PRinT SCreen

The Newsletter of Stanford/Palo Alto PC Users Group

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C·O·N·T·E·N·T·S

THE OCTOBER PRESENTATION

Last Wednesday: October 30th, 7.30pm at Turing Auditorium

COMMUNICATIONS AND FINANCE

This month come meet **PRACTICAL PERIPHERALS**, the company who so graciously donated a modem to SPAUG's bulletin board! Mike Todd will demonstrate Practical's wares, and show us why they've been rated so highly by the various PC magazines.

Our other special guest is Greg Marek from **INTUIT**, here to show us the two latest versions of **Quicken**. The newest **Quicken for DOS**, and also **Quicken for Windows** were released just at the end of September.

The President's Piece

The planning committee met this month with a serious item on the agenda. Due to many factors, the club is experiencing financial problems. Most of our costs have increased, including rent and the newsletter. The bulletin board has cost us more than we thought and the number of members has not increased significantly. We're considering a lot of options to correct the situation, including a change in membership fees, membership nights and auctions. We'll be discussing this at future meetings.

We're also considering again the idea of finding a new place to meet. Since we're in the middle of Silicon Valley it makes sense that there must be other halls available for our use. How about where you work? Contact Bob Bottini with your leads. Of course we need a place that's available at no charge and is equipped for the sort of presentations that we do. It would be great to have a space that we could use for both our general meetings and our SIG meetings.

Cagney France has been bringing his shareware disks to our meetings for the last few months as an experiment to see if it would be beneficial for both of us. It's certainly been beneficial for those of us that have bought from him. The rub is that there have not been enough of us buying disks to make it worth Cagney's investment in time. So, it appears that this month might be his last. It would be great to have him here on a regular basis; but, it takes our support. If you haven't done so yet, take a few minutes to peruse his selection and pick up a few disks. The holiday season is coming up very soon, you can get your shopping done early this year.

HELP! The club has a need for someone to enter data in a database and produce a few simple reports. We're still collecting and compiling the data from the surveys we passed out and need someone with a little time to put it into a package for us. I estimate that it would take about 1 - 2 hours to enter the data, and from there we could decide what to do for the reports.

MEMBER OF THE MONTH

October's Member of the Month is jointly awarded to Rick and Beverly Altman. Thanks to Rick's donations of software and books, and Beverly's enormous efforts at organizing a fundraising drive at last month's Summer Sidewalk Fair, over $500 was raised for SPAUG! We all want to give a huge THANK YOU for their time and generosity!

YOUR CLUB NEEDS YOU

BE AN ACTIVE SUPPORTER

TELL US A STORY

Why did you buy your computer? What's your favorite program? And why? When was the last time you felt like throwing the damn thing through the nearest window? Why? Everybody's got a story to tell. So, tell us yours and we'll print it here. How about your computer wish list? What about that free software you won? Did it do what it claimed it could? We need fresh input from some fresh voices. It doesn't have to be fancy or long, just real. Tell us your story.

THE BBS IN PRINT

BOB BOTTINI

Bob is the BBS Sysop

(415) 321-4497

THE NEW BULLETIN BOARD NUMBER

Praise be!!!   The BBS is up and running.

I AM MOST PLEASED for you, our members. It has been a long time in coming for you. We plan to load in a lot of current and relevant files for you. We will archive our old files dating from 1985 to 1987. If there is anything that you need from that era we will be happy to put them on line for you. There is a lot of good news this time around and the best from my point of view is that Henry Hollwedel has agreed to act as Co-Sysop so that I will have some help in developing and expanding our BBS. Between the two of us you can be assured that we will bring you the very best that can be expected in a BBS.

AT THE REQUEST of some of our members here is how to access the new BBS for the first time. 1st you must have a good communications program. We recommend a program called PROCOMM Ver. 2.4.3. If you need a copy of this program we will be pleased to supply it at one of our monthly meetings. The program will be pre configured so that all you do is load it onto your hard drive and you will be ready to go (it can also be set up to run from a floppy drive). PROCOMM will be demonstrated at our November 27th meeting.

YOU MUST USE your communication program to contact the BBS. Once you have contacted the BBS the first thing that you will see on the BBS will be a welcome and then a request for your first name, then it will ask for your last name. If you are a member of the club you will have been pre-registered and the BBS will request your password. If you have not logged on to the BBS as yet, your password will be the last four digits of the phone number that you used in the membership questionnaire (the one you completed when you joined the club). This number could be your business phone or your home phone, etc. Once you have inserted this code you will see our welcome screen - in color if you have a color screen. From here on you will have instructions at the bottom of your screen. Take your time and read them and you'll do just great.

AS FOR HENRY and myself, we plan to spend days and weeks loading files onto the BBS. We also plan Seasonal Surprises. We hope that you will enjoy your new BBS. We must give acknowledge and give thanks to PRACTICAL PERIPHERALS a great company that helped us to acquire one of their superb modems, the PM9600SA V32/42, at a very reasonable cost. Our club, SPAUG, is very appreciative of their making it possible for us to acquire such a great piece of equipment. It is performing magnificently. I can tell you that we have saved quite a lot of money in telephone costs because of its speed as well as its accuracy.

NOTES ON THE FAIR

The Annual Summer Sidewalk Fair turned out to be fun for all and, thanks to many members of the computer community, also helpful to SPAUG's ailing treasury .... so we will probably be incorporating the new fund-raising aspect into our future Sidewalk Fairs. The SPAUG fund-raising table was made possible by the support and cooperation of many generous companies and people. Thanks to Borland, Intuit, Microsoft, Power Up, Printers Inc, Staceys Books, 800 Software, Tony Allen, Jan Altman, Bob Bottini, Jim Dinkey, Cagney France, and Mike Van Waas for making it all possible. A special thanks to Rick Altman, who donated 20 software programs and books to the club and that gave rise to the whole idea of a fund-raiser. (Rick, if you promise to do the same thing next year, I'll put this little thank you message into a macro and have it all ready to use again. Agreed?).

PLANNING MEETING

November 5th (1st Tuesday) at 7:30pm
The location
1670 Oak Avenue, Menlo Park

Help us to make decisions about the club. All members are welcome. You don't have to be a club officer to get your views heard.

*T*he SPAUG fund-raising table at the Sidewalk Fair was a big help to our treasury, but we still can use some more help! Consequently, we decided to continue the sale of the remainder of the software and books through PrinT SCreen. The following is a list of what is still available, with an additional 20% taken off of the very low Sidewalk Fair prices. Since it is too cumbersome to bring all of these items to each meeting, you may order what you want from Beverly Altman, (415) 329-8252, and it will be brought to the meeting, or you can arrange to pick it up.

CATEGORY	ITEM	DESCRIPTION	SPAUG PRICE	STORE PRICE*
Software	RESOURCE WORKSHOP	A designing and compiling resource for applications running under Microsoft Windows, 3.0	20.00	99.00
Software	ADDRESS BOOK PLUS, 3.0 by POWER UP!	Prints address books, mailing labels, envelopes, with a built-in dialer and proportional laser fonts	8.00	49.00
Software	PC TOOLS DELUXE Version 6	Data Recovery, Hard disk backup, Dos Shell, Desktop Manager	40.00	129.99
Software	THE MAXIMIZER 2.1 (With Maxmerge)	Contact Management Software INFO WORLD: "Best in its class". Classifies, sorts, searches, tracks history, writes letters, stores info.	10.00	30.00
Software	MULTIMATE 4.0	Latest version of Ashton-Tate's top level word processing software	40.00	249.99
Software	MOVE'EM	A program loader; expands memory to give full use of 640KB; supports XMS for additional memory	12.00	39.00
Software	MORE WINDOWS version 3	A Windows utility that adds 300% more screen area!	8.00	29.00
Software	QUATTRO PRO 2.0	The popular Borland spreadsheet program	40.00	99.00
Disk	THE WORLD OF OBJECTS with Philippe Kahn	An explanation of object-oriented programming. (OOP)	5.00	25.00
Book	EXCEL 3 MADE EASY Martin Matthews (1991)	A step-by-step guide to using Excel 3 under windows	8.00	19.95
Book	MICROCOMPUTER EXPERIMENTATION WITH THE IBM PC	Experimental training for scientists or engineers with emphasis on controller design and interfacing.	10.00	31.95
Book	STEPPING UP TO DR DOS 5.0 (1991)	Learning Digital Research's DR-DOS in a hurry	7.00	14.95
Book	HANDS-ON VENTURA C.J. Wallia (1989)	2.0 A Self-Teaching Guide and Reference Manual	8.00	26.00
Book	CLIPPER 5	A developer's guide to "The ultimate dBase compiler". (with disk) (1300 pages!)	15.00	44.95
Game	DIE HARD by ActiVision		8.00	25.00
Game	PIPE DREAM by Lucasfilm		8.00	25.00
Game	ESCAPE FROM HELL by Electronic Arts		8.00	25.00

* *The current discount price - where available.*

AUTOMATION 1A

QUESTION

I have written a Lotus 1-2-3 application with a high degree of automation and would like to market it. Ironically, though, I can't find a good way to automate its startup. I use hundreds of Lotus macros in the program, but they won't help me until I'm actually in Lotus. How do I get the user into Lotus and into my application faithfully?

What DOS commands do I need to know? Help!!

ANSWER

DOS can help in many ways—you need to decide if you want your application to start up totally clean and professional, or if it is okay to show a seam or two. The challenge is to accommodate the fact that your customers will be using their computers in entirely different ways before starting up your application.

Let's say that your application is a program that analyzes possible real estate ventures and you have named the program PAYDIRT. Assuming that you're using version 2.01 and a fixed disk, first create a subdirectory in your customer's computer called PAYDIRT and copy the six 1-2-3 files into it. Then create a batch file called PAYDIRT.BAT that begins with a CD\PAYDIRT command, ensuring that regardless of what the user was doing previously, now he or she is in \PAYDIRT. Optionally, PAYDIRT.BAT can display a sign-on message or greeting of some sort. The last command in PAYDIRT.BAT would be "123" to begin 1-2-3.

Every time 1-2-3 starts, the first thing it looks for is the presence on the current directory of a file called AUTO123.WK1. If AUTO123 is found, it is automatically retrieved, and if AUTO123 contains an auto-start macro, that macro is automatically played back. Presto, we've gone from a DOS prompt all the way into your 1-2-3 application simply by typing a one-word command. We did it by:

1. **Creating a new subdirectory**

2. **Copying 1-2-3 into the new subdirectory**

3. **Creating a batch file that logs onto that subdirectory and runs 1-2-3.**

4. **Using AUTO123.WK1 and an auto-start macro.**

But if you're like me, you might feel funny about having the heart of your Lotus application be in a file named AUTO123. After all, shouldn't you have a file called PAYDIRT.WK1?

You can — all you have to do is create a tiny little AUTO123 file. This little file contains only one cell entry: an auto-start macro that reads <bold>/FRPaydirt~<bold>. In this case, AUTO123's only job is to retrieve PAYDIRT.

EASY DOES IT WITH THE POWER SWITCH

QUESTION

I spend about three hours on the computer each day, but usually in five or six sessions. Which is best: To turn the power off after each session and then turn it on when I'm ready to start the next session, or to keep it on all day?

ANSWER

I know someone who bought a computer and NEVER TURNED IT OFF. He reported no failures at all and it lasted five years (it finally died when he dropped it down a set of stairs). Normal persons prefer to sleep at night without listening to a computer fan, but the fact is that the less you turn your computer on and off, the better it is for your circuitry and your drives. Each power cycle sends a spike of current through your system that gradually takes its toll on your disk drives, especially a fixed disk.

Here's a good rule of thumb: If you work on your computer in a relatively normal time-frame (like a 9-5 job), turn it on at the beginning of the day and then turn it off only once, when you are done computing for the day. The power drain of an inactive computer is insignificantly small, and you will appreciate being able to pick up where you left off and not having to wait through a cold boot. If you leave your computer for an extended period of time, make sure to turn off your peripherals and any lights around you (the light bulb at your computer station draws more power than the computer itself). It is most important that you turn your monitor off (or use a screen blanker), because a constant image over a period of time will burn out your monitor's phosphor. Like the smart computer user that you are, you save your work before leaving the computer for any prolonged period, right?

A related thought: If your computer does not have a reset switch, it would be a worthwhile (and inexpensive) project to rig one up. Especially if you're like me and you experiment with dozens of memory resident programs at the same time and you lock your computer up a lot. A reset switch will save you from having to power down and then back up again. Radio Shack sells "momentary on" switches for about a buck and the company from which you purchased your computer can tell you exactly where the switch should be connected on your motherboard.

In March 1991 I bought a 386Dx-25MHz system from Hi-Tech USA Corp. After considerable research I had come to the conclusion that they had the best price, were reliable and provided on-site service. I have not been disappointed.

Until March I used a PC-XT which I had fine tuned with batch files and which did every thing I needed it to do. I decided to upgrade because it was a little slow and didn't have color, and besides it was there.

I bought Windows 3 when I got the computer. Immediately I started getting strange error messages, lock-ups and a trashed disk. The disk checked out OK at Hi-Tech so they reformated it and returned the computer. Again something killed my hard drive. Hi-Tech checked every component and could find nothing wrong. They told me there was a problem when using a using Disk Manager with Windows. I was beginning to wonder if I had bought a lemon. I was getting sorry that I had changed systems.

About then Brian Dougherty demonstrated GeoWorks at the club meeting. I bought it and have been using it ever since. A short time later I read in BYTE (May 91) that "when using third party device drivers like Disk Manager, SpeedStor, or V feature, Windows gets confused when in the 386-enhanced mode and the system locks up at the initial Windows screen." The fix is simple: In the **SYSTEM.INI** file add the line

VlrtualHDIrq=false

immediately after the line - [386Enh]. The article discussed the reasons if anyone is interested.

At the next meeting I mentioned this to Tony Allen. He knew about the third party driver/Windows 3 incompatibility; if I had recognized the problem I could have saved myself a lot of headaches. After I found the solution, I found the answer in the Windows manual. I had read the section before but I didn't follow the manual until after I read the BYTE article. I never reinstalled Windows because I like GeoWorks.

When you see an error message on your screen such as:
Drive C: Not Ready Error
Cannot Read from Drive C:
Cannot Write to Drive C:

it's a sure sign that Windows, running in 386 Enhanced mode, is having trouble with a nonstandard drive or controller. What Larry's fix does is tell Windows to stop virtualizing all the hard disk interrupt request handling, and shunt them all down through the BIOS. This slows things up a touch but it works. The wording is not case sensitive and **VirtualHDIRQ=off** means the same thing.

The problem with the original Windows 3 version of SmartDrive disk cache trashing the FAT on disks that had been formatted with partitions larger than 32Mb was pretty well eliminated with the November 1990 maintenance release Windows v3.0a. SmartDrive never had any trouble with large partitions created with DOS 4.01 (or now DOS 5.0). However, there can still be problems with Vfeatures Deluxe (Golden Bow), SpeedStor (Storage Dimensions), Innerspace (Priam Systems) and Disk Manager (Ontrack Computer Systems).

As a point of interest, a hard disk of, say 80Mb, partitioned as two 32Mb and one 16Mb volumes, will have an average seek time of less than a single 80Mb volume - the heads have less ground to cover to find the required data. With disks of more than 1024 cylinders stay clear of SmartDrive altogether, use another disk cache such as PC-Kwik 4 - it's better, and it works with the four disk partitioning programs above.

Tony Allen

TECH TOPICS

Q I'm thinking about reinstalling Windows to compare it to GeoWorks. I know I don't have to reformat to add to the SYSTEM.INI file, but is there any reason why I couldn't do so with DOS 5 instead of Disk Manager (Ontrack Computer Systems)? I have a Seagate ST51 drive. At the same time I would remove the current partition.

A There are three caveats with regard to making a large hard disk one volume. The first is that there are a lot of programs - mainly utilities - that will not recognize volumes larger than 32Mb. The second is that the cluster size will increase, from 4 sectors, to 8 or maybe 16, depending on the type of disk (each sector is 512 bytes). No file can be smaller than a single cluster which means that even a 20 byte batch file will take up a whole one. So in an 8 sector cluster this same 20 byte file will waste 4076 bytes (4096-20).

Finally the third point to consider is a possible complication in your backup system. With small volumes you can back up each logical drive on one 40Mb tape, unattended if necessary. Don't forget that if your data was on a logical drive when you backed it up, and this drive no longer exists, you may have problems if you need to restore the data.

If you decide to re-partition the disk, it is probably a good idea to do a low-level format while you're at it. This will re-enforce the magnetic pattern of the sector headers of the disk. The instructions for doing this are either built into the controller's hardware or came as programs supplied with the drive. Alternatively you can use a program such as Spinrite (Gibson Research) which, as well as performing a low-level format, will give the disk a thorough check out and set an optimum interleave. Then DOS 5.0 FDISK will establish the partitioning system which is where you make the decision about the trade-off between the convenience of a large volume and the inevitable loss of storage space.

Q I tried to install Rick Altman's shell (Print Screen, Sept.91) with little success.

A OK this was a boo-boo on my part. Rick's program works fine but when I was transcribing it for PRinT SCreen I left one line out of every function key assignment in the MENU.BAT listing. A pretty important line as it turned out it was the command to run the program. For example the function key 5 assignment was missing the command WIN, so all it did was put the words *Running Windows* on the screen and then jump straight back to the menu. By inserting the command WIN at line 23a everything goes according to plan.

```
21.    :F5
22.        cls
23.        echo Running Windows
23a.      WIN
24.        pause
25.        goto START
```

Apologies to all who tried and failed to make this work. It'll teach me to test *everything* before I commit it to print.

Tony Allen

SPAUG MEMBERSHIP BENEFITS

Our club was founded in 1984 as a Stanford Voluntary Student Organization with Associate Membership available to members of the non-Stanford community who use PCs. SPAUG is a nonprofit organization whose purpose is to bring together people interested in personal computing and to provide a forum for the exchange of ideas in the field.

General Meeting
A monthly General Meeting featuring programs of general interest is held on the last Wednesday of the month at 7:30 PM. The meeting place is on the Stanford Campus, Jordan Quad, in Polya Hall, Turing Auditorium.

SIG Meetings
Novice and other special interest groups (SIGs) meet monthly, providing demonstrations or detailed coverage of topics of special interest.

PRInT SCreen
A monthly Newsletter is mailed to all Members, including feature articles, the Club Calendar and other helpful information.

SPARC
An electronic Bulletin Board is maintained for uploading and downloading files and for message communicating among Members. Bulletins, and files in several public domain

and shareware categories are available. The BBS number is **(415) 321-4497**.

Software Library
A library of public domain software disks is maintained for the benefit of Members.

Random Access
Members may announce items for sale, ask questions and share information during the Random Access period of the General Meeting.

Disk of the Month.
A collection of public domain or shareware programs is prepared and presented at the General Meeting. The disk is available for $1 or in exchange for the Goodie Coupon on your membership card.

Mailcall
Items received in the club mailbox are reviewed at the General Meeting. Shareware programs, demo disks, and special offers are made available as well as the newsletters received from the exchange program with other user groups.

Renewals
Members' expiration information is printed on Newsletter mailing labels. A return envelope is enclosed for convenience in the month prior to renewal date.

New Members
Names of new and renewing Members are listed in the Newsletter.

Resource Center
A list of Members who are available to give help by telephone on various aspects of

computing is provided in the Newsletter. The SPAUG Constitution is available for downloading from the Bulletin Board.

Classified Ads
Members may post noncommercial ads at General Meetings, send them to the PRinT SCreen Editor for publication in the Newsletter, or send them to the BBS Sysop for posting on the For Sale bulletin section of the board.

Random Drawing
Members attending the General Meeting are eligible for a drawing for a prize, often a valuable program or hardware item.

Sidewalk Sale
An annual sidewalk sale is held featuring computer-related items for sale by vendors and Members.

Member of the Month
A Member who has contributed recent or ongoing service to the club is selected by the Steering Committee for recognition. A quarterly no-host dinner is held to honor these Members.

APCUG
SPAUG is a member of the Association of PC User Groups. An APCUG Bulletin Board and other benefits are shared.

Information Line
A recorded message provides up-to-date information about programs and activities. Callers may request information about membership. The phone number is **(415) 321-4498**.

WHAT IT'S ALL ABOUT
A Guide to PC Memory

Part 2:
THE MEMORY MAP
TONY ALLEN

There are basically three types of memory as far as the computer is concerned:
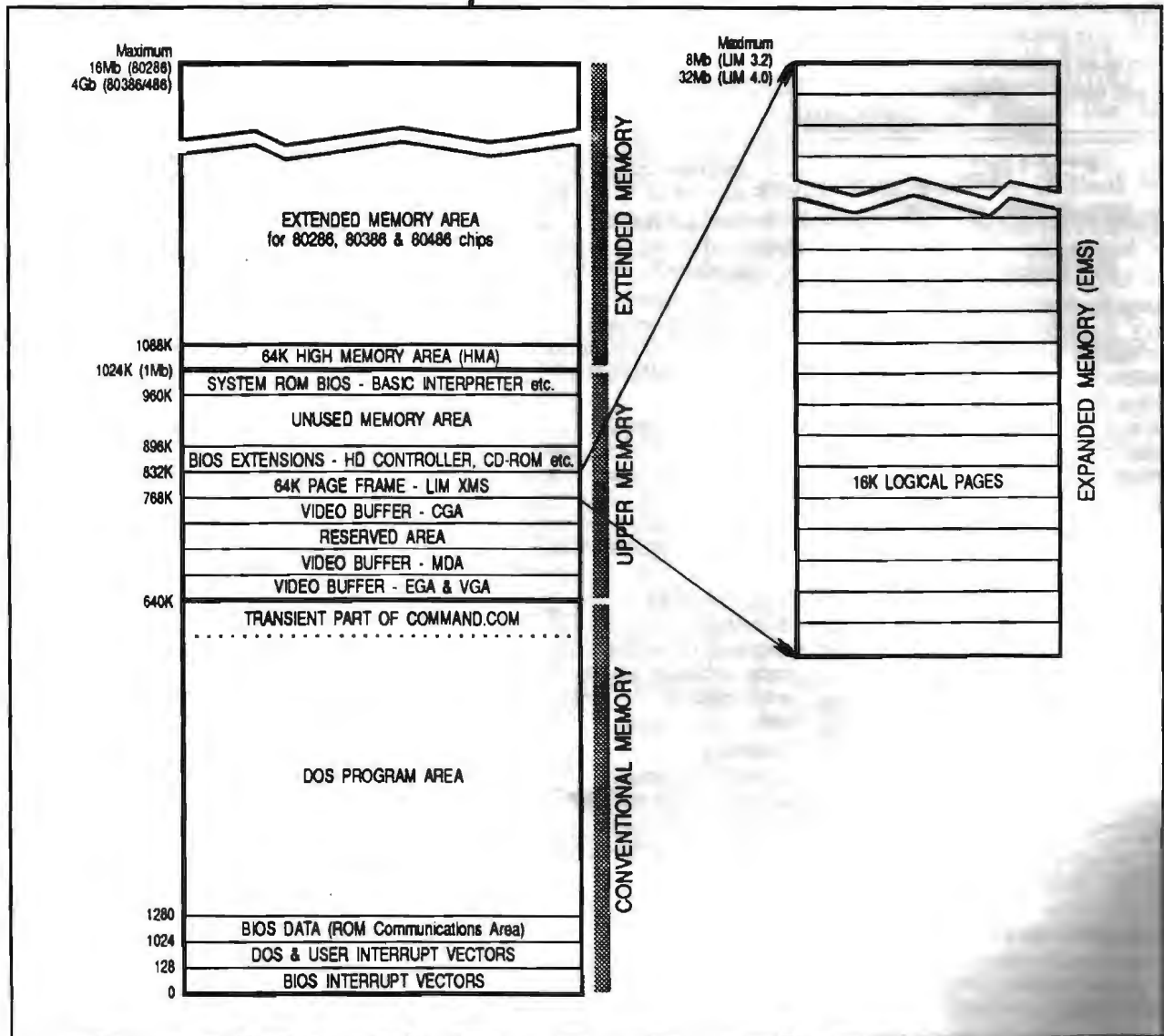
- Conventional
- Expanded
- Extended

CONVENTIONAL MEMORY

This, by definition, is the the memory that all computers come with. When the Intel 8088 chip was chosen for the IBM PC one of the constraints that it had was a memory addressable range of one megabyte. The PC designers had to organize this space to accomodate the various computer functions that had to use it - so they mapped it. The original map had 512K reserved at the top end for video buffer and BIOS code. This was soon realised to be pretty much overkill, and the map was changed to its present 640/384 split.

As you see in the graphic below, a small amount at the base of conventional memory is reserved for flags, BIOS hardware calls, and interrupts (such as the keyboard buffer). This leaves the bulk of the 640K base memory available as

Memory map diagram:

EXTENDED MEMORY — Maximum 16Mb (80286), 4Gb (80386/486)

EXTENDED MEMORY AREA for 80286, 80386 & 80486 chips

UPPER MEMORY:
- 1088K — 64K HIGH MEMORY AREA (HMA)
- 1024K (1Mb)
- 960K — SYSTEM ROM BIOS - BASIC INTERPRETER etc.
- UNUSED MEMORY AREA
- 896K — BIOS EXTENSIONS - HD CONTROLLER, CD-ROM etc.
- 832K — 64K PAGE FRAME - LIM XMS
- 768K — VIDEO BUFFER - CGA
- RESERVED AREA
- VIDEO BUFFER - MDA
- VIDEO BUFFER - EGA & VGA
- 640K

CONVENTIONAL MEMORY:
- TRANSIENT PART OF COMMAND.COM
- DOS PROGRAM AREA
- 1280 — BIOS DATA (ROM Communications Area)
- 1024 — DOS & USER INTERRUPT VECTORS
- 128 — BIOS INTERRUPT VECTORS
- 0

EXPANDED MEMORY (EMS) — Maximum 8Mb (LIM 3.2), 32Mb (LIM 4.0)

16K LOGICAL PAGES

CONVENTIONAL MEMORY

Name	Size In Decimal		Size In Hex
MSDOS	11536	(11.3K)	2D10
HIMEM	1184	(1.2K)	4A0
EMM386	8400	(8.2K)	20D0
COMMAND	2624	(2.6K)	A40
FREE	64	(0.1K)	40
FREE	631360	(616.6K)	9A240
Total FREE :	**631424**	**(616.6K)**	

TABLE 1A

UPPER MEMORY

Name	Size In Decimal		Size In Hex
SYSTEM	163840	(160.0K)	28000
RAMDRIVE	1184	(1.2K)	4A0
SMARTDRV	16256	(15.9K)	3F80
ANSI	4192	(4.1K)	1060
MOUSE	11952	(11.7K)	2EB0
FREE	64608	(63.1K)	FC60
Total FREE :	**64608**	**(63.1K)**	'

Total bytes available to programs
(Conventional+Upper): **696032 (679.7K)**
Largest executable program size: **631216 (616.4K)**
Largest available upper memory block :**64608 (63.1K)**

TABLE 1B

the DOS program area. There is a section at the top of the base area where the transient part of DOS is resident, so the actual space for programs is somewhat less than the utopian 640K. Even with DOS 5.0, a clean machine, and everything possible loaded high I can only manage 631,424 bytes free which is 616.63K. (See Table 1A.)

UPPER MEMORY BLOCK

This is the area of conventional memory that lies immediately above the 640K boundary and runs to 1Mb. This 384K block is reserved for the system itself as mentioned above and as detailed in the graphic of the memory map. The system BIOS has its own mapped area, as does any other BIOS: a hard disk controller or an EGA card would be examples. The first section of upper memory is used by the video buffers. Here are stored the ASCII character codes and the details of the visual attributes of displayed graphics. Here lies the expanded memory page frame of 64K.

Here also there are unused areas where DOS 5.0, DR DOS 5.0/6.0, and the memory managers 386Max and QEMM managers work some of their magic. By searching out the holes in the UMB and sometimes with a crafty bit

of re-arranging they can squirrel away a lot of small programs like TSRs and device drivers (see Table 1B). This has the great benefit of increasing the amount of conventional memory available for programs down below the 640K barrier.

EXPANDED MEMORY

This was developed jointly by Lotus, Intel and Microsoft as a way of overcoming the 640K DOS limitation. The first specification in 1985, LIM Expanded Memory Specification (EMS) 3.0 and then 3.2, allowed a maximum of 8Mb of expanded memory to be accessed. In 1987 LIM Enhanced EMS (EEMS) 4.0 increased this to 32Mb. The great advantage was that it allowed programs, those that had been written to take advantage of it, to be very large and yet be run on computers that operated with the original 8088 chip.

It did this by using a 64K area of conventional memory as a page frame. It is in the UMB where expanded memory managers normally have their page frame. They use this to switch banks of memory, from an expanded memory board in computer, to the empty address space in the upper memory block. This means that data or code can be stored outside the 640K conventional memory DOS address space, and be brought in where it can be used by the program running at the time. Each 1Mb of expanded memory is divided up into 64K sections, or pages, of 16K each and up to four 16K blocks at a time can be brought into the UMB page frame. These pages can be swapped in and out as the demands of the program require.

EXTENDED MEMORY
THE HIGH MEMORY AREA

To access extended memory, which starts at the 1Mb mark, the CPU has to be able to switch into protected mode, something that the 8088/8086 chip is unable to do, due to its inherent address space limitations. However, by manipulating the A20 address line, 80268/386/486 chips are able to access the first 64K of extended memory without leaving real mode. This is the block directly above the 1Mb upper memory area of conventional memory. Here DOS 5.0, by using HIMEM.SYS, can place most of the DOS code and the disk buffers created in your CONFIG.SYS.

A 80286 chip can access, in protected mode, up to 16Mb of memory (1Mb of conventional plus 15Mb of extended). The 80386 and 80486 chips can use up to 4Gb (a gigabyte is one thousand megabytes). However, to use protected mode one would have to discard DOS for another operating system, Unix, Pick and OS/2 are possible alternatives. Of course you would need to use programs that run on these platforms. A way round this is to use a memory manager. Windows is one of these and it can access extended memory directly.

EXCEL TIPS & TRICKS CONTEST

Q Is there any way in Excel to calculate the numbers of days between one date and another?

A Sure is. Excel calls it "date arithmetic." The TODAY and DATE functions will do the trick for you. Watch:

- = **TODAY()-DATE(91,6,1)**
  the number of days since this past June 1st

- = **TODAY()-DATE(90,12,31)**
  the number of days in 1991

- = **DATE(54,2,23)-DATE(42,6,18)**
  the number of days between my birthday and Paul McCartney's

The TODAY and DATE functions both return serial numbers, which can then be used in normal arithmetic operations. (Notice in the second example, that in order to count 1/1/91 as Day 1, you must subtract 12/31/90 from today.)

Q Does Word for Window's File Open command allow you to open more than one file at a time? I can't figure out how to do it.

A No, it doesn't. But there's another way.

Go to File Find. Once the dialog box appears, click on Search. In the Search List, specify the directory(s) where the files are located. Click OK to return to the original box. Select all the files to be opened by clicking on the first one, and then holding down Shift while you click all the rest. The Open button will open them in turn, each in a separate window.

Q What is the undocumented program included in Windows that allows you to edit system files?

A It's called SYSEDIT.EXE, and it's located in the WINDOWS\SYSTEM directory when Windows is installed. SYSEDIT (short for "System Configuration Editor") is a miniature text editor that gives you access to the following files: AUTOEXEC.BAT, CONFIG.SYS, WIN.INI, and SYSTEM.INI.

When you run SYSEDIT, the four files are automatically loaded into cascading windows. It's a very convenient way to compare and make changes. When you're done, the files are saved in text format. One way to run SYSEDIT is to pull down the Program Manager File menu, choose RUN, and enter SYSEDIT.

If you find you're running it relatively often, create an icon for it in Windows. Open up a directory windows for WINDOWS\SYSTEM in File Manager, and arrange your screen so you can see it alongside the Main group in Program Manager. Find SYSEDIT.EXE in the directory window, and drag it over to the Main group. An icon will automatically be created.

Jan is the Vice-President of SPAUG and a Microsoft Certified Trainer.
Send your questions on Windows products to:
3655 Pruneridge Avenue, No. 135, Santa Clara, 95051, (408) 243-5955.

THE SPAUG RESOURCE CENTER

*This is a list is of club members who have volunteered their
services. If anyone would like their name added to this list, please
get in touch with Paul Staley or Jan Altman.*

OFFICERS

President	Paul Staley	(415) 493-1864
Vice President	Jan Altman	(408) 243-5955
ASSU Representative	Alex McMillan	(415) 322-4543

MANAGERS

Bulletin Board Sysop	Bob Bottini	(415) 369-2086
Financial Manager	Bev Altman	(415) 329-8252
Librarian - Public Domain Software	Les Weil	(415) 321-5541
Newsletter Editor	Tony Allen	(408) 739-2953

SOFTWARE

Accounting	Larry Mehl	(415) 329-6037
Foxbase	Marie Hooper	(415) 325-1206
Windows Products	Jan Altman	(408) 243-5955
R:Base	Larry Mehl	(415) 326-6037
Lotus 1-2-3	Larry Mehl	(415) 326-6037

LANGUAGES

C	John Watson	(415) 325-7632
Fortran	John Watson	(415) 325-7632
Pascal	John Watson	(415) 325-7632
Smalltalk	John Watson	(415) 325-7632
QuickBasic	Don Baird	(415) 365-6822

CLUB EVENTS IN NOVEMBER

Sun	Mon	Tue	Wed	Thu	Fri	Sat
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

November 5 First Tuesday - **PLANNING MEETING**
7:30pm Beverly Altman, (415) 329-8252 or Paul Staley,
(415) 493-1864

November 13 The **WORD FOR WINDOWS SIG** meets the second
7:30pm Wednesday of each month at 7:30pm to talk about Word
for Windows and general Windows issues. The next
meeting will be on Wednesday, October 9. Location
is Infotec Training Institute, Techmart, 5201 Great
America Parkway, Suite 254, Santa Clara. The group
is led by Jan Altman, a Certified Trainer in Word for
Windows. For more information, please call Jan at (408)
243-5955.

November 25 The **MICROSOFT WORD FOR DOS SIG** meets the
7:30 pm fourth Monday of each month at 7:30 pm. The group
alternates between discussions of Word 5.0 and Word
5.5. The next meeting will be on Monday, November
25th. *New location* is the rec room of Oakridge Apts.,
3655 Pruneridge Ave. (just west of Lawrence Express-
way), Santa Clara. For more information call Jan Altman
at (408) 243-5955 or Harold Santos at (415) 573-8786.

November 27 Last Wednesday - **General Meeting**
7:30pm Turing Auditorium, Polya Hall, Stanford University

THE OCTOBER PRESENTATION

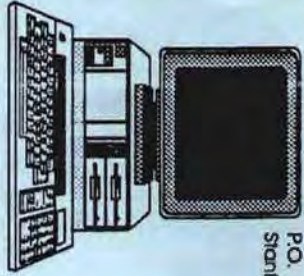*Last Wednesday: October 30th, 7:30pm at
Turing Auditorium*

COMMUNICATIONS AND FINANCE

This month come meet **PRACTICAL
PERIPHERALS**, the company who so
graciously donated a modem to
SPAUG's bulletin board! Mike Todd
will demonstrate Practical's wares, and
show us why they've been rated so
highly by the various PC magazines.

Our other special guest is Greg Marek
from **INTUIT**, here to show us the two
latest versions of **Quicken**. The new-
est **Quicken for DOS**, and also
Quicken for Windows were released
just at the end of September.,

Club Information

Meetings
Paul Staley
(415) 493-1864

Membership
Beverly Altman
(415) 329-8252
$25/year (Students $10)

Bulletin Board
(415) 321-4497

Newsletter
Tony Allen
(408) 739-2953

Hubert H. Humphrey
USA 52
VICE PRESIDENT

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THE OCTOBER PRESENTATION

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