer was devised by Wally Fusilier of the Ann Arbor group. He uses it to create a box, because marking vertical lines is so much faster using tab sets. Then he writes the words inside the box, if it's text material. If it's tables he creates them in Spreadsheet, & transfers to the Editor, putting the box around the table.

Margin Settings

With the V+III editor on the screen, notice the ruler at the bottom of the screen. Notice the margins are set at the 1-inch & 7-inch positions. This is called the default margin settings & this is where they are each time you turn on your computer. But, keep in mind that this ruler is only 8 inches long & your paper is 8-1/2 inches wide, so even though the ruler shows 1 inch, your actual margins will be 1-1/4 inches. Remember always 1/4 more than the ruler shows.

To change margin settings:

<◇1>. Press CTRL P
<◇2>. Press <CR>
<◇3>. Press STYLE key
<◇4>. Use arrow keys to set left margin
<◇5>. Press <spacebar>
<◇6>. Press R
<◇7>. Press STYLE key
<◇8>. Use arrow to set right margin
<◇9>. Press STORE key

These new settings will stay for this one document only & will

return to the original default settings when you STORE the document or clear the screen.

VAL 1.19 Edit-Spellcheck Disk

A single disk spell checking system can be made in Valdocs 1.19 if you have a copy of the Peachtree Spelling Proofreader. The directory list below shows the files needed. Use CPYD to make a copy of the Valdocs System disk & erase all files not needed for the Editor. Then CP/M or TPM can be used to add the Spell checking files with INDEXER. Use of TPM allows the protect level to be changed to prevent accidentally erasing files. PROT *.* <5> will change all files on the disk. Then the dictionary file is changed to add new words by: PROT WORDS.DIC <0> if desired. After the disk is booted, SETUP will change to the expert level as needed. The spelling file can be accessed by MENU or at the TPM level by: A:SP at the A> prompt. Use the S selection at the main menu & input the file as, B:90628002.VAL (example), where the drive is set to A: default. Any mismatched words can be Marked or Skipped. If they are marked, a .BAK file is saved which should be erased after the revisions are completed. New words can be added to the WORDS.DIC file by changing the directory default from menu. The new words may be combined with the RHD.DIC file also, but a backup of RHD should be made since this file will be reorganized after additions are made.

1.19 Disk Directory

INITIAL INI	2K	VLOADER CHN	2K
VDRIVER CHN	10K	FONT FNT	18K
SYSINIT CHN	18K	LOADUP CHN	2K
INDX CHN	52K	VALDOCS CHN	52K
RHD DIC	112K	PRNT CHN	8K
MENU CHN	8K	TPM CHN	4K
SP COM	6K	SP PTR	34K
SETUP SYS	16K	RESTART SYS	2K
INDXDATE NDX	2K	Free Space (4K)	

Beginner Tips from Byte Sighs

V+III comes with HELP! Whenever you are puzzled as to what Valdocs can do, what a popup menu choice means, or how to do something, press the HELP key at the top left of your HASCI keyboard. Some HELP is on each SYSTEM diskette (EDITOR, SPREADSHEET, etc.) but sometimes more HELP is needed & you are prompted to "Insert the Master HELP Diskette." You can save swapping diskettes & time if you place the Master help file on your DATA diskette. Here's how ... While you are in the Valdocs Editor or Menu press the COPYDISK key. From the Copydisk menu choose <M>ake a data disk & put a new diskette in the data drive (RIGHT) when prompted to do so. After the new DATA disk is made you will be returned to the Copydisk menu. Choose <N>on-indexed (copy, delete, etc.) & for the source drive put an A for the LEFT drive. When prompted to put the proper disk in the drive, take out the system disk in the LEFT & put in the Master HELP diskette, & press <CR>. From the File Copy menu choose <S>ingle file copy & select the top file HELP0.HLP. For the Destination Drive choose B, the RIGHT Hand Drive where you left the Data disk you just made. The file name will be displayed so just press <CR> to keep the name & copy the HELP0HLP file to the data diskette. After the copying is complete, UNDO back to the Copydisk menu & then to the Editor.

You will be prompted to replace System & original Data disk, After replacing these disks press HELP & <M>iscellaneous.

Select <C>hange data disk & replace the current diskette with your new Data diskette containing HELP. Now full HELP is just keystroke away.

The Master HELP file takes up about half the room on your floppy but disks are a lot cheaper than your time. You might want to make several of these disks for the different modules. You won't need one for Valdraw or Valpaint as they have the complete HELP for their operation (HELP5.HLP) included on the System disk.

Hard Drive Tips: All the Valdocs HELP you routinely need is contained in two files, HELP0.HLP & HELP5.HLP. ERAse HELP1.HLP, etc. as they are redundant. The VAL.GIF HELP (HELP8.HLP) will be useful when you first run VAL.GIF but soon you will not need it as the program is so simple. HELP6.HLP on the utility diskette is for converting Valdocs 1.* documents to +III & won't be needed unless you are continually converting documents.

Protect Your Hard Drive Hard drives can be destroyed, along with your data, if they get bumped. My original 10 Meg Comfiler hard drive lasted one month! I had it conveniently sitting on my hutch where it was easy to see & turn on & off. While playing bridge one night, I let the kids play in the office. The next morning I began getting error messages. No one used the QX or knocked the drive off the hutch but there was normal horseplay. I had the drive repaired & upgraded for $450 but never retrieved the data I hadn't gotten around to backing up. Now my drive sits well under my desk on a concrete block! It is plugged into a power control center so it turns on & off with the computer. Most of the time I leave both running. I back up every important file immediately.

TITAN & QXTIPS

The World at Your Fingertips

by William Winter of SPULAEUG

<> **The Modem** ONE of the outstanding capabilities of the QX it Telecommunication. That's a big subject, one with which I've had more than half a dozen years of hands-on experience. This, then, is the first of a series on telecommunicating.

The two big features of our cherished QX are (1) user friendliness, & (2) integrated environment. Many departments all molded into easy access. Under MAIL, we can call up the Address Book where we've stored a list of names, addresses & phone numbers - for automatic dialing. I've found the facility valuable & have been communicating around the world - Europe, Middle East, Africa, Latin America, Asia - with abundant ease & never a hitch.

"Telecommunication" simply means two (or more) computers "talking" to each other. Computers, of course, can't "talk" directly. And different computers "talk" different languages. First, you have to translate your computer's language into "telephonese". Then the computer at the other end must have a translating device to convert the telephone signals into its brand of computer language. The "translating" device is a MODEM. It "modulates" (MOD-) & "demodulates" (-DEM).

So that in order to telecommunicate over the telephone lines, you'll need the translator, the MODEM. Transmission speed is important - the "BAUD" rate. The higher the baud, the faster the transmission & that means less telephone time. Which is fine is you're communicating with another private computer. You'll want to get your message over quickly & receive messages quickly. Save telephone charges. But if you access a commercial database like Compuserve, you'll be charged a higher per-minute rate when you use the faster transmission, the higher baud.

Until recently, 1200 baud was standard fast speed. Above that, the Compuserve cost went up. Now Compuserve & other databases have upped their minimum to 2400 baud, so that you can transmit & receive at twice the previous speed for the same price. And that of course means you save telephone line charges. So, if you're about to buy a modem, get the 2400 baud. In practice, you don't save much money unless you load a big file. But the new 2400 baud modem would be the first-time buyer's best bet. If you're really in a hurry, you can get modems with baud rates up to 9600.

The modem can be either internal - in the form of a board inside your QX in one of the expansion slots - or external. I like the external type. Little LED lights show you what's going on - "on hold," "receive data," "send data," - & they show you when the modem is being "initialized" - something done automatically when you enter the MAIL module.

Once your modem is installed (via cable to your RS-232 port), go to SETUP, via MENU. Then, <C>ommunications Characteristics. There you enter information about your new modem. Example: Type of Modem: Hayes; <F> for full duplex (more about this later). Indicate the baud rate (1200, or 2400). 8 data bits. 1 stop bit. 0 (zero) parity bits. Then STORE the requirements of the computer at the other end. But these numbers are usually standard. If a receiving computer requires 7 data bits (as does Compuserve, at 1200 baud) then you can enter the special configuration in the Address Book, & that will supersede what you've entered in SETUP.

As with everything else in computer-land, beginning always seems complicated. Once you get past the initial nuisances, you'll find yourself in touch with the world through your keyboard. And - it's a breeze.

QX Tips from Doug Davis of Star Technology

These nicad batteries (QX) generally last about five years. And here is the trick to determine how old your battery is. Right next to the battery model number (N-SB3) is a date code. If it starts with L it's a 1981 battery, with M it's a 1982 battery if an N it's a 1983 battery, & so on. Most of the batteries I replace in my shop start with the N code which means they are about 7 years old now.

If you really want to make your QX run cooler, do this:

<> 1>. First off, if you haven't done this already, remove the fan screen & throw it away. Just take a Fillips screwdriver & loosen the 4 screws holding the fan in place. Slip out the screen & replace the 4 screws. Your computer will love you for this!

<> 2>. Locate the resistor labeled R156 right new to the white fan connector labeled CN13 by the yellow battery. Take a small piece of bare wire & wrap it around & solder it to each side of R156. By installing this jumper across R156 you are increasing the fan voltage from 9 to 12 volts & speeding up the fan, effectively moving much more air through the computer.

My theory is that the Epson QX designers used resistor R156 to slow the fan down in order to make it quieter.

RSI Basic Technical Information

by Phil Parrish of QX Help Key

Writing RSIBASIC graphics displays to a disk file. The following lines of RSIBASIC code added to the end of an RSIBASIC program will cause the graphics display that is generated by the BASIC program to be written to a disk PIC file which can then be retrieved in VALPAINT as a non-indexed file (CTRL Q) & also used in a "Slideshow."

The un-numbered statements starting with a ' are remarks.

```
9000 OPEN #11,"O,"B:FILENAME.PIC" 'OPEN THE FILE
     A UNIT#11 (CAN BE ANY NUMBER FROM 10 TO 255) (FILE
     MUST NOT ALREADY EXIST)
9001 'O IS THE LETTER O AND STANDS FOR OUTPUT FILE
9003 'DRIVE B: CAN BE ANY AVAILABLE DRIVE
9006 'FILENAME CAN BE ANY .PIC FILENAME UP TO 8 CHAR-
     ACTERS (MAKE ONE UP SUCH AS DESIGN#2.PIC)
9010 SCRN WRITE #11,(0,0),,639,380,2 'READ PICTURE
     DATA FROM SCREEN AND WRITE TO A DISK FILE CALLED
     #11. READ ALL SCREEN DATA STARTING AT UPPER LEFT
     CORNER LOCATION 0,0 TO FULL WIDTH OF SCREEN AT
     PIXEL LOCATION 639 (UPPER RIGHT CORNER) AND DOWN
     TO A LENGTH OF 380 PIXELS (BOTTOM OF SCREEN).
9015 'STORE IN FULL COLOR (CMODE 2)
9018 'ON NON-COLOR QX-10'S THE ,2 MAY BE OMITTED
9020 CLOSE #11 'CLOSE THE .PIC FILE
9030 END
```

Notes: Even though the screen length is 400 pixels, the screen length in line 9010 cannot exceed 380 due to the status line on the valpaint screen. Larger numbers will still work, but this will cause the second half of a double-screen picture to load thus making it necessary to select <M>ove up one page (in the Valpaint main menu) to see the picture.

From VALPAINT use CTRL Q <R>etrieve a non-indexed file.

After the picture comes on the screen, you can then restore it as an Indexed file by pressing STORE. To regain disk space, in COPYDISK select <N>on-indexed (Copy, Delete, etc.) drive B, & delete the non-indexed .PIC file (the one you named in line 9010 - example DESIGN#2.PIC-). The Indexed file will have a name like 87717001.PIC. Both .PIC files take up the same amount of disk space (around 50K in color).

by Rex B. Kline

Because of the extra memory inside the QX-16, TPM provides an internal 220 kbyte ram disk which can still be used to speed up the Valdocs editor.

You can check out the QX-16 ram disk action yourself by doing the following: boot up V+III, press MENU, exit to TPM, & at the A prompt type "M," followed by a <CR>. You're now logged on to Drive M, home of the QX-16 ram disk. At the M prompt type <# IBM-"DIR" (followed by a <CR>) to see the files already stored there; type "SPACE" & TPM will tell you how much space is still available on Drive M.

One reason the Editor is so slow with documents over 10 pages in length is because of its incessant disk accesses to the data disk. If a ram disk is used as the data disk instead of drive B, disk accesses will be made at electronic speeds, tremendously improving the performance of the Valdocs editor.

We'll assume that you want to edit a document stored on drive B using the QX-16 ram disk. Before plunging ahead, keep in mind that any data stored in the QX-16 ram disk is volatile & will disappear as soon as the computer is turned off, making it necessary to save your work on a floppy before you finish a session.

Further, when using drive M as your data drive, you can't use the INDEXER because there isn't room for both your data & the indexer overlay file in the ram disk. We're going to erase the overlay file shortly, & afterwards the system will crash if you press INDEX key. With these caveats in mind, here's how to do it:

<> 1. Boot up V+III, go to the Editor & press INDEX to get a list of your text files. Use the information presented by the Indexer to get the TPM name of the text file to be edited. TPM file names (such as 87719004.VAL) indicate the document is the fourth version of an editor file created on July 19, 1987.) Press UNDO to return to the Editor.

<> 2. Go to the QUIRKS menu, & select "<L>og in different disk drive", type "M:".

<> 3. The Editor is now using drive M as the data disk. Since you're going to copy a text file from drive B to the ram disk, you'll want as much space there as possible, so you should erase all the unnecessary files on it. Press MENU, exit to TPM, & at the A prompt, type "M:". Type "DIR" to show the editor working files (EDITCUR1.VAL, EDITDEF1.VAL, EDITMSC1.TMP) & the overlay files for the indexer & the editor or spreadsheet. (INDX.OVL, EDIT.OVL & SPRD.OVL files).

<> 4. At the M. prompt type "PROT*.*" to change the TPM protection level of all Drive M files to 0 so they can be erased. Next, type "ERA*.OVL" to erase all overlay files. Type "SPACE" to show the 207K now free.

<> 5. Return to the Editor by typing "RESTART EDIT/C".

<> 6. Once in the Editor, call up the QUIRKS menu, & select "<R>etrieve non-indexed file". When asked for the file to retrieve, type "B0:TPM filename", where TPM filename is that of the text file on drive B you identified in step one. Press

"RETRIEVE".

<> 7. The editor document will appear. Drive B is mercifully quiet & most editor operations (especially block operations) are much faster. The speed is by no means blinding when using the ram disk, but it is much impr

<> 8. When finished editing, store the revised text on Drive B. Call up the QURIKS menu, select "<S>tore as non-indexed file". Then select "<V>aldocs" at the next menu & press "STORE" to save your file to drive B.

<> 9. You can now turn off your QX or reboot your system so Valdocs can reload the indexer overlay file back onto Drive M.

If you find the ram disk useful, make this process automatic by using CPL to remember the keystrokes involved in steps 2 through 5. Thereafter, you'll need to press only one button to do most of the work.

Q-Tips

Orphans Away, M'Boys or The Phantom Machine -- Talk about being an orphan! There exists a QX-11, according to Julie Sauvageot of RAGE. It evidently was a machines that was developed but never reached the market. Unbelievably, the machine has two 3-1/2" stiffie drives (you can see how Epson was ahead of their time), & no published documentation exists for it. According to Julie, a purchaser of a used QX- 11 told her Epson America said he "shouldn't even have that machine!" They do not support it. The owner is now looking for any manuals & other information that pertains to it. Good luck!

Cheap Frills, or an Inexpensive Mouse For the QX -- If you've wanted to a d a mouse to your QX system, you may have found that they are fairly expensive. Now, Robin Young writes in the San Fernando Valley EUG that the "Genius" mouse wo.ks with Valpaint & Valdraw on the QX machines.

To set the Genius mouse up to work in Valdocs, in the Setup menu you must:

-- under Terminal Characteristics, select (S)ingle key menus, (E)nabled

-- under (C)ommunications, select (H)ayes, (F)1200 baud, Modem installed (Y)es, Background answer (D)isabled

-- under (M)iscellaneous peripherals, select (R)ising Star mouse

-- the store the new setup & do a warm boot. Initialize the mouse/modem by pressing MAIL, then turn the mouse on by pressing GRAPH SHIFT MAIL. You should see the X on the status line just left of the time.

At this point, you can turn off the Single Key menus option if you wish, but Valdocs is faster & easier to operate if you leave it on. The mouse will continue to work with the Single Keys option disabled until the computer is re-booted.

The Genius mouse emulates both Mouse Systems & Microsoft mice. It is an inexpensive mouse which retails for as little as $35 by mail, & for about $50 to $60 for the GM-6 model that includes Dr. Halo, a paint program which is similar to Valpaint.

DOS 3.X & the QX-16 by Christopher Porter

In the July/August issue of *The Epson Loop*, Erika Kuelke mentions some problems she had when she tried to run a borrowed copy of DOS 3.20 on her floppy-based QX-16:

(1) "The disk booted properly but date/time could not be reset. It defaulted to 01/01/80 with an arbitrary time."

(2) "The disks could be formatted with 40 tracks, but not 80 as is possible with DOS 2.11."

(3) "The DOS disk was not compatible with our 2.11; i.e. a 2.11 DOS formatted disk was unable to read files -- even data files -- from the DOS 3.20 format ..."

Erika then goes on to add: "*Carl Nelson called me from Florida... [he] works with QX-16's & WordPerfect in DOS 3.21 & has no difficulty. He promised to write details...*"

I am particularly interested in this myself, since I too own a QX-16 & would like to upgrade my DOS. However, I have also personally encountered all three of Erika's problems -- along with a fourth little "gotcha" as well:

<>(1) The time & date are indeed defaulted incorrectly, because "normal" DOS doesn't know how to access the QX-16's clock chip. So it acts as though you didn't have one.

<>(2) Not only can't you format 80-track diskettes, you can't even read them (except for track zero).

<>(3) I have read many 3.X diskettes under 2.11 without a single problem, & was in fact astonished when I first heard that the formats were supposedly incompatible. But I did have trouble on one occasion -- & temporarily switching 3.X took care of it.

<>(4) Background printing (i.e. -PRINT command) doesn't work.

Now, in my case all but #2 are minor. Being a programmer, I could easily solve the clock problem in software; I would not be reading 3.X diskettes under 2.11, but rather the other way around; & I rarely use background printing. But the lack of 80-track storage is something I simply *cannot* do without. And this 1 restriction has effectively prevented me from switching to 3.X thus far.

Perhaps this Carl Nelson has a hard disk? He wouldn't need 80-track diskette storage then...!

SEMIDISK TIPS

SEMIDISK DIES! SYSTEM CRASHES!

Prof. Leslie L. Clark

These are the headlines flashing through my mind when, one day last month, I fired up QX-10 System No. 2 & got a screenful of garbage.

This system is fitted with an Epson color monitor & a 2 Meg SemiDisk. It has also been upgraded with the new BIOS ROM that Roger Amidon crafted. [Have you ordered yours? Do it-- now! It's one of the best ways to renew your QX's lease on long life.] Moreover, when I had some trouble with this SemiDisk a few months ago, Roger was kind enough to take a look at it. He found nothing wrong, fitted it with a Shottky diode so the charging current was switched off when the QX-10 was switched on, & sent it back to me. It had operated well ever since.

Like many others, I enjoy the freedom of the 2M SemiDisk. The generous working room allows storing all of the necessary working files for Valdocs. There's also lots of room for data files. The battery backup retains the information between sessions at the keyboard. The new ROM allows booting up automagically right into Valdocs within a few seconds. Finally, because both programs & data are stored on the SemiDisk, mechanical wear & tear on those precious disk drives is minimized. The only time one needs to use a drive is when loading an external program, or when saving one's data.

This time, though, I had a sinking feeling. Screwing up my courage, I thought, "Well, there must have been a power outage during one night. When I was asleep, the power must have been out for more than a few hours. I'll just reload my files from the backup disks." Feeling rather smug about having backed up everything [you do, too, don't you?], I dug out the backup & started to reload the files on the SemiDisk.

Before taking that step, though, I reasoned that I might as well reformat the SemiDisk. I dug out Roger's SemiFix utility. This utility, you may remember, initializes the SemiDisk.

Right away, I found there was something really wrong. What appeared on the screen was a series of lines indicating hard errors. Switching to the QTEST utility, under CP/M, didn't do any better. "Oh well," I thought, "this SemiDisk has finally bit the dust."

With memories of easily-remediable difficulties with MS-DOS boards in the back of my head, I decided to try one more trick before throwing in the towel. Often, taking out a board from its slot & cleaning the "fingers" with a cloth dampened with alcohol will help. I did that, & reinserted the board firmly in "its" slot, the one furthest from the side of the machine. This time, I left off the cover of the option slot so further fixes could be attempted. When I fired up the machine again, I got no further with SemiFix than I did the first time.

At this point, I got out the magnifying lens to assist the failing eyes. I also scrounged around for the brightest small light I could find. I decided to examine the board as closely as I could.

Guess what? One of the chips, at the very bottom of the board, had become unseated! The row of pins at the bottom of the board were practically out of their socket on one of the chips! Was this the dreaded "ram creep"? This is the result of chips gradually easing out of their sockets as a result of repreated heating & cooling cycles when machines are switched off & on again for further use. But, no, I don't think so. I think that what tends to happen is that when the SemiDisk is inserted carefully into its option slot, some components on the motherboard tend to press on the side of one or more chips on the SemiDisk. This causes them to lift out of their socket partially.

The cure was clear. First, the SemiDisk was placed on a double-folded towel. Second, I breathed on my fingers to help dissipate any electrostatic charge. Third, I pressed down on the chip until it seated firmly in its socket. Fourth, I made sure that all the little upstanding capacitors on the motherboard were bent over to the side. [Do it carefully; they won't break.] Now, when the board was refitted in the option slot, there was nothing to unseat the chip from its socket.

A session with SemiFix confirmed the diagnosis: initialization & formatting of the SemiDisk went according to Amidon, & I was able to reload Valdocs from the backup disks.

This frightening situation will probably not occur with SemiDisks obtained directly from SemiDisk Systems. In those boards, chips are most often soldered into their sockets. The trouble is likely to occur, however, with boards that have been upgraded, as mine was, from 512K to 2M by adding additional chips yourself. In this case, the chips are not soldered into place. They are thus prone to displacement by mechanical forces. Bending down the little capacitors is still not a bad idea, whatever the source of your SemiDisk.

It was quite a relief to get RSI Basic up & running in color again, & to confirm my belief that the QX is a rugged & reliable machine. That it is, & it was good to discover that most troubles come from such an easily remedied source as the one discovered. Happy computing!

PHONE RESOURCES

Several volunteers have come forward to offer their assistance to NEUG members (only). PLEASE observe the limitations on when these generous people will be available. If you would like to also offer your services, it is not too late! The experience will be rewarding!

When you call ***Have your membership number handy. This phone service is one of the benefits of NEUG membership. It is not fair to expect NEUG volunteers to help you if you are not supporting NEUG!!? Check your renewal date on your label!!***

General assistance, emergency fixes, and advice BEFORE you buy something is always available from NEUG (814)237-5511 4-7PM EST But NEVER on Saturdays-please!!

WordPerfect & VALDOCS questions can be answered by Mr. Paul Howard, (301) 482-6088 during the day, & early evening. Additional Val-help can be obtained from Judy Sharp (505)821-8745 in the early evening. Or evenings from Scott Schmeling (MN) (507)354 1402. Greg Tamowski (NJ), (201) 471-4763 invites evening calls on the Valdocs, and most anything else you can't get an answer on from another NEUG source. Lynn Spietz (MI), (313)398 1329 will answer general questions about V-III, QX-10/16. QXDraw, Valdocs, and some RSI Basic questions can be settled by Bob McLain of WISE, (414) 782 8829 6-10 P.M. 7-days/wk. Lou Souther (MA) (617828 3935 will answer "*anything I can help with Valdocs, PeachCalc*". Jean & Norm Thompson (WI) (414)734 2391 after 7PM on Val-III EDIT, ValPaint, SuperFile, and TPM.

Technical hardware, and operating system questions are welcomed by:- G. A. Conger (Jerry) 701 Wayland Drive, Arlington, TX 76012 Voice phone (817)261-0577. Jerry is willing to take calls most anytime, but prefers noon to 9PM. He will take a stab at any kind of question from beginner to experienced programmer.

CP/M & TPM SpreadSheet (PeachText 5000 and V-III) questions will be answered by Lin Fowler, (305)524-5677 between 8-10 P.M. EST. Bill Lafitte (CA) will take calls evenings, and weekends on Valdocs, TPM, hard disks, CPL, DOS and STATISTICS at (714)548 1741

MultiPlan questions answered 4-10 P.M. Pacific Time by Larry Glasgow. (213)431-5822. PeachCalc, CP/M, DOS and general Valdocs help from 6-8PM Jesse Brinson (NC) (919)882 2249

PC-FIle is the speciality of Sharon Kries. Call her before 8 PM Central (219)996-6522.

VENTURA and PageMaker help is available from Doug Coatney, (415)969-3962 between 6 PM and 11 PM

Ventura, HP LaserJet II, Symphony, Lotus Freelance and WordPerfect help is available from Harold Harding after 7:30 P.M. at (216)561-7173. Church Pastors might also find Harold helpful. VDE, Ventura, Pascal. and PC-Write help is available 6-11 PM from Ian S. Richmond (PA) (215)649 1198.

WordStar, Perfect Writer and Peachtree List Manager questions may be answered by Steve Max (212)222-6297 at nearly any reasonable EST hour, 7days a week!

Geneva inquiries can be directed in the early evenings to Jim Stettler, (601) 452-9242.

AsEasyAs (a 1-2-3 clone) expertise is offered by retiree Dan Doane of CT. Call (203)767-9178 anytime from 9 AM to 9PM(!) If he doesn't have the answer, you've got big trouble! He uses it even for word processing! Lotus 1-2-3 questions are answered from 4 P.M. to 10 P.M. weekdays and Saturday by John J. Mede, (717)248-2820

Wayne Hillman, (309)734-3539 will help with SIG/M Public Domain Software, and Donald Sharp (714)991-8922 will help anyone with questions about the 'inside of their QX-10" from 9-11 PM Western time.

Mary H. Westheimer will gladly answer questions about WordPerfect from NEUG members. (602) 866-7410.

Wally Fusiller, (313)426-8972 *WANTS* to have questions on V-III Edit, VALDRAW, FancyFont, List Manager, WordPlus, QXDraw and *spreadsheets in general*. He will entertain you from 8 - 8 SEVEN DAYS. Call him, because he's a neat guy!!

Nevadian Terence Clapp (702)645-7785 will answer MS-DOS questions, after 6 P.M. Pacific time, if callers will leave a message on his answering machine. CP/M, Valdocs, DOS & even UNIX questions may be asked of Jon Hochstetter (WI) day or evening (414)654 7939. Cliff Davidson (CO) (303)434 8980 after 6:30 is the man to ask about *Titan DOS Programming*. I.O. Bean (CA) (916) 962 is available 8-5PM & knows the QX-10, Titan boards, DOS and Lotus software. Leon Zomes (WA) is available 7-11PM for questions on TPM, CP/M Titan and DOS at (206)542 5882

QX setup and possible battery problems might be solved by calling Bill Files (814) 237-3258 after 4 P.M. Eastern time. He also has an inventory of fresh QX batteries and installation instructions. Fast UPS delivery can be requested.

CATALOG OF NEUG DISKS

The size of the current library prevents us from issuing a fully comprehensive catalog.

There will be MANY NEW disks will be released in these list-

ings & many previously issued disks might be modified, updated, or have a new numbering system applied to them. NEUG has acquisition plans for more than 400 additional disks per year.

Members can order any disk(s) anytime, for $6.00 each. In order to encourage more users to participate in our Public Domain & User-Supported disk distribution, we have established a special disk distribution program, with special pricing. Within 6-weeks of the publication of a LifeBoat, the disks listed in that particular issue at special rates. $28 for 6; $42 for 9; $55 for 12, & $4 each for 20 or more. Orders should be sent to NEUG's address. These special prices for this issue are good until March 15th.

NEUG wants members to enjoy the advantages of the disk library. But please remember, disks are copied by volunteers, & sometimes we need 4-6 weeks to get the filled orders out!!

Les Clark Reviews NEW UG Disks

NEUG IBM 846:

> PC-Browse/NP/Notepad

PC-Browse, Ver. 1.00, is a memory resident file searching program. It will work only with text-based applications. It takes 60K of RAM, or 3K if loaded in expanded memory. Pop it up over your word processor & load any textual data file. Press F9 & enter a word or number to search for. For successive occurrences, press the grey + key. Another key will paste the found data in your word processor. Or, search all the files on your disk for the selected search term. With a keyword indexed file [created from a database, say], Browse can do very swift searches using hypertext links. [How about searching 2 Megabytes in a couple of seconds?] With these techniques you can look up addresses or area codes; locate a part number; create a hypertext-like help file for an application that has no help file. There are many other uses. This is a new & interesting concept whose capabilities have yet to be determined. ALSO: This disk contains two memory resident notepads, NF & Notepad. First, NP takes about 1500 bytes, is called up with Ctrl-N, allows 10 lines of 25 characters, & ought not to be used with machines using memory managers [QEMM, Himem, etc.] or it'll freeze everything. OK for older machines. Origin unknown. Second, Notepad is a different beast. It takes up about 22K of RAM, is called up with ATL-0, & has a timer, alarm, ASCII table & notepad. Notes can be written to disk. It's 1984 shareware: $10.

NEUG IBM 850/851:

> Activity Control Technology, Ver. 1.1B.

An early example of the software type known as personal information management. Managers, lawyers & project leaders and, above all, on-the-road salespersons, have in one package a menued set of schedulers, ticklers & memo & letter generators. This is coupled with databases of names, telephone numbers, calendars & related information needed to track activity in contact with others–and the outcome of that contact. There are inbuilt alarms to remind of meetings, to-do reminder lists & suggested courses of action. Finally, there are forms for letters, expense reports, present & future activity lists, & so on. All this is aimed toward saving time & increasing your efficiency & effectiveness.

Also on this disk: a menued collection of 65 tips & techniques from PC World's readers in a PowerBase database. Featured are Basic, C & Pascal programs; & batch files, DOS utilities & other goodies. Some useful utilities, some clever programs to learn from.

NEUG IBM 852

> The Prophet, Ver. 1.7, Released 9/87

A program to track lotteries. For those who don't think lotteries are as random in number selection as they ought to be, you can track patterns of number selection. For the inveterate gambler, here's a record keeping system for lotteries- - your own, your family's, your friends & associates, including group purchases. The database can maintain all of the State, Canadian 6/49 & Australian Gold lotteries at one time on one 360K floppy diskette. Add a second floppy & double your capacity.

Davis sells databases; all are included in the $75 package price; otherwise, full registration is $35 & contributions of $15 are encouraged. The shareware program allows 100 drawings to be stored. The registered version allows 800 drawings.

Prophet will also pick numbers for you. The seeding of the random numbers [based on your & and your astrological sign] is not truly random, but what the heck. Remember this program is designed to increase your fun in playing. It is easy to use.

Also contains: ANADISK, Ver. 2.02 , Released May, 1990.

We reviewed Sydex's 22NICE & 22DISK some time ago, & praised them highly. Here is another of their products. It's a DOS floppy disk analyzer that allows budding technofreaks to get down-and- dirty with the details of floppy disk structure. A superb user interface allows selections to scan the disk for defects, examine the file allocation tables [FATs], change individual sectors, dump a section of the floppy to a disk file, even create odd formats. Make a copy of one of your disks & use this program on it. You'll soon know more about what makes your computer tick than you thought possible. The bonus is that you will also be able to effect many repairs yourself–& understand far more about the operation of disk utilities like Norton's & PC-Tools than the average user.

NEUG IBM 853:

> Exchequer, Ver. 2.1. Released 7/89.

A check writing & checkbook management program. Its metaphor is the checkbook register–the first screen you see. It can accommodate 4000 transactions, 255 categories, 255 predefined transaction [models for checks, deposits, etc.] & ten different report types. There are four main data files. Data is saved automatically every 10 transactions [can be reset in setup]. Program functions are selected via function keys. Checks or reports can be printed singly or in batches. Discount information on forms from three supplies is included. Aimed at the beginner, there are suggestions for using the program also for savings & credit card accounts, doctor & insurance records, & small business accounts payable & receivable. Good, no-nonsense program of modest cost & great flexibility. Use PKLITE or LZEXE to halve the EXE size.

NEUG IBM 854:

> Disk Utilities/Area Codes/Sideways Printer

Even though disks are now cheaper, the 400K & 800K diskette utilities from 1987 can prove useful occasionally; they transform 360K disks into large storage devices with minimal fuss. The 704K utility extends DOS base memory in 286 machines where you'd love to get at that extra memory between 640K & 1 Meg. ALSO: Left Coasts's $15 AreaCode utility shows the telephone codes for any of the 50 states or Canada you type in on the menu screen. Runs standalone or memory resident [via hot key combinations]. Demo version has 2000 listings; full version has almost 19,000. Very fast. ALSO: Expressware's $20 menu-driven sideways printer is arguably the most interesting of its kind. Make a disk file from your spreadsheet, word processor, whatever. Call up Onside. Choose the file [point-and-shoot], the font [from six choices] & the paper size. On the second menu, choose the width & height magnification of the characters [five choices for each]. On the third menu, choose margins, line spacing & lines/page [120 max]. Press enter & away you go on any Epson- compatible dot matrix printer. Because the file is bit-mapped, printing is slow. So what: use background printing! You can also invoke Onside via command lines, & preset the 175 or so combinations of size & style/font.

NEUG IBM 855/856:

> File Express, Ver. 4.23

Here's a beginner's database–a flat file type of surprising speed & power. The tutorial starts from ground zero. There's no mouse use, but the menus are attractive & easy to understand. You can have a field lengths of 250 characters, 120 fields/record & 16 million [!] records per database. Fields can be changed after being set up, an important point for any user, novice or not. This program can suit personal & small business use well. Getting information out & on to paper is very easy with the full-screen report writer & label maker modules. The printed manual, with the registered version, could make you an expert. You'll need it for maximum use & enjoyment, since there's no help available at the F1 key. The program will work on just about any DOS-compatible machine.

NEUG IBM 857/858

> ExpressCalc, Ver. 4.10. Released: 2/90

A beginner's spreadsheet that's so easy to use you hardly even need the brief tutorial. There's a maximum of 65 columns & 256 rows allowed –16640 cells. [You can change the column & row numbers if the product doesn't exceed the max number of cells.] A memory monitor keeps you informed about the size of the spreadsheet. Spreadsheets can be linked. You can import or export DIF files [sans formulae], or data from from File Express or PC-File. All monitors are supported up to VGA. The size can be reduced to only 8 rows for use on a portable computer. The commands are similar to SuperCalc's [each one starts with the \ slash]. There's a full complement of functions for formulas. No support for numeric coprocessor or macro capability [maybe in the next version]. Graphics are primitive, limited to bar graphs, & require some work to print. Use PKLITE or LZEXE & reduce the single EXE file to a real modest 160K file.

NEUG IBM 859/860:

> CheckExpress, Ver. 4.03. Released 5/90

A home & small-business check register package. Prints checks on any standard continuous preprinted form. Also prints reports of account[s] activity in several formats, including weekly, monthly, yearly periods. The primary screen shows "folders," from which you select a function. To make out checks, you work right from a "blank check" on the screen. Up to 4000 records, 200 budget codes, & 100 filled-in repetitive codes are available. You can have bills due reminders on booting- up your computer. Reports can be exported to FileExpress, GraphExpress, DIF & mail merge formats. Pop-up four-banger calculator. You can define & revise budget categories on the fly. Many custom options via separate Setup module. Fast & clean, with attractive displays & menus. Compact data files. A worthy competitor to Quicken, et al. ALSO: A menu-select collection of 65 tips & techniques from PC World's readers, in PowerBase database. Featured are Basic, C & Pascal programs; also batch files, DOS utilities & other goodies. Some useful utilities, some clever programs to learn from.

NEUG IBM 861:

> ExpressGraph, Ver. 1.05. Released: 6/90

A menu-driven business graphics program. Accepts .GRF files from ExpressCalc, plus .DIF files [no formulae] & .FE [FileExpress] files. Requires color graphics [CGA, 640 x200]. Data loaded to screen can be displayed in 10 different forms [bar, pie, line, 3-d, etc.]. Rotate & mirror image options are available with a keypress, expanding display options of basic graph. A keytap on F10 then prints the graph. Text can be added in small, medium & large type to customize the output.

NEUG IBM 862:

> File Express, Ver. 1.00. Released: 8/89

A do-it-yourself menuing & hard disk management kit for beginners who don't use a mouse & work mostly in a single disk partition. Fast & compact. The displays are attractive & clear. Setting up menus to call up your programs is quick & easy. A shell you call from the main menu allows file management [copy, delete, move, view, run, etc.]. There are other menu choices to back up most recent files, compare files, view them & search for them. This is a fully functional evaluation package.

NEUG IBM 863:

> Sydex CP/M < > MS-DOS Utilities

This is a set of utilities that allow you to use CP/M programs under MSDOS, & read or write from or to CP/M formats–300 of them! Just create a subdirectory for your CP/M program, copy over the CP/M files to MSDOS, rename all COM to CPM, run Sydex's GENCOM progam. Now run your CP/M programs just like DOS programs. Wow. If you have a V20, they'll run three times as fast as in CP/M. On a 386/25, they'll run about twice as fast as on a 4 MHz Z80. 22DISK allows treating your 5-1/4 drive just like a CP/M drive temporarily, & there are special drivers for Eagle, Rainbow, & HP150 formats [these are $15 each extra]. The 22Nice/22Disk combo costs $40. See our 22NICE review for more details.

NEUG IBM 864

> Xmas Carol Songbook, Ver. 2.0, Released 11/88 & The Sydex Shareware Sampler

Next holiday, you can gather around a warm computer for a group singing of 13 traditional favorite carols. Choose one from a menu. The words are displayed & the single tune notes are played. Keeps everyone in tune. The opening & closing noises & tunes are cute the first time, but annoy after that.

This also contains four shareware versions of Sydex utilities.

<>1. Concurrent Format. Last update: 3/90 [$15 registration.] Allows using a hot key combination to pop up a floppy disk formatter. It operates in the background while you go about other text-based work. [Graphics shut it down]. Midway in speed between DOS & Norton format. Uses 11k while resident; can be removed from memory.

<>2. Copy Duplicator. Last update: 5/90 [$15 registration.] Disk copying machines are expensive devices. For small production runs, this is a better solution. Copying a master diskette to up to four drives is as fast as normal DOS Diskcopy. Setup can be for higher speed, more verifying, or multiple copies. Nonskilled operators can run the program after it's set up. Perfect for user groups, or any situation where on-the-fly copies are made.

<>3. Disk Formatter. Last update: 1/90 [$10 registration.] Set the program up for disk size & capacity. You can then format/verify any number without reentering commands. Can handle up to four drives.

<>4. TeleDisk. Last update: 5/90 [$20 registration.] Turn any diskette into a *file* that's an exact duplicate. Then send it by modem anywhere you like. At the other end, Teledisk recreates the disk for use or analysis. Like fax-ing a whole disk. Or transfer a disk collection to tape, laser or other CD medium.

These utilities are simple, low cost & superbly engineered gems. They are easy to install & use. Each uses a crisp & attractive user display. ***Highly*** recommended.

NEUG IBM 866

> Electric Almanac, Ver. 1.0 Released 6/90

Here's some New Age fun, for entertainment purposes only! An astrological almanac includes tables for hunting & fishing, planet risings & settings & metric conversion. A separate section has simplified versions of the I Ching, Tarot cards, an oracle & even lucky Lotto numbers. Another section has

astrological recommendations for the hour, day, week & month. You can get "best dates" for planning & harvesting; personal care; business & so on. The disk is free, but you get some pitches for "readings" (natal report $20; friends/lovers report $15) & a home-based business selling astrological reports. Minor annoyances: the program needs to be mouse-aware, & it ought to return you to the same menu item you start from. Visually attractive graphics,though.

> **All Disks are available from NEUG for $6 each. Orders can take 4-6 weeks.**

MicroSoft Widows 3.0

Review of (Windows) ToolBook(TM)

by Dr. Heinz Henisch

ToolBook (TB) might be described as a utility program for Windows 3.0, and that would be perfectly correct, but to call it that would raise the wrong expectations. TB is not so much a program, as a life-avocation. Massive as it is in its scope and sophistication, no brief review can do it justice; only prolonged and total immersion could do that. The complexity of the package could be judged in several ways, e.g. by the amount of disk space it occupies (up to 8M), or else by its price. TB's retail price is $395 ($295 street price), but for those seeking deeper involvement and more control (*including royalty-free runtime support*), there is also the Asymetrix Author's Resource Kit (ARK) for an additional $450 and a Developer Support Partnership Program for $495. That should look after most people's needs, at any rate, one would certainly hope so. We will concentrate on the basic package, and that is formidable enough. Of course, Windows 3.0 is required, and at least 1.5M of RAM is recommended.

What does TB do? To quote, it is "a software construction set that allows end users and developers to quickly build custom graphical applications without using traditional programming g languages". That's about it, but not quite. True, a good deal can be achieved "without using traditional programming languages", but users who want to do really sophisticated work must really learn a non-traditional one, namely OpenScript(TM). No problem. That language system is supplied with the TB package, including a 610-page handbook to speed users towards mastery. A second handbook "Using Toolbook" (only 440 pages), is addressed to less ambitious users. Regrettably, it is short of simple examples to lead the reader by the hand from first principles to virtuosity. The idea is evidently that this task is fully accomplished by the QuickTour training program (included) and up to a point it is, though I believe a good deal more is needed. QuickTour is actually something of a presentational masterpiece, but it *illustrates* more than it *teaches*. It does succeed in demonstrating the basic character of the offering: pages of an illustrated book that can be called up at will. Unlike the pages of a real book, pages in a TB book can be called up at will. Unlike the pages of a real book, pages in a TB book can have what appears to the viewer an interactively determined contents, and even animation. TB lends itself to the making of sophisticated instruction programs in which text and pictures are fully integrated. An illustrated catalog of something or other comes to mind.

Just because "computer aided instruction" is a rapidly growing field. TB should have a growing scope, "limited only by the user's imagination", and there's the rub; imagination is a precious commodity which tends to be in short supply. In passing, HyperWord(TM) by Zaron Software, retail $149 ($79 street price), claims to be able to do similar things, but the relative merit of both packages remains to be be established.

I will protect readers (*& I wish I could protect myself*) from the specialized terminology used by the handbook; sufficient to say that for everything on wants to do there is a Script (in OpenScript, a truly English-like language). However, it is not actually necessary to master OpenScript in order to use Scripts; one can draw on Script examples supplied and use them "as is", or else modify them. Alternatively, on might be tempted to write a new Script from scratch. How difficult are these methods? That all depends, stay tuned for more (if I survive).

Meanwhile, we can simply enjoy using the facilities and examples provided. One of those is Daybook(TM), an appointment and address book, superior to those supplied with Windows 3.0, and fun to use. In principle TB allows it to be customized, and one of these days I will find out how. Other built-in facilities are an Animation Primer, a Hypermedia Book, a dBase Exchange book, a scientific Calendar and for advanced users, and absolutely phenomenal Dynamic Link Library (of OpenScript functions) with context-sensitive Help. *Why another Calculator?* One might might well ask, but there is an answer. This calculator is very different from the one supplied with Windows 3.0 itself, and, indeed, all other scientific calculators I have seen. In those each function is given a separate key, which means that key proliferate. In contrast, we have here only the basic number keys, the scientific functions being selectable from their own menu window. Moreover, the calculator displays not only the current entry, but also a few lines of calculating history. This helps one to understand what the value of the current register actually refers to. In any event, the calculator is here not only for use, but as a demonstration of how applications can be implemented.

Among the utilities offered are multi-page collections of page designs, and of attractive clip-art, both in color. Who would have thought that portraits of Shakespeare and Einstein would find computer applications, but they do. The various items can be transferred and manipulated via the TB clip-board, but alas not exported to the Windows 3.0 clip-board itself, which would seem to be an odd limitation considering TB runs under Windows 3.0. The art-work is intended to be used *within* the TB environment only, but it *can* be printed out. I found the print quality to be poor, but printing-out is not the purpose and intention, enlivening the pages of the "book" is.

Let us now set ourselves a TB task; maybe not exactly one readers have had in mind, but one that will serve as a simple illustration at the most elementary level. We are going to create a *new* "book", consisting of as many as two thrilling pages. The second of these (see below) will contain a circle, right in the middle, and *could*, of course, contain much more. The first will contain, in much the same place, a "button" with the irresistible inscription PRESS ME. Then we would want some spectacular action and, accordingly, we will arrange for page 2 to appear whenever the button is pressed (by clicking the mouse). That will constitute our book.

To "write" it, we press New Book from the TB opening menu. Then, as soon as the first (blank) page of our book appears, we select Author level from the Edit Menu. At that level, we select the button emblem in a palette, to signify we wish to create a button. We find a place for it, and drag the mouse until, we judge the button to be of the right size. Once this is done, we go to the Object menu and from that we select various other attributes. For the name, we make an inspiring choice, and call it Button No. 1. For the face label, our choice is already mapped out for us (see above), we shall call that PRESS ME. We then go to the Script menu of that dialog box, and that brings up a clean area in which we are invited to write our script. So, let us write, in the elegant OpenScript language:

```
to handle buttonUp
  goto page 2
end buttonUp
```

Having done that, and still unsure of ourselves (for good reason), we can ask TB to test the syntax. When we do, TB turns thumbs down; "goto" is not an allowed word. So we edit the second line, and write "go to" instead. Now TB says, all's well. We choose Edit/Update from the menu, and that records our script. Having thus made all our decisions concerning button properties, we click OK and go back to Reader level (user level), as distinct from Author level. Now we face our rectangular page, with a plain button saying PRESS ME. Plain it may be, but we could have made that button any shape (even the shape of a dog!), or any color, or any texture. Similarly, we could have arranged for the other buttons on the page, each associated with its own script. Nor was it necessary to begin with a blank page, one of the built-in page design offerings could have been adopted at the onset.

For the moment, we'll be content with a plain vanilla button. We'll do what it says, and PRESS (click the mouse on it), hoping to see page 2, but the system responds by saying the execution is suspended because there is no page 2. Of course, there isn't! How could there be, we haven't made it yet. However, we can make it, just as we created the 1st page, except that this time we draw a circle (or, in principle, anything else that comes to mind, as long as we don't make TB blush!), instead of calling for a button "object". After that we go back to page 1 and click the button again. This time, lo and behold, the system responds by presenting us page 2, easily recognized as such by its circle in the middle. Thrilled with this success, we select PREVIOUS from the Page menu, and get page 1 back, with our button intact. Naturally, there is nothing to prevent page 2 from having any number of other buttons, each linked to a distinctive script, which tells the system various things it might do next. Not only buttons, but drawn objects (including the dog referred to above) can be similarly linked, and "do things", when clicked. So can "Hotwords", words in a text that have been specially earmarked to be mouse sensitive.

We have made a book, even if it isn't likely to be a Best Seller. Excited? Yes, especially when one recalls an old truth; a journey of a thousand miles begins with but a single step. One might just add that is was an enjoyable step, and might even turn out to be addictive! Direct inquiries to Asymetrix, Bellevue, WA 98004 (206) 462-0501

> **Win 3.0 Help Needed!?! Send us your tips on using Windows. Your fellow members need your assistance!!**

Les'n Gregg's Corner

A Big Cursor for Laptops

from Prof. Leslie L. Clark August 1990

Here is a script file that will create a big blinking cursor. This might be useful on a laptop. Type the following into a text editor, or in edlin. Save the text as BIGCURS.SCR.

```
N BIGCURS.COM
E 0100 EB 20 51 50 53 52 B4 03
E 0108 B7 02 CD 10 88 E8 3C 0E
E 0110 73 07 B9 0F 00 B4 01 CD
E 0118 10 5A 5B 58 59 EA 00 00
E 0120 00 00 B8 08 35 CD 21 2E
E 0128 89 1E 1E 01 2E 8C 06 20
E 0130 01 BA 02 01 0E 1F B8 08
E 0138 25 CD 21 BA 22 01 CD 27
RCX
0040
W
Q
```

Now type DEBUG < BIGCURS.SCR Debug will create BIGCURS.COM. Enjoy!

Fly the Flag!

CORPORATE LADDER 1.1: QUICK AND EASY CHARTS by Dr. Chris Gregg

Bloc likes to call Corporate Ladder (CL) "the FormTool of the chart designing world." I'd have to agree. CL is quite easy to use, reasonably priced, & unless you have rather elaborate needs, CL can generally do the job. This program is particularly good for organizational charts, decision trees, flow charts for procedures or computer programs and, yes, even genealogy charts (the hook for me) are possible. CL can do almost anything which requires lines, boxes or symbols. However, because it is a completely text based program, circles & other non ASCII characters cannot be used. CL requires a minimum of 512K of memory, two floppy drives or a hard drive, & will run on any PC XT or AT. No graphics board is necessary. Almost any kind of dot matrix, daisy wheel or laser printer can be used. However, a daisy wheel printer will not be able to provide nice boxes & lines. Instead you will have dashes for lines & + for box corners. A complimentary package of four laser fonts ($29.95 value) is included for those who are so blessed as to have a laster printer. I tested CL on a 386 SX with an 18 msec IDE hard drive.

SUMMARY OF GENERAL FEATURES CL comes with a 78 page manual & a handy reference card. The manual is clearly written & well indexed. Each command & feature is carefully documented & a brief tutorial is also included. There is also on-screen help which is quite good. Free technical support is available, but not toll free.

Charts can be any size up to a maximum of 430 characters by 150 lines (43 x 25 inches with 10 pitch type) & chart design is completely flexible. That is, YOU can decide how the elements should be arranged. Some programs insist on doing the layout THEIR way or make you choose a particular chart "style" before starting. This is not always possible or convenient. One of CL's nicest features is that it draws boxes with a single keystroke. Simply type the text you want to enclose & hit F3 to draw a perfect box around it. However, any amount of text and/or extended ASCII characters may be placed anywhere on the chart without being enclosed in a box. This is real handy.

Box size may be either fixed (up to a maximum of 80 x 25 characters) or variable (size depends on the amount of enclosed text) & may be drawn with single, double or dashed lines. Any of these three styles can also be used for connecting lines. Text inside boxes can be automatically centered or justified (right or left) whenever a box is drawn around it. One can also either erase a box, text within a box, or both with a couple keystrokes. Long lines can be quickly drawn & erased & the cursor can be moved quickly over large distances on the screen. All these features make it MUCH easier to do a chart with CL than would be the case with even the snazziest word processor.

All or part of a chart may be moved or copied which greatly speeds chart creation. Doing these operations by hand is a pain! And best of all, when you are creating the chart, there is no need to be compulsive about spacing & centering. When you are done, CL does an "automatic cleanup" of the chart components. This nifty feature corrects spacing between boxes & lines, centers groups of boxes, & does necessary line centering & justification.

USING CORPORATE LADDER The major menu categories – Files, Text, Boxes, Lines, Move, Other & Help – appear in a menu bar across the top of the screen. These are summoned by Alt + the initial letter of the menu. Each main menu option leads to a more detailed submenu. Options shown therein are selected by moving the cursor to the desired action & hitting the enter/return key or by typing a keystroke. In general the keystrokes are well thought out & easy to remember. For example, to center text the command is Alt J (justify) then C (center). Once commands are learned you can ignore the menus & just use commands. Along

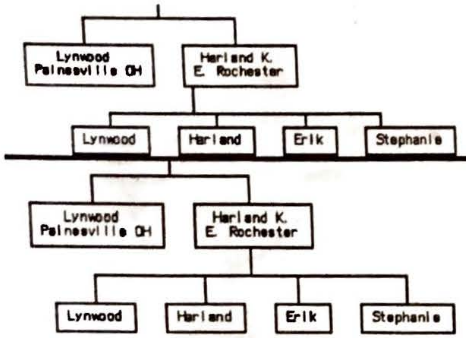
the bottom of the screen is a ruler which also shows the horizontal location of the cursor. This is very helpful because some charts are several screens wide. It would be very nice if there were a similar vertical ruler. Also at the bottom of the screen are an instructional message line which explains the active command & an status/error bar. Normally the status lines shows: the active file, whether any special program mode (line drawing or erasing, moving, or finishing touch) is has been turned on, the currently selected line & box border styles (single, double, or dashed lines), & the row & column position of the cursor. If an error is made, a message replaces the status line. It explains the error & how to remedy it. That done, the status line again appears.

The overall procedure for creating a chart is simple.

<> 1. Begin by typing the desired text & then place it in a box. The box can be drawn with a single keystroke. If possible, do all the boxes on one horizontal level before moving down the page. This is made easy because the cursor automatically jumps over a reasonable space to begin another box (or you can move it where you want). No elaborate preplanning is required but it is smart to give a some thought as to where to begin on the page. Charts generally tend to get wider as they expand downward. If you start working in the upper left hand corner, things are going to get very cramped later on & you'll have to move things to make room. Moving is reasonably easy to do because of the way CL is designed, but chart drawing goes a whole lot faster if you don't have to rearrange everything halfway through. Compulsive box spacing during the original layout is not required because the program will do that when all the elements are in place.

<> 2. Next, connect the boxes with lines so as to show their relationship to one another. Again, you don't need to center lines on boxes or place boxes under each other. That's CL's job.

<> 3. Use the automatic "finishing touch" feature to: a. justify text within boxes; b. center lines connected to boxes; c. center groups of boxes under other boxes (e.g. to center all the department manager's boxes under their immediate boss or children's boxes under their parents); d. space boxes evenly side-to-side; & e. evenly space horizontal lines. These actions are performed according to selections made in a setup box. This a is dandy feature which saves a LOT of time & grief when you are doing the rough layout of the chart. The illustrations below show the appearance of a portion of my chart before & after automatic cleanup.

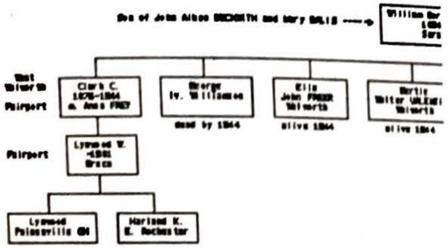


Finishing touch isn't always perfect, but it's very, very good! Once CL has done it's magic, inspect the chart & accept or reject the "revision." If the new arrangement isn't satisfactory, simply change the setup & try again. Depending upon the uniqueness of the chart, a few final adjustments may need to be made by hand. Be sure to save the chart at this point before proceeding. You don't want to lose it in case something goes wrong during printing!

<> 4. Enter titles and/or the date if desired & place them on the finished chart. The options are top or bottom of the page & left, right or centered. Then you are ready to print.

<> 5. Printing involves three steps: a. defining the page layout including paper size, orientation (horizontal or vertical), & margins; b. setting up the printer by indicating printer type & port, whether "cut & paste" printing is desired (see below), & whether paper changing is necessary; & c. previewing the chart to see if layout, headings, margins, & paper edges are as desired. At this point the chart should be stored again to preserve the headings & printing format. If everything is perfect then the chart is printed.

KUDOS AND CAT CALLS I was generally very pleased with CL. I read almost none of the manual & then successfully completed a rather complicated 3 generation family chart with multiple marriages for several family members & children by each marriage. There were about 45 individuals involved & it took about 75-90 minutes to get it to a printed form. It would have gone a lot faster had I read the manual & made a rough plan of the family before starting. Instead I sort of made it up as I went along. It would have been a nightmare to draw this chart by hand or construct it with a word processor. I'd have never even attempted it without CL! My next chart was for a real family & it went much more smoothly. As the illustration below shows, I was able to show the relationship between several people & add notes wherever I wished. It caould have been a lot more complicated, but I just wanted to give you an idea. This is just part of the chart. It was 180 spaces wide. ***(you might need a magnifying glass!)***



I did have a few problems with CL but they were mostly of my own doing. For example, I kept wanting to insert new boxes in the middle of a row of boxes much like one inserts a word in a sentence. However, CL kept telling me there was something in the way. I found that frustrating because it LOOKED like there was plenty of room to me. However, that indiscretion taught me a lot about moving chart components. Once I made a little more room, there was no problem doing what I wanted. However, I could have avoided all this annoyance had I followed the manual's advice to add all the boxes at a given horizontal level in sequence.

Figuring out the "rules" for what can & cannot be readily moved also took a little time. For example, to move a box the cursor must be inside the box, but to move a group of connected boxes the cursor must be on a straight vertical line above the box or group or group of boxes. Also, what I thought was a "connected" group didn't always agree with CL's definition. For example, I made a hanging shelf under one parent with several children dangling from it. I could only move the shelf with all the attached children IF I had drawn all the connecting lines in a single operation. Little things like this can make you crazy until you figure out the (in this case) unwritten laws of the move command. However, these are minor annoyances which vanish with experience.

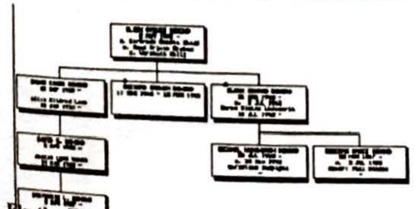
CL's biggest flaw, in my opinion, is the inability to preview the finished chart in miniature on screen as can be done with the Form-Tool PrintVision utility (see previous review). This means you cannot see the whole chart at once before printing unless it fits on a

single 80 x 25 line screen. Previewing by moving through several screens is VERY inconvenient. Besides, I wanted to "capture" the image of the finished chart as an illustration for this review. As I pointed out earlier it would do no good to print the chart to a file & then view it with a word processor page preview. All the nice boxes & connecting lines will be replaced by letters because the graphics characters which make up the lines & boxes are only sent to the printer & not to the ASCII file. I used the regular version of PrintVision (see previous review) to get the image above. Because the chart was 180 spaces wide, I was only able to show half. CL required 6 screens to view the whole chart.

Some other things also ruffled my fur a bit. For example, when a large chart is printed, it must be done in sections & then cut & pasted. Alignment of the various parts is facilitated by a small + on each page & duplication of one column of text. These features are supposed to make it easy to match things up, but I still could not get adjoining pages to align perfectly. I don't know if this is the case with all printers, but I was not happy with what I got on my high speed dot matrix printer. It did not improve when I switched to slow speed high quality printing either. It wasn't bad, mind you, but I'm compulsive about such things. I also managed to lock up the program once when I tried to abort printing despite the fact that it was supposed to be possible. This would not be so swell if the chart had not been stored as the directions advise. Finally, one has the impression that the program can print a chart vertically (portrait) or horizontally (landscape). That's only partially true. In order to do this, the paper must be placed sideways in the printer. One solution to printing wide charts in a narrow carriage printer & to the matching problem mentioned above is to use a sideways printing program. This can be done BUT the printing program MUST be able to print text files containing graphics characters.

LAST WORDS... It would be nice if CL provided its own sideways utility. It & a special CL version of the PrintVision would be dynamite additions. For such wonderfulness, I'd be willing to cough up more money for the program because it is otherwise very quick & easy to use. I hope CORPORATE LADDER considers these suggestions & makes viewing & printing charts a little easier. Then in my book CORPORATE LADDER would be a must have for those who have a need for charts. Finally, & this is not a criticism -- although involved family box & line charts can be done & done well with CL, this type of operation chart would probably be best done by a program designed for this purpose. The reason is that genealogy charts are generally organized in a specific way & contain standard facts. CL excels at charts & diagrams which are unique & that is what it should be used for.

GENEALOGICAL ASIDE In my opinion, among the very best programs for making genealogy box charts is BKBOX. This utility is part of the excellent Brother's Keeper genealogy program (Shareware, $40; available from John Steed, 6907 Childsdale Rd., Rockford, MI 49341]. The chart below took me about one minute to set up & it's a very simple example. All I did was put my data into gedcom format, import the file into Brother's keeper, & then run BKBOX & tell the program which person to print a chart for. It does all the rest -- & very fast (except for printing). The program can do up to six generations with up to 200 boxes in a generation. WOW!!! It also does dandy wall-sized tree charts. Run, don't walk



to the post office to send for this one folks. Blox Publishing, 855 SW 37th Avenue, Suite 765, Coral Gables, FL 33134 800-888-2562/305-445-0903, Retail $79.95,Both 3 & 5 disk included, not copy protected

CO-OP

See the previous LifeBoat issue for our Co-Op offerings. Since we have not made any major changes, (we have run out of paper, which we will NOT restock) we will save a little space.

MICROFRAM(TM)ing

by Richard Shoemaker

I have MORE copy for this column than is likely to fit in the this or even the next available issue. For that reason, I hope the readers will treat MicroFraming(TM) as a continuing serial. If, & when, NEUG achieves the 4,000 membership goal, we will be able to publish monthly! I personally hope you think enough of the benefits of NEUG membership to recruit at least ONE new member!?

Pointing Devices I have a fascination for input & pointing devices. Maybe it is because Ventura & Windows are ideal environments for elegant accessories. But I have a large disadvantages. I am basically clumsy. My penmanship is qualifies me to be a superlative physician. & I like to put input devices on my lap, with the foot rest up on my Lazy Boy office chair fully extended. I prefer to be 4-7 feet away from my monitors.

This means I have to have extraordinary input devices. I need extra long cords (tails). And I will not be using the device in the optimum conditions. Often my work surface is my lap.

The CH RollerMouse (CH Products, 970 Park Center Drive, Vista, CA 92083 619/598-2518) is nearly square, but its base is tilted up in an attempt to replicate the angle of most keyboard with their feet fully extended. It comes with drivers to emulate either the MicroSoft Mouse or Mouse Systems. The documentation is reasonably well presented; meaning it is understandable. Installation is a snap. You should be up & running in 5 minutes or less.

The RollerMouse offers a 1-1/2" trackball, & 4 control buttons. The buttons can be configured or left or right handed users using a set of dip switches on the bottom. You can also configure for speed (100-400 CPI). It does not seem to have a ballistic feature (the faster you move it, the more it accelerates).

CH bundles the standard Menu program. You can easily implement mouse-type menus for DOS, 1-2-3, Word Perfect 4.2/5.0 dBase, or create your own with the supplied Compile program.

Remember when the test for IBM PC compatibility was the ability to run Flight Simulator? For the pointing device arena, the Windows 3.0 Solitaire game seems to be the ideal way test how comfortable & functional a product is. The RollerMouse performed flawlessly. In the configuration I tested, the left front button locks & drags, while the left rear button acts like the normal left mouse button. Users can change the configuration to suit their needs. I did have some difficulty using the RollerMouse in my lap. I found the trackball would act erratically if the RollerMouse was tilted one way or another. Upon examination, I discovered the ball is not tightly mounted, but has some play in it. If you are more conventional than I, & will keep the device on a level table top, then this problem will not occur.

I had another problem, but CH Products can't take all of the blame. The designers of Epson computers basically realize the illogic of plugging keyboards into the back of the CPU case. This makes sense. It would also make sense to have mouse ports, & at least one serial port on the front, or at least on the side of the CPU! It takes a good portion of the RollerMouse's tail to reach all

the way around front he rear of the CPU case. The problem was solved by adding a serial cable, but this should not have been necessary. Until CPU designers realize the moronic design of putting all computer ports on the backside of computers, I need an extra long cable!

While I am on the subject of the IDEAL: The best kind of trackball actually should not be a strictly horizontal device. I would prefer one that sat on its side, or at an 45° angle. This would relieve some of the corporeal stress all keyboarders experience by rotating their hands to the unnatural horizontal position. And the ideal pointing device should have some mounting method, so it would attach to the chair arm, keyboard, monitor or CPU. Otherwise, it will tend to get lost or buried in the users workspace by the many papers found in today's '*paperless*' office. Naturally, it should be wireless!

I found the RollerMouse more than acceptable for the average user. The ball itself had enough weight to all the user to 'throw the cursor' to the other side of the screen. The user has ability to set the CPI by hardware switches, or by using software commands. Better yet, CH Products has designed it with sufficient space to allow the user to rest the heel of his hand, without entering erratic undesired movements.

When I request a review product, I do not tell the manufacturer about all of the tests! One of these test is to deliberately drop it from a desktop to the (carpeted) floor 25-30 times. I also walk on it lightly a few times. You might laugh, but these are the kinds of things that will happen in real like. Members with children, please note, the RollerMouse survived!

The MousePen (IMCS, 1332 Vendels Circle, Paso Roblews, CA 93446 (806) 239-8976) would have failed half of the above physical testing. It is a very lightweight pen-like item. It cannot take much physical punishment. But, IMCS has allowed for this. If the MousePen fails for *any* reason during the first year, it will be replaced free. After that time, a replacement is only $20!. In effect, they are including a lifetime warranty.

The MousePen is my personal favorite. It allows me to use a pointing device in a manner I have used all of my life. I seem to have more finite control with my writing fingers, than my clumbsy hand which most of the other devices seem to involve. Of the trackballs I have used, only the LogicTech (which manuvers well with only a thumb) appraoches the level of control I have with a MousePen.

IMCS bundles the TelePaint program, & offers all of the standard drivers & mouse menu functions. As I have stated previously, the MOusePen is not the ideal device, but it comes closer to what I need for the way I work than any other, followed closely by the Agiller MousePad. It even has an extra long tail.

Choosing a pointing device is a personal decision. Dr. Gregg reviewed two trakballs, & a conventional mouse; choosing the conventional mouse. I have used the Mouse Systems & MicroSoft Mouse for years, & after trying many, have found I can live with most of them. The MousePen is my personal favorite with the MousePad & RollerBall next in line.

One important comment. Since NEUG decided to do an exhaustive review of pointing devices, we wrote a desktop published letter to EVERY mouse or track ball manufacturer we could find an address for. The only exception was MicroSoft, who had recently sent us Windows. We didn't want to seem greedy. To date, Agiler, Kensington, Logitech, IMCS (mousepen), Keytronic & CH Products have responded. In my opinion, those who value their product & the user community enough to expose their products to amateur reviewers also will probably value supporting individuals users remarkably better than those who have NOT responded! At least, the companies who did submit review items are trying harder! We believe members might be better served to consider this when they are making their own buying decisions!

One entry into the pointing device market has intrigued me. Dr. Chris Gregg declined to review it, but I have found it to be both a delightful & extremely useful tool. Its called the WIZ, from CalComp, 2411 W. La Palma Ave., Anaheim, CA 92801. What makes it unique is that it is an intelligent device, without any moving parts. This also makes it am $199 retail product, but this includes a 5-year warranty!

WIZ is composed of 2-3 main components. The mouse pad is intelligent, & works with a standard mouse-like device which has cross haris. An optional pen device can be purchased to be used in place of the mouse. I believe the pen would add even more function to the WIZ in drawing or CAD applications, but unfortunately, one was not requested or received with the review unit.

The WIZ is not ballistic. This means the distance it is moved is directly proportional to the distance the on-screen cursor is moved, regardless of how fast or slowly it is moved. Gregg did not like the WIZ because it was too sensitive, with a 1,000 dpi (dots per inch) rating. I like that kind of control, but have to caution that users who have 'shaky' hands should choose a pointing device with a much lower (less than 300) dpi rating.

What makes this product unique, & for many a desirable choice is its ability to use templates which are custom designed for specific software programs. WIZ comes with a DOS & Windows template, & by registering your purchase, you can obtain one additional free template, say for Ventura, PageMaker or AutoCAD. Many other templates are available. Each tempplate allows the user to place the cross hairs over a software command printed on the template to start that particular command. In other words, it brings the GUI interface one step higher on the evolutionary scale.

Compounding its usefulness, the WIZ has three mouse buttons, but each button can command two different commands, which the user can customize to their personal way of working. You can also write macros into the templates, thus expanding the personalization of the user's individual methods.

WIZ can be installed three ways. As a serial device, a bus device using your existing PS/2 compatible mouse port, or as a self powered serial device.

WIZ is compatible with any software that uses the MicroSoft Mouse standards. However, as of this writing, I was not able to tell you about how well it works with Windows 3.0. The unit was shipped to us with the older Windows drivers. I hope to have more on the WIZ in a future issue, when I have the Win 3.0 template and perhaps a few others.

There are some drawbacks in CalComp's WIZ product design. You lose about 32K of RAM, which is about 4 times more than the more common pointing devices. And the sensitivity does preclude the user with infirm hands. Perhaps the largest drawback is the desire of CalComp to make a few extra bucks by selling the user templates. You do get 3 free, but most poeple will want at least twice as many.

The performance of the WIZ is excellent in all graphics applications, like desktop publishing, drawing & Windows. Using the cross hairs, it should be possible to do extremely accurate tracing or drawing, if you use a paint program. Even without the Ventura Template, this issue was compiled completely with the WIZ on our 19" dual-page monitor. We installed it as a simple MicroSoft compatible mouse.

The WIZ is certainly a top-of-the-line product, & anyone heavily invested in graphics should run, not walk, to a local dealer to take a test drive. Some may find its sensitivity is too difficult to adjust to, but I feel most will become acclimated. It is probably even more desirable for the user with the 17" or larger monitor. The WIZ is one of those products you will either love or hate. I have fallen in love! I can't wait to get the Windows 3.0 template!

> This issue was somewhat delayed by the Crisis, sorry. Let's fly the Flag to show our support!