



PRinT SCreen

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

June 1987

Volume 5, Number 6

N E X T M E E T I N G

Date: Wednesday, June 24

Time: 8:00 p.m.

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

A G E N D A

8:00 PM General Club Business

8:30 PM Speaker: To be announced

9:00 PM Discussion and Random Access

10:00 PM Conclusion

Information regarding the speaker and topic for this month's main meeting was unavailable at press time. Come to the meeting and find out what wonderful things are in store for you!

P L A N N I N G M E E T I N G :

All members are welcome to attend the monthly Planning Meeting, where we make decisions on the future of the group (e.g., speakers, topics). Please call Corwin Nichols, 494-8640 or 324-9114, for the location of the next meeting, which will be held on Wednesday, July 15th at 8 p.m. If you can't reach Corwin, call any Club Officer.

CALENDAR

June 24....Group Meeting.....8:00

July 7.....Novice SIG.....7:00

July 15....Planning Meeting.....8:00

July 29....Group Meeting.....8:00

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.

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.

NEW REDUCED PRICE ON FLOPPIES!!!

Xidex Precision disks are now available for \$6/box (down from \$7). High density floppies are 4 disks for \$5. The catalog and the Disk of the Month will be offered for \$1 a disk. If you wish to purchase disks at the meetings, you will need to present your membership card, so be sure to bring it with you.

GET PUBLISHED: WRITE FOR PRT SC

Please contact Becky Bridges if you are interested in writing for PRINT Screen. It does not matter what your level of computer experience is; each of you has some information, knowledge or opinion that would be of interest to your fellow members. Review your latest software or hardware purchase. Tell us how you use the PC in your work and play. Help others avoid or solve problems you have encountered.

Please submit the articles:

- o In WordStar, MultiMate, or ASCII.
- o Single-spaced.
- o Double-spaced between paragraphs.
- o Any right margin.
- o By the 15th of the month.

Dave Hoffman, an academic computing specialist at Stanford, discussed the computing facilities available on the Stanford campus. On the mainframe level, Stanford uses an ethernet network called SUNet (Stanford University Network) which is comprised of 2000 terminals scattered across the campus. SUNet was recently extended to certain student residences as well.

The computer system for academic use is called LOTS (Low Overhead Timesharing System). LOTS is available to students for classes and for sending electronic mail.

The ITS (Information Technology Services) Data Center mainframe is used predominantly for administrative computing.

The Microcomputer Evaluation Lab in Sweet Hall can be used for software testing and experimentation. ATs, XTs, and Macintoshes are available.

The Residential Education Classrooms give students an opportunity to learn how to use computers right in their dorms. Right now there are 6 clusters of IBMs (there will be 9 by September), 3 Macintosh clusters, and 3 DEC clusters.

Stanford students, faculty and staff can purchase computers at a substantial discount at the Stanford Bookstore through the Microdisc (microcomputer discount) plan. Microdisc currently offers selected hardware and software products from Apple, Hewlett-Packard, and IBM. Microdisc includes a computer demo area, as well as a consulting staff and an authorized service and repair center.

Consulting is available through IRIS (Instruction Research Information Systems) and LOTS. Consultants provide assistance in selecting a PC or software program, as well as solving problems, and integrating micros with the other computing systems at Stanford.

NEXT NOVICE SIG GROUP MEETING - TUESDAY 7/2/87, 3785 Farm Hill Blvd. Redwood City. Watch for blue light. Call Don Baird 415 365-6822 for information. Meetings are at 7PM on the 1st Tuesday of the month. People can arrive early & stay until 11PM for extra business, like copying (public domain). Current attendees will be notified in case of late changes.

REPORT for NOVICE SIG meeting held 6/2/87

It did not go as planned. The early discussion on fundamentals paled to what we accomplished the time before - even though there were more real novices attending. Lesson learned: have better agenda.

The modem topic fizzled, too. This leader prepared harder than ever before, but was weak on what all the acronyms meant. For a group composed of few modem owners, the topic is too broad and advanced.

Compounding matters, we failed to transmit a file between modems. Those attending deserve to know why, and it might be helpful to others. The receiving modem was set for a default download to drive B. Transmission, of course, aborted when finding no disk in B. Resetting the default to download into the current directory also gave an abort. With ProComm 2.4.2, it is necessary to exit and then reenter the program in order to activate changed settings. This was finally remembered, alas, after all had departed.

For such a topic, we need at least four who are either close to, or are already, using modems. We will take a poll of those expecting to attend next time to determine whether to repeat the topic. In any case, because novice attendance grew and the regulars dropped

off, it will be the practice to talk fundamentals early in the evening.

Don't forget to bring some blank disks to the meeting to copy public domain software.

Novice tip: Try `TREE/F) ANYFILENAME` - (`TREE.COM` must reside in the current directory or in the path). Then use `LIST ANYFILENAME` (or `TYPE ANYFILENAME`) to examine or search through the contents of all the subdirectories. For a full hard disk, this can be faster than `FDA` and the like. `ANYFILENAME` can be kept on a floppy to let you know what files were lost if (or when) your hard disk crashes. Unfortunately, file size and date are absent.



Professional Computer Graphics

Professional Computer Graphics provides full service graphics production with the IBM PC. Our hardware consists of a **Lang VideoSlide35** for the production of **35mm slides**. The Lang produces a professional quality 35mm slide with higher intensity than available on a standard CRT and raster fill to reduce the effect of the raster lines. We use an **HP 7475A Six Pen Plotter** for **hard copy** and **overhead transparencies**. We also have extensive software for the original generation of the screen images. We sell a special slide making kit which permits designing screen images and saving them so you can send them to Professional Computer Graphics to produce the hard copy.

Whether you generate the screen images or we do, you will find our convenience and quality unsurpassed. We are here to serve your graphic needs. So give us a call for information or a sample slide.

Professional Computer Graphics also provides consulting and system configuration, specializing in the business and graphics areas of the IBM PC.

P.O. Box 50070 • Palo Alto, CA 94303
(415) 856-0873

DISK OF THE MONTH

The Disk of the Month features TSR. The TSR package is a group of programs useful in managing DOS memory, and in particular managing memory-resident utilities. TSR stands for "Terminate and Stay Resident."

Two of the TSR programs are MARK.COM and RELEASE.COM. They are used to remove memory-resident programs from memory, without requiring a system reboot, and without the usual problems of creating holes or leaving interrupts dangling.

Mark Woodward will be demonstrating these programs at the June 24th meeting.

The disk will be available at the back of the room for \$1 (or use your Goodie Coupon).

P S / 2 U P D A T E

According to a recent Reuters article that appeared in the S.F. Chronicle, IBM's PS/2s are selling sporadically because of the unavailability of the new operating system. Rumor also has it that the OS/2 would be delayed 6-12 months.

Unsurprisingly, IBM denied all the rumors. According to an IBM spokeswoman, "Orders exceed supply and our expectations, among both customers and dealers. She insisted the company would meet its deadline for delivery of OS/2 by first quarter 1988."

Save Keystrokes
With Batch Files

QUESTION: I know that batch files can save me a lot of time and effort but I never get around to using them or learning how they work. Can you recommend some simple batch files that will get me started?

ANSWER: Batch files can be used for applications as simple as combining two commands into one or for creating full-blown, knock-your-socks-off interactive menus that manage all of your computer functions. The important thing to remember is that in most cases, batch files are nothing more than a string of DOS command instructions that you could type yourself. But why bother if a batch file can do it for you? This answer assumes very little computer aptitude or experience:

Batch files are simple ASCII text files, but DOS treats files with "BAT" extensions as being executable files that contain other DOS commands. The simplest batch file that every hard disk user should use is one that changes directories and then runs a command (e.g., loads a program) in that directory.

For example, let's take Lotus 1-2-3, a program that can only be started from a directory that contains the critical 1-2-3 files. You don't want to have to type CD\ LOTUS and then 123 every time you start 1-2-3, so instead you can create a batch file called 123.bat that contains those two commands. Building this batch file is a piece of cake -- we'll use the DOS Copy command to do it. In your root directory, type:

COPY CON 123.BAT

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The cursor will drop down a line, at which point you enter the following two lines:

```
CD \LOTUS
123
```

You tell DOS that you're finished by pressing Ctrl-Z (or the F6 key). You will see the "one file(s) copied" message, and presto, you have an executable file that will combine those two commands into one. Every piece of software that first requires a CD command should have a batch file made for it, and by the time you get to about six batch files, you will realize that your system needs a place for them. I recommend creating a directory called BAT to house all of your batch files. Then run, don't walk, to your AUTOEXEC.BAT file to add C:\BAT to your PATH statement. If you don't have a PATH statement, add a line in AUTOEXEC that reads PATH=C:\BAT.

Just for fun, each month we'll add to 123.BAT to illustrate how complex a batch file could become if you have the need and the inclination.

**Help! I'm Going
Envelope Happy**

QUESTION: If computers are so great, how come they can't print envelopes automatically, after I have already typed the name and address on the letter. I type about 25 letters a day and am quickly going crazy retyping all of those names and addresses. I use WordStar, but would switch to just about any other word processor if it saved me from all of that retyping. What can I do?

ANSWER: While I don't know of any word processor that has a specific command to pull the name and address off of the

letter and print it on the envelope, you can rig it with a bit of elbow grease, using WordStar or just about any mainstream word processor. You will need to make good use of your "file read" and "file write" functions, and you will be building a couple of lengthy macros. If you have WordStar Version 4 you can use the built-in macro function (called Shorthand), or you can use an external (macro program like SuperKey or ProKey. Either way, this answer assumes a modest working knowledge of macros, and if you know how to use a RAM disk, it is preferable. While we will use WordStar for the answer, the concepts can be transferred to other word processors.

Our object is to instruct WordStar (via macros) to grab the name and address from the top of a letter and store it in a holding file, and then take the holding file and merge it with the proper printing instructions.

As you open a file and start your letter, place a block begin marker (^KB) right before the name and address. When you finish typing the name and address, it is time to invoke the first macro--named <Alt N>, or <Esc>N in Ver. 4 (we'll call it <N> for our purposes). The macro <N> places the block end marker and writes the block to a file called DATA. When creating this macro and the forthcoming one, substitute the correct syntax for <Ret>, <Esc> and <Ctrl>, depending upon the macro program used. The macro <N> looks something like this: ^KK^KWDATA<Ret>.

The holding file has now been created. Now continue on your merry way writing your letter. When you are done with your letter and ready to print, save with a ^KD (not a ^KS) and print from the main menu. Then insert the envelope (in a position arrived at by trial and error...) and get ready to invoke Macro No. 2, <Alt E> or <Esc>E. This macro performs the following steps:

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THE ANSWER MAN

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Opens a new file called PRINT
Creates two dot commands that format the envelope printing
Reads in the data file, DATA
Saves and prints
Deletes PRINT for the next time

The two dot commands are .MT for setting the top margin and .PO for the left offset. The values will be around 15 and 40 respectively; adjust them to suit your needs. The code for macro <E> looks something like this

```
DPRINT<Ret> (Ver 4 needs a "Y" right here)
.mt 15<Ret>.po 40<Ret> <Ctrl-K>RDATA<Ret>
<Ctrl-K>DPPRINT <Esc>YPRINT<Ret>
```

If you use a RAM disk, create DATA and PRINT there, as all operations will be faster. Just add "D:" to the two macros at the appropriate places.

This looks like a lot of work, but once you have created the thing, you set it in motion with the touch of two simple keystrokes, <N> and then <E>. Try it, you'll like it.

QUESTION: We have a loud-mouthed colleague at work who drives everyone crazy boasting about how he knows everything there is to know about our computer system. Any ideas on how we can shut him up?

ANSWER: Slip a system disk in A: before the next time he boots up, and put the following AUTOEXEC.BAT file on it:

```
ECHO OFF
ECHO Invalid ROM cycle specification
ECHO Corrupted file control block
ECHO Register out of range
ECHO Unavailable environment variable
ECHO ^G
ECHO FATAL ERROR NO. 357-C
ECHO All data in network lost
ECHO .
ECHO Please report to supervisor
ECHO For immediate termination
```

Send your questions or your tips on how to handle deviant workmates to: The Answer Man, 25200 Carlos Bee Blvd., No. 428, Hayward, CA 94542.

REVIEW

NEWSMASTER

Reviewed by: Paul Jordan
Published by: Unison World
Price: \$99.95

If I was enthusiastic about Unison's Publishing's "PrintMaster", I'm ecstatic about Unison's newest product, "NewsMaster." NewsMaster is the affordable answer to many of the higher priced Desktop Publishing programs.

NewsMaster is truly easy to operate, you don't need a lot of fancy equipment, the price is right and you don't need a color monitor to operate it.

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NEWSMASTER

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NewsMaster allows you to print quality newsletters on your dot-matrix printer (there are over 50 supported), or on a laserjet with headlines, graphics and 1 to 10 columns of text.

It comes with a dozen popular type-styles in 34 different sizes. There are over 250 graphics supplied with the program for business, sports, news and travel. It also allows you to use

graphics from PrintMaster, PrintMaster Plus, Art Gallery I and Art Gallery II. One of the nicer features is that you can expand or shrink the graphics as necessary and cut and paste blocks of text. You can also create simple charts, lines and boxes.

After designing your masthead and graphics layout, the text can be typed, or read from a text file created with your favorite editor or word processor. The text is easily made flush left, right, centered or justified.

NewsMaster is a WYSIWYG (What You See Is What You Get) program. You can see the full page of graphics and text before you print it. You can view the full page, or zoom in to a one-quarter or one-third view. You cannot read the text in the full page view, but it was designed so you can see the total effect of headlines, text and graphics. Graphics can be placed while you are designing your printed page, or after the text is added. Simply place the graphic image where you want it, and the text will reform around it.

Although the instructions say it will take about an hour to turn out your first sample newsletter, in reality it took me about two. The tutorial section of the manual is not by the numbers, but in paragraph fashion. It was a little difficult to look at the instructions, type them in, and then find your place.

Instead of conventional menus, NewsMaster uses the icon system, which consists of little graphics pictures instead of words. I would rather have a menu that says 'Edit text' or 'Edit picture' rather than have to figure out what the cute little symbols mean. I found the symbols more confusing than helpful, but I finally got used to them.

When I finished the sample and printed it out on my Gemini dot-matrix printer, I expected the result to be mediocre. However, I was pleasantly surprised at the excellent quality of the final product. With a LaserJet the results are even better.

The program is not copy protected and is easily transferred to your hard disk. I did have a question or two about the product but a phone call to Unison's wonderful technical support department provided prompt answers.

I highly recommend NewsMaster for any organization, small business, school or anyone who has the need for producing newsletters.

REVIEW:

PRINTMASTER PLUS

Reviewed by: Paul Jordan
Published by: Unison World
Price: \$59.95

PrintMaster Plus creates posters (great for garage sales and notices), banners, and standard greeting cards. In addition, you can make custom calendars, stationery and even design your own logos.

For those of you who read my review on PrintMaster back in June of last year, you know that I thought highly of it.

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The new PrintMaster Plus is even better. The menus are simpler and easier to work. The PrintMaster Plus editor, where you design and draw your own pictures, has been improved and is much easier to operate.

The program is not copy protected and installation is a breeze.

First, let's take a look at the improved features. The text, in combination with graphics, can now be flush left, justified, or centered. The size of your wording is now displayed on the screen.

With the old version, you were limited to the use of one graphic at a time. With PrintMaster Plus you can use two graphic images instead of one. You can also flip a graphic from left to right (or top to bottom) to attain symmetry in your designs.

One of my favorite features is that you can recall a saved image, and edit it. For instance, when you design a greeting card, you can use it for more than one person, or occasion, by simply changing the names or the messages.

The menu system is greatly improved. When making a correction, you do not have to make as many trips backwards through the menu system. All in all, the frustration factor has been kept to a minimum.

A new window feature has been added to the drawing pad that allows you to pick an area of your graphic, and move it, copy it, or modify it. Think of it as a rubber stamp allowing you to place multiple images wherever you want. The graphic you select in the 'window' can be flipped horizontally or vertically. It is an excellent feature for allowing you to add your own customized touches to a graphic design. I found myself trying out pattern after pattern of graphics, and experimenting with logos and text.

A good product, at a good price. I highly recommend it.

Rick Altman

DISCOVERIES

Half the Time, We
Don't Even Know What
We're Talking About...

We talk a lot about the language of computerese. Many of us make fun of it. My mother laughs when I say that the default time for dinner is 6:00, and we all groan when we hear someone say that he will interface with us later. Indeed, the computer age is responsible for some of our common-day language (and some of our WORST common-day language).

Then there is a large set of words and phrases that stay in the computer domain. Like boot the computer. Or an ASCII file. We take them for granted. We don't make fun of them, and many times we don't even bother to figure out what their names mean. When's the last time you stopped to contemplate the meaning of the word "byte"? For years, I have been throwing around computer lingo without knowing what the words really mean or what their origins are.

Let's start with boot. To boot the computer. It's a verb, related to start. It's one of the first words I teach novices, but I never tell them where the word comes from because I have never known myself. Ready for this?

Think about how DOS operates. When you start up, you're telling DOS to load itself into the computer, because before DOS is loaded, nothing can happen. But if nothing can happen before DOS is loaded, how does DOS get loaded? Who helps DOS get loaded? The answer--DOS itself. In other words, to borrow a piece of down-home English, DOS pulls

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DISCOVERIES

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itself up by its own bootstraps. Hence, boot.

How about dump? Have the programmers of the group stopped to think about what this rather indelicate term stands for? Most of us qualitatively understand it as displaying data or spewing forth a bunch of programming code. The word is primarily a programming and debugging term, and its roots can be found there.

Back in the computer stone ages (about 40 years ago), if a program did not run correctly, it was not so easy to search out the error. Often the only way programmers found their errors was to print out everything in memory. They didn't have the handy little memory managers that we have today, where you can view memory byte-by-byte.

Back then, the only way to see memory was to print it all out on paper. Byte-by-byte. The result was a mountain of computer paper and a never-ending train of hexadecimal code. It looked like someone turned the computer upside-down and just DUMPED the memory out on to the floor. And now you know the rest of the story.

Byte is easy. Byte comes from bit which is a single Binary digIT. Eight bits to a byte; a byte is eight bits. Got it? Good. Next?

ASCII. We kind of know--it's the alphabet, right? An ASCII file is a file that we can read. ASCII is plain old English, or something like that. Actually, ASCII is a comprehensive code, just like Morse code. It stands for the American Standard Code for Information Interchange. It represents EVERY character that can be sent to the screen, to a file or to the printer, not just the alphanumeric characters.

An ASCII character consists of one byte, and a byte can have a value from 1 to 255. Therefore, there are 255 ASCII symbols, covering the entire range of letters, numbers, punctuation marks, fractions, various foreign letters, mathematical symbols, dozens of line- and box-drawing characters and several characters that output to the screen or the printer.

How about ANSI? You know, the device driver that controls the screen and keyboard? Some of us change our DOS prompt with some wild ANSI commands, but do we know that it actually stands for an institution, a building? It's the American National Standards Institute. How disappointing.

Speaking of dull, do you know what a modem stands for? MODulator DEModulator.

I always thought that the Escape key or the Escape character was so named because it allowed you to back up out of, or escape from, a command or function. That sounds kind of cool, to escape from that erase command. More disappointment: the Escape character allows other characters to escape from their usual ASCII meanings and be part of longer, more involved commands.

Edlin? No, you already know that it's line editor spelled kind of sideways. Ah, how about COMSPEC? It stands for command specification and it is a command that tells DOS...you're right--who cares.

We'll end on crash. Do you know what it means when your hard disk crashes, other than that your day is ruined? It turns out that a disk crash is among the most literal of all computer expressions. Unlike a floppy disk, the magnetic head that reads from and writes to a hard disk never actually touches the disk, preferring instead to hover just over it. That's one of the reasons that hard disks are so much faster than floppies.

DISCOVERIES

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But wear and tear or acts of god will take a magnetic head out of alignment, and if it gets to the point that it actually touches (i.e. crash lands on) the surface of your hard disk, it's time to say hello to your favorite technician and to the FORMAT command. When your hard disk "crashes" it literally means that the read/write head crashed and fell on the disk surface.

Now that you know what all these words really stand for, you have our permission to NOT use them at your next happy hour or dinner party.

(Rick Altman is a software consultant living in Hayward. He can be reached at (415) 581-7563.)

CLASSIFIED ADS

FOR SALE

Remington Rand Word Processor
Age: 3 years Cond: Excellent
Price \$ 500.00

Telephone System
6 office COM-KEY AT&T (2 for PBX oper)
Spec's: Intercom; Speaker phone; Privacy
button; Original cost \$4300.00
Condition: Excellent
Price \$ 2300.00

Please call Turley Angle (415) 369-1981
for further details.

THE BULLETIN BOARD

IS BACK!!

The new club BBS should be up and running in the next couple of days. The number is 723-7995. Give it a try; if there's no answer, try again in a few days. Further announcements will be made at the meeting.

HELP WANTED

Please contact Becky Bridges if you would be interested in selling ads for PRinT SCreen. The job would entail contacting local computer stores, repair shops, etc. to see if they would be interested in advertising on a regular, periodic, or one-time basis. Call Becky at 326-8605 if you are interested.

FREE ADS

Don't forget that as a member you are entitled to free classified ads in PRinT SCreen. If you have old/unused hardware or software, place an ad here. Members have reported good responses to their ads.

DBASE SIG

Those interested in joining a dBASE SIG please contact Gustav Haas at 369-4327.

The following changes to the constitution will be discussed and voted upon at the June 24th meeting:

PROPOSAL - AMENDMENT OF CONSTITUTION -- ELECTION OF OFFICERS
Amendment to ARTICLE IV --- Officers
Section B. Election of Officers:

CURRENT VERSION:

1. In October of each year the Group Board will appoint a temporary office of elections and notify all members, both regular and associate, of the opportunity to submit nominations for elected officers prior to November 15.
2. The election of officers will take place at the last general membership meeting prior to December 15, with all members present eligible to vote. During said meeting, and prior to the start of voting, the officer of elections will announce all nominations received and accept additional nominations from the floor. A majority vote of those members present is required for election.

PROPOSED CHANGES:

1. In February of each year, the Group Board will appoint a temporary office of elections, and notify all members, both regular and associate, at the February general membership meeting of the opportunity to submit nominations for elected officers not later than two weeks before the March general membership meeting.
2. At the March general meeting, the elections officer will announce nominations already received, and accept additional nominations from the floor. The nominations will then be declared closed, and the slate of nominees will be communicated to all members, regular and associate, along with an absentee ballot to be returned by mail and received by the elections officer one week before the April general meeting.
3. The formal election of officers will take place at the April general membership meeting, with all members present eligible to cast their vote provided they have not mailed an absentee ballot prior to the meeting. The temporary office of elections is charged with the responsibility of assuring that each member casts one vote, the absentee ballots are properly tabulated, and that only eligible members vote.

CLUB OFFICERS:

President:	Corwin Nichols	494-8640
Vice President:	Kathy Carroll	325-0824
Treasurer/ASSU Rep.:	Mark Woodward	493-9150
Financial Manager:	Beverly Altman	329-8252
Newsletter Editor:	Becky Bridges	326-8605
Speaker's Bureau:	Jim Wampler	323-7365

SIGS:

Novice:	Don Baird	365-6822
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LIBRARY:

Public Domain Software	Les Weil	321-5541
Soft Copy	Jim Caldwell	692-7181
	Ralph Muraca	365-1659
	Turley Angle	369-1981

RESOURCE PEOPLE**Application Packages:**

MicroSoft Word	Jeanie Treichel	851-0100
KEDIT	Arthur Naman	408-374-1700
Lotus 1-2-3	Bruce Coddling	367-8642
	Arthur Naman	408-374-1700
Symphony	Sally See	941-1378
Framework	Jim Caldwell	692-7181
Financial Software	John Van Deman	854-1167
Perfect Series	Stefan Unger	321-7319
Q&A	Elaine Meyer	325-8057
Rbase System V	Jack Kahoun	349-4696
	Tony Pabon	408-866-4815

Languages/Operating Systems:

BASIC	Ralph Muraca	365-1659
Pascal, DOS 2.0	Jeff	321-5930
	John Watson	325-7632
"C"	Corwin Nichols	494-8640
	John Watson	325-7632
	Mel Cruts	408-263-6099
Fortran	John Watson	325-7632
APL	Paul	968-8283
	Stefan Unger	321-7319
	Paul Berry	494-2043
PC-LAN	Paul Berry	494-2043
MSDOS, CP/M	Mel Cruts	408-263-6099

Hardware:

Expansion Boards	Curt Carlson	941-5680
Columbia computer	Stefan Unger	321-7319
Hard disks	Jim Caldwell	692-7181
Epson printers	Jim Caldwell	692-7181
Toshiba printer	Paul Berry	494-2043



CLUB INFORMATION

MAILING ADDRESS: P.O. Box 3738
Stanford, CA 94305

MEMBERSHIP Louise Greer Bolitho 322-3850
INFORMATION: \$25/year fee (\$10 for students)

NEWSLETTER: Becky Bridges 326-8605
P.O. Box 982
Palo Alto, CA 94302
Deadline for submissions: 15th of each month

ADVERTISING

If you are interested in advertising in PRinT SCreen, send camera ready copy to P.O. Box 3738, Stanford, CA 94305 before the 8th of the month. All ads are payable by check in advance. Rates per issue are:

Full Page (8.5 X 11) \$25.
Half Page (7.5 X 4.5) \$15.
Qtr. Page (4.5 X 3.5) \$10.

Classified ads are free to paying members.

The Stanford/Palo Alto
Users Group for the IBM PC
Box 3738 STANFORD, CA 94305

