

HARDCOPY

What's New

By Bob Ward

We started our February meeting with our President, George Campbell discussing his latest computer equipment acquisitions and the reasoning behind his choices. George purchased a Gateway 2000 386/20 Mhz computer with a Seagate 80 megabyte hard drive and 4 megabytes of RAM. To this he attached an existing Princeton VGA monitor and new Logix VGA monitor board. To his surprise, the new Logix drove his monitor to a resolution of 768 X 1028, way above the 600 X 800 he expected. Another plus to the Logix board was that the picture didn't "shrink" in certain modes; a common phenomenon with many other boards.

The computer is well constructed and the company appears to really care about their customers (that's something new). He received 3 phone calls from Gateway even before delivery to make sure they hadn't forgot anything and to keep him apprised on the date of shipment. Gateway is so busy, you can expect a delay in shipment of 1 to 2

weeks. They can't keep up with demand.

A few weeks previous to buying his computer, George purchased a Pacific Page Cartridge for his HP LaserJet II. This cartridge emulates Postscript. Better yet it does this for little more than \$400. Compare this to the minimum \$1,000 license fee charged by Adobe for Postscript on any laser printer, and you have quite a deal.

I had to try it out! I created a page with Ventura Publisher that would make any printer groan. It came through with flying colors. Except for being slightly slower than a true Postscript printer, it handled everything I threw at it; something the Apple Laserwriter (Postscript) printer wouldn't do. The blacks were more solid (no streaking) and the print quality was excellent. Previous to the Pacific Page cartridge, George had purchased Glyphix, a software font program which can be used with either Microsoft Word or

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Reflections

By Lonnie Odom

Las Vegas PCUG. February, 1990

In the beginning, Intel created the 8088, IBM designed the PC, and on the seventh day Bill Gates introduced us to DOS! As we begin a new decade I thought this would be a good time to reflect on the "Home Computer" system and home user. The Eighties saw us go from small 4k 2Mhz computers, hooked to the old B&W television, that you had to program each time you turned it on. To 80386 33Mhz monsters that never seem to stop wanting ram chips, and never having enough hard disk space for the multitude of software available that you just "can't live without".

The early eighties saw the computer companies targeting the large corporate accounts. The home user was viewed as some pimply faced kid, with black horned rimmed glasses, whose sole purpose in life was to obtain a pirate copy of every piece

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What To Do With Old Upgraded Software

By Kenneth L Kayser

Milwaukee Area IBM PC Users Group

I recently upgraded my word processor. After satisfying myself that I would never need the old version, I prepared to throw it out. Then I thought, "Could someone else use this?" After all, here were six disks and a set of manuals in perfect condition. But, is it legal to give this program and documentation to someone else? Careful reading of the license agreement was not totally helpful. It was quite clear that the software could only be used on one computer at one time. But, the status of the obsolete software after purchase of a new version was not clear. Reading other license agreements produced only a headache. They all have similarities and differences. None cover all situations. Some cover documentation; some do not. All can be subject to interpretation. None that I read were specific on disposition of obsolete disks and manuals.

Therefore, I did a mini survey on four representative software companies: Ashton Tate, Lotus, WordPerfect, and Central Point. I asked them what their policy was on giving away obsolete software. Each responded, and each gave a different answer. To no one's surprise Ashton Tate said to "destroy disks and documentation." They did not, however, dispatch the FBI, as I was warned they might, at least not yet. Lotus telephoned and said that they will distribute the materials through their "philanthropy department," telephone (617) 577- 8500. WordPerfect sent a cryptic letter which did not answer my question. The license agreement they sent along was equally unhelpful. However, the gist seems to be that they do not want obsolete versions given away.

Lastly, we come to Central Point, the source of PC Tools, et.al., the "Mother Terese" of software companies. In her letter, Sue Williams stated, "Although we currently do not have a set policy regarding giving our older software versions (disks and manuals) away, I checked with my sales manager who felt this would be just fine." They further state that they will register the recipient for no charge!!! I love this company.

In the absence of a clearly stated agreement to the contrary, I think we should be able to give obsolete software and documentation to someone else. If a company does not want this done they should clearly state, on the upgrade order form, that we are not buying a new license. Furthermore, the company should clearly define what may be done with obsolete software and documentation.

From the standpoint of the manufacturer a "gift" of the obsolete software could result in one of three eventualities:

1. The recipient likes the program so much that he buys the latest version (and many subsequent versions as well).
2. The recipient likes the program well enough that he uses it instead of buying the latest version.
3. The recipient does not like the program and either buries it or gives it to someone else.

For the manufacturer, my gift might gain a user, lose a sale, or neither. I have become a daily user of some software which was given to me in just this way. Since the "gift" of an obsolete manual and disk, I have purchased an original and two upgrades. Without the gift it is doubtful that I would ever have tried this software. Promoting and selling software is extremely expensive. An economical way to do this might be to encourage distribution of obsolete software and manuals.

###

welcome



A big WELCOME to the new members listed below. We hope we can serve your computer needs.

William Avery	549-9315
Galen Bates	466-9520
Charles Braun	543-7227
Terry Buckley	
Keith Dills	549-8685
R.N. Eilerman	473-0375
John Ewing	528-7196
L.J. Kenyon	238-7154
Edwin McDonald	542-0239
Arleigh Nave	528-3828
Ralph Oneal	466-1021
Charles Storni	544-8865
Robert Valpey	543-3555
Arthur Wilson	927-3054

The following individuals will be dropped from membership unless we receive your renewal by the next meeting.

David Brown
Dayna Conroy
Rick Gorman
Bill Hay
Alison Henry
Joe Latimer
Doug Nelson
Tom O'Malley
Tim Pesce
Winn Schey
Chang Se Kim
Nancy Watts

###

What's New

WordPerfect to beat the font size limitation found on non-Postscript printers.

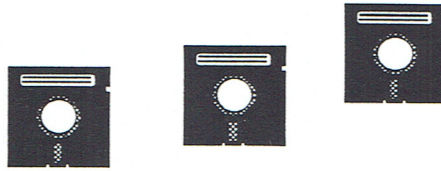
So here's George sitting with his old 286 and a new 386 computer. Now how to shuffle data between the two without doing a complete hard disk backup. He came across a good program that allows transfer of data between two computers through their serial ports via a nul modem cable. This program is called ZIP, not to be confused with the archiving utility of the same name. We have it under the name PC2PC. It transfers data by file or entire subdirectories at 10 to 14K per second depending on the speed of your computer.

After a short intermission, Jayme Nozzi from Xtree Company demonstrated XtreePro Gold. Now here's a versatile program for shuffling programs around your hard disk, changing attributes, etc. You can find just about everything Xtree does in shareware but you can't put it all together like XtreePro Gold. I especially like their global commands which take your whole hard disk, subdirectories and partitions, and creates one giant directory listed in alphabetical order. It's a very useful program worth looking at.

At the end of Jayme's demonstration there was a drawing for three copies of XtreePro Gold. Congratulations to Harry Clark, Earl Gustafson, and Lynne Boisen; each winners of a copy of XTreePro Gold. And thanks to XTree Company for generously donating these prizes. We hope they will come back again with more new and exciting software to demonstrate.

Next month Andy Burton, district representative for MicroPro International will be our featured speaker. He will demonstrate WordStar 5.5. He told me, "You think WordPerfect has an interesting demonstration, wait till you see mine." Well Andy, we're waiting, and looking forward to seeing WordStar.

###



SLO Bytes Library

Here's what we are adding to the library this month... Hope you like all the new programs.

#301-303 Replacing PC-File dB with the new PC-File 5.0. This new version incorporates both PC-File+ and PC-File dB

#367 Graphic display programs: OPTIKS & VPIC22 both display and print several graphic display formats. VGA2EGA changes GIF files from a VGA to an EGA format. GREY displays GIF files in grey scale. TIFF14 is a TIF display program.

#368 PC2PC - transfer data between two computers via nul modem cable. SPLRR2 - ram resident print spooler. ANAD201 - Disk Analyzer II. Analyze and repair just about any disk. BO!114 - Back Off!, deletes multiple files. BEN-251 - batch file enhancement program.

#369 STATAR - Statistical Analysis for the Researcher is a sophisticated statistical program.

#370-371 PC-Write Lite - Lite beer, Lite salad dressing, how about a lite computer program. PC-Write Lite is full featured but doesn't contain many of the bells and whistles that the parent program, PC-Write 3.03, contains.

#372 GAMES: DICE - the game of dice. (EGA), DULLES - similar to ATC (air traffic controller) but for the Dulles airport. MAINEEAK - you guessed it, another game. This one can rattle your cage. SLOT - nice EGA slot machine game. Better than Las Vegas, doesn't cost you a penny. POLICEQ2 - solves Police Quest 2. MOUSEWAR - nice game to be used with your mouse. PIGLATIN - Reatescay Igpay Atinlay romfay ASCIIYAY exttay

Library Updates:

#082 LIST to version 73A

#266 TDRAW from version 3.2 to 3.3

#316 DSZ to version 1114 & DSZTUTOR moved from #349

#330 StupenDOS to version 1.61

#349 DSZTUTOR removed and added to #368

#360 add SwapDOS

Demo Disks:

#140 Magellan - Auto-Demo by Lotus (3.5" disk)

#141 Magellan - Trial Version by Lotus (3.5" disk)

#142 Applause II by Ashton-Tate (3.5" HD disk)

#143 Money Matters by Great American Software (3.5" disk)

###

**PRICES
CHOPPED**

New Printer Ribbons

Panasonic 1090-1092 from MEI

\$3.25 each

Call George Henderson @ 528-3892

Used only two months...

Tandy 10 megabyte Hard Disk and controller for Tandy 1000..... \$100

PC-Tools 5.1

(new, shrink wrapped)... \$35

Call Wil Neubert @ 489-3636

###

Reflections

of software available and distribute it to every other kid in his high school. Hence the PC/JR was brought to life. No extendibility (without great expense), a toy keyboard, and software that was made up of mostly games and educational programs, with extra

heavy copy protection. IBM turned a deaf ear to the home users who were begging for a cheaper home version of the IBM PC that all of us were starting to use in our jobs. Who wanted a toy computer that could not run the programs we had at work?

Even with "clones" the home user was lucky just to get what was available at highly inflated prices. My first MS/DOS machine was a Columbia VP-1600, which was a portable (only 38 pounds) clone, that came with 1 360K floppy, 128k RAM, a nine inch amber composite monitor, for the lowly price of only \$3499.00. A second floppy and another 128k of ram, dragged another \$500.00 out of my pocket. But what the heck, I was happy! A true BLUE at the time was over \$6000.00, so a saving of \$2000 was a big deal.

Slowly over the years I pumped more and more money into that system. Of course I waited until prices of hardware came down to affordable prices. Or at least came down to what I had been able to stash away in savings for more equipment. Upgrading to 640K ran another \$180, but again that was a deal that a dealer offered one night at the HAL-PC (Houston Area League of PC Users) meeting when the going price for an memory expansion board with 384k was running in the \$250-\$300 range. Several months later, again at a HAL-PC meeting, I was able to pick up a Seagate ST-225 for \$475 when the normal street price was closer to \$600.

Now you have to take into consideration that I am not even talking about the price of all the software that

I was also buying. Software has always been so overpriced that I am going to save that discussion for a later article. Also I was doing consulting/programming for several Doctors offices that used a Tandy Model 12 and was having to support that system at the same time.

My first MS/DOS machine was a Columbia..... 128K RAM..... for the lowly price of \$3499.00

A little more reflection brings to mind the \$39 I paid for a printer cable, and the \$36 for a serial cable. The first

300 baud modem set me back \$175, and my old Courier 2400 (which now runs the BYTES BBS) was an astonishing \$695! But I got it two weeks after it was introduced, one of the few times I didn't wait for prices to come down.

So what does all this reflection have to do with home computers of the Nineties? Well prices are still too high on newly introduced items, as vendors attempt to recoup their R & D costs at an accelerated pace. But then the technology is moving so fast that by the time a company gets a product to market, often times something else has been announced that makes theirs obsolete. A home user doesn't have to wade through all the various computer magazines being published to find the best price on an item, and then hope the mail order company doesn't rip him off by cashing his check and then waiting 3 or 4 months to ship the product. All he or she has to do is run down to the neighborhood computer store.

We are blessed in this town with several very excellent computer store owners who are very knowledgeable about the product that they sell. The old shoe salesmen that ran computer stores in the early eighties are mostly gone now. The stores carry full lines of most all products, and one simply has to go into the store and tell the owner how he wants his system configured, and presto with the pressing of a key a quote can be printed out in seconds. My recent observation of local computer prices has seen our local store owners in close competition with the mail order firms. And with a local pur-

chase you get the local support to go with it, plus you know all the various components are going to work together with one another.


Now what kind of computer should you be looking to buy in the early Nineties? Here is my recommendation for a complete system to carry you through the next few years as your home computer.

80386 20-33Mhz CPU VGA Multi-Sync Color Monitor 1.2 meg and 1.44 meg floppy drives 4-8 megs of RAM 65-110 meg Hard Disk 1:1 HD Controller 24 pin Graphics Printer 9600 Baud Modem

This configuration should run in the \$4000 range at present time. A whole lot more computer than I got for my \$4000 in the early eighties. I hope to be doing a review of the above configuration beginning in the next issue of BYTES. This review will be on only locally offered computers by local dealers (those willing to participate) and will be done with PC Magazines Benchmark series, and patterned after their reviews of nationally offered systems.

###

Calendar

-
- March 4th Andy Burton, district representative from MicroPro will be demonstrating WordStar 5.5.
 - April 1st John Martinelli, chief engineer from ICSN will demonstrate their new "Mouse Pen".
 -  May 6th Betty Skov, public relations manager from Logitech will demonstrate Finesse.

Matching RAM Chips to CPU Speed

By Jeff Prorise

Reprinted from the East Tennessee PC Users Group via the Humbolt PC Users Group

Most users know that they can't buy just any RAM chip to install in their machines. For proper operation, the chip's access time -- the amount of time it takes the chip to deliver data to the CPU once the request is made -- must be balanced against the processor speed.

The speed with which the processor can accept data from RAM is determined by two factors: clock speed and the number of clock cycles required for a memory access. The 8088 requires 4 clock cycles for a memory access; the 286 and 386 require only 2. At 4.77

If you add RAM to your PC, consult the manual that came with it to determine how fast the RAM chips must be.

MHz, an 8088 needs 840 nanoseconds to complete a memory access -- 4 clock cycles at 210 each. A 33MHz 386, on the other hand, with its superior clock speed and architecture, can accept data a mere 60 nanoseconds after requesting it.

Balanced against the CPU's clock speed and memory access time is how fast the RAM circuitry can deliver data. One measure of the speed of a RAM chip is its rated access time; another is its total cycle time, which takes into account both access time and precharge time -- the time it takes the chip to recover after a memory location is read. Precharge time is typically slightly less than the access time. The nanosecond rating on a chip specifies

its rated access time: 150 nanoseconds for a 150 ns chip, 100 nanoseconds for a 100 ns chip, and so on. For zero wait state operation, the chip's access time must be less than the CPU's memory access time. In some designs, the cycle time must be less than the CPU's access time. Thus you must be careful when adding memory to your system to make sure that the RAM you add is fast enough to keep up with the CPU.

To keep the cost of their machines down, many manufacturers outfit their PCs with slow RAM and impose wait states on the CPU. Wait states are simply idle clock cycles the processor spends waiting on RAM to deliver data. If a RAM chip can't provide data to a 286 in 2 clock cycles but can in 3 clock cycles, one wait state is inserted to balance the performance characteristics of the two components.

Special memory architecture schemes have been devised to reduce the number of wait states required and boost overall system performance. Interleaved RAM divides memory into two banks so that one RAM location can recover after a read while another is being read. Page mode RAM divides memory into pages a few kilobytes in length with special circuitry which permits memory locations within a page to be accessed with zero wait states. Static RAM caches the contents of slower dynamic RAM in faster static RAM, as much as a disk cache does for magnetic data. Page mode RAM is very common in 286 PCs, while RAM caching is most often found in 386 machines. If you add RAM to your PC, consult the manual that came with it to determine how fast the RAM chips must be. Installing slower RAM might result in unreliable operation and parity errors. Don't waste money buying RAM faster than what the manual specifies, however. Faster RAM won't speed up the machine because the CPU will still run at the same speed.

###

Bits n' Bytes

- Just received our quarterly shipment of "Personal Systems" from IBM. They will be available at the next meeting.
- We still have about 100 Computer Buyer's Guides. Pick up one at the next meeting. How about 2, or 3 or a whole stack. We have plenty.
- I have 200 order forms from Family Publications with super discounts on computer magazines... for either new subscriptions or renewals. A year of PC Magazine for \$18.00 or Computer Shopper for \$12.00 and many many more. Pick your's up at the next meeting. (Note, I am still investigating the legitimacy of this company as I can not come up with a valid phone number for them in New York)
- George is in the process of selecting various components for our next BBS computer. This will be a 286 with 2 Megabytes of memory, running two phone lines. The old BBS computer will become another computer for use in the library during meetings.
- I hope some of our members made a New Year's resolution to contribute to the newsletter by writing articles. All that talent out there and no one's sharing their knowledge. Guess we should be happy other clubs have an active membership or I'd be sending out blank pages.
- Don't forget to check the table in the library room for used computer magazines. We have a large assortment each month free for the taking. Magazines remaining at the end of the meeting are put in the dumpster.
- If you would like to see something special demonstrated at one of our meetings, tell an officer. We'll write a letter to the company and see if a representative will come and be one of our featured speakers.

The Nitty Gritty of Zipping

By Bill Foweler,
Capital PC User Group

Reprinted from Boca Bits Newsletter of the PC Users of Boca Raton - January 1990

First, a survey. Let's see a show of hands:

- How many of you know that a .ZIP file is one or more DOS files compressed into a single file in order to save disk space and reduce the time required to transmit them via modem? Good! Almost everyone. (By the way, these compressed and packaged files are usually referred to as archive files. That's a small "a" in archive, folks!)
- Now, how many of you have used utility programs designed to create .ZIP files or to extract or otherwise manipulate the files contained in a .ZIP file? Only a few less hands than before. A very archive-literate crown.
- Did you know you could examine a directory of the files included in a .ZIP file without extracting the files? Not bad, but we lost a few people on that one.
- Are you aware that you can read or print a text file included in a .ZIP file without extracting it from the archive file? Oops! I'm afraid we're really losing some of you now.

Based on this survey, I think a review of some of the functions provided by the PKWare utilities is in order.

PkWare is the developer of one of the most widely used archive file manipulation systems. The latest versions of the files that comprise PKWare are contained in the file PKZ102.EXE. It is a self-extracting archive program. That means that you just type

"PKZ102"; the 14 files that constitute the PKWare compress/uncompress system will be extracted from PKZ102.EXE and placed on your disk. A 360K floppy will hold all of these files but not much else, so have plenty of disk space available when you begin this process.

The two major programs in the PKWare system are PKZIP and PKUNZIP. Basically PKZIP is the program that compresses individual files into a .ZIP file. PKUNZIP is the program that handles the extraction of files from .ZIP files, as well as several special-purpose functions with .ZIP files.

The following section describes how you can access some of the lesser-known capabilities of the PKWare system.

Removing all files from a .ZIP file

```
PKUNZIP C:\DOWNLOAD\Filename(.ZIP) A:
```

This command will extract all of the files in Filename.ZIP in the DOWNLOAD subdirectory on the C drive. The files extracted will be placed on drive A. The notation [.ZIP] in the command indicates that it is not necessary to type the extension .ZIP when processing a file with that extension.

Creating a .ZIP file from Separate DOS files

```
PKZIP -a A:\Newfile C:\DOWNLOAD\*.*
```

This command will compress all files in the DOWNLOAD subdirectory on the C drive and place them in file Newfile.ZIP on the A drive. The '-a' in the command above is the commands switch that tells PKZIP to add files to the archive file; in this case, Newfile.ZIP. If Newfile.ZIP does not exist, the "- a" switch will cause PKZIP to create it.

Examining a directory of files inside a .ZIP file

```
PKUNZIP -v Textfile(.ZIP)
```

This command will display a directory of the files contained inside the file Textfile.ZIP, which is in the cur-

rent subdirectory of the current logged drive. The directory listing will show several items of information about each file in the .ZIP file, including the original file size, compression method used, compressed file size, and the date and time of the file.

Reading a text file that is inside a .ZIP file

```
PKUNZIP -cm Textfile(.ZIP) Program.doc
```

This command will display the file Program.doc (which is inside the file Textfile.ZIP) on the monitor. After the first screen, you advance through the file one line by pressing Enter, or one page by pressing the space bar.

Printing a file that is inside a .ZIP file

```
PKUNZIP -p Textfile(.ZIP) Program.doc
```

This command performs just like the previously described one, except that the file Program.doc will be sent to the printer, rather than to the computer screen.

These are only a few of the many .ZIP file manipulation functions available to users of the PKWare system.

The PKWare compression programs are available in file PKZ102.EXE. Those who use PKWare compression programs are requested to register for a fee of \$25; the full registration fee of \$47 includes a diskette with the next version of PKWare when it becomes available.

Excerpted from The Capital PC Monitor (the newsletter of the Capital PC User Group of Washington, DC), October 1989 [edited].

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Using Named Parameters To Place Temporary Files Where You Want Them

By Kris Jamsa,

Las Vegas PCUG, February, 1990

Many batch files contain commands that use the DOS output redirection operators (and >) to create temporary files as the commands execute. The following batch file, SHOW-FILE.BAT, redirects the output of the ATTRIB command to the file FILES.DAT which contains the names of every file on your disk.

```
ATTRIB *.* /S FILES.DAT
PRINT FILES.DAT
PAUSE
```

Once the file completes printing

```
DEL FILES.DAT
```

The DOS output redirection operator directs DOS to write the output that normally appears on your screen display to the file or device specified. In this case, DOS writes the output to the file FILES.DAT. By default, DOS creates this file in the current directory. As you can see, once the file FILES.DAT completes printing, the batch file deletes it. As such, FILES.DAT only exists on your disk temporarily. The PAUSE command insures that DOS has successfully printed the file before the DEL command executes. Many batch files create temporary files as they execute. In some cases, you may not want DOS to create the temporary file in the current directory. One alternative is to create a DOS subdirectory called TEMP in which your batch files create all temporary files. Within your batch files, you simply include the subdirectory name as shown here:

```
ATTRIB *.* /S \TEMP\FILES.DAT
PRINT \TEMP\FILES.DAT
PAUSE
```

Once the file completes printing

```
DEL \TEMP\FILES.DAT
```

Unfortunately, if a user runs this batch file on a disk that does not contain the subdirectory TEMP, the batch file will fail. Rather than forcing the user to create a subdirectory to store temporary files, you can use DOS named parameters to specify where the batch file should create the temporary file. A named parameter is a value you place in your batch file that is surrounded by percent signs, such as %LOCATION%. When DOS encounters a named parameter as it executes your batch file, DOS searches the environment for a matching entry. The DOS SET command lets you place entries into the environment. If you simply type SET at the DOS prompt, DOS displays the current environment entries. To create an environment, you use the SET command as shown here:

```
SET LOCATION=C:\DOS\
```

In this case, when DOS encounters the named parameter %LOCATION% within your batch file, DOS will substitute the corresponding environment value, which in this case is C:\DOS\. The following batch file, for example, changes the batch file presented earlier to use named parameters.

```
ATTRIB *.* /S %LOCATION%FILES.DAT
PRINT %LOCATION%FILES.DAT
PAUSE
```

Once the file completes printing

```
DEL %LOCATION%FILES.DAT
```

When the batch file executes, DOS searches the environment for an entry in the form

```
LOCATION=
```

If the environment entry exists, DOS substitutes the entry's value. If the entry is not defined, DOS simply ignores the named parameter, creating the file using only the file name. If instead, assuming that the following environment entry exists, DOS would create the temporary file in the directory TEMP on drive C

```
(C:\TEMP\FILES.DAT).
LOCATION=C:\TEMP\
```

By supporting named parameters, batch files can create temporary files in the directory specified, or instead, simply create the files in the current directory if no matching environment entry exists. If your system has a RAM disk installed, you might want the batch file to use the RAM disk to create temporary files. As a result, the batch file executes faster, because DOS creates the files faster.

As the complexity of your batch files increase, named parameters give you tremendous flexibility.

```
###
```

Our Busy BBS

So you wonder why you can't get through to our Bulletin Board. Hey, more than just the "locals" are using our board. Here is a list of those "outside the toll free area" we received within a 54 hour period.

- 1 - Edison, NJ
- 2 - Elk City, OK
- 1 - Athens, TX
- 1 - El Paso, TX
- 1 - Clovis, NM
- 1 - St.Louis, MO
- 1 - Kent, WA
- 1 - Holland
- 6 - Santa Maria
- 5 - Paso Robles

```
###
```


Leave It On Turn It off

By Hugh Bayless

Monterey Bay User's Group

For a long time it has been accepted as gospel that computers should be turned on when you start to use them and not turned off again until you are through for the day. Everybody knew that turning computers on and off shortened their lives drastically.

That was probably true in the early days (perhaps six or eight years ago), but today it is not necessarily true.

There is certainly some thermal shock in a light bulb when it is turned on, but computers are not light bulbs, and the days of high amperage surges from turning on computer power supplies are a thing of the past.

Rather than compare a computer to a light bulb, we should compare it to the other electronic devices so common in our homes: televisions, microwave ovens, VCRs and hi-fi systems. We turn these on when we use them and off when we are through with them. There are no manufacturers' warnings of dire consequences from not leaving our TV sets running constantly instead of switching them on and off as we do.

John C. Dvorak, the widely read columnist, advises people to turn off computers and other electronic gear when not in use. As he puts it, a machine that runs one hour a day will last 24 times longer than a machine that runs 24 hours a day.

More and more people seem to agree with his viewpoint. An electrical engineer with P.G.&E., Stan Miller, Jr., contributed an article to the Humboldt User Group Newsletter in which he said much the same thing: "If you plan on leaving your computer on to use it say in the next half hour, I would say leave in on and turn the brightness control down. But, if you are going to be away from your computer an hour or so, I would go ahead and turn it off."

What these gentlemen are saying makes sense to me. The life of a hard disk drive is given as MTBF (Mean Time Before Failure) and is measured in hours of operation. The less it runs, the longer it will last.

In the world of mainframe computers that took thirty minutes to boot into operation, it was customary to leave them running all of the time. Today, with the modern, fast booting desktop PCs, that reasoning does not apply.

The argument will no doubt continue into the future: leave it on, turn it off. But, until I get advice I consider better than the foregoing, I shall turn my own computer off when leaving it for more than ten or fifteen minutes.

I want my computer to last as long as possible.

Note: For what it may be worth our Mita photocopier sales rep and service person strongly advise to keep the machine off if not used for extended periods. The cooling fan continually sucks in and deposits layers of dust, rhinos, cat hairs, pollen, mice whiskers etc., much to the detriment of the machine.

###

Printing Graphics: A Tip

By Kim Kaiser,
Capital PCUG

Reprinted from Space Coast PCUG Newsletter,
November 1989

Some time ago I bought Capital PC User Group Library Disk No. 67 containing MTOOL, a very nice interactive math program.

Unfortunately, the delightful graphs produced on my Zenith monitor via a VGA card would not print. The program was not much good to me without a record. So I wrote to the author of this shareware program and asked how I could use Print-

Screen to capture the graphs on my dot-matrix printer.

No reply. I sent no registration fee either; the program was virtually useless to me. I called Rich Schinnell on the MIX, and he suggested that something was wrong with my screen handler.

When I came across a note in the "User-To-User" section of the April 25, 1989 issue of PC Magazine, Rich's advice came right out of my memory.

"DOS 4.0 adds EGA/VGA support to GRAPHICS.COM," said the article. I have DOS 4.0, but I did not use it because of reported bugs.

I did, however, modify the GRAPHICS.COM file of DOS 4.0 according to the instructions on page 316 of the magazine mentioned above.

When I replaced my DOS 3.2 GRAPHICS.COM with the newly doctored GRAPHICS.COM and its companion, GRAPHICS.PRO, PrintScreen produced a beautiful rendition of the MTOOL graphs on my printer.

I can now also print any other graphs on my screen, including fractals.

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FLOPPY DISKS 4-SALE at the meeting

Royale Grey DSDD 360K
Unformatted Floppy Disks
with labels, tabs, and sleeves
70 Cents Each

MEI DSDD 360K
Unformatted Floppy Disks
with labels, tabs, and sleeves
50 Cents Each

High Density Disks 1.2 MEG.
90 Cents Each
Sony 3.5" 720K

Unformatted Floppy Disks
90 Cents Each
New Library Disks
90 Cents Each

All Disks fully guaranteed against defects.

Club Information

The SLO BYTES Newsletter is a monthly publication of SLO BYTES PC User's Group located in San Luis Obispo, California. Information in this Newsletter is derived from both our own membership and other PC User Group Newsletters. The purpose of this publication is to inform our members of meetings and provide information related to the use of IBM PC's and compatible computers.

Membership: Dues are \$18 per year. Newsletter only is \$10 per year. Full membership entitles you to our monthly newsletter, full use of the public domain software library and discounts at local computer stores.

Article Submission: Deadline for submission of articles is the 15th of each month. Articles should be provided in ASCII format without any type of formatting from your wordprocessor including tabs, indents, extra spaces, or highlighting. We prefer articles on disk but will accept hardcopies if necessary.

Disclaimer: Neither SLO BYTES PC User's Group, its officers, editor, or contributors to this newsletter assume liability for damages arising out of this publication of any article, including but not limited to the listing of programming code, batch files and other helpful hints.

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Direct all correspondence to Bob Ward, 2100 Andre Ave., Los Osos, CA. 93402. Call (805)756-2164 M-F 7:30am - 5pm and (805)528-0121 all other times.

Treasurer: Teri Sorgatz, 832 S. 7th Street, Grover City, CA. 93433 Phone 489-2516

Meeting Times

General meetings are held the 1st Sunday of every month, unless noted otherwise in the newsletter calendar, at 2:30 pm in the Cal Poly University Biology Department, Fisher Hall 286. Special Interest Groups (SIGS) meet at 1:30 - 2:15 pm.

New User's SIG - F.H. 286

Our Public Domain Library is in Fisher Hall 292. Hours 12 Noon till closing.

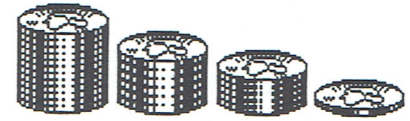
SLO BYTES BULLETIN BOARD

(805) 528-3753 2400/8/N/1

PC Files & Message Section

SYSOP: George Campbell

All Welcome - 24 Hours



Treasurer's Report

Here's our expenses for the month of January, 1990

Beginning Balance	\$1525.97
Newsletter Xerox	\$92.00
Dues - APCUG	\$25.00
Deposit 2/5/90	\$734.70
Balance	\$2143.67



DISCOUNTS

Paradise Computers 3485 Sacramento, unit B San Luis Obispo 544-7127	5%	All computers, peripherals and software.
Star Computers 855 Morro Bay Blvd. Morro Bay 772-7827	5%	Any software in stock.
Computer Logic 973 Foothill Blvd. #4 San Luis Obispo 544-8347	10%	Paper, ribbons, cables, and other supplies.
WITCO Computers 3563 Sueldo, Bld. B San Luis Obsipo 549-0811	10%	Off list - all computers, software, computer peripherals, and products. Contact Bruce, Paul or Dave for discount.
	5%	Off complete systems, peripherals, supplies but not including software.
	5%	Off computers alone.



SLO BYTES BBS is a member of the UGX on BIX, the on-line service for computer- using professionals. For information, call 1-800-227-2983.

