



PRinT SScreen

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

September 1988

Volume 6, Number 8

ANTARCTIC DIVISION					
	JAN	FEB	MAR	TOTAL	
WIDGETS	10,000	10,300	10,600	30,900	
GIDGETS	10,100	10,400	10,700	31,200	

NORTHEAST DIVISION				
	JAN	FEB	MAR	TOTAL
WIDGETS	4,000	4,300	4,600	12,900
GIDGETS	4,100	4,400	4,700	13,200

SOUTHWEST DIVISION				
	JAN	FEB	MAR	TOTAL
WIDGETS	2,000	2,300	2,600	6,900
GIDGETS	2,100	2,400	2,700	7,200
MIDGETS	2,200	2,500	2,800	7,500
TOTAL	\$6,300	\$7,200	\$8,100	\$21,600

Version 3.0
A New Dimension for 1-2-3

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**THIS
MONTH**

The speaker: Liisa Nyborg,

WordPerfect Corp Page 3

Are you computer literate?? Page 4

Batch files that talk back to you Page 6

To upgrade or not to upgrade Page 12

Let Echomail lower your phone bill ... Page 16

CLUB NEWS

August Meeting

Mike Rubenstein introduced Lotus's new product, Agenda, a personal information manager. In principle, Agenda is a data base which stores information and retrieves it according to user's categories. In practice it's an electronic notebook, people tracker, project organizer, to-do list, phone book, and decision-making aid, but it doesn't give green stamps!

As you might expect, Agenda bears strong similarities to other databases, outliners, and text-retrievers, but it does most of its work on the fly, whereas the others have to stop and shift gears.

You start off by typing in some lines of information and then add structure by creating categories. Agenda searches the lines you've written and notes whether you've entered information corresponding to the categories. All lines you write

are scanned for the indicated categories, and you can ask Agenda to spit out information on a category at any time. Moreover, you just make up a new category at any time — try that on your database program!

Agenda is very much unlike current databases and outliners because you don't have to create fields and put proper information in those fields. Hence you can never "overfill" a field, and you don't ever have to worry that information got put into the wrong field. In fact, the concept of a field doesn't exist in Agenda.

The information you enter is, however, limited to an item of about 350 characters, but you can attach notes as long as about 5 screenfuls. Agenda ought to be especially useful to writers who use long lists of references. For example, each reference can be annotated and retrieved by category (topic), author, publication,

September – October Calendar

Sept. 28	Group Meeting	8:00
Oct. 10	Microsoft Word SIG	7:30
Oct. 12	Planning Meeting	8:00
Oct. 26	Group Meeting	8:00

Next Meeting

Date: Wednesday, Sept. 28

Time: 8:00 p.m.

Place: Polya Hall, Turing
Auditorium (Rm. 111)
Stanford University

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

etc. And then retrieved by any new category as the need arises! (Finally, you can toss out my 3x5 card files!)

Mike's presentation was so interesting, and generated so many questions that he didn't have time to say much about Lotus Manuscript. In a 5-minute summary, he spoke of the important differences between Manuscript and other word processors. By a drawing of names, one copy of Agenda and three Lotus T-shirts were awarded to SPAUG members in attendance.

Disk of the Month

Jared Nedzel, our ASSU representative, described Tetris, which along with a number of other games was featured as "Disk of the Month." The game disk was available for \$1.00 at the meeting. Jared showed how to play the game, and the way he played it suggested that he had become quite expert. It was a pleasure to watch him twist and turn those odd-shaped pieces! For those of you who missed getting the disk, it's still available; also, TETRIS is in SPAUG's BBS.

DOS of the Month

Rick Altman unveiled DOS 4.0, a well-kept secret in the PC community. The new version sports a new DOS shell, supports expanded memory, fixed disks larger than 32 Mb, and a host of other features. As of press time, no major bugs have been reported — just the usual collection of rumors that always surfaces with new versions of the operating system. Rick will keep the group posted as he learns more about DOS 4.0.

see page 5

DIR C:\September

A representative from WordPerfect Corporation, Liisa Nyborg, will demonstrate the new WordPerfect 5.0 program at the September 28th meeting. The new version of the program features styles, cross referencing, forms, graphics importation, macro editing, and a macro programming language. Former club president Jim Caldwell who hadn't used WP since an old 1.x version says 5.0 is fantastic.

Disk of the Month

The Disk of the Month features Snipper, a memory resident screen shot utility. With Snipper running in the background, you can press Alt-W and select what part of the screen you want to print or send to a disk file.

Don Baird will demonstrate Snipper at the September 28th meeting. Copies will be available for \$1 each or use your "goodie coupon."

DOS of the Month

This month Rick Altman will demonstrate how to create keyboard macros without the use of any commercial program — just ANSI.SYS.

The Cover

This month's cover, a preview of Lotus 1-2-3's new multi-dimensionality, was captured by "Hijaak," a screen capture program by Inset Systems of Danbury, CT, (203) 794-0396.

THE VIEW FROM THE TOP

Computer Literacy

by Ralph Muraca,
Club President

This month, let's try something new. I'll present my views on a topic, and then you can make comments at the general meeting during "Random Access."

How often we hear the words "Computer literacy!" Just what do they mean? I have trouble with them, yet I'm on the board of a corporation dedicated to promoting computer literacy! Ask, and get a typical answer, "If you use a computer, you're computer literate!"

The answer seems adequate, but I suspect it isn't, just as "literacy" isn't defined as the use of books. Could it be that reading literacy, computer literacy, and comprehension are intertwined? Can there be computer literacy without reading literacy? Can there be computer literacy without comprehension? You might be inclined to say, "No," but

we often hear of computerized machinery and farm tractors with icons in place of writing, and they are used successfully by illiterates or semi-literates. And how about computers that use icons?

Computers are used in many ways, not alone in the machines SPAUG members use; for example, the typical market check-stand. Would you say the clerk who passes merchandise over an infrared decoder and punches keys is computer literate? And newer autos have a number of computers in them; are their drivers computer literate? If you play games like TETRIS, are you computer literate? Let's take a new approach.

Millions of words have been written on the problem of literacy in our country, in the schools, and in the work place. In early times, a person able to read aloud some familiar passage was considered literate. Today, that person is called illiterate; you see, the rules for literacy have changed. Many forms of

reading are now recognized, at least two of which are reading-to-do, and reading-to-learn. A semi-literate can read to do, that is, look up info, keep it in memory long enough to apply it, and then forget it. Reading-to-learn involves the elements of comprehension and retention.

Maybe there are many

*Can there be computer
literacy without
comprehension? Is computer
literacy the same as
reading literacy?*

kinds of computer literacy, and its definition isn't a simple statement. In fact, it seems plausible that a person who can program computers and is fluent in several high-level languages has a form of computer literacy quite unlike most hobbyists, hobbyists, and, in turn, these have computer literacy many levels above a key-punching store clerk.

Maybe the term computer literacy should be restricted to those who program computers, and other terms should apply to "the rest of us." We all drive cars, but none of us would say we're automobile literate! Just as we cause an auto to perform its function, if all we do is cause a computer to execute its programs, should we call ourselves computer literates? Does mere contact with a computer impart computer literacy?

Since there are many levels of involvement with , trying to identify the minimum level above which a person may be considered computer literate might pose some intractable problems. For example, if we say, "A computer illiterate is one who can't use DOS," and the same person now moves over and uses a computer based on icons, is he suddenly computer literate?" Is computer literacy machine sensitive?

I've said enough to get you thinking. It'll be nice to hear at the next meeting some discussion of different views on computer literacy, and as many "definitions" as there are attendees. What I'm trying to do is gather the different criteria people use to determine whether a person is or is not computer literate. Till then! ¶

Club News

from page 3

The Steering Committee

Certainly you are aware that the Steering Committee meets once a month to discuss new ideas for SPAUG activities and to make final arrangements for the next general meeting.

Any SPAUG member is welcome to attend these meetings. From time to time, interesting activities and decisions of the committee will be announced in this column.

Plans have been implemented to advertise SPAUG meetings in local papers and the Stanford Daily in hopes of attracting more members. Also, membership forms have been placed in local businesses.

SPAUG meetings will be announced regularly in the Stanford Daily and in the Palo Alto Times on the day of the meeting. Fliers and other advertisements of SPAUG's activities will be posted regularly on campus kiosks.

Bob Noyes and Christopher George have volunteered to be SYSOPs for the SPAUG BBS, relieving the president of much of the operational details. The committee solicits members to assist in the formation and operation of a Novice/Intermediate SIG. Nancy Helmy, Don Baird, and Richard Orser have indicated that they are willing to help operate this SIG; any others?

The SPAUG disk library still needs a volunteer or two.

see page 9

Making Your Batch Files Stop and Wait

by Rick Altman

(This is the third in a continuing series exploring strategies for customizing your DOS system. This series will culminate with instructions on building a professional, personalized menu.)

In the first two episodes, ANSI.SYS was the feature attraction, starring as the replacement for a commercial macro program. Using the PROMPT command, you can redefine any key on

Now we switch gears. The next step toward automating your system is giving your batch files a very special capability—that of true interaction.

Typically, batch files can only pretend to be interactive, in two ways: 1) with replaceable parameters, entered only when the batch file is started, and 2) by placing a PAUSE in a batch file that merely suspends the batch file until a key is pressed.

But a third capability, less commonly known, is considerably more powerful: a tool that can stop a batch file in midstream, query you for input, and then branch one of several different ways, depending upon your input.

You might think that this capability would be part of DOS; you might as well believe that the Internal Revenue Service will file Chapter 11. Instead, several programs are available in our library and on our bulletin board, SPARC, under the names ANSWER and INPUT.

Here is a tool that can stop a batch file in midstream, query you for input, and then branch one of several different ways, depending upon your input.

your keyboard, in any shift state. These macros, which work at any DOS prompt, can be single commands, batch files or a sequence of commands. Because ANSI.SYS is included with all versions of DOS, these macros are free.

Hey User, Which Way Should I Go?

ANSWER.COM, the one used in the following examples, is a program designed to be run only in batch files.

It suspends execution of the batch file, and optionally, displays a message. During the pause, anything you type gets placed in the DOS environment as the parameter %ANSWER%. From that point on, you can do any of the usual if-then checking for that parameter.

Example No. 1: You use Lotus 1-2-3 to track your investment possibilities. Your luck is so good that half the time you leave 1- 2-3, you go right to your telecommunications software and issue instructions to buy. The other half of the time, you merely exit and go onto another task. You can't use an ordinary batch file, because you don't know which decision you are going to make until you are already in Lotus (i.e., you have already started the batch file). This is a decision you will make in midstream.

This is a job for ANSWER. Here is what the batch file would look like:

```
1. echo off
2. cd\lotus
3. 123
4. :START
5. answer Do you want to buy? (Y or N)
6. if %ANSWER%==Y goto MODEM
7. if %ANSWER%==N goto END
8. echo Try again
9. goto START
10. :MODEM
11. cd\modem
12. smartcom
13. :END
14. cd\
15. echo Bye
```

This batch file uses three "labels"—think of them as place markers so the

batch file can know where to go next. They are the three lines that begin with colons. Some of the lines in this listing are indented for readability.

Lines 1-3 comprise a typical way to start Lotus 1-2-3. Line 4 is the first label, and its purpose will become clear shortly. Line 5 executes ANSWER and asks the user whether or not to buy stock. ANSWER forces the batch file to wait for keyboard input and a <Ret>. The user can answer in upper or lower case.

Lines 6-7 evaluate the response. ANSWER takes your input and stores it in a parameter called "ANSWER." The syntax shown here, with the percent sign and the pair of equal signs is simply DOS' cryptic rules for batch file programming. If the answer is yes (or Y), the batch file jumps to the label called MODEM. If the answer is no, the batch file goes instead to the label END. If the response is anything else, the batch file continues to lines 8-9, telling you that you goofed and then jumping back to the START label. If you were to keep answering incorrectly, the batch file would indefinitely loop back on itself.

Lines 10 is the MODEM label and lines 11-12 are typical instructions to start a telecommunications program. Line 13 is the END label which is the place marker for the simple ending to this batch file. Note that if you instruct the batch file to jump to MODEM and start your modem program, when you exit, the batch file continues executing

see next page

Interactive Batch Files

from previous page

right through lines 13-15, ignoring the END label.

When ANSWER asks for input, you can type anything you want, not just one letter or number (ANSWER waits for <Ret> before it lets the batch file continue). Therefore, you can type a complete word or phrase and make it part of a command, just as you do with a replaceable parameter.

For instance...example No. 2: You need to carefully and painstakingly delete several files on a very full directory, requiring that you examine the directory constantly. Each time you must enter a DEL command, and after a few such commands, the directory scrolls off the screen, requiring that you perform another DIR. ANSWER can help as part of the following batch file:

1. echo off
2. :START
3. dir/w
4. answer Pick a file to delete
5. del %ANSWER%
6. answer Another? (Y/N)
7. if %ANSWER%==Y goto start
8. echo Done

Right after the START label, a wide directory is displayed and then ANSWER asks you for a file to delete. Your answer gets placed directly into the next line as part of the DEL command. You can include wildcards. Line 6 is another ANSWER, this time for a simple yes or no. Your answer quickly takes its place in the ANSWER parameter, and if the answer is yes, then the batch file loops back to the beginning of START and redisplay the directory and asks you again for a file to delete. If you don't answer yes, the batch file is over.

A program like ANSWER is one of the best ways to get introduced to the fundamentals of batch programming. It gives you the feeling that you are piloting your batch files: type one thing, the batch file turns left, type something else and the batch file turns right. Used effectively, ANSWER can take care of some major league tasks for you.

What ANSWER can't do is act upon function keys—you must type valid ASCII characters when it prompts you. However, in the next episode, we will look at a way to pilot a batch file with the touch of a single key, without having to press <Ret>. To do this, you will actually write a program from scratch. I know, I know—programming code gives you migraines. Humor me, okay? ¶

ANSWER is one of the best ways to get introduced to batch programming. ANSWER can take care of some major league tasks for you.

Club News

from page 5

Additional SIGs need to be operated. Volunteers???

Use SPARC and Win

All you have to do is sign onto the bulletin board between September 29 and October 25 and you will be eligible for a drawing at the October 26th meeting. Details to be announced at this month's meeting.

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

For your own security, phone numbers will no longer be operative as passwords. If you have not changed your password from your phone number, please call a Sys Op to do so. The System Operators are Ralph Muraca, Turley Angle, Beverly Altman, and Mark Woodward. Their phone numbers are listed on the SPAUG Resource Center list.

Goodie Coupons

Remember, the "Goodie Coupon" attached to your membership card is presently good for one free disk: the library catalog, Disk of the Month, or a blank disk. Trade in your coupon for a disk at a future meeting.

Membership renewals

For the two months preceding the expiration of your membership you will find a renewal envelope enclosed in your newsletter. Use this envelope to promptly

The SIGS

Microsoft Word SIG

Forms creation, line and box drawing, merge, and math calculations will be the topics discussed at the next Word SIG meeting. Manny Melliza from Microsoft Corporation will be there to provide his MS Word expertise.

Although each meeting has an assigned topic, there is always time for questions regarding other aspects of WORD. Manny's presence gives assurance that all issues are resolved correctly.

If you are interested in attending these meetings, contact Jeanie Treichel at home (851-0100) or work (326-7438). Meetings are held on the second Monday of each month. The next meeting is scheduled for October 10 at 7:30 p.m.

Novice SIG

The Novice SIG will be resurrected soon—maybe with a new name—so stay tuned for more details.

send in your \$25 check (\$10 for students) so that you won't miss an issue of the monthly newsletter. A current membership card will then be sent to you in the next PrtSc. ¶

Features

Lotus Release 3 Sneak Preview

*by Becky Bridges,
PRTSC Editor*

I was fortunate to be able to see a demonstration of the new Lotus 3.0 earlier this month, and it promises to be an exciting product.

Lotus 2.0 users will have absolutely no trouble using 3.0 because the interface is identical. The main menu has not changed at all. All the new options (and there are a lot of them) have been added to the end of the various submenus. Because the existing commands have not been altered, all your 2.0 macros will work flawlessly in 3.0.

The three-dimensional aspect of the program was the focal point of the demonstration. You can simultaneously process multiple files and/or multiple spreadsheets within a file, enabling you to easily consolidate data. For example, you can have different departments in separate spreadsheets within a single file. One of these spreadsheets could

be a consolidation of the data from these different departments. You will therefore find less need for the File Combine command in Release 3.0.

Each sheet in a file is labeled with a letter (A through IV) in the upper left corner of the screen. The PgDn/PgUp keys move you between sheets. Up to three contiguous sheets can be viewed at a time.

You refer to data in another sheet by indicating the sheet letter in the range. For example, to add up a column of data in three sheets (A, B, and C) you may have the formula A:F15..C:F25.

Formulas can also reference data in another file, regardless of whether the other file is currently in memory. If both files are in memory, a two-way link is possible (i.e., data in one file updates data in another file which, in turn, affects data in the first file). If just one of the files is in memory, only a one-way link is possible.

Because of the 3-D aspect, macros will be easier to organize. Just store all your macros in their own sheet so they won't be disturbed when

you insert and delete rows and columns in your spreadsheets. The new version also features automatic keystroke recording to ease the macro writing process.

It appears that 3.0 has some of the date features we saw in Agenda at the last meeting. For example, you can enter a date (e.g., 9/9/88) without a label prefix, and Lotus will convert it to its corresponding Julian date (e.g., 32167) and format it accordingly. Furthermore, you can easily use the Data Fill command to fill in a range of dates for you. You can specify 1-JAN as a start value and 3mon as a step value and you will get quarterly dates (1-JAN, 1-APR, 1-JUL, 1-OCT).

You can now add comments to your formulas so that two years from now you will know what that monster formula does. Just place a semi-colon and your description after the formula. How long can the comment be? Just make sure the entire cell contents do not exceed the new 512 character limit.

Another feature that makers of gargantuan formulas will appreciate is word wrap in the control panel. Your formulas

do not scroll off the left edge of the screen; you can see the entire formula as you enter it and when you edit it.

Like in any word processor, you can search for and/or replace text strings. You can even replace values and parts of formulas.

The Undo feature was not functioning in the Beta copy I saw, though apparently it can be turned on and off to preserve memory when needed.

More graph types are now available: high-low-close-open, horizontal bar, mixed, area. You can simultaneously view a graph and your spreadsheet, and you can print graphs from within 1-2-3 (no more PrintGraph program—yeah!!). You can also print a spreadsheet and graph together. With the HotGraph feature, you needn't define all the different data ranges—Lotus will give its best guess and make a graph for you.

Supposedly new capabilities have been added to the database aspect of Lotus, though we did not have time to see any of them.

As you may have heard, shipment of the product has been delayed as the programmers try to get the code to fit into 640K so that users will not have to go out and buy expanded memory boards. Though a 286 machine is recommended, the program will run on an 8088 processor.

Release 2.0 owners can upgrade for \$150; upgrading costs \$200 for 1A owners. ¶

*You can simultaneously view
a graph and a spreadsheet,
and you can print graphs
from within 1-2-3 — no more
PrintGraph program, yeah!*

To Upgrade or Not?

by Marty Molloy

For the past six months, I've been struggling with the question of whether to upgrade my IBM-XTs. With almost identical systems at home and the office, I'm increasingly feeling their inadequate speed, memory, and obsolescence.

Sometimes it is memory limitation (640K RAM plus 1 MB expanded EEMS memory) that can't hold enough large documents on my Framework II desktop at the office. With 2 MB of RAM at home, I can load up to 17 months of checkbook spreadsheets, but calculation crawls with more than one on the desktop at once. Some house-keeping chores, like unfragmenting my hard disk with Mace Utilities, take 10-20 minutes.

However, lengthy backups are not a problem; my programs run on hard disks. At home I save all files on floppies. At work, every day X-Tree tags all new or modified files and copies them to a backup hard drive in less than a minute. For a

while longer, I can survive with what I've got, but it's clear that my 8088-based systems are dead-ended.

It all boils down to developing an upgrade strategy, and then deciding when to act. I'd like to reuse as much of my existing hardware as possible: floppy and hard disk drives and controllers, 1-2 MB EEMS memory board, EGA video board and monitor, and power supply. When I'm forced to, each can be replaced.

Two principal alternatives have been around for a long time; accelerator boards with faster 8086 (XT Turbo) and 80286 (AT) microprocessors. But I rejected them both for two reasons. First, these CPUs are also obsolete. Except for doubling the CPU speed and data path, the 8086 has the same limitations as my old 8088, and can't run OS/2 in the future. Intel's 80286 chip is "brain damaged", unable to run more than one DOS program at a time, therefore unable to multitask my many existing programs, and likely to crash while making the effort.

Second, accelerator boards are fast for operations performed on that board itself. For any operations beyond the board—

System	Intel CPU	CPU Speed	CPU/RAM/bus data width
PC, XT	8088	4.77 MHz	16/8/8-Bits
XT Turbo	8086	4/6/8 MHz	16/16/8-Bits
AT & Turbo	80286	6/8/12/16 MHz	16/16/16-Bits
386-AT	80386	14/16/20/25 MHz	32/32/16-Bits
(New)	80386SX	16 MHz	32/16/16-Bits

Figure 1: Characteristics of IBM PC and Compatible Systems.

like extended memory, disk read/write, etc.—signals must travel 50% slower through the 8-bit XT bus (see Figure 1).

So, accelerator boards are fundamentally flawed; for my upgraded system to operate at its full potential, I must replace the motherboard to get a full 16-bit bus. Only a 80386 chip makes long-term sense (see Figure 2).

There are a number of 80386 motherboards available to upgrade an old PC, XT or AT (Dyna, Fortron, Hauppauge, Intel, Micronics, Monolithic, Mylex, Turnpoint, Zeos etc.) with respectable BIOS chips (Phoenix, AMI, Award). They range in cost from about \$1,400-3,000 for 16 MHz with 1-2 MB RAM; 20 MHz versions are emerging (Dyna, Hauppauge, Monolithic, Zeos) with prices in the \$1,500-3,300 range. However, most have severe RAM limitations, holding 1-2 MB, or at most 4 MB, if you can find 1 MB chips.

Recent articles by Jim Seymour in PC Magazine and Stewart Alsop in PC World agree that more than 2 MB RAM is required to run OS/2, and multi-tasking 2-3 major applications raises that minimum to 3-4 MB. If this is not main RAM (on the motherboard or in 32-bit high speed proprietary memory board(s) running at CPU speed), signals are slowed down by the 16-bit path and slow speed (8 MHz) of the AT bus. Since there is no industry standard for 32-bit 386-AT RAM, each manufacturer has their own proprietary expansion board to add RAM. Their prices are breathtaking, \$50- 200/KB or up to \$8,000 for 4 MB (AST Premium/386), doubling and tripling the cost of the computer itself.

Only the Micronics and Mylex

motherboards have high speed RAM cache on board (32-64 KB of 40-45 nanosecond 32-bit static RAM, called SRAM), which has emerged as the unanimous choice of champion 80386 machines by Compaq, Everex, and IBM. The 20 MHz Micronics uses fast static column RAM, called SCRAM, for Compaq-like speed. The other motherboards were designed BC (before cache) with interleaved DRAM banks; some predate realization that 2 MB is insufficient for OS/2. So far, only Micronics has software for the expanded memory standard (LIM/EMS 4.0).

see next page

Figure 2: Component Decisions for Upgrade from PC/XT.

Start with 8088 (PC, XT) and choose:

1. 8086 4/6/8 MHz (XT Turbo); 80286 10/12/16 MHz (AT); 80386 16/20/25 MHz (386-AT); or 80386SX 16 MHz (32/16-bit data path).
 2. Accelerator board (card); or Motherboard (replacement).
 3. 1-4 MB main RAM; or 4-10+ MB main RAM.
 4. No high speed cache on motherboard; or 64-256 KB high speed cache.
 5. AT bus, or IBM Micro Channel Architecture (MCA).
 6. EGA (640x350 to 800x560), or VGA (640x480 to 1280x600).
 7. DOS 4.0, OS/2, or both.
-

To Upgrade or Not?

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The new CPU on the block is Intel's 80386SX chip, just released in its first computer system (Compaq 386s). This promises the best of both worlds: a high speed (16 MHz), full width (32-bit) data path between CPU and RAM, and a 16-bit data path to the rest of the system. This frees you from expensive proprietary 32-bit RAM boards; standard 16-bit AT memory is fine, although expansion boards will run at slower 8 MHz AT bus speeds, rather than 16+ MHz CPU speeds. While the SX is about \$100 less than the 80386 chip, there is no indication whether upgrade 386SX motherboards will be produced. Since the SX chip is not pin-compatible with the 80286, AT owners don't yet know if a replacement chipboard will ever emerge to permit wholesale upgrading of 286s to 386SXs.

The other decisions (see Figure 2)—CPU speed, AT or MCA bus, and DOS 4.0 or OS/2, are straight forward for me.

A CPU speed of 16 MHz would leave my 4.77 MHz 8088 in the dust; I'm tempted by 20 MHz, if I can afford it. Wouldn't it be nice to have a removable 80386 chip set, for future replacement? The current 386 speed limit is 25 MHz; Intel just announced that it is working on a 33 MHz chip; the ultimate 80386 speed limit is reported to be 40 MHz.

IBM's Micro Channel Architecture (MCA) doesn't tempt me, since I don't expect to have smart peripherals (hard disks, printers, modems, etc.) with their own CPU's that require an MCA arbitration system. So I'll stay with the AT bus,

but I wish that a 32-bit standard like AST's SmartSlot would become an industry standard—an unlikely event, since its board and system competitors would have to follow its lead. MCA is only available in IBM's PS/2 systems; but, chip sets are announced, and Tandy and Dell promise MCA clones.

Since I have EGA (high resolution digital color), I'll stay with my existing video board and monitor. Otherwise I'd upgrade to VGA (higher resolution analog color) with a combined EGA-VGA board and a NEC MultiSynch II (digital and analog) monitor.

Microsoft's announcement of DOS Version 4.0, removes any concerns I might have about moving to OS/2 within the next 2-3 years. Until some irresistible, blockbuster applications are written that force me to abandon my current software, there's no reason to worry about it, as long as I upgrade to a 386 system with 3-4 MB RAM. Like OS/2, DOS 4.0 removes the 640 KB limit on main memory, and the 32 MB limit on hard disk partitions. Multi-tasking, if I need it, is available now on any 386 system with DESQview 386 or Windows/368.

So where all does this leave me? With the realization that squeezing a replacement motherboard into my XT just makes future decisions more difficult just to save \$60, rather than buying an AT case. Few boards are made in the 1" lower XT height, while there are endless AT-size boards to choose from. The same is true of replacement motherboards—all manufacturers make AT-size; only a few make PC- or XT-size, and these are more limited in RAM capacity than ATs.

For now, waiting for two develop-

ments in 386 replacement motherboards: addition of large (256 KB), fast on-board cache; and, introduction of the 80386SX chip permitting use of conventional 16-bit AT RAM.

If these hopes do not materialize, I'll eventually move up to a 386-AT system. Everex's 16 MHz Model 3000A is discounted to approximately \$2,000, about the same cost as a replacement motherboard. It has 64 KB fast static RAM

cache, and expands up to 16 MB with standard AT RAM cards.

However, it does not have a 32-bit data path for high speed RAM memory. For that, I'd have to move up to Everex's Step-16 (SI 19.5), Step-20 (\$4,400, SI 24.3), or Step-25 (\$6,000), list prices without hard disk. Perhaps I can afford the 16-bit machine for home; the office will have to decide whether I need the 32-bit screamer. ¶

Using WORD on a Laptop

by Gunter Steffen

As a student, I do a fair amount of research in the library. The process involves taking notes and making bibliographic references that need to be transcribed, organized, and then entered into my home computer. I decided that the transcription process was a duplicate, and therefore, a wasted effort; so I bought a little Toshiba TD1000 with a 768K Memory upgrade. The idea was to run the word processor out of non-volatile RAM and save the files on disk for easy transfer to my main system, on which I had already installed a 3.5" disk drive.

I use Microsoft WORD 4.0, and there was no way that I could fit the entire program into the limited memory of my laptop. So I chose only the essential files that allowed me to run the main program, a few printer drivers, and the appropriate style sheets.

Patting myself on the back about what a clever fellow I was, I set to work taking notes, but then a curious thing happened.

After the first few pages of notes, I kept getting locked out of the program. The computer displayed an error message and froze while I stared at the screen, first in disbelief, and then in utter frustration. All that work down the drain; I couldn't even save any of it.

The problem recurred several times before I called Microsoft for help. WORD generates temporary files which it stores on the working disk, in this case, the RAM disk. The error message occurred as soon as there was insufficient storage, and since I kept my working file in RAM, it usually did not take long to fill up. The trick was to tell WORD to store its temporary files on one of the floppy drives, not the RAM disk. The DOS SET command is the key to this trick. You can enter the command from the keyboard before running WORD or include it in the AUTOEXEC.BAT file. The command is:

SET TMP=[drive:]

In my case, it reads SET TMP=A:, but if your laptop computer has two floppies, then you might want WORD to store its temporary files on your B: drive. ¶

Long Distance Chats With Echomail

by Paul Pease

Bulletin Boards, those electronic store-and-forward places we generally explore for the latest in free- or share-ware, have taken a new term in the last year or two. It's Echomail, the new way to get involved with other BBS users asynchronously.

A growing number of local boards will allow you to read an Echomail area and jump right in with a message of your own. At no cost. And get into conversation with like-minded callers all around the country—even around the world. Subjects range from art and music to programming languages to politics and humor and, inevitably, X-rated stuff.

Here's how it works. The Sysop (BBS System Operator) constructs areas in his/her Message section for Echomail. On my board (322-6451) I have just a few of them, including BAY4SALE and MIDI-NET. The first deals with things people in the Bay Area want to buy or sell, the

second with MIDI, the music/computer interface standard.

You sign on to the board, enter the Echomail area, and start reading the messages. If you want to answer one of them or add a thought of your own, just follow the on-screen instructions and have your say.

At the end of the day, the BBS packages all these messages from all the echo areas and forwards them to the next bulletin board. There the message packet is un-arc'd, sorted, and forwarded to the next station for forwarding. With almost 15000 BBSs in action around the country, most of these echomail setups can run only on local phone calls, so no money is charged. In some instances you may be asked to donate five dollars or something to help the sysop with the phone bill.

It isn't instantaneous. Messages may take a couple of days in transit from here to Boston or Australia or Newark. But it's fun and the price is right.

Although I believe this got started with Fido and FidoNet, it's now being used with OPUS, QuickBBS and some other systems. If you're interested, drop into almost any BBS and ask the sysop for a list of the Echoes he/she carries.

It's fun and points a way to ultimately subvert the existing order. I mean, what will the phone company do when you don't have to pay extra to write a letter to your friends and family around the country? ¶



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PRTSC POTPOURRI

The Null Device

*Houston Area League of
PC Users' Journal*

If you place >NUL at the end of a command line, any message will be echoed, not to the screen, but to the NUL device (so you won't see the message). This is very useful in AUTOEXEC.BAT files to avoid seeing confirming or copyright messages each time. Also, you can load a program such as ProKey without seeing the confirming message, "ProKey loaded," each time.

Transferring Documents Between Word Processors

by Bill Weil, SF PC Users Group

Unfortunately, there is no simple way to transfer documents directly between WordPerfect and Microsoft Word. Since these are two very popular word processing packages, there may be many times when you need to make this transfer. If you save and retrieve the files as ASCII text files, you have to manually reformat the entire document.

The solution to this problem is actually a general solution to many translation problems with any two programs. See if there is a translation format that they both understand. In this case, you first translate to WordStar, then translate from WordStar into WordPerfect or Microsoft Word.

This method also works with MultiMate and any other word processor that has a two way WordStar conversion.

There are also commercial programs on the market that are designed just for the specific purpose of converting word processing documents. *Software Bridge* will convert several different programs with very little fuss, and will keep most of the formatting intact.

Safe Computing

by Douglas Baty, Sacramento PCUG

Does your PC still engage in unsafe computing practices like running files downloaded from bulletin boards without first getting a complete programming history on them? Does it consort with tainted floppy disks? Maybe you should insist that it use a Tyvek sleeve for greater protection.

I'm worried. My computer has been acting oddly ever since I installed an expanded memory board. Not a malfunction exactly — more of a change of mood. He used to be a happy-go-lucky kind of guy. A free-thinker, he called it. Now he just keeps to himself and dabbles with old software.

He used to spend Saturday night cruising the BBSs looking for juicy new programs. Now he won't even call up his old favorite, Big Blue. He's even disconnected the modem.

Too dangerous, he tells me. *You can never tell who might be infected.*

"Infected?" I asked. "Whatever do you mean?"

Computer virus, he replied. *What's*
see next page

Potpourri

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frightening is the long latency period. Your best friends could have it and you would never know.

"Never know what?" I inquired. It was clear he didn't want to discuss *it*. A strange beep emanated from his speaker. The same sound he makes when running children's games.

My F.A.T. could be destroyed!

"That's bad? You claim to be a portable and weigh 37 pounds."

NO! NO! he exclaimed. *You still don't see. All my applications could be contaminated. My data could be altered.*

That did sound bad. I imagined trying to explain to the IRS that my children are not really named, Rover, Spot, and Fluffy. So I probed further. "Can't you tell if you are sick?"

Not until symptoms appear, usually without warning. That cute laptop next door felt fine until a Jolly Roger took the place of her spreadsheet. She shouldn't have been fooling around with pirated copies.

He was clearly distressed, so I offered him a new utility program.

Was it shrink-wrapped at the factory? he wrote on the screen as I tried to insert the disk.

"No, it's from the club library. That used to be one of your favorite sources."

Public places are the easiest targets he declared. *Don't give me any of that public domain stuff until you buy VACCINE. If you can't find that VIRUSAFE or SYRINGE will do as well.*

The situation was clearly getting out

*The situation was
clearly getting out
of hand. He'd
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of hand. He'd gone paranoid. Maybe a change of associates would help. Since I was looking for a new job anyway, I foolishly trying hooking up with a network.

Stop, Doug! he cried. *Have all those on the network been tested with DATA PHYSICIAN?*

"How would I know?" I replied rhetorically as I plugged him in to the job board. Biggest in the state. As I ignored his protests and scrolled through the listings, an opening at the Computer Center for Disease Control (a division of SOPH-CO) flashed by. Before I could print the phone number, a circle appeared on the monitor with an incipient grin and the words: *Have a nice day.*

It's not too bad now. That face pops up only on alternate Mondays. A copy of FLU-SHOT I got from an RBBS pretty much wiped out the infection. Trouble is, FLUSHOT antigens fill in where the virus used to be. The cure is only slightly better than the disease.

I was foolish to ignore his protests. Now I know the difference between expanded and extended memory. The expanded memory board I had installed extended his intelligence beyond mine! ¶

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