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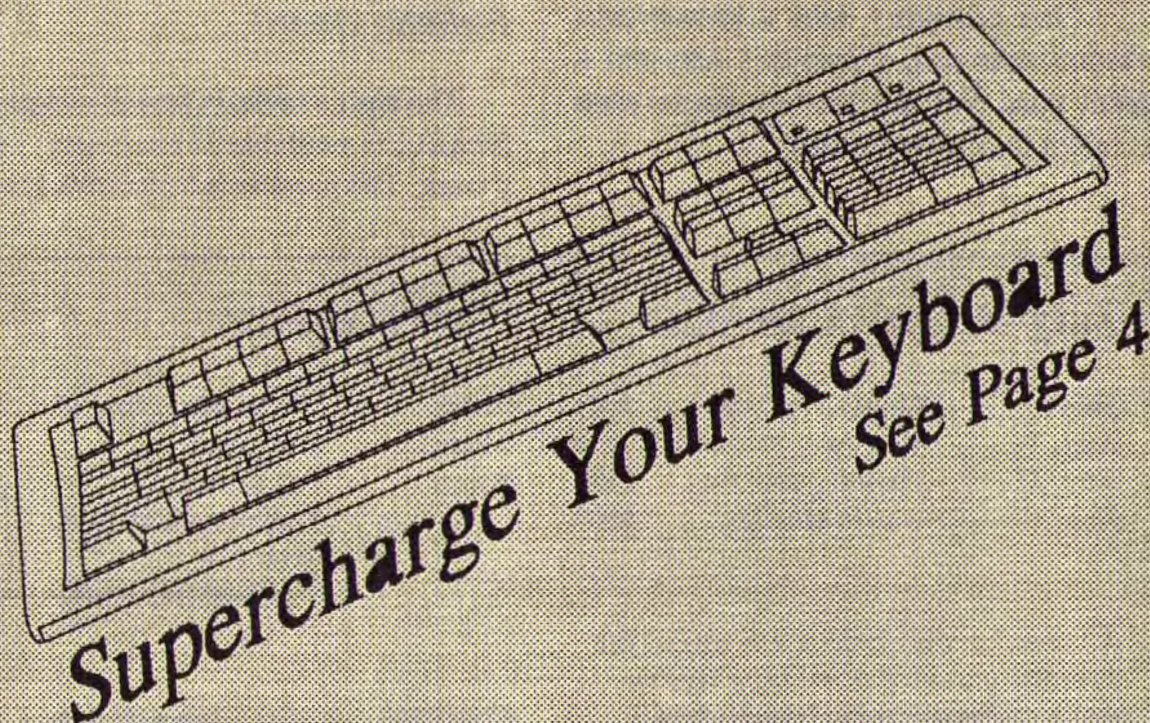
**The Newsletter for the
Stanford/Palo Alto
PC Users' Group**

July 1988   Volume 6, Number 7

Supercharge Your Keyboard   See Page 4

June Meeting

Those of you who didn't attend the meeting last month missed out on some great software deals. Rick "Do I hear $12?" Altman auctioned off a pile of new software for bargain-basement prices.

David Needle, Editor of Computer Currents, and Senior Editor Owen Linderholm gave an informal talk at our June meeting. David started out by showing us some of the crazy promotional gimmicks software companies send the magazine:

• Some unknown software company for some unknown reason sent a can of beer.

• One company sent a paintbrush-shaped note-pad, a painter's hat, and a paint pan. Not too hard to guess what product they were touting.

• Several companies sent their press kits in handy-dandy plastic briefcases — just what everyone wants and needs.

• An inflatable airplane was MicroSoft's way of advertising its new Flight Simulator program. (MicroSoft also sent our club a promo — but I guess we didn't merit anything as expensive as an inflatable airplane. We got one of those cheapo, put-together airplanes.)

After this light-hearted beginning, David and Owen opened themselves up for discussion on a variety of computer-related topics. Many members took advantage of the depth and breadth of these experts' knowledge in the computer field.

Bulletin Board

The club's bulletin board, nicknamed SPARC, is available 24 hours/day, 7 days a week. The number is 723-7995. Use the

July–August Calendar

July 27	Group Meeting	8:00
Aug. 8	Microsoft Word SIG	7:30
Aug. 17	Planning Meeting	8:00
Aug. 31	Group Meeting	8:00

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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.

Next Meeting

Date:	Wednesday, July 27
Time:	8:00 p.m.
Place:	Polya Hall,
	Turing Auditorium
	(Rm. 111)
	Stanford University

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Check out our new column on page 3, DIR C:July, with all the details of the events scheduled at the next meeting.

following communication settings: 300, 1200, or 2400 baud; no parity; 8 bits; and 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.

Membership renewals

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

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.

Floppy disks for sale

Xidex Precision disks are available for $6/box. High density floppies are 4 disks for $5. The catalog and the Disk of the Month will be offered for $1 a disk. ¶

DIR C:July

A representative from the Prodigy on-line service will return to Turing Auditorium to get feedback (both positive and negative) from those who signed up for the service.

The Speaker

Our main speaker will be Fred Waters, an enthusiastic computer hobbiest and professional technical writer. He uses IBMs exclusively and has been involved with computers for the last twelve years. Fred will be discussing the efficient and effective way he has structured his system, and how he manages to keep track of the dozen projects he has going on at once. His implementation is similar to the AutoMenu program, which brings us to the Disk of the Month...

Disk of the Month

The Disk of the Month will be AutoMenu, a public domain utility that allows you to easily build a central menu from which you can run all your software programs. Dirk Van Der Linden will demonstrate it and copies will be available for $1.

DOS of the Month

This month Rick Altman will discuss the DOS sort filter, one of the easiest and potentially most helpful tools hidden in everyone's DOS subdirectory.

Buy a Macro Program? You May Not Need To...

by Rick Altman

(This is the first of a multi-part series exploring hidden treasures of the ANSI.SYS screen and console driver. This series will culminate with instructions on building a professional, personalized menu.)

Once upon a time, a "macro" was considered to be a magical thing that few people knew about. It was supposed to turn you into a more productive computer operator, a wizard at the keyboard, and who knows, perhaps a better parent and more responsible citizen.

Today, everyone uses macros and most programs have macro processors built right into them. But if you want macros while at a DOS prompt, the conventional wisdom requires that you

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Save the $150 of a macro program — ANSI.SYS can redefine any key on your keyboard...for free.

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buy a stand-alone macro program, like Superkey or ProKey, and reserve a chunk of your system RAM. If you need that RAM for a mega-program, you need to always remember to disable your macro program first. Then you need to remember to bring it back. In trying to save keystrokes, macro programs often cost a few keystrokes themselves.

No, macro programs are no longer hot items, as most people are satisfied to use the macros built into their favorite application programs. But this common scenario neglects the erstwhile users who want macros for their DOS activities.

To them, the solution is on their system disks and the solution is free.

ANSI.SYS: More Than Just Pretty Colors

It's a good bet that most of you load ANSI.SYS into memory during your startup because a piece of software instructed you to, or because someone told you that it was a good idea. Maybe you know vaguely that it allows you greater control over your screen and its colors or video attributes.

What you may not know is that it also gives you tremendous

control over your keyboard; in effect, ANSI.SYS allows you to define macros and store them in memory, just like a commercial macro program. Not super-duper macros with pauses and branches and conditional statements-- just simple definitions for keys that you don't otherwise need for DOS activities. And it does this for free.

Eschewing the sleep-inducing details, you can send ANSI.SYS commands to the keyboard that will redefine any key, in any shift state, to be any combination of keystrokes. For instance, you could instruct DOS to perform a "DIR/P" every time you press Alt-D. Furthermore, you can store these commands in a batch file and load them into memory just by running the batch file. All it takes is knowledge of DOS' so-called "scan codes" and a bit of practice with the PROMPT command. Oh, and ANSI.SYS, which is loaded into memory by a line in CONFIG.SYS that reads "DEVICE=[path]ANSI.SYS.

Using Escape to...Escape

ANSI.SYS requires that you tell it the key you want to define as part of an "escape sequence," a technical term designed solely to intimidate DOS users. In effect, you tell DOS: "Don't use the normal key definition (escape

from it); use this new one instead." You do it with the following syntax:

PROMPT $e[<keystroke> ; <redefinition> p

ANSI.SYS macros can be stored in a batch file and loaded into memory at any DOS prompt.

Now here's the catch: How do you identify these keys? Would that it be so easy as to just type the key, but hey, that's DOS. Every keystroke that you can issue is assigned a special identification tag, called a scan code. A capital "B" is 66, a small "q" is 113, Ctrl-T is 20 while Alt-F6 is 0;109. Naturally, DOS banishes its table of scan codes to the optional Technical Reference Manual, and not all of the books on DOS have them. The table on page 7 offers a partial list; for a complete list, go to our library or bulletin board for a program called SCAN-CODE.COM, which will display on request scan codes for every keystroke.

The scan code for Alt-D is 0;32. If you wanted to redefine Alt-D to be

The Hidden Wonders of ANSI.SYS

DIR/p and then <Ret>, the syntax would be:

PROMPT $e[0;32;"DIR/p";13p

After the PROMPT, the "$e[" tells ANSI.SYS that the command is to be an escape sequence. The "0;32" is the scan code for Alt-D and the semi-colon after it is the separator between it and the redefinition. The "DIR/p" is the literal redefinition and therefore must be in quotes. After the semi-colon, the "13" is the scan code for <Ret> and the "p" ends the command.

If you issue this command, the first thing that you will notice is that your DOS prompt disappears, requiring that you re-issue the PROMPT command in your usual manner (for instance, "PROMPT PG"). Now press Alt-D and see what ANSI.SYS has taught your keyboard.

While you wouldn't want to use "QWERTY" keys, ANSI.SYS permits you to redefine virtually every key on the keyboard, in every shift state. With a few exception, these macros are only active at DOS; as soon as you enter an application program, they are disabled. A few programs listen to ANSI.SYS commands while running and might be interfered with by your redefinitions. Those programs will require that you disable your definitions (more on this later). To return Alt-D to its normal state, type:

PROMPT $e[0;32;0;32p

Here are a few examples of key redefinitions that will aid any DOS user:

PROMPT $e[0;30;"DIR A:/p";13p
(Make Alt-A "DIR A:/p")

PROMPT $e[0;48;"DIR B:/p";13p
(Make Alt-B "DIR B:/p")

PROMPT $e[4;"DEL *.BAK";13p
(Make Ctrl-D "DEL *.BAK")

PROMPT $e[3;"COPY "p
(Make Ctrl-C "COPY " no <Ret>)

One of my biggest peeves is that the colon is a shift key and the semi-colon is not. After all, I use a colon about 50 times more often. So I switched them:

PROMPT $e[58;59p

PROMPT $e[59;58p

I also use an ANSI.SYS macro to turn an unused key into the combination of :<Ret>, which I use at the end of commands all the time (like DIR A:).

Now the Batch Part

These ANSI.SYS commands can be entered at any DOS prompt anytime. Most importantly, they can be ganged up and entered from a batch file. To do this, create a file called KEYS.BAT in your favorite text editor, or the non-document mode of your word processor and include all of your PROMPT

commands, using the syntax described above. Finish the batch file with the PROMPT command that sets your favorite system prompt. When you run KEYS.BAT, the PROMPT commands will whiz by the screen and all of your macros will be in memory.

The KEYS.BAT can easily be edited and then rerun as many times as you want. The DOS environment does have a limit to the number of keystrokes that can be used as redefinitions, ignoring any keystrokes that are beyond that limit. Once you have KEYS.BAT just right, make it the last command in AUTOEXEC.BAT.

UnDefining Keys

The vast majority of application that you run will simply ignore your ANSI.SYS macros, but there are a few that will not. To play it safe, you need an easy way to disable your macros. Create a second batch file, called UN-

KEYS.BAT, and read in KEYS.BAT (so at the moment the two files are identical). But at the second part of each statement, delete your redefinition and repeat the scan code instead. In other words, you are redefining each key to be itself again. Then whenever you need to disable your macros, type UNKEYS.

Save Money, Memory and Madness

My ANSI.SYS macros are a tremendous boost to my productivity as a DOS user. I don't need super-fancy macros at DOS--just a quick and clean method of entering all of the repetitive commands that I encounter. ANSI.SYS is free, takes up a minimum of memory and is very well-behaved.

NEXT MONTH: Your very own function keys, for your very own applications. ¶

Scan Codes for the Alpha-Numberic Keys

Key	<Ctrl>	<Alt>	Key	<Ctrl>	<Alt>	Key	<Ctrl>	<Alt>
A	1	0;30	M	13	0;50	Y	25	0;21
B	2	0;48	N	14	0;49	Z	26	0;44
C	3	0;46	O	15	0;24	1		0;120
D	4	0;32	P	16	0;25	2		0;121
E	5	0;18	Q	17	0;16	3		0;122
F	6	0;33	R	18	0;19	4		0;123
G	7	0;34	S	19	0;31	5		0;124
H	8	0;34	T	20	0;20	6		0;125
I	9	0;23	U	21	0;22	7		0;126
J	10	0;36	V	22	0;47	8		0;127
K	11	0;37	W	23	0;17	9		0;128
L	12	0;38	X	24	0;45	0		0;129

Some Number Crunchers

by Ralph Muraca, Club President

All of us have computers, eh? And aren't they supposed to "compute?" Came the day when I got tired of programming for every little equation; so I looked to the popular press.

Glowing words prompted me to look at two of the "best" low-cost number crunchers; Solver-Q is only $90, and Eureka is about $170, but they can be bought for less. The trouble is that since the reviews are in the popular press, and advertisers are a great source of profit, you'll seldom get an unvarnished truth. Well, let me tell you what I found out about these two popular computing programs. Boy! They sure didn't turn out to be like the rave reviews said!

In technical work, many tasks require a lot of small computations, but there's often need to vary parameters in a model to study its behavior — the "What if?" of the technical world. In general, the technical world needs a cross between a computer language and a spreadsheet, (such as the $395 TK Solver Plus), or a sort of a word processor that computes (the $349 MathCAD), but I kept to Eureka and Solver-Q. (My nerves tense when software costs more than $150!)

Although price was a factor, the selection of the two programs was really made on the basis that they were equation solvers. Now, I'm not going to waste your time talking about the ins and outs of the math involved in solving equations and the way the programs should or shouldn't have done it, but you can bet that the test equations I used were real doosies.

Both programs offer convenience; models or sets of equations are easily set up and solved, and they can be altered and quickly re-solved. Both programs can solve equations by iteration, for example those that occur frequently in partial differential equations. And both are very handy for solving systems of more than one nonlinear equation,

A math coprocessor is recommended for both programs. Solver-Q handles large problems expeditiously, but Eureka handles smaller problems slowly. Solver-Q has no graphics capability, but it can output data to a file that can be read by standard spreadsheet programs and plotted. In sharp contrast, Eureka has jazzed-up screens and windows with zoom, tiling, and stacking. Windows show running records of calculations, solution verification, and simple plots.

Although Eureka is easy to use, and even may be fun to play with, the 240-page manual describes only test problems and gives little technical information about the numerical methods used. Eureka is surprisingly limited, for example, it can only handle a maximum of 20 equations (10 with complex parameters), and its curve fitting and optimization applications can only use 19 data values (less if complex parameters are involved). As problems approach these limits, the program becomes slow.

Eureka handles repeated calculations clumsily. You can only change

parameters one at a time, and it is often necessary to sort through report files to collect results. In general, a lot of keys have to be pushed to make "What-if?" computations. But one of the most serious problems with Eureka is an occasional termination with wrong results and no error message! Such behavior typically results when the operator tries to solve a set of equations with more variables than equations. Nearly any math program has safeguards against such errors!

With the Solver-Q program, initial guesses can be changed during a calculation, and data for most of the iterative operations can be contained in a file. The program can handle 1000 simultaneous equations, limited only by available memory, and can be used routinely for 50 to 100 equations. Solver-Q is better in many respects than Eureka, and it has

been designed specifically for the no-nonsense sophisticated user. The manual for Solver-Q is little more than 100 pages long and includes more than two dozen tutorial programs

In finality, Eureka is perhaps too limited for most professional work, but it is easy to use and quite effective for the simple problems selected as examples in courses of instruction. Solver-Q is excellent for large problems, but it demands more of the user.

Now, the moral of this little ditty is this: don't believe raving reviews of software when the vendor advertises heavily in the publication that sponsors the review. Since this Newsletter receives no emoluments from software vendors, and the unsolicited review was written by an unpaid author, you just gotta believe what was said! (Don't you?) ¶

News From the SIGs

The Novice SIG

At the last meeting we discussed the following topics: text editors vs. word processors; how to set up a file system that enables you to see what files are in libraries and on bulletin boards, and tells if and where they exist in one's own floppy library; a batch file for regularly backing up FAT and a list of all the files on the hard disk(s); and other sundries.

This meeting was the last by this leader. I encourage others to try this experience of giving as well as receiving. Becoming "connected

among persons with like interests" was a prime objective. Our roster shows system and software details for each person, thus it has become useful in getting questions answered.

— Don Baird

Microsoft Word SIG

The Microsoft Word SIG meets the second Monday of every month. The next meeting will be Monday, August 8th at 7:30 p.m. For details on the meetings call Jeanie Treichel at home (851-0100) or work (326-7438).

PRTSC POTPOURRI

Borland's New Word Processor: SPRINT

Borland has released a new word processing program called Sprint that includes a package of Alternative User Interfaces so that you can make Sprint act like the word processor you're already used to: WordStar, MultiMate, Word-Perfect, Microsoft Word, SideKick or EMACS. Sprint is also read and write compatible with these and other word processors. You can even completely reprogram Sprint's interface however you want it.

Another unique feature of Sprint is its ability to work on up to 24 files simultaneously and display up to 6 windows. Sprint also has an auto-save feature, macros, merge, sorting, columns, style sheets, and thesaurus.

If you currently own a Borland product, you can purchase Sprint for $99.95 (half the suggested retail price).

Computer Glossary

by Charles Bassline, Datamation

DESIGN: What you regret not doing later on.

DOCUMENTATION: Instructions translated from Taiwanese by Japanese for English-speaking persons.

INFORMATION CENTER: A room staffed by professional computer people whose job it is to tell you why you cannot have the information you require.

MEETING: An assembly of computer experts coming together to decide what person or department not represented in the room must solve a problem.

OFFICE AUTOMATION: The use of computers to improve efficiency in the office by removing anyone you want want to talk to over coffee.

Thoughts on Illiteracy

by Richard T. Rogers, Tucson PCUG

You know you're computer-illiterate when:

❶ You think an Apple is the fruit that first caused discord in the Garden of Eden.

❷ You call the drug abuse center when your kid tells you he has a blown memory.

❸ You think a nanosecond is the length of time Grandma promises to stay with you next summer.

❹ You think a head crash is the result of sniffing too much Duco cement.

❺ You think serial communications have something to do with Snap, Crackle, and Pop and parallel communications means you and someone else see eye to eye.

❻ You think BASIC is simple, and Pascal died during the French Revolution.

❼ You think a boot is useful only when dealing with manure or bad weather. ✦

The SPAUG Resource Center

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