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Deadline:

All advertising and other material for publication in North Texas PC NEWS must be received by the NEWS staff by the 15th of the month. See copy deadline below.

Articles:

We would like to get more articles for publication in North Texas PC NEWS; guidelines follow.

Please do not right-justify, indent or otherwise code the copy. If column alignment is critical, send along a hard copy, or written instructions. Article submission is preferred by NTPCUG BBS, Startnet MC 51563, or disk in ASCII format, unjustified. If you send a disk, please include a printed copy of the article to assure accuracy. If sending to the User Group Bulletin Board, use "mail" mode, to John Pribyl. Double spaced, typewritten copy is acceptable but must be received a week before the deadline. All material submitted will be considered for inclusion in the newsletter. The Editor reserves the right to edit as necessary to maintain standards of literacy, grammar, and length requirements.

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DEADLINE
Copy deadline for April
NT PC NEWS:
Tuesday, March 15th.

Meeting Dates:

March Meeting - 2nd Sat. (12th)
April Meeting - 3rd Sat.
May Meeting - 3rd Sat.
(tentative)

Editor's Notes...

You've told us you enjoy the newsletter; now we need you to offer something in return: personal experiences, reviews, observations, projects or other items of interest to the members.

I'm not necessarily talking full-blown, 100%, specialized reviews or comparisons like PC Magazine or InfoWorld... although those are always welcomed with open arms. I'm talking more about what you as an average user meet everyday in the rounds of computing. Some people think you have to have a world-shaking idea or Shakespearean writing talent to write an interesting article. Not necessarily so! Our members are people with the same interests as yours, and want to hear about new, or unusual -- or even commonplace occurrences if they serve a useful purpose -- if you'll just put them down on paper.

We have some great articles this month, and we appreciate those who contribute.

We just need to get more articles and receive them earlier in the month. With earlier submission of articles, we can do some pre-planning and improve PC NEWS. At the present time, the content of each newsletter cannot be determined until the night of the deadline.

We need volunteers who will write articles and/or help get more members to contribute.

Please call the editor if you can help. Article submission instructions are detailed in the left column on this page.

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March 12

Charles Kroboth, Program Director

9:00 AM to 9:45 AM

AUDITORIUM

*** GRAPHIC ARTS MOVIE ***

We will be showing the video, Graphics Arts Systems, on our projection system. This is a video text report on the computer graphics industry from Frost & Sullivan and gets very specific about equipment and cost.

10:00 AM to 11:00 AM

AUDITORIUM

*** IMAGE SETS ***

Image Sets is a company based at Infomart, specializing in PC-based design production workstations that produce high color-resolution, professional quality graphics and text. They will be demonstrating products from AT&T Graphics Software Labs and Targa, as well as, their own turnkey systems for lithographers, art departments, and video production.

Prez Sez...**Transfiguration -- DOS Rises From the Flames**

Reports of DOS's death are greatly exaggerated. Whispers of change, however, are stalking the PC user. Like thunderheads building above West Texas, the "Great Operating System Revolution of '88-89" is gaining momentum, poised to inundate the PC world.

Harbingers of this revolution are already upon us. IBM/Microsoft announced/released OS/2 at FALL COMDEX87 in a flurry of announcements extolling the operating system (OS) as the solution to almost all our PC problems. Magazines are filled with WINDOWS 2.0 and WINDOWS/386 articles. Variants of UNIX V, Xenix, Venix, etc., are waiting in the wings from a number of vendors.

"DOS is dead!" echoes loudly as OS vendors' battle-cry.

Wait a minute. OS/2 is an exclusive neighborhood. Folks with 8088-powered PC's -- like the one this column is being written on -- can't live there. OS/2 leaves us behind. There's a suspicion of marketing hype here -- designed to encourage us to abandon our beloved PC's and move (i.e., buy) to the newer, 80286/80386 (\$\$\$) world. Don't forget memory -- OS/2 likes lots of memory, with 4M (\$\$\$'s) estimated as necessary to do real work.

WINDOWS is big, slow-moving and requires a graphical interface. Period. Well, not quite. WINDOWS also eats memory something fierce. 640K goes real fast. UNIX is very, very big and has strange names I'm not that sure I want to learn.

What happens then to the millions of DOS-powered, 8088 PC's most of us own? Are we supposed to give

them to the kids for game machines? Or, perhaps, install them as the most expensive door-stops in the neighborhood? I don't think so.

OS/2, WINDOWS/xx and Unix are solutions to problems. Each is a natural outgrowth of the evolution of PC's into the world of business and advanced home use. Each of the systems is designed for dif-

Borland Strikes Out with NTPCUG Members

Several hundred North Texas PC Users Group members made a special effort to attend the Borland "QUATTRO" demonstration at the December Meeting. Jim Graham, former NTPCUG President and member of the Board of Directors, gave a relaxed, knowledgeable view of Borland's new spreadsheet.

Things began to fall apart after the demonstration.

Ten NTPCUG members' names were drawn to "receive free copies of Quattro." And members who signed up for a subsequent QUATTRO Seminar were assured they would receive invitations detailing date and location of the following meeting. So far, so good.

At the time of this writing in February, at least one of the ten "winners" have not received either QUATTRO or any notification from Borland explaining the delay. Many of the members who signed up for the following meeting were NEVER notified of the demonstration which took place February 9.

That's shoddy performance from a company that calls itself "world class." Period.

NTPCUG members who "won" or signed-up for the Seminar and have not "heard" from Borland are asked to notify us VIA MAIL, giving their name and current mailing address.

ferent use patterns in somewhat different environments.

Newer versions of DOS – and they are coming – will also be solutions to problems, but not on the grandiose scale of OS/2, UNIX V and WINDOWS/xx. Instead, DOS will be focused on the "typical" PC user who generally does one thing at a time, or several things sequentially. WINDOWS/xx really belongs here, if a faster, smaller and easier-to-use version is developed in conjunction with new DOS's.

Remember – MS/PC-DOS 2.1 and 3.2 are well-behaved, well-known versions of DOS with ample utility for typical home PC users if the frills of later versions aren't necessary.

For those of us with older PC's and PC-XT's who want to use the new OS's, but are unwilling to ante-up the \$\$\$'s for new machines, there are some solutions in the pipeline. Microsoft, AST, Intel, Quadram and Western Digital have all announced either "accelerator" boards or new motherboards to replace existing 8088's with either high-speed 80286's or 80386's. Listed prices are high – starting about \$1000 – but are sure to drop with discounting.

While many other manufacturers have had accelerator boards for some time, the new crop includes provision for high-speed memory in the multi-megabyte range and are aimed at compatibility with OS/2 and/or WINDOWS/386. Owners of AT (80286) machines who want 80386 speed and functionality can also add 80386 accelerator boards or replacement motherboards.

All will run DOS 3.3

Reagan

□



Bill Gates, Chairman and C. E. O. of Microsoft will address our Group at a special meeting at 7:00 PM on MARCH 8th at the INFOMART.

ON COMPLEXITY

Number 13 in a series.

by Jim Hoisington

If you haven't purchased any memory chips since Christmas you are in for a shock. The 256K bit DRAMS have doubled and doubled again in price. And you may not find any to buy at any price.

The most common explanation one hears these days is that it is due to the dollar's weakness in relation to the yen. But that is only a small part of the problem.

Most of the chip manufacturers have stopped making the 256K bit chips. They are switching over their manufacturing facilities to the 1 million bit chips. That's good for the future but bad for those of us that still have some empty sockets in our memory expansion boards that use the 256K bit chips.

The memory board makers are also gearing up to use the new chips in their designs. To make room for these new boards, however, they are selling off their boards that use the 256K bit chips which only makes the problem worse. It adds a larger number of buyers to the market who are looking for 256K bit chips.

Finally, the Federal Yankee Government passed a tariff bill to restrict the number of 256K bit chips that could be imported from Japan. The bill might have been a good idea when it was proposed, but by the time it was passed, most of the U.S. chip manufacturers had dropped out of the 256K bit DRAM market.

The result of the tariff was to increase the scarcity of chips driving up the price. The chip manufacturer that really benefited was Samsung, a Korean company, which was not affected by the tariff.

What can you do about it? If possible, wait for the new boards using the 1 megabit chips. You'll need them.

It appears that two years from now the average personal computer will have between 4 million bytes and 8 million bytes of memory much as the average machine has between 512 thousand bytes and 640 thousand bytes today. Putting that much memory into you machine using 256K bit chips would strain your power supply and generate way too much heat for your cooling fan to handle.

What will you do with all that memory? You'll fill it with software, of course! Just consider that the first release of OS/2 uses 1.5 megabytes, and operating systems always seem to get bigger with each release. Programmers can always write software to exceed the memory capacity of any machine, no matter how large.

Jim

□

PC-MOS/386 Offers 386 Power and DOS Compatibility

by Andrew J. Chalk, Ph.D.

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Quick Summary

PC-MOS/386 is a true 386 operating system that enables the user to, reliably multi-task existing DOS applications. It has a network version that can support up to 25 users through remote terminals. It looks like DOS, and runs most DOS software.

Remember the AT roll out back in August 1984? Several hundred assembled members of the press sat in the auditorium, periodically scratching themselves under the arms or emitting strange groaning noises. Up on the podium, electric blue was the color scheme of the day. The platform almost sagged under the weight of what looked like the whole upper management of IBM's Entry Systems Division. Eventually, a line of IBMers gave speeches extolling the new machine and its new Intel 80286 processor which, they said, could multi-task applications in its protected mode.

After they had finished, a small boy in short pants and professorial looking glasses came forward from the back. A kindly IBM type offered an orange box for him to stand on so that we might see him. He rose to the podium, and with a big smile said that he and some chums had been working on an operating system for the new machine. This operating system would be ready by "the end of 1985." Some of the less knowledgeable press types, not knowing how complicated an operating system is, were heard to grumble that this was too far away. The cognoscenti politely said that they would prefer the new DOS today but, everything considered, 1985 was fine.

Well 1984 saw huge demand for IBM's new machine. The doubters who had said that 64k was too much memory for anyone short of Chuck Yeager were put to rest. The year 1985 came and went with a great vintage in Bordeaux but no new DOS in sight. Users became a trifle less polite in their references to Microsoft and a few even went and bought a funny looking machine that apparently came equipped with a rodent.

By 1986 the new DOS was as far away as ever. Retirees stopped lobbying for social security increases and demanded that their Congressmen do something

about the new DOS lest they be too old to use it when it did appear. Those funny looking machines started to appear everywhere, often sold with coupons for free Pepsi and the slogan "The Machine for a New Generation." Even Michael Jackson bought one. Some experienced computer users were even heard to utter the old Latvian swearword "UNIX".

Only late in 1986 did criticism abate. The reason for this was not that the new DOS appeared, but because the 386 did. The 386 was faster, had a larger memory address space, and a special mode that made the multi-tasking of existing DOS applications safe and easy. At first, 386s were expensive. However, by late 1987 you could buy one for \$2000 and thousands of PC owners who had eagerly paid \$5,000 for a 64k, 8088-powered PC back in the 1982 decided that this machine was what they wanted and the only question was "when," not "if." While nobody was looking the first version of the new DOS was released, amid a general "who needs it?" response from users. Some even said that "OS" stood for "Obsolete System."

Once armed with a 386, you have a machine that can run at a clock speed of 16mhz or more. It can access 4 gigabytes of real memory and 64 terabytes of virtual memory. It can perform multiple tasks that are hermetically sealed from each other through hardware protection. The 386 is, in short, an astounding chip that has the power to fulfill most tasks that 95% of users place upon it. If you buy one now, it won't be like having bought a PC back in 1982. In a couple of years time, people won't ignore you in restaurants or snicker behind your back. This is a real computer, a platform for five to ten years of productive use. The 386 is, in short, a resting point beyond which many users will not want to go for a long time.

Let's buy a 386 today, take it home, set it up, and load the operating system. Problem number one. What operating system? Do you really want to use MS/DOS on this machine? MS/DOS was a technical marvel on a PC with 64k of memory. On a 386 it is like buying a Ferrari to use only on North Central Expressway in the rush hour. No multi-tasking, no memory beyond 640k, no multi-user. ▶



One solution is UNIX. But you have spent thousands of dollars on software for MS/DOS? The bright colored boxes sure look pretty on your shelf, but would you pay that much just for decoration?

It was to answer this dilemma that The Software Link designed PC-MOS/386. A true 386 operating system that looks like DOS, has commands like DOS, but exploits Intel's outstanding chip to provide true multi-tasking of existing DOS applications. MOS, as we shall call it, is not like DoubleDOS or other such multi-taskers designed for the 8086. You don't have to remember to load this program before that program, never use these two programs together, or put up with one program painting the screen of the other. MOS uses the 80386 chip's virtual '86 mode, so every program has an iron wall of hardware protection around it to prevent interference. MOS can also run the 80386 in protected mode, permitting multi-tasking of 32 bit applications that exploit more than 640k. Software for this mode is not available yet.

MOS stands for Modular Operating System. The program is so named because it can support up to 25 users. You can buy the single-user version and then purchase "upgrade" packs to convert to 5, 10, ... up to 25 users. In this review we look at the single user version because of the absence of a convenient network to test the multi-user version. I will describe the features of the multi-user version but I do not have personal experience of how well it performs.

MOS is aimed at two types of user. The one that The Software Link pitches its advertising at most heavily is the small office or engineering shop that wants to set up a network. The other is the standalone 386 owner who wants to exploit the 386 chip without losing his investment in his DOS software. At a street price of \$150 MOS is priced right to deserve a serious look.

Installation and Configuration

MOS comes on two 5.25 inch 360k diskettes with a single 400+ page manual and a slip cover that converts into a manual stand. I could never figure out how to convert the slip cover into a manual stand so that feature must be aimed at true power users.

You can install MOS in a number of ways. First, if you have only one partition on your hard drive you can type "MSYS C:" and MOS installs itself. If the hard drive is DOS formatted then MOS replaces DOS. Your directory structure and FAT remain intact and can be used by MOS or DOS since MOS uses a DOS compatible file system (this is a notable achievement of the MOS software engineers). Second, if you have a multiple-partition hard disk you can reformat with a MOS utility a start computing "tabula rasa." If you

want to use DOS instead of MOS you boot with a DOS disk in drive A:. Third, also if you have a multiple-partition hard disk, you can do what I did (inferred from, rather than stated in, the manual), create a MOS bootable floppy and boot from that when you want to use MOS. It contains a batch file that sets up a path to a directory on the D: drive containing the MOS system files and also makes a hard disk partition the active drive. The advantage of this is that MOS runs most, but not all, DOS software and this option makes it easy to choose MOS or DOS. MOS coexists with Ontrack's Disk Manager partitioning software but The Software Link advises that MOS does not like all disk partitioning software. Whichever method you choose, installation is easy and clearly explained in the manual.

Configuration is less simple, and apparently one of the major problems with MOS users. The problem is that the clear explanation of the MOS installation process is not followed by any comparable description of the overall facilities or design philosophy behind the many device drivers that accompany MOS. Since the 386 is new, it has its own attendant complexity. The basic rule is that the next step is to set up a CONFIG.SYS, much like in DOS. The MOS device driver MEMDEV.SYS must be the first line in the file. This informs MOS what type of hardware is being used. Other commands, which can follow in any order, consist of optional device driver commands and non device driver commands. In addition to user device drivers, MOS comes equipped with several system device drivers. \$CACHE.SYS loads the MOS disk cache, \$RAMDISK.SYS loads the MOS ram disk, \$EMS.SYS loads the MOS expanded memory driver for DOS software that can use LIM EMS, \$SERIAL.SYS specifies what types of terminals are attached to the main console in multi-user operation and \$PIPE.SYS defines a buffer for inter-partition communication. Non device driver commands are similar to DOS commands such as BUFFERS or specific to a multi-tasking or multi-user environment. For example, SLICE establishes the default time slice per partition and SMP SIZE sets the size of a buffer used by MOS to store partition information.

Unlike DOS, device drivers in MOS are removable if they are not in use. Also, certain commands that DOS puts in the CONFIG.SYS are used at the command level in MOS. For example, the environment can be dynamically re-sized from the command line. Both these enhancements are useful.

Using PC-MOS/386

It is clear that a lot of thought went into the MOS design before anyone coded a single line. A paraphrasing of the design specification might be

"make it look and feel like DOS but use the 386 chip." When you boot up, MOS gives you a copyright screen and then its straight to the "[C:]" prompt (MOS prefers the brackets to the DOS ""). The first thing that I did was type in

```
"PROMPT $! $p $g $"
```

and, as expected, the prompt changed to the familiar

```
16:21:44 C:\.
```

Next, I ran a batch file. It worked fine. MOS appears to support the whole DOS user command set and, like DOS, implements some commands internally and others externally. In addition, MOS adds a few new commands and more options to existing ones. The EXCEPT command allows you to do something on all files except the ones specified. So:

```
except (*.doc myfile.txt) do copy *.* c:
```

copies all files except those with the extension DOC and the file MYFILE.TXT to the C drive. MOS also has the complementary command ONLY to perform commands only on a designated file or class of files.

Another useful command is AUTOCD, which lets a batch file return to an arbitrary drive and directory from where it started. This is not possible under DOS. MOS also takes a gingerly step in the direction of structured programming with the CALL and RETURN statements that direct execution of a batch file to a label and then return to the line following the CALL when RETURN is reached. I can sympathize with the MOS designers in wanting to provide the familiar handful of DOS batch commands but it would be nice to see a more powerful language (such as REXX) supplement the archaic DOS batch facility sometime in the future. At the MOS command prompt a user can type "help" and a menu of all MOS commands is displayed.

MOS comes with a full-screen editor which you can also use as a line editor (like EDLIN) if you are a masochist. In addition, MOS comes with a debugger that does more than DOS DEBUG but less than specialized debuggers such as Periscope. The debugger does not show 386 registers.

The next thing to do was to run an application. I ran WordPerfect from the usual DOS batch file and hey presto, real live word processing with everything working properly.

Next, I wanted to try one of the things that makes MOS interesting, multi-tasking. MOS implements multi-tasking in a very intuitive manner. You create a partition of a specified size and you then effectively have a second machine. You switch between partitions using ALT-n, where n is the partition number. The first partition is partition 0 and subsequent partitions can have numbers you specify or, by default, gets the next available number. An extension to the

prompt command lets you put the partition number in the prompt so that you instantly know where you are. The maximum number of partitions is limited by available memory.

I loaded a copy of WordPerfect in partition 1 and switched to partition 0. The WordPerfect screen disappeared and the MOS prompt of partition 0 flashed up almost immediately. I was able to run utilities and the like from this command line partition and instantly switch back to partition 1 using ALT-1. MOS permits partitions to be dynamically re-sized or completely removed so you can make a partition smaller to create room for a new one at any time. One feature not in the present version is virtual memory, so to make maximum use of MOS you would want 2 megabytes of memory or more in your machine. The MOS system uses a small amount of memory for the kernel and the command processor and a variable-sized area for the system memory pool to store partition information (I found that 64k was adequate for anything I tried to do. However, the multi-user version requires more space). In addition, an area is set aside to store video data for each partition when it is not visible and for disk buffers. Since these resources are mainly shared they do not subtract from the free memory in any given partition which is 640k on a CGA/MDA system and 588k on an EGA system.

During the evaluation period many programs were tried with MOS. A sidebar gives a list of everything either tried or reported by others to work in the same way that the program does in DOS. The most notable non-working programs were Framework II

What Works With PC-MOS/386

The following major application programs were either tested with PC-MOS by the author, or are reported to work by others. Numerous DOS utilities were tried and all of them worked (they are not reported here).

Dataflex	Quick Basic 3.0, 4.0
DBase III+	Show Partner F/X
Kedit v3.53	Sidekick v1.56
Kermit	Telix v2.12
Lotus v2.x	Turbo C
Microsoft C	Turbo Basic
Multimate	Util
Pibterm	WordPerfect v4.2
Power C	Wordstar
Quick C	

v1.1 and Sidekick. Framework comes up but the keyboard freezes and Sidekick shows its logon screen and then refuses to appear in response to CONTROL-ALT. The Software Link released version 2.1 of MOS towards the end of the review and this contains a patch for Sidekick version 1.56b. The new release also contains support for the EGA 43 line mode and Hercules Graphics. The latter was not tested but the EGA 43 line mode caused the cursor to disappear and random garbage to appear on the screen. At this time I am not prepared to blame MOS for this as I was the only person who reported the problem on The Software Link's bulletin board. It may have been the 386 machine that I was using.

Although Sidekick does not work under MOS, that is not to say that Terminate-and-Stay-Resident programs (TSRs) generally do not work. I ran a resident on screen clock that writes directly to video RAM. It worked without problems and did not appear on the screens of partitions in which it was not loaded. The popular command line editor CED is not necessary with MOS as the system implements a command line scroll back buffer. You hit UP ARROW and the previous MOS command typed at the command line reappears. Hit UP ARROW again and the line before appears, etc. You can also edit the command line properly to insert as well as overwrite existing text. These two features are sorely missing from DOS and their inclusion in MOS reflects the sensible philosophy of the MOS designers of only veering from the DOS standard in areas where it is seriously inadequate.

Inter-process communication under MOS is rudimentary. The device \$PIPE.SYS allows one process to send data to a buffer where another process can retrieve it. There is no checking by MOS that the right process retrieves the data, nor does the operating system inform the sender that the data has been retrieved. The pipe method has only a speed advantage over inter-process communication via disk files (and a ramdisk can be used for that).

Multi-User MOS

As stated above, multi-user MOS was not tested in this review, so information on MOS in operation is second hand. Users in MOS are assigned to terminals connected to a host 386 machine through the serial port at up to 115,200 bps (if the terminal can support it). Users share resources such as the disk drives and the printer. Printer access is arbitrated by the spooler incorporated in MOS. Users can be assigned login ids, and a security level. Each file and each partition on the host is assigned a security level and only users with security levels at least as great can access them. A user may also create new partitions himself and change the security class of files that he creates.

The time devoted to each partition is adjustable in two ways. First, by multiples of 1/18ths of a second (a third party vendor supplies a utility that allows this to be set more finely) and, second, by means of its priority relative to other tasks. Under the former method, the time given to a partition is fixed, and under the latter it always gets processor time before a lower priority partition. In practice, this means that if several users are working on a database or accounting application response time is good. If several users are running processor-intensive applications simultaneously (such as spreadsheets) then there is a noticeable performance hit relative to the single-user setup. This phenomenon is a feature of multi-tasking per se, rather than a problem with MOS.

The MOS system is intended as a low-cost network for the small office or engineering shop and at that it succeeds well. Consultants who install MOS get access to The Software Link's bulletin board in addition to voice technical support and my sessions on this BBS indicated that support is both rapid and helpful. There is evidently a core of consultants who install MOS regularly and have clients who are happy with it. Most of the problems revolve around special devices attached to the network, such as tape drives, and the correct syntax for the MOS CONFIG.SYS. Some problems revolve around the type of 386 machine used. MOS was developed on the Compaq so this may be the best choice of hardware for a server.

MOS appears to be easy to configure and maintain in a multi-user context and this makes it attractive in that it obviates the need for a full-time system administrator so long as there is someone with reasonable computer literacy on the staff.

Technical Support

The typical single user's technical support line to The Software Link is by telephone. Consultants also get a BBS. The response on the BBS is fast and helpful. The phone technical support is the not unfamiliar overworked technical support department situation. When you do get through, the support is good. Hopefully, the present situation reflects the pains of company in the process of a violent expansion and the situation will improve over time.

The Future of MOS

Presumably, a high priority for The Software Link is to make MOS compatible with a wider range of DOS software and available hardware. It is clear that this has been the pattern since the product's introduction in the Summer of last year. In the medium term, it

will be interesting to see MOS support the 386 chip in its native mode. This is the mode of the chip that allows multi-tasking of true 32-bit software. Since there is virtually no software of this type at the present time the virtual-86 mode is more useful and MOS supports this well.

The 386 operating "environment" is becoming more crowded. In addition to MOS, other true general purpose operating systems are Digital Research's Concurrent DOS 386, IGC's VM/386, and UNIX with Locus' Merge 386. Looming on the horizon (possibly the very distant horizon) is Microsoft's successor to OS/2. There are also the 386 control programs Desqview and Windows 386 and the Phar Lap and AI Architects DOS extenders. At the moment, MOS's market position might be characterized as being on a springboard. They could take off in a big way or they could fall flat. The Software Link can probably take it for granted that the product for which MOS is useful, the 386, is going to sell. The question is, which operating environment will the early adopters choose? There are good arguments for choosing MOS but many 386 users will not try an operating system that comes from a company about which they know little. What The Software Link needs in order to guarantee their place as a major player in the post-DOS operating system era is a link to a major applications vendor whose products are rewritten to support MOS. Microsoft is out, for obvious reasons. Ashton-Tate seems to lack strategic direction. That leaves Borland, Lotus and WordPerfect. WordPerfect does not have the depth of product line, and Lotus, despite its market presence, is essentially a one-product firm. Borland would be the best choice. Paradox, Reflex, Quattro and Sprint could all be recompiled with (the 386 version of) Turbo C. Then the company could offer an operating system and all the major applications to the 386 buyer. In the absence of such a link it is likely that most 386 buyers will hold out for OS/2 386.

For the present, PC-MOS/386 is worth serious consideration in two contexts. First, as a single user multi-tasker of existing DOS applications which is reliable and easy to use. Second, as an efficient multi-user system for a small office or engineering shop in which users are connected from terminals to a 386 host.

One final thing to bear in mind is that MOS comes with an evaluation disk that runs fully functionally for 30 minutes between reboots. If you do not open the sealed system disk you can return the package for a refund. That is an offer that shows huge confidence in the product and is hard to beat.

Andrew

Hardware Configuration Used in This Review

This review was conducted on a Fivestar 386/S computer equipped with 1.5 megabytes of RAM and a Priam 60 megabyte hard drive.

Product Information

Product: PC-MOS/386 v2.10

Requires: 80386 based-system

Developer: The Software Link 3577 Parkway Lane Atlanta, GA 30092 1-800-451-LINK

Price: Single-user \$195 25-user \$595.

Andrew Chalk is leader of the Assembly Special Interest Group.

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Software Report

by Dick Gall

Finance Manager II - Version 1.2

Over the past couple years, Hooper International has been quietly adding modules that convert its General Ledger from a standalone program to the centerpiece of a small business management system. The release of Version 1.2 crowns this system with new features in each module and improved speed and capacity throughout.

Currently available modules are:



The General Ledger is a menu-driven, double-entry bookkeeping system. It is easy to use, but does require an understanding of double-entry (debits and credits) bookkeeping. Sample accounts and examples of basic transactions are provided to assist in setup. For beginners, the appendix on basic accounting principles demonstrates how to structure entries for various business transactions. ▶

General Ledger features summary:**Maintains Accounts**

Stores up to 1999 accounts
Tracks monthly budget for income and expense accounts
Maintains multiple sets of books
Provides three subtotal levels
Maintains a detailed list of everything you own, and everyone you owe

Records Transactions

Allows up to 32,000 transactions per year (3,800 with floppy disks)
Sorts transactions by date order or by order of input
Permits multiple debits and credits per transaction
Allows user to easily correct and/or delete transactions
Provides check-number input field
Allows user to enter transactions from a previous month or year

Creates Financial Reports

Provides full range of financial reports
Reports by month, quarter, or year
Provides summary, or trended (by month) reports

Performs Fiscal Year Tasks

All closing entries performed automatically by the system
Beginning balances automatically set for new accounting period
Variable fiscal year, or accounting period capability

Creates Graphs of your account balances.

An Account Reconciliation option is offered for the General Ledger. This will balance a checkbook and any other type of statement account. A Payroll module is being planned for release in the spring of 1988. The Account Reconciliation module keeps track of all transactions for a particular account. It shows which transactions have "Cleared", or are included in the balance on your bank statement, and which remain outstanding.

Financial Utilities provides:

Loan Analysis: Payments, original loan amounts, interest rates, terms, and amortization schedules.

Depreciation: Straight line, straight percent, declining balance, sum-of-the-years-digits, ACRS, MACRS, and Alternate MACRS methods.

Investments: Present and future value of annuities, internal rate of return, net present value, bond price, and bond yield to maturity.

Reports can be listed on screen, to a disk file, or directly to a printer.

Machine requirements are 256K of memory, monochrome or color display, 2 floppy disks or 1 floppy and hard disk, DOS 2.0 or later version.

Modules are priced separately from \$15 to \$40 each. Each module diskette includes a manual. Optional printed manuals are available. All modules include the master menu and system utilities.

An 11-month General Ledger program is distributed for evaluation via the User-Supported Software concept. The evaluation package includes sample data files and over 200K of documentation. The evaluation diskette is \$3 + S/H from Hooper.

For further information, contact Hooper International at P.O. Box 62219, Colorado Springs, CO 80962 or call their 24-hour order number: 303-528-8989. Free telephone support is provided to registered users.

DJ:DISK JOCKEY

DJ is a toolkit of practical utility programs that improve the speed, flexibility, and security with which disk data files are managed and used by a PC. Any serious PC user who performs a variety of operations on file data and programs is likely to find several members of the set to be uniquely useful.

Revolution Software has released DJ as their second product. Their first is the RAM-resident cursor control program CRUISE CONTROL, which was reviewed in the November 1986 PC NEWS.

Convenience starts with the recognizable command and program names, which can be grouped into four functional areas:

- A. Disk Maintenance Group
 - DISKTEST Test disk/diskette drive
 - REORG Make disk files contiguous
- B. Data Security Group
 - ENCRYPT Secure file contents
 - PROTECT Hide file, set read-only access
- C. File Management Group
 - SEARCH Search all files for phrase
 - FINDFILE Find file location
 - FINDDUPE Identify duplicate files
 - DIRSORT Structured directory listing
- D. Printer Management Group
 - SETPRINT Automate printer controls
 - REDIRECT Send printer output to disk file

DISKTEST checks the current status of each physical sector on a disk to make sure data has not been affected by deterioration. REORG speeds up disk operation by consolidating parts of fragmented files. This provides faster program loading and other file operations. ▶

ENCRYPT uses the National Bureau of Standards Data Encryption Algorithm to protect information in designated disk files from unauthorized access. The corresponding DECRYPT command converts back to the original contents when the encryption password is supplied. PROTECT marks selected files as read-only so that they cannot be accidentally changed or erased. A files can also be "hidden" so that it is not included in directory listings.

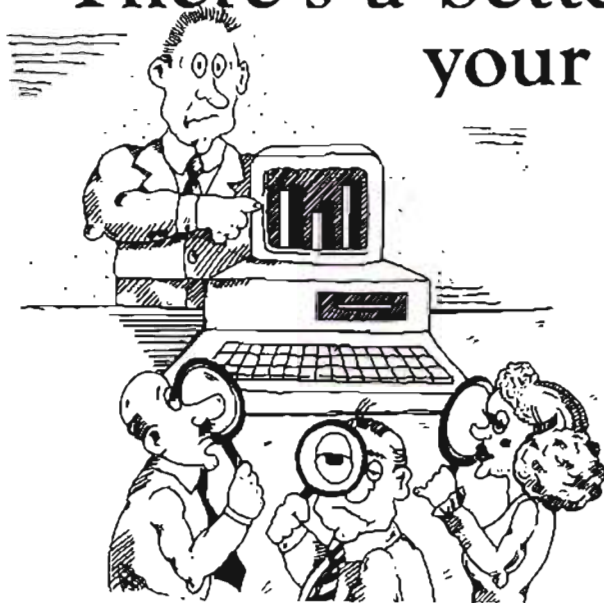
File management tools soon become essential with a hard disk drive. The cryptic file naming system used by DOS is often makes it difficult to immediately identify file contents from a standard directory listing. SEARCH searches all or designated parts of a disk unit for files that contain a user-specified phrase. FINDFILE and FINDDUPE are needed for efficient data storage space use and management. DIRSORT offers single-column and wide listings of disk direc-

tories, with sorting options on filename, extension, size, and date.

SETPRINT allows you to define your own standard set of printer codes using familiar names and characters. REDIRECT is a resident facility that intercepts program output print data and sends is to a disk file for further processing. Tests of this feature showed reliable operation in several situations and time savings due to errors caught by browsing print files on screen prior to physically sending them to the printer.

DJ is supplied in a very professional package with integral 31-page, typeset manual. It is designed to operate on IBM machines and 100% compatibles with at least 192 KB of memory, running PC/MS-DOS 2.0 through 3.2. List price is \$59.95 from Revolution Software, Inc., 715 Route 10 East, Randolph, NJ 07869, phone 201-366-4445.

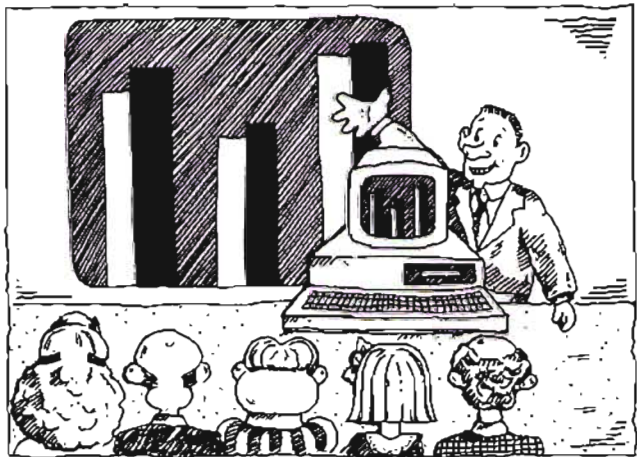
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Diagnosing (And Curing) Memory Problems

Reagan Andrews

Warning! This article involves going into the PC and moving boards and chips around. Static electricity is a major IC killer and owners should take protective measures to eliminate static discharge, before removing boards of chips from the PC.

This article began as a message on the NTPCUG BBS to answer a member's question concerning the meaning of the PARITY 2 error message. I began thinking a couple of simple suggestions and possible solutions would cover most members' equipment. I was wrong. There are so many variants of the original IBM-PC now that generalizations are difficult when specifics such as memory chip configuration or system switch settings are involved.

In the following, PC owners should ALWAYS refer back to their owners' manual for their particular PC in regard to chip location and motherboard switch settings.

The Evil "PARITY ERROR x" Message

Parity should always mean "equality" in PC's. When it doesn't, you get a parity check error message – big trouble. IBM-PC's and almost all compatibles use parity checking to detect errors in memory by using a parity bit for each byte (8 bits) of RAM storage. This is why there are nine memory chips in each bank of memory in these machines.

PARITY CHECK error messages are associated with a bad RAM chip on either the motherboard or accessory memory board of your machine. Such messages often take this form:

```
PARITY CHECK X (1 or 2)
XXXXX
```

These errors always demand immediate attention, since the machine will refuse to work until remedied. That usually means having to pull the cover off the PC and do some digging around in its innards – or taking the PC in for repairs.

There are two types of these errors. A PARITY 1 error is related to a bad or malfunctioning memory chip on the motherboard of the PC, and a PARITY 2 error refers to memory on an accessory memory board.

There are many possible causes for this in a machine that has been in operation for some time (i.e., more than a month) some of which, hopefully the most common, I'll list for you:

1. One (1) or more of your system RAM chips has loosened in its socket due to vibration, movement or alternate heating and cooling of the machine.
2. One (1) or more of the RAM chips has "died" and no longer functions.
3. (and most dangerous) one of the traces on either the motherboard or memory board has been broken, or a marginal, "cold-solder" connection to one of the socket pins has finally let go.
4. (and not to be lightly discounted) the user may be using the wrong diagnostics program, i.e., the memory chips are O.K., but the wrong version of the system diagnostics program is used. Owners of IBM PC/XT's with 640K (Model 5160's) on the motherboard MUST use version 2.2 or higher system diagnostics. Some PC/AT's (5170) also show false parity errors in some configurations. 'Nuff said.

Loose RAM chips easiest to remedy

Number 1 is actually the most common source of RAM errors in relatively new (less than two years old) computers from a hardware source. It becomes more common as the owner does things, changing boards, adding disks, etc., that involve moving around inside the computer case.

Solution is usually simple – just push the loose chip back firmly in place. Often simply going over the memory chips and giving each a firm yet gentle push will solve this problem without recourse to a RAM identification program. Remember, if it's a PARITY 1 error, the problem is on the motherboard, and a PARITY 2 error is on one of the add-on memory boards.

There's a small catch though. Some early RAM IC's didn't have gold or rhodium plated pins and can display significant oxidation coating which acts like a pretty good insulator.

One solution to this is to "pull" a few chips at random and check the condition of the pins. If they appear dirty and mottled or blackened, this may be a source of the problem. Solution is to clean the pins on each chip by gentle abrasion, a regular, pink pencil eraser will do nicely, and coat with protective media.

Hi-Fi stores sell some stuff called Cramolin Oil for gold contacts that works well in this application. It's also good for the contacts on frequently-moved boards in the PC.

Bad RAM chips are a bigger problem

Identification of the bad RAM chip is the major problem here. First, the error message determines whether the bad chip is on the motherboard or an accessory memory board. Then, you have to find the

individual row and chip involved. There are several approaches to use:

1. Use a utility RAM identification program to find and replace the offending chip,
2. Use the manufacturer-supplied diagnostic program to identify the bad RAM (if one was supplied!),
3. If you have a PC-1 or 2, use the motherboard switches to begin isolating memory banks one at a time. This will narrow the search down to 9 chips which can be easily interchanged,

Finding the Bad RAM Chip

Solution 1 depends on availability of a suitable RAM testing program for the owner's PC and/or accessory memory boards. While some boards do come with such programs, many don't, and this may not be easily accomplished.

Solution 2 is also dependent on the availability of the appropriate software. IBM-PC's have chip location included in the error message, but not easily deciphered without the correct documentation (which wasn't part of the Owner's Manual or Technical Reference Guide). Unfortunately, these codes changed over time and machine type and are less than useful on a Sunday afternoon with an important report due Monday morning.

Solution 3 Doesn't Require Anything Except Patience

Solution 3, while time-consuming, eliminates the need for other software, but does involve turning your PC off and waiting for several seconds before turning it on again. Here, you are using the machine's internal diagnostic routines in the Power On Self Test (POST).

Also, consult your PC's manuals for physical location of each memory bank on the mother board, or the memory board's manuals for physical location of each memory memory bank. This is highly important in the steps that follow. (On older boards with one row of soldered RAM chips, that row is the lowest level memory bank.)

Your first step is identifying the "bad" bank of RAM chips. If your PC has switches on the motherboard to set maximum memory, begin decreasing this one bank at a time (with the power off) until there is no error message on POST. The bank controlled by the setting just prior to this holds the bad RAM chip.

If you don't have switches for this function, you will have to physically remove the individual banks of chips, one at a time. Although not absolutely necessary, \$10 - 20 invested in GOOD IC extraction

and insertion tools will prove a very good investment at this time. Remember -- static discharge kills chips!

Once the suspect row is identified, interchange any two of the chips and re-run the POST. If the error code changes, i.e., one of the numbers or characters changes, one of the two chips is bad. Replace one of the chips with a good chip and test again. Keep changing and testing until the bad RAM is replaced.

Where to get the "extra" RAM chip to exchange for the bad chip can be a big problem Sunday morning. I keep several "extra" RAM chips in appropriate sizes -- both 64K and 256K -- on hand for just such emergencies. For this purpose, I purchased RAM in a speed range equivalent to the "fastest" RAM chips anywhere on the system.

If you don't keep "extra" RAMs on hand, you can "rob" a good chip from the last bank of memory to exchange for the bad RAM chip on an earlier bank -- if they are the same size. This way you only lose the last memory bank and usually have enough system memory to continue with your work until a replacement RAM can be purchased.

You've got BIG Problems if the bad RAM is soldered-in.

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If it's one of the chips soldered to the motherboard or memory board, you've got big problems fixing it at home unless you are comfortable with controlled-heat desoldering and resoldering. This usually must be repaired by a qualified service center. If it's the motherboard, remember the cost to repair could easily exceed cost of a new, clone motherboard. Get an estimate, but be prepared to replace.

Unfortunately, older PC's are approaching an age where these may become somewhat more common. My PC is five years-old this month and I'm much less adventurous inside the box than two years ago. Also, I don't turn the PC off unless I'm absolutely sure I'm not going to use it again that day (or night) to prevent as much thermal stress as possible.

Intermittent PARITY CHECK Errors Worst of All

Number 3 is often intermittent in nature rather than a flat-out failure which makes it the most difficult to trouble-shoot and find. These are the stuff of true nightmares for the PC owner.

Either of these two, a bad soldered-in RAM or intermittent problem, will probably need the

intervention of a really good service person or replacement of the offending part -- motherboard or memory board -- since replacement cost is rapidly eaten-up by \$40/hr labor charges or whatever is being charged these days for service by qualified personnel.

Numbers 2 & 3 may be a result of machine abuse, most frequently in the form of over-heating due to blocked or restricted vents, too many heat-producing components in the computer or a power supply with an anemic fan. Solid state devices do age and thermal stresses are a great killer of IC's over time.

Minimizing these stresses by minimizing the temperature gradients within the computer case is one way to significantly prolong the service life of your computer. Avoiding many on-off cycles during the day is another. It's usually better operating practice to turn the computer on and leave it on as long as possible without turning it off.

Some machines are NEVER turned off for the above reasons.

Reagan

■

Selected SIG Happenings

News and Meeting Notes on Special Interest Groups

(Material for this column should be sent to Phil Chamberlain, SIG Coordinator before the 15th of the month.)

LOTUS SIG

The subject for the February meeting was a demonstration of HAL with some emphasis on some of the more advanced features concerning databases in 1-2-3. Lotus HAL is an Add-In for 1-2-3 distributed by Lotus Development. HAL provides a "natural language interface" for 1-2-3.

The subject for the March SIG meeting will be an overview of the built-

in @ functions which will be followed up in future meetings by discussing the categories of functions that our attendees are most interested in.

The LOTUS SIG always takes some time to address questions concerning 1-2-3 and Symphony. If you have any questions about these products, come by and see us or leave a message on the bulletin board in the LOTUS SIG mailbox.

Peyton Weaver
and Mark Gruner

Personal Users (Beginners) SIG

Personal (versus professional) users, novices, beginners, new PC owners, soon-to-be PC owners... this SIG is for you! This month we are complet-

ing our first offering of our 16 stand-alone classes covering fundamentals. Since each class stands by itself, you can start attending at any time and be sure of getting all 16 classes.

IN PREVIEW: At the March NTPCUG meeting, we will cover the last of our 16 classes (and move right back to our first 4 classes in April):

- 13 - Printer Setup
- 14 - Writing LOTUS macros
- 15 - Major categories of software applications available today
- 16 - PCs to the end of the 20th century and into the 21st

Come learn or review the fundamentals with us!

Bob Presley
and Richard Terreo

■

ASK DR. DOS No. 1

Reprinted with permission of the Pasadena IBM User's Group

Dear Dr. Dos -

I'm thinking about switching over to Unix, xenix or even Zipnix from Unysis. Any idea which is faster, niftier or slicker?

Power User, Los Altos

Dear P.U. -

It looks like you're stuck in the Power User's Credo of, "if it's not broken, fix it." A workshop at the Spring Comdex convinced the Dr. Dos staff that 1) your wife has no idea how much you're really spending on computer equipment, and 2) making your computer go faster, slicker and niftier leads to severe fragmentation. Ask Stuck Pasadena, a recent Dr. DOS questionee now recovering in a local psychiatric hospital.

Dear Dr. Dos -

There are times when I seem to have to wait forever for my floppy disks to format. Any ideas for speeding things up?

Slowpoke, Cincinnati

Dear Slowpoke -

Floppies are notoriously slow. The material they're coated with tends to catch the arm of the disk drive. Floppy manufacturers have known how to solve the problem since the early eighties and haven't because of the cost. Dr. Dos suggests a light coating of PAM (hold six inches from the disk and spray for no more than three seconds) to the upper portion of the disk.

We recommend using only the poorest quality disks and never try this with the 3 1/2" disks. Be careful, however, as one dimwit tried using SPAM either due to an existential disorder or a typo and caused his disk drive to crave white bread.

Dear Dr. Dos-

Every time I sit down at the computer I feel a great sense of discomfort as the time seems to speed by very quickly. Just what is happening?

Whoosh, New York

Dear Whoosh -

Computer time is different from other time.

Time pieces seem to become inaccurate when you're at the computer. Every five minutes of computer time is equal to, seems equal to, one hour of my wife's time - from her perception. Actually, for every five minutes at the computer, only 25 minutes goes by on the clock.

It's a simple recalculation based in the number of time slices your computer uses. For example, a computer running an 8088 has an internal clock that ticks about 18 times a second (Mean Greenwich Time). This time factor (8088s only) pushes time ahead 25 minutes for each 5 minutes of real or actual time. The ratio of 5:1 is obvious (except to you, Whoosh).

An AT class machine (80286) pushes the time factor to 10:1 while the new 80486 machines will provide an even faster 30:1 ratio.

Experiment with these machines in conjunction with your spouse. "Dinner is ready," they say. "Five minutes, Honey," you respond. Take careful note at the strong relationship between the time factor of 8088s and 80386s and the length, depth and substance of your marriage. ■



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Compaq 386: 20 for the Price of 16

I was a bit bemused when I heard Compaq was getting ready to announce its 20 MHz version of the Compaq 386 Deskpro, because the Compaq 386's I've been using lately already time out at 20 MHz (using the Landmark Software SPEED99 CPU Speed Test). It turns out there was such a shortage of the 16 MHz 80386 Intel chips (remember that bug reported here a few months ago?) that manufacturers, including Compaq, have quietly been substituting the 20 MHz 80386 chip for the 16 MHz one.

Prices will probably be dropping on the "16 MHz" Compaq 386's, and that's the time to take your disk copy of Speed99 around to dealers and test out those machines to see if you can find one with the 20 MHz chip.

The new Compaq Deskpro 386 does a lot more than just juice up the internal clock speed to 20 MHz, though. Among other things, it handle hard disks up to 300MB and memory up to 16MB.

Compaq also announced its new 20 MHz 386 portable. I don't know if the 20-pound weight of this machine really makes it portable (won't Compaq ever get into the laptop market?), but it has all the goodies of the new Deskpro 386 (except for the extra-large hard disks.)

Compaq is also providing a new version of its MS-DOS, Compaq MS-DOS 3.31, that overcomes the 32MB hard disk barrier! To get around the 640K RAM limit, Compaq is bundling a copy of Microsoft's new Microsoft Windows/386 with all of these machines purchased through December. It looks like a real winner, and I'm planning to get one before year-end.

Microsoft's Windows/386 really looks interesting. Essentially, it takes advantage of the 80386 chip's 8086 virtual mode to permit multiple DOS sessions of up to 640K each in separate windows. Each DOS program running in each window can also access expanded memory above 640K if the software permits. But you'll need at least 2MB of memory to run this, plus as much additional memory as each individual DOS application might need. Windows/386 also supports the new LIM EMS 4.0 protocol.

Just think, you could set up all your TSR software to run in one window, your network software to run in

another window, and so on. And in case you're wondering, software doesn't have to be written specifically for Windows to run under Windows/386. However, applications not written specially for Windows will run more slowly under Windows/386.

Lotus Gets Harvard Fever

You may remember from your readings here that Mitch Kapor, co-founder and Chairman of Lotus, left Lotus about a year ago to expand his horizons. Then, a few months ago, Kapor was enticed back. About two months after that, he turned around and announced he was taking a hiatus from Lotus as a Visiting Professor at MIT. It looks like he was visiting MIT's Sloan School of Management: he just founded a new company called Go Corporation in San Francisco. Chairman Kapor's new company also has Robert Carr, former "chief scientist" at Ashton-Tate, on board, as well as Jerrold Kaplan, former "principal technologist" at Lotus. Since Carr signed a non-compete agreement with Ashton-Tate, it looks as if Go will not be producing any Dbase or FrameWork type products.

I hear the door at Lotus is going to be revolving even faster pretty soon. CEO Jim Manzi, a Harvard MBA, has brought a lot of other alumni on board, and it's become very clear to those on the business side at Lotus that you don't stand a chance if you aren't also a Harvard MBA. Thus, I hear, many paper pushers are taking flight, and more will follow.

I also hear the development side at Lotus is getting pretty fed up with the situation, because these Harvard guys are trying to apply their techniques to the development area, which they know nothing about. (Remember, the Harvard Business School was the one that wanted all incoming students to buy the IBM Convertible laptop and its non-working IBM modem.)

Spreadsheet Wars Continue

While on the subject of Harvard...Software Publishing has very quietly taken its Harvard Professional Publisher package off the market. If you own a copy of this package, call Software Publishing right away. The company will replace the now defunct product with Harvard Graphics and First Publisher, free of charge—but only if you ask for it to.

Lotus, meanwhile, has, despite its turmoil, come out with a nice enhancement to 1-2-3 called Speed-Up. This long-awaited program will make your 1-2-3 spreadsheets run faster, because it will cause only changes to be recalculated, rather than all the cell formulas. Lotus says you can get it free from "selected" dealers, whatever that means. Otherwise, it can be had directly from the company for a surprisingly reasonable \$20. ▶

Also, after much vacillation, Lotus has finally and formally announced it is dropping copy protection from 1-2-3 Release 3.0. Ashton-Tate sounded the death knell to copy protection by dropping it from dBASE, but this really nails the coffin lid shut.

In other spreadsheet news, Microsoft is actively courting developers to produce add-in and add-on products for its new PC version of Excel—which is beginning to look like a real winner.

Not to be outdone, Borland's Quattro spreadsheet has a unique feature that lets you design your own interface, in case you don't care for the 1-2-3-type interface the program comes with. (That's one way to handle "look and feel" questions.) Borland has also come out with a new release of Turbo Pascal that overcomes the previous 64K barrier, and that links to Paradox and Quattro.

PostScript & Micro Channel Clones

You may want to wait a while longer before buying an expensive add-in board to get Adobe PostScript (the language in the Apple LaserWriter) in your Hewlett-Packard LaserJet. Phoenix Technologies, the makers of the standard in PC clone BIOS chips, has now cloned PostScript—and reportedly beefed it up, as well. The clone should cause price drops in current PostScript printers, and, even better, spur more and more hardware and software PostScript capabilities in the PC world.

Rumor also has it that another clone king, Chips & Technologies, has produced a Micro Channel chip set that it is sneaking out, one at a time, to preferred customers. But the OEM's are so wary about possible suits from IBM that they are keeping any development under the tightest wraps seen in many a year—much to the dismay of their various PR departments, who would love to use the information to excite the stock market.

Core International seems to have very little fear of IBM, however, and has announced hard disks for various models of the IBM PS/2. They all have 16 ms access time and come in 90MB, 150MB and 260MB sizes. Core calls these disks the HC series, and they all use the same ESDI interface as the PS/2s, so can just be plugged right in. They sure beat the heck out of the IBM supplied disks, some of which have access times as slow as 80 ms! Now if we could only buy the PS/2s without the IBM supplied hard disks...

Speaking of PS/2 peripherals, it turns out the IBM mouse doesn't work with some significant software—including IBM's DisplayWrite 4, IBM's 3270 micro-to-mainframe link, and IBM's 3270 emulation program!

Workers Rights

The privacy issue is heating up higher and higher these days, and taking many different forms. In California, Governor Deukmejian vetoed Tom

Hayden's bill banning the use of subliminal messages on computer screens. Yes, it really is happening—messages such as "keep working" and "you're not working as fast as the person next to you" are actually being flashed onto terminals so fast that the worker's conscious mind does not notice them but the subconscious mind does. Hayden (the name may sound familiar to you from the Chicago Seven days or as Jane Fonda's husband) says he will reintroduce the legislation.

Meanwhile, in the past month alone, I've had six different cab drivers who have related tales of quitting jobs as data entry people when they found their terminals and keystrokes were being monitored on a minute-to-minute basis. One fellow told me he quit in disgust when called on the carpet for an inactive terminal—he had to use the men's room, and his break wasn't due for another 15 minutes. What in heck's going on here?

In another vein, Hewlett-Packard has been running multiple surprise drug searches with drug-sniffing dogs. Even though the searches have not turned up anything, HP says it will continue. Meanwhile, many large companies here in New York are requiring drug urine tests and/or lie detector tests these days just for job interviews, much less employment!

Trademark Rights

In the last couple of years, the PC industry has seen lawsuits concerning copyright infringement, most notably over "look and feel." While the majority of these have yet to be resolved, the past several months have produced a new onslaught of threatened and actual lawsuits over trademark infringements which seem just as ludicrous. We can now move on from jokes about who owns the F1 key and the / key to jokes about who owns "/2" (slash 2) and "III" (Roman numeral three).

Believe it or not, IBM has been hassling AST, Orchid Technology, Alloy Computer Products and other vendors about their using the name PS/2 in their advertisements for add-on products for the new IBM PS/2 computers. IBM has even filed suit in some cases! The implications are truly wide-ranging and frightening.

For example, Orchid Technology began running ads in the national trades in June for its RamQuest 50/60 memory cards with copy that read "Introducing PS/2 Memory Expansion, For People Who Think Big" and "The First PS/2 Memory Card, Available Today." Shortly thereafter, IBM filed suit in San Francisco's U.S. District Court arguing (are you ready for this?) that the inclusion of the "PS/2" in the ad might confuse potential customers about whether the boards were being made/marketed by IBM or by Orchid! (The whole thing was finally settled out of court.)

continued on page 17



DISK-OF-THE-MONTH

by Kathryn A. Crawford

MARCH DOM:

Disk 245. FINGER PAINT (TM) ver. 1.30

FINGER PAINT is a Shareware program (registration is \$19.95) from Poisson Technology, of Fremont, Calif. This program was requested by a number of members at the January meeting, and after I tried it I understood why. This is one graphics package that IS very easy to use.

FINGER PAINT is a program for drawing pictures. Like PC-Paint, you use icons to choose line width, shapes, and patterns. The icons are activated by using either function keys or a mouse. You then draw on the screen using either arrow keys or a mouse. The commands are on a menu, which displays messages telling you what to do next. There are 29 commands, 20 of which can be accessed directly through function keys. You can draw free-hand, or use the icons to select shapes. Patterns can be selected from icons to fill the shapes. The package includes an automatic demo that shows what the program is capable of drawing.

The pictures can be printed out. The entire work area for each picture (called a "page") is 537(x) by 750(y) pixels. The non-registered version will print the pictures using HP LaserJet (half size only), EPSON FX, or IBM Proprinter compatible printers. The printout of a page will fit on an 8.5" by 11" sheet of paper. Registered user receive the printer driver routines for the over 160 supported printers: both laser and dot matrix.

The program requires 320K bytes memory and a graphics card: EGA(640x350), Hercules(720x348), or CGA(640x200). The authors say the program will run on IBM PC, XT, AT, clones, and PS/2. I ran the Finger Paint on an IBM PC with CGA graphics, an IBM AT clone with EGA graphics, and a PS/2 with VGA graphics. The CGA picture was good, but the EGA pictures were sharper. The VGA graphics on the PS/2 were as sharp as the EGA on the AT clone. Other graphics software written for the IBM PC will run on the PS/2 but look thick and crude; Finger Paint looks fine and detailed on the PS/2.

Other Disks for March 1988

A complete list of the new disks for March will be available on the club Bulletin Board the week before the meeting.

Mail Order

Please note the address for the DOM Mail Order:

NTPCUG, DOM Mail Order
P.O. Box 780066
Dallas, TX 75378-0066

Some people are still using the order forms with with Tim O'Neil's P.O. Box address. Tim moved to the Houston area a few months back, and I have less than no idea of what happens to orders sent to Tim's old P.O. Box address.

We are still smoothing out the routine for the Mail Order production, but at least we have the turn around time down to two weeks. Further improvement in the service is expected as the person(s) involved get the hang of it. Remember that the Mail Order Service is for disks only. Requests for Bulletin Board access, etc. cannot be handled by the Mail Order staff.

Shipping & Handling Fee Now \$2.00 for 5 Disks

Now that we have had a few months to track the costs of the Mail Order operation, we find we must raise the Shipping and Handling Fee to \$2.00 for each 5 disks ordered. When the Post Office does the expected price increase, we will need to look at this again.

3.5 Disks Through the Mail Order

As we announced last month, you can now Mail Order the Disk of the Month collection in the 3.5 disk format. The order form with instructions is again printed in this issue of the newsletter. I'd like to direct your attention to what proved for some to be a tricky bit of math. In the example, we have an order for three DOM numbers. Each DOM number has more than one 5.25 disk in the set, with the total number of 5.25 disks in the order being 9. There are 720K on the 3.5 disks, so the contents of two 5.25 disks will fit on one 3.5 disk. Nine divided by two is 4.5, which rounds off to 5. The order will be for FIVE 3.5 disks. We are not going to send you half of a 3.5 disk.

The DOM Central Committee

We have a number of DOM volunteers who help get the DOM disks to the members each meeting. There is a large number of volunteers who work an hour or more behind the DOM desk selling disks. We have a number of volunteers who write reviews. We have people collecting shareware and public domain software for the DOM. To coordinate all these activities, we have a group called THE DOM CENTRAL COMMITTEE. (We had considered calling them THE VICTIMS OF DOM, but we aren't looking for any pity.)

Some of these people you already know:

—Dwight Neal is the DOM Desk Scheduler. He's the person who calls around before the meeting to find out who's available to work the desk when. People interested in working the DOM Desk should drop by the NTPCUG Registration Desk in the lobby and register with Connie Andrews, who maintains the roster of volunteers for the NTPCUG.

--Ken Loafman has been working with the Mail Order. Besides getting the disks made, labelled, and mailed off; he installed the 3.5 drive which makes the 3.5 disk Mail Order possible. His other duties involve cruising CompuServe looking for the latest versions of Shareware, checking out software, and writing reviews.

—Howard Hamilton is the DOM Production Manager. Dr. Hamilton will be writing the DOM column every few months in order to go over the recently released DOM disks in more detail, and to explain some of the procedures for getting disks into the DOM collection.

Getting the disks out every month is labor intensive, and it takes its toll. We have some new members to help with production of the DOM and related activities: —Mark Gruner —Harold Horton —Charles Carter These people will be listing the Disks we have out on review, contacting the reviewers to find out when the reviews will be ready, and getting the disks ready for production.

—Pete Testa is on special assignment to get the DOM Index up on the club Bulletin Board.

And finally, there is the DOM Chair: me, Kathryn Crawford. I do the index, help with the mail order, keep the records and the books, plan, coordinate, worry, and other duties as assigned.

DOM Particulars

The North Texas PC Users Group copies these programs as a service to the club and its members. We try to test all the programs, but we do not warrant the programs in any way. You must decide if a program is suitable for your system and use. If you ask, we will tell you what we know about any program, but the final decision to buy and/or use these programs is yours. We will gladly and without question exchange an unreadable disk for one of the same program.

EXCHANGE: All members of the club are encouraged to contribute copies of public domain programs to the club library. For each new disk of software contributed, you may select any disk in the club library in exchange. The contributions will be reviewed before credit is issued at the next meeting.

MAIL ORDERS: At prevailing prices plus \$1.00 for mailer and postage. Mail your orders to: NORTH TEXAS PC USERS GROUP, DOM Mail Order, P.O. Box 780066, Dallas, TX 75378-0066.

PRICE: Members: \$2.00 per disk (if the program is on two disks the price is \$4.00). Non-members: \$3.00 each disk

CATALOG DISKS: Currently the catalog is on one disk and costs \$2.00. The catalog disk has all of the readme files from each disk in the collection.

MEDIA: DSDD 5 1/4" Formatted as 8 sector data disks. Public domain software only, standard full disclaimers

AVAILABILITY: Disks sold out or not available at the monthly meeting can be obtained through the DOM Mail Order.

DOM VOLUNTEERS: If you would like to work the DOM Counter for an hour during the monthly meeting, contact Dwight Neal (214)985-7929 (home)

20MHz Chips, Harvard MBAs and Cab Drivers

(continued from page 15)

Ashton-Tate also jumped onto the bandwagon by threatening to sue someone who was about to release an add-on product for dBASE III/III PLUS named "d--- III." I'm told Ashton-Tate claimed trademark ownership of "III" in addition to its registered trademarks of "dBASE III" and "dBASE III PLUS." (I'm not sure if A-T claimed it owned the lower case "d" or not.) What is next on A-T's lawyers hit list? Rocky III?

(Reprinted from NYPC Newsletter, November 1987) 

SWAP SHOP

Four lines free each month to members; 5th through 10th lines at 15 cents per word. Larger ads at commercial space rates. Send check to the Editor for words exceeding the four-line limit. Free ads are on a space-available basis. Mail ads to the Editor.

FOR SALE: Used printer stands. Desk height. Heavy duty metal construction. \$30 each. Ask for Dan. 235-1048. (This is the corrected phone number for this ad. Ed.)

Framework I for sale, complete and in original condition (will transfer registration if Ashton-Tate permits this). Contains word processing, spreadsheet, graphics, database, telecommunications and FRED, a true high-level programming language in which you can write your own routines. Framework is an ideal package for someone who has just acquired a computer as it provides all the major applications within a standard interface. ONLY \$30.00
CALL ANDREW CHALK at (214) 226-6909 (Garland area)



MEMBERSHIP APPLICATION North Texas PC Users Group, Inc.

The NTPCUG is a non-profit, independent organization of individuals learning to apply personal computers to practical problems. For additional information about the Group, call (214)746-4699.

Application Status: (Check One)
>>>> _____ NEW MEMBER
>>>> _____ RENEWAL
>>>> _____ CHANGE OF ADDRESS

NAME: (Last) _____ (First) _____ (MI) _____

OR Company/Organization: _____

ADDRESS: _____ (Suite/Apt) _____

CITY: _____ STATE: _____ ZIP: _____

PHONE: Home (_____) _____ Work (_____) _____ (Ext) _____ (Check Preferred #.)

Do you want access to the Club RBBS? YES [] NO []

Please initial here _____ if you wish to have your address included on member lists sold for the club's benefit to advertisers of compatible products.

The NTPCUG expects and encourages volunteer participation by members in helping put on the monthly meetings at the INFOMART. This usually consists of a few hours of your time each year. If asked, would you consider assisting the Group with one or more of the following activities:

(Please check all that apply.)

[A] Working with NTPCUG Volunteer Committees? (Circle selections)

- | | | |
|-------------------------------|---------------------------------|-----------------------------|
| [IB] Information/Registration | [MM] Membership | [GP] Group Purchase |
| [NL] Newsletter | [ES] Equipment Setup | [FB] Financial/Bookkeeping |
| [DM] Disk of the Month (DOM) | [PR] Publicity/Public Relations | [ST] Startext NTPCUG Column |

[B] Giving a talk or demonstration to a small group?

[C] Giving a talk or demonstration to a large group?

[D] Being a volunteer, informal "consultant" in your area of expertise for NTPCUG members?

Would you be interested if the Group arranges instructional courses (at various levels) in any of the following areas at a cost per student of approximately \$5/classroom hour?

(Please circle or specify, indicating level preferred, i.e., beginning, intermediate, advanced)

- [A] Spreadsheet software – Lotus 1-2-3, Supercalc4, etc. (Please specify) _____
- [B] Data Base software – dBase, RBase, Reflex, etc. (Please specify) _____
- [C] Word Processing software – Word Perfect, Wordstar, etc. (Please specify) _____
- [D] Integrated software – Framework, Symphony, etc. (Please specify) _____
- [E] Programming Languages – APL, Assembly, BASIC, "C", Fortran, Forth, Pascal, (other) _____

Do not write in this area -- for use by NTPCUG.

Annual Dues are: \$24.00 (Regular Membership) _____ \$12.00 (Student Membership with ID) _____

Applications should be mailed to: North Texas PC Users Group, Inc.
(Make checks payable to NTPCUG.) P.O. Box 780066
Dallas, TX 75378-0066

Received: \$ _____ Check No. _____ Date: ___/___/___ by: _____

North Texas Personal Computer Users Group, Inc.

P.O. Box 780066, Dallas, TX 75378-0066

Phone (214)746-4699 for recorded information about the User Group and meeting dates.

Board of Directors

<p style="text-align: center;">Reagan Andrews, Ph.D., Chairman Phil Chamberlain Kathryn Crawford</p>	<p style="text-align: center;">Jim Hoisington Sid Nolte, Ph.D.</p>
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The North Texas PC Users Group, Inc., is a non-profit, independent group, not associated with IBM or any other Corporation. Membership is open to owners and others interested in exchanging ideas, information, hardware, predictions, and other items related to IBM Personal and compatible computers. To join the Group, complete the application blank printed elsewhere in this issue, and send it with \$24 membership dues to the Membership Director whose address is shown at the bottom of this page. A subscription to the newsletter is included with each membership.

The Group meets once each month, usually on the second Saturday. See cover for date, time and place of the next User Group meeting.

Officials

<p>President – Reagan Andrews, Ph.D. (214)828-0699 h President-Elect – Jim Hoisington (214)416-3101 h Program Chair. – Charles Kroboth (214)746-5335 w Treasurer – Joe Brophy (214)891-8187 w</p>	<p>Secretary – David McGehee (214)681-0202 h Membership Dir. – Robert Kolodner (214)821-6015 Disk of the Month – Kathryn Crawford (214)596-2539 Group Purchases – o p e n Group Statistician – Connie Testa</p>
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Special Interest Groups

SIG Coordinator

– Phil Chamberlain (214)243-5034 h
Artificial Intel. Arnie Strand (214)824-7894 h
Astrometry – Arlin Collins (214)351-5137 h
Assembler – Andrew Chalk, Ph.D. (214)226-3461 h
Business Applic. Bruce Schubert (214)991-5967 w
Enable – Jack Lundberg (214)596-8160 h
– Susan Watts (214)416-0077 h
C Language – Sid Nolte, Ph.D. (214)233-6178 h
Communications – Pete Testa (214)495-7506
DAC Software – Mike Macaulay (214)956-7750
Databases – Chris Morgan (214)746-5335 w
– Bob Monaghan (214)429-3245 w
DBase – David Hayden (214)380-8172 h
DOS – Jim Hoisington (214)416-3101 h
– Reagan Andrews, Ph.D. (214)828-0699 h
Graphics – Don Crockett (214)255-6704 h
Hdw Solutions – David McGehee (214)681-0202 h
LOTUS – Peyton Weaver (214)462-0552 h
– Mark Gruner (214)373-3147 h
Personal Users – Bob Presley (214)867-1679 h
Richard Terreo (214)307-1259
Programmers – Jim Hoisington (214)416-3101 h

Science/Engr. – Sam Leven (214)991-7642
– David Lamb (214)931-3068 h
Stock Market – Cliff Murphy (214)279-7973
Turbo Pascal – Don Chick (214)276-2524 h
Windows – David Hayden (214)380-8172

NOTE: To access the BBS by long distance,
use area code 817

BULLETIN BOARD SYSTEM – 461-0425 (Metro)
461-0506 (Metro)
SYSOP: – Tom Prickett (voice) (214)690-9087
Asst. SYSOP. – Maggie Mooney
Technical Advisors: Fred Williams
Pete Testa

Address Changes, etc...

Payment of dues, address changes, and inquiries about membership should be directed to
NTPCUG Membership Director
P.O. Box 780066
Dallas, Texas 75378-0066

(Check newsletter mailing label for your renewal date..)

MEMBERSHIP CARD

This is your membership card in North Texas PC Users Group. You will need it for identification at Disk of the Month sales, group purchases and other activities. This card is valid only for you, the person named on the label on reverse side. It is valid through expiration date shown on the label.

When trimmed, the card will fit transparent badge holders available at your stationers.

Wear your membership card while attending meetings and other functions of the Users Group.

Membership Card North Texas PC Users Group, Inc.
This card valid only for individual named on label affixed to reverse side, only through year/month printed on the label, and only with proper identification.
Print Name: _____
Signature: _____

Trim card to wallet size.

Meetings & Times

Saturday, 12 March 1988

9:00 AM to 9:45 AM

AUDITORIUM

* GRAPHIC ARTS MOVIE *

We will be showing the video, Graphics Arts Systems, on our projection system. This is a video text report on the computer graphics industry from Frost & Sullivan and gets very specific about equipment and cost.

10:00 AM to 11:00 AM

AUDITORIUM

* IMAGE SETS *

Image Sets is a company based at Infomart, specializing in PC-based design production workstations that produce high color-resolution, professional quality graphics and text. They will be demonstrating products from AT&T Graphics Software Labs and Targa, as well as, their own turnkey systems for lithographers, art departments, and video production.

Special Interest Group Meetings...


*Scheduled SIG times could change. Check the Bulletin Board just before the meeting.
Check room numbers on the overhead display in the lobby at INFOMART.*

<u>9:00 - 9:55</u> Assembler DOS Graphics Hardware Solutions Personal Users Science/Engineering	<u>10:00 - 10:55</u> Astrometry ENABLE Personal Users	<u>1:00 - 1:55</u> Artificial Intelligence Business Applications Communications Data Bases LOTUS Personal Users Turbo Pascal
<u>9:30 - 9:55</u> Orientation	<u>11:30 - 11:55</u> Orientation	
	<u>12:00 - 12:55</u> C Language Personal Users Stock Mkt Investing	<u>2:00 - 2:55</u> Advanced Programmers dBase Programmers DAC Easy Accounting

North Texas PC Users Group
P. O. Box 780066
Dallas, TX 75378-0066

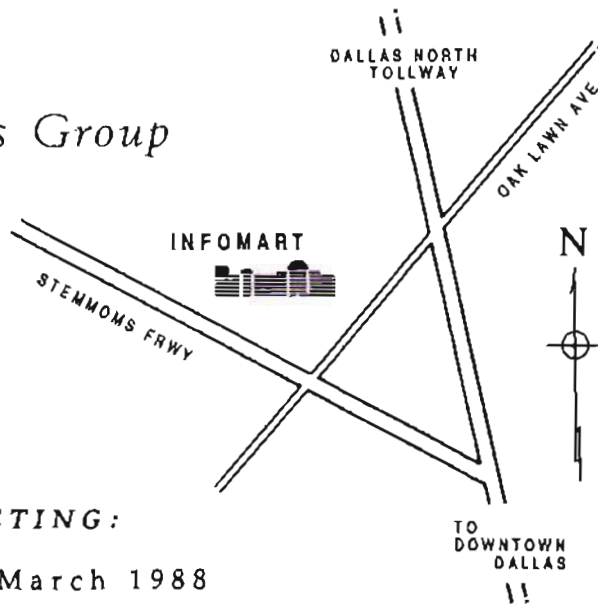
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 North Texas PC NEWS
2025 Rockcreek Drive
Arlington, Texas 76010



North Texas PC Users Group



NEXT MEETING:

12 March 1988