

# PRinT SCreen

*The Newsletter for the  
Stanford/Palo Alto Users'  
Group for the IBM PC*

February 1989

Volume 7, Number 2

## **C:\> CHKDSK ↵**

33449984 bytes total disk space  
135168 bytes in 54 directories  
23375872 bytes in 1533 user files  
9938944 bytes available on disk

Would you  
like your  
computer to  
read like  
this?

720896 bytes total memory  
665520 bytes free

***See Page 5***

**THIS  
MONTH**

The Speaker: Jim Dinkey ..... page 3  
Disk of the Month: Recall ..... page 3  
The Altman Auction ..... page 3  
Unraveling the Memory Mystery ... page 8



# CLUB NEWS

## January Meeting

Charles Pack, Director of Computer Operations for the American Association of Individual Investors, demonstrated one of his investment programs at the January general meeting. The Personal Portfolio Analyzer is specifically intended for use by the *individual* investor, not stock brokers or associations. It allows you to keep track of stocks, bonds, CDs, Notes Receivable, T-Bills, precious metals, puts, calls. One of the few investments it does not track is real estate.

The Personal Portfolio Analyzer keeps a list of all your transactions, similar to an inventory. Each portfolio can contain up to 255 transactions; a transaction consists of the purchase, sale, and any dividends of any one investment.

A variety of reports are available. A few of the reports he showed us were

Income Analysis, Gain/Loss on Sale, Market Value Analysis.

He offered a free copy of the program's new version to serious beta-testers. After April 1, Personal Portfolio Analyzer will be a user-supported product with a suggested fee of \$25.

Unfortunately, time ran out and Charles was unable to show us his other program, a stock charting system.

## Modem Deal

One modem is still available from the club's group purchases a few months ago. The external 2400-baud EasyData modem can be purchased for \$101. Call Richard Orser at (408) 425-0474.

## Elections

Elections for club officers are coming up in April. The elected positions are: President, Vice-President, and Treasurer.

## February-March Calendar

Feb. 22	Group Meeting	7:30	<b>Next Meeting</b>
Mar. 15	Planning Meeting	8:00	<b>Date:</b> Wednesday, Feb. 22
Mar. 13	Microsoft Word SIG	7:30	<b>Time:</b> 7:30 p.m.
Mar. 14	Novice SIG	7:30	<b>Place:</b> Polya Hall, Turing
Mar. 29	Group Meeting	8:00	Auditorium (Rm. 111)
			Stanford University

*All members are welcome to attend the monthly planning meeting, where we make decisions on the future of the group. Call Beverly Altman, 329-8252, for the location of the next meeting.*



The Treasurer must be a full-time student at Stanford University.

Nominations will be taken at the February 22nd meeting, or you can mail your nominations before March 15th to:

David Casto  
1994 Valparaiso  
Menlo Park, CA 94025

Nominations may also be made during the March general meeting, at which time the slate of nominees will be formalized. The actual election will be by

written ballot, mailed beforehand or executed at the April general meeting.

### ***Membership Renewals***

For the two months preceding the expiration of your membership you will find a renewal envelope enclosed in your newsletter. Use this envelope to promptly send in your \$25 check (\$10 for students) so that you won't miss an issue of the monthly newsletter. A current membership card will then be sent to you in the next *PrtSc.* ¶

## **DIR C:\February**

The main speaker at the February 22 meeting will be one of our members, Jim Dinkey. Jim, a professional engineer, will give a non-technical overview of common problems with personal-computer power systems. With the aid of slides, he'll discuss the ins and outs of grounding, and the many practical ways personal and business computer systems can be protected from line surges, noise, and even those dreaded PG&E stormy-weather interruptions.

*Don't forget the new meeting time is 7:30 pm!*

### ***The Altman Auction Returns to Action***

Rick Altman will be holding another software auction, and if the first one is any indication, incredible deals will be had by all who participate. Much of the software is still in shrink-wrap condition, and ALL the software being auctioned has original diskettes and

complete documentation. Among the programs on the auction block are:

A professional drawing program  
Screen capture programs  
Lotus 1-2-3 add-in word processor  
Memory managers  
Word Perfect 4.2  
Borland Sprint  
Lotus Manuscript  
Menu programs  
Disk and File utilities

And lot's more. Bring your check-book.

### ***Disk of the Month***

The Disk of the Month will be RECALL, a DOS utility which allows you to look back at data (commands and their results) that has scrolled off the screen. You can set the size of the buffer RECALL uses to store scrolled-off data.

The program will be demonstrated and copies will be available for \$1 each or use your "goodie coupon."



# PRTSC POTPOURRI

## *Printer Repairs*

*by Mike Slay*

*Marin/Sonoma PCUG, September 1988*

Printers break more than any other PC hardware (with the possible exception of some brands of hard disks). Fortunately, most printer failures can be fixed without a trip to the shop. The key is understanding what the printer is trying to do and then imagining what is stopping it. I can't give you step-by-step procedures for every possible fix, but I can tell you how to look for problems.

Most problems will be due to either the cable or the ribbon. The fixes for both of these are generally inexpensive. Another common problem is incorrectly loaded paper, especially with Epsoms, and the fix for this is free. There are even a few tricks and adjustments you can try if the problem is more serious. All told, you can probably fix about 90% of the things that go wrong with printers.

I never cease to be amazed at the things that can be caused by a bad or loose cable. For example, I have seen a loose cable cause a printer to not always advance the paper, while still printing all characters correctly. (this is theoretically ridiculous.) In any case, if your printer is misbehaving, check your cable connection.

Even if the cable is securely connected, it may still be the problem. Frequently, cables are smashed up against

*see page 10*

## SPARC NEWS

### *Use SPARC and Win*

A puzzle to gauge your mental flexibility and creativity was placed on the bulletin board for all members to download. The person who solved the most answers in the shortest amount of time will win a prize at this month's meeting.

### *Message Overload*

Those who tried to leave messages on SPARC in the last couple of weeks were unable to do so because the message database was full. This situation will be rectified in the near future. (It cannot be fixed remotely; the Sys Op must go to the computer on campus to permanently remove deleted messages in order to open up space for new messages.)

### *SPARC Info*

The bulletin board (SPARC) is available 24 hours/day, 7 days a week. The number is 723-7995. Use the following communication settings: 300, 1200, or 2400 baud; no parity; 8 bits; and 1 stop bit.

If you are having a problem logging onto SPARC, call one of the Sys Ops. The System Operators are:

Ralph Muraca 365-1659

Beverly Altman 329-8252

To leave a message for the Sys Op, use the [C]omment command on the main menu. ¶



# DISCOVERIES

## 20k of RAM?

by Rick Altman

Last column, I shared with you my experiences turning my AT computer into a 386. I decided to replace the entire motherboard, opting against buying a complete computer or inserting an add-on 386 card. Replacing just the motherboard was cheaper than purchasing an entire computer, yet much more complete of a solution than merely adding a card. An add-on card would have given me the speed enhancements, but not the memory enhancements, which, in my opinion, are the more significant benefits to moving up to the 386 class. I concluded

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*Desqview discovered that I wasn't using the memory space reserved for an EGA card, so it handed that memory over to DOS to be used as conventional memory — hence the 720k of available memory.*

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my last column with a CHKDSK report. Here it is again:

33449984 bytes total disk space  
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23375872 bytes in 1533 user files  
9938944 bytes available on disk

720896 bytes total memory  
665520 bytes free

I'm not using any mirrors — I have 720k of memory available to run DOS applications, and by the time I finish with lengthy CONFIG and AUTOEXEC routines, I still have over 665k of RAM to play with.

Last column I shared with you how I turned my AT into a 386. This column I'll tell you why. Sure, a 386 is very fast — but its real value lies in the software that has been written to take advantage of the 80386 architecture. This issue I look at Desqview 386 and next issue I will look at Windows 386 and compare the two.

### *An Extra 80k for DOS*

Some of the most significant software being produced today is from Quarterdeck Office Systems, the company that made "multi-tasking" a viable concept with its program Desqview. I wrote about Desqview last year, but with the new Desqview 386, the product deserves another look.

Clearly, the sexiest feature of Desqview 386 is the device driver QEMM.SYS, a versatile memory

*see next page*



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## 720k of RAM

*from previous page*

manager that loads in CONFIG.SYS. QEMM replaces your current expanded memory software (if you have one) and acts as watchdog for all the memory you have above 640k. For instance, in my Hercules system, QEMM discovered that I wasn't using the memory space reserved for an EGA card, so it reallocated that memory and gave it to DOS to be used as conventional memory — hence the 720k of available memory that CHKDSK finds and DOS uses. If I were using an EGA or VGA card, I would have less available memory than 720k, but regardless, QEMM sniffs out any memory that is not being used below 1 Mb and hands it over to DOS. It does this automatically — you don't do a thing...except gleefully use DOS to its full potential (is that an oxymoron?)

The initial thrill lasted about three days for me. Then a strange feeling set in: Over the years, I have become so adept at conserving memory and suddenly it hardly matters. I now have all the memory I

need, and must find new challenges to fill this void. I don't need to bother with elaborate schemes to purge memory of TSRs. I don't need to worry about running programs in their leanest possible configuration. I can run Ventura Publisher with the top down and several megabytes of screen fonts loaded; I can run Lotus 1-2-3 in front of a cache, a spooler, a macro program and Sidekick. Maybe this is how lottery winners feel...

### *An Extra ?? Megabytes for You*

This is all fine and well, but it is still not the primary reason that I moved up-town. Desqview's central theme is not more memory, it's multi-windowing: the ability to keep more programs loaded than will actually fit in the conventional 640k (or 720k) of RAM. It can do this on a plain old XT, by freezing a program in its tracks and moving its code out to a hard disk or a RAM disk. But on a 386 with memory above 1 Mb, the results are truly impressive.

Essentially, Desqview allocates everything it possibly can to high memory (even your device drivers and TSRs) and creates the widest possible

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*I no longer have to bother with elaborate schemes to purge memory of TSRs. I can run Ventura Publisher with several megabytes of screen fonts loaded; I can run Lotus 1-2-3 in front of a cache, a spooler, a macro program and Sidekick.*

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space for DOS. On my system, it is about 637k. This is quite a feat, because Desqview needs about 128k for itself, but on a 386, it is able to load much of its own code into high memory.

The QEMM driver automatically converts all of your high memory into super-octane EMS 4.0 memory, regardless of how plain your memory board is. I bought a \$100 Everex board instead of the much more expensive Intel Above Board because I knew that QEMM would be able to convert the memory in the most efficient manner possible.

Am I losing some of you? Get used to it—the Desqview manual will lose many of you also. The punch line is that I can open up and keep active as many 637k windows as will fit in the space I have available in all of my memory AND on my hard drive. The more high memory I have, the better, as Desqview can swap one program out to high memory and bring in another in less than 1 of a second. If memory is used up and Desqview has to swap code out to disk, it is slower but still better than nothing, because when you bring a program back from suspended animation, it is in the precise 73 condition in which you left it.

### **Who Benefits?**

If you write small programs in BASIC, you can stay with a 64k IBM PC, but if you need to have ready access to more than one program at a time, Desqview is a very valuable tool. Here is a typical Desqview scenario:

1. I need to do some number crunching and then document the results in the form of an official memo. I open up two Desqview windows, one for Lotus 1-2-3

and one for my word processor. I calculate a result in 1-2-3, grab the data, jump instantly into my word processor and paste the numbers in. Then I realize that I made my columns a bit too wide. No problem—I jump back to Lotus, adjust, fly back into my word processor and I'm done. Then I open a third window for telecommunications, call a remote bulletin board and deliver the memo.

I apologize if this sounds like a Wang commercial. Here's another:

2. Desqview proved invaluable to me as I wrote my book on Ventura Publisher. I needed to have Ventura close by as I developed the text, but I didn't want to have to resort to writing in Ventura's Text mode. With Desqview, I was able to build documents and explore strategies in Ventura and simultaneously write about them in my word processor. With Desqview's built-in macros, I was able to switch between programs with two keystrokes.

As I developed the manuscript, I used four windows: One for Ventura Professional, one for Ventura Standard, one for word processing and one for DOS. Granted this took a hefty chunk of memory—four megabytes worth—but if you subscribe to the adage that time equals money, then it is eminently worth it.

And *that's* why I bought a 386 motherboard. ¶

*Next issue, Windows 386.*

Desqview 386

Quarterdeck Office Systems

150 Pico Blvd. Santa Monica, CA 90405

(213) 392-9701

\$149.95



# Features

## Unraveling Expanded And Extended Memory

by Jim Hoisington,  
Marin/Sonoma PCUG

A lot of people are confused about the difference between expanded and extended memory. I'll try to explain the difference and give some advice on which you need.

Extended memory can only exist on machines with the 80286 or 80386 processor. The original IBM PC will never have extended memory because the 8088 processor can't use it.

Extended memory is just more memory above the 1 MB limit. Since the 80286 can address up to 16 MB of memory in protected mode (the 80386 can address even more), programs which run in protected mode will want to use some of the space.

Until recently, most software ran the 80286 and 80386 processor in "real" mode. However, OS/2 runs in protected mode. The prophets are

predicting that OS/2 users will need between 4 and 8 MB of memory for their software by the end of 1989. And that additional memory will be extended memory.

Expanded memory was originally invented to help the 8088 PCs use more memory than they were capable of addressing. This same system also works on the 80286 and 80386 processors when they are running in "real" mode.

Expanded memory creates one or more windows below the 640K limit on the PC. The software can then put data into a window and tell the expanded memory board to store it in a "page." When it wants the data back, it tells the expanded memory board to fetch the page and put it back into the window where the 8088 processor can use it. The number of pages is determined by the amount of memory on the expanded memory board.

By shuffling data in and out of these windows,



the program can keep more information in the computer than will fit into 640K. It is clumsy, but the alternative is to keep the information in the diskette file. The memory to memory transfer between the windows and the pages are much faster than the same transfers to and from the fastest disk drives.

A problem with expanded memory is that not everybody agreed on the size and the number of the windows. The original design was a joint effort by Lotus, Intel, and Microsoft. In computerese, this became the LIM specification by using the first letter of each designer's corporate name. The expanded memory part got abbreviated to EMS which stands for Expanded Memory Systems.

AST Corporation, which was not a part of the original design, improved upon it and came out with its own standard call EEMS—Enhanced Expanded Memory System.

Last year all the major memory board makers got together and improved the design one last time. This final specification is usually designated LIM 4.0. Boards made to this standard are just coming on the market. However, I am not aware of any software that makes use of these enhancements.

Over the next three years we will probably see software that takes advantage of both expanded and extended memory. After all, there are all those PCs out there with 8088 processors that have no other way to get access to more memory. However, as OS/2 and other "protected" mode operating systems come into common use on the 80286 and 80386 machines, I have to believe that software developers will abandon the page-swapping mode of expanded memory for the "just more memory" mode of extended memory.

Do you need expanded memory? Only if you are going to be running a product like Lotus 1-2-3 which can make use of it. Do you need extended memory? If you have a PC or PC clone, certainly not. If you have a computer with an 80286 or 80386 processor, you will eventually need more memory than 1 MB. Some of us will need it sooner than others.

I am writing this column on my AT clone. It has 1 MB of memory on the mother board. I have added an AST Rampage card with 2 MB. I have divided the memory on the card so that I have 512K of extended memory and 1.5 MB of expanded memory. ¶

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*Expanded memory lives above 1 megabyte, but it travels down to the 640k zone in little windows of 64k. When a program needs some data in expanded memory, it fetches it from above 1 megabyte and deliver it to the application running in the 640k of RAM.*

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## PRinT SCreen Potpourri

*from page 6*

the wall behind a PC until one of the wires breaks. If your printer is behaving erratically, borrow a cable from one that works and see if that fixes it. If it does, buy a new cable. (And try not to pay more than \$15-\$25 for it—cable prices vary widely from vendor to vendor.)

### **Taming MS-DOS**

*Review by Marjorie Lundquist,  
Milwaukee PCUG*

This book is not for the raw novice to whom MS-DOS is a mystery. The author assumes that the reader owns a personal computer, is familiar with the machine and its manual, and can perform the elementary DOS commands. What this book does is to show you, the reader, how to make DOS do the things that you want it to do. It teaches some "tricks" (and some commands) not covered in the manual. In short, it takes you past the stage where you are blindly following the manual, to the point where DOS becomes a tool to accomplish whatever you want to do.

The author assumes that you are already familiar with these commands:

DIR, FORMAT, CD, DISKCOPY, TYPE, ERASE, COPY, RENAME

He focuses on the lesser-known commands. There are lengthy discussions of CONFIG.SYS and ANSI.SYS, for example. Instructions are also given to enable you to "add your own commands" to DOs via batch files (creating macros, as it were). Other topics discussed are the differences between the various versions

of MS-DOS, how to set the BUFFERS for optimum system performance, how to organize directories and subdirectories, how to organize files on the disk, backing up your system and how to recover accidentally erased files.

A series of utilities is provided as well. One is SuperDirectory, which will display hidden and system files; it allows you to see everything that is stored in a directory.

Another utility is Protect, which enables you to ensure that no changes can be made in the future to the file so protected (until you remove the protection). This might be a good way to prevent infection of a file by a virus.

Want to know how much memory your memory resident utilities are taking up before you create a document of file, before you discover—too late—that you don't have enough memory available to save it? You need the RAM utility. It will give you four figures: total installed memory, memory used by the operating system, memory consumed by resident utilities, and the remaining memory available for loading and executing a program.

The utilities discussed in the book can be purchased on disk for an extra \$25. Written in a conversational style, the book is easy to read. The author explains many of the peculiarities of MS-DOS, demystifying both DOS and his own recommendations. This is an excellent book for its intended audience. ¶

### **Taming MS-DOS (2nd Ed.)**

by Thom Hogan  
M&T Publishing  
Redwood City, CA  
\$19.95



# The SPAUG Resource Center

## Club Officers

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President	Ralph Muraca	365-1659
Vice President	Richard Orser	408-425-0474
Treasurer/ASSU Rep	Jared Nedzel	854-2732

## Managers

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Financial Manager	Beverly Altman	329-8252
Newsletter Editor	Becky Bridges	326-8605
Production Editor	Rick Altman	962-9270

## Library

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Public Domain Software	Les Weil	321-5541
Soft Copy	Ralph Muraca	365-1659
	Turley Angle	707-526-4921

## Software

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Desktop Publishing	Rick Altman	962-9270
Accounting-Computer Assoc. Framework	Larry Mehl	326-6037
	Jim Caldwell	692-7181
	Richard Orser	408-425-0474
Lotus 1-2-3	Bruce Codding	367-8642
	Arthur Naman	408-879-9900
Microsoft Word	Jeanie Treichel	851-0100
	Hunter Jackson	408-446-4097
Q & A	Elaine Meyer	325-8057
R:BASE	Jack Kahoun	349-4696
	Tony Pabon	408-866-4815
	Larry Mehl	326-6037
Symphony	Sally See	941-1378

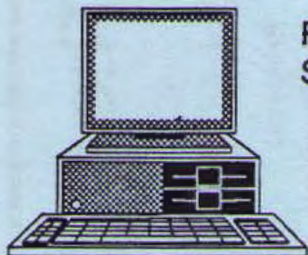
## Languages/Operating Systems

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BASIC	Ralph Muraca	365-1659
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DOS 3.x	Rick Altman	962-9270
Fortran, Pascal	John Watson	325-7632
Hard Disks	Jim Caldwell	692-7181
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Epson Printers	Jim Caldwell	692-7181
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XT/AT Systems	Van Maulis	966-1306



## The Stanford / Palo Alto Users' Group for the IBM PC



P.O. Box 3736,  
Stanford, CA 94309



### Club Information

<b>Membership</b>	Louise Greer Bolitho 322-3850 \$25/year fee (Students \$10)
<b>Bulletin Board Newsletter</b>	723-7995 Becky Bridges 326-8605 P.O. Box 982 Palo Alto, CA 94302

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