



The Stanford/Palo Alto Users Group for the IBM PC

PO Box 8292

Stanford, CA 94305

NEWSLETTER VOLUME 1 NUMBER 3

JUNE 1983

<<<<THERE HAS BEEN A ROOM CHANGE FOR THIS MEETING>>>>

Please note that we are meeting in a different location on Stanford Campus. Check inside for the enclosed map.

 * Next meeting: Wednesday, June 29, 1983 *
 * 7:00pm MAIN QUAD *
 * Rm 30, in the basement, History *
 * Corner, Stanford University *

AGENDA FOR THE MEETING —

- 7:00 General Club Business
 - Report on the Wednesday Before the Monday Meeting
 - Club Software Library Update
 - New Business
- 7:40 Guest Speaker — Lawrence J. Magid, ace writer, entrepreneur and all-around well-informed person.
- 8:20 Random Access
- 9:00 Conclusion of the Official Club Meeting

Reminder—Don't forget about the Monday Before the Wednesday Meeting at Talbott's on California Ave, across the street from the Winery. Time is at 8:00 pm, goes on until whenever (usually about an hour and a half or so). All are invited to this meeting where great plans are made and policy discussed. More informal than our regularly scheduled meeting.

AT THE LAST MEETING.....

The \$10 membership fee (\$15 for families) was approved and seems reasonably reasonable, especially considering the costs of other clubs. A report from Wes on club finances indicates we are finally in the black. There was interest indicated in holding a Novice Night Seminar, as well as seminars in other areas.

I still have a few boxes of diskettes (Dysan DSDD) available at \$41. Call me (Kevin) at 494-2574.

Wes Danskin 851-0277

Linda DeSosa 856-6281

Mike Van Waas — Librarian
325-2507

Kevin Ohlson — Editor
494-2574

IBM has announced the 8087 Co-processor chip (big surprise?). Though others have been on the market for last few months, this is the latest from Big Blue. You do much with numbers, this may be just the thing. Also from Boca Raton is APL.

We talked about group buys at the last meeting, and one of the items mentioned was a 1200 baud modem. Mike Van Waas, our club librarian, has a hot tip about Hayes Smartmodem 1200 for \$439, maybe less. He'll have more details at the meeting.

Some tips on your Epson (or otherwise) printer. If you're having trouble with the tractor pin-feeds tearing out the holes in the paper, remember to buy "20 pound" paper. This is heavier than the 12 or 16 pound variety, and while you don't get as many sheets per box, it will probably cure an aggravating problem. One thing I do to keep the paper from misbehaving is keep the locking lever on the right-side pin-feed in the "unlock" position, locking only the left pin-feed assembly. This allows the right-side to adjust for paper width irregularities. Finally, Wes Danskin pointed out that it is caveat emptor when purchasing MX-80 ribbons. The one supplied with your printer is 60 yards long. Most of the less expensive varieties are only 20 yards long.

Wordstar version 3.3 has been released. \$85 update to registered owners. Review in PC World's June issue.

PERIODICAL REVIEW

Dr. Dobbs Journal has a short program for PC's with more than 576K RAM, called MEMSIZE. Might be useful to anyone operating in the stratosphere.

An interesting interview with Digital Research and their future with respect to IBM PC's is in the June (Vol. 1 No. 4) issue of PC World. We may be seeing more of CP/M in the future.

As mentioned above, PC World reviews the new version of Wordstar. But PC does a much better job of it. PC also has an article on page 411 on recovering lost Wordstar files.

After another lengthy review PC gives the thumbs down to Context MBA. For a different perspective of 1-2-3 or Context MBA try the June issue of INC. magazine. These two programs are the cover story.

If you're considering an RGB monitor in the near future, you might want to see page 247 in the June issue of PC.

This month BYTE features articles on other 16-bit micros, including the HP-200 and the DEC Professional 300 Series. Also articles on designing a modular computer around the IBM PC and an inside look at MS-DOS.

PC World covers RamDisking this month (good), does an in-depth review of TK! Solver, and features a Peter Norton article on the PC keyboard.

Both PC and PC World review investment analysis are.

PC reviews the new Quadram "Appleboard" (also known as Quadlink) which turns your PC into an Apple II, and the TRS 80 Model 100 portable computer. Is PC a specialty mag?

This month a new space devoted to personal experiences with various bits of hardware, software and/or members of the community. Had a good experience with a particular shopkeeper of the high-tech persuasion? What have you done now that you've outgrown your first 256K multifunction board? Bought a modem lately? What little tips has the experience taught you? These or any other ideas you might want to write about for our fearless newsletter would be more than welcome.

This month I am going to write about disk drives. Certainly not the definitive treatise, but a few things I think you might find interesting. Piecing my PC together, the thought of installing a quad-density drive intrigued me. The Tandon TM100-4 was only \$50 more than the more conventional 100-2, yet had the capacity to store twice the information. I decided to go for it.

Though DOS 1.10 won't utilize all 80 tracks of a quad drive, it will utilize 40 tracks. So for a few months this was how the 100-4 was employed. As you might imagine the diskettes from drive A weren't compatible with drive B. Rumor had it that DOS 2.0 would recognize an 80-track drive, but it doesn't. Instead, I purchased JFORMAT from Tall Tree Systems.

JFORMAT is an operating system enhancer for DOS. It does a variety of things for your IBM PC but I bought it to fully enable my quad drive. That it does very well. In fact, it allows me to choose either eight or ten sector with either 650K or 800K storage, respectively. I found that I was getting an awful lot of "read errors" with the 800K format, so I switched to 650K and now only occasionally do I have trouble. In fact this may have nothing to do with JFORMAT and could be a mechanical fault of the disk drive. All I know is what I read on the screen.

I found that my TM100-4 is very picky about the diskettes I feed it. I was using Dysan 104/2D (double-sided quad density) diskettes and getting far too many "read-errors" to be acceptable. When a "read-error" continued after repeated "retry" commands, I noticed that removing the diskette and reinserting it would usually solve the problem, pointing to the critical nature of diskette positioning in quad drives. I mentioned this to my friend who works at Dysan and he said that this particular drive had problems with the hub reinforcement rings. He ordered for me a box without the offending rings, but there was no improvement in the situation. I used the rest of the box as the world's most critically tested double-density diskettes. I tried a box of Verbatim 557-01 (also double-sided quad density) and they work a whole lot better.

The advantages of the TM100-4 are pretty obvious—only half as many diskettes are required to store a given amount of data. All that extra filespace for not that much extra money (\$110 with the JFORMAT). I rationalized it as a good stop-gap measure while waiting for the price of hard-disk drives to come within range.

There were some unforeseen disadvantages. The most troublesome has been the fact that the diskettes for the two drives are not compatible. This makes it difficult to make copies or back-ups of certain programs—the club diskettes, for example. (I later learned that by using the command "Diskcopy A" I could make duplicates of Drive A on Drive A.) Another is that the software isn't as transparent as it might be. While JFORMAT accepts DOS, DOS doesn't recognize files written while operating under JFORMAT. This makes it difficult to transfer a file from Drive B to Drive A and transport it to another machine. What all this translates to is my keeping two sets of books, one for DOS and one for JFORMAT. And, oddly enough, you don't always get the storage you might think you might. I was not able to place two very full club diskettes onto one diskette formatted to 800K.

INSIDE YOUR PC

Many times I have had the cover of my system unit off, installing disk drives, multi-function boards (yes I have two), etc. And each time I became more curious about the little black box mounted inside. Most clearly it says not to remove the cover as there are no user serviceable parts inside (you'll soon learn this is not true). I am referring to the power supply unit, mysteriously kept secret from even the revealing Technical Reference.

Removing the cover is not as easy as one might think. Both disk drives had to be removed and two "cards" removed from their slots to gain access to all the screws. Inside, the first thing I noticed was a removeable fuse, similar to the AGC series by Buss. It is a 250V 2.0 Amp Slo-Blo, I could trace the wiring this fuse protects the Monochrome outlet on the back of the system unit. The fuse also has "136.123.1" printed on it, probably a serial number. The cooling fan is a "Sprite" Rotron model SU2C1. It is impedance protected and operates on 115 volts at .07/.06 amps. The "power in" socket, that is, the socket you plug your wall cord into on the back of your system unit is made by Switchcraft, and is a model EAC-301. The socket your monochrome plugs into is model EAC-306. The system unit power on switch is rated at 15 Amps at 125 volts. What you might do with all this information I have no idea.

HOW TO MEASURE A DISKETTE

Sandy Phelps

One of the most closely guarded secrets in the magnetic media industry is the iron oxide coating formulation covering the surface of your floppies.

How well a WRITE/READ operation works depends a great deal upon the ability of the magnetic particles to re-align themselves when a WRITE current passes through the disk drive head.

I can't tell you why one coating does a better job than another but a test can be used to give some comparison of the performance of floppy diskettes.

The achilles heel of a double sided drive is its ability to WRITE and READ on side 1 of track 39. That's the upper head on the last of a 40 track formatted diskette. (0 to 39). This is where a READ or VERIFY error is most likely to occur, and where you need maximum performance from both the floppy diskette and the disk drive.

To get on with our floppy test, assorted diskettes were tested using a TANDON TM100-2 drive, a disk drive exerciser, and oscilloscope.

A 2F pattern (all ones) is written on side 1, track 39 and the output of the READ amplifier measured and recorded as Eout.

The following data seems to give an indication of the recording ability of a diskette. Keep in mind that the tests are not conclusive and may have differing results given another sample lot.

Notice that the Maxell MD2/DD has the highest output. It may be because that it is rated for the more demanding format of 80 tracks on a side. Any of the other manufacturers may have an equally high reading if rated as such. Except as noted the other diskettes are rated for 48 tpi (tracks per inch).

Some of the diskettes were identified as "single side" but have the READ/WRITE slot on both sides.

The Control Data diskettes are identified for use as single side, single density and 35 track.

As with anything, one measurement doesn't tell the whole story. A quality diskette has many other attributes such as surface smoothness, lubrication, certification, and the jacket design as well.

As you can see, the sampling is a grab bag of floppies and perhaps an unfair test for some manufacturers due to the indicated rating.

Given (or loaned) a broad spectrum of diskettes, a more comprehensive test could be performed.

Reprinted from SWCS Newsletter

MANUFACTURER	PART NUMBER ID	Eout	COMMENTS
Maxell	MD2/DD	168 mV	Rated for 96 tpi
3M Scotch #1	745-O-RH	166	
3M Scotch #2	745-O-RH	160	
Control Data #2	1241-00	156	See text
Generic #1	no name or no.	152	May be 3M bulk
Control Data #1	1241-00	150	See text
Generic #2	no name or no.	146	May be 3M bulk
Dysan	104/2D	144	
Verbatim	MD5500118191	144	
Sentinal #1	no part number	140	Single sided rating
Sentinal #2	no part number	140	Single sided rating
Maxell	MD2/D	136	
Radio Shack	26-0305	136	

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Software Library Policies

The Stanford/Palo Alto Users Group has made one of its major commitments the acquisition of public domain software (or "freeware") and its circulation among club members. This is the origin of SPACL - the Stanford/Palo Alto Club Library. This document briefly describes our acquisition and circulation policies for the SPACL disks. For more information or questions, please contact the club librarian, Mike Van Waas, at 415-325-2507 or Kevin Ohlson, at 415-494-2574. The club address is P.O. Box 8292, Stanford California, 94305.

Acquisition Policy:

To date the primary source of software has been the Silicon Valley Computer Society disks, and disks made available by the San Jose IBM Employees PC Club. SPACL will continue to acquire and circulate this software. We also, and more importantly, encourage donations from our members of software they have developed and want to put into the public domain and that they have acquired from other public domain sources (e.g. bulletin boards, programs published in magazines, etc.). Sources of donated software will be asked, in order to prevent inadvertant circulation of "pirate" software. Club policy is to strictly avoid acquisition or circulation of any licensed or proprietary software, or software not in the public domain. If you want to make a contribution, please contact Mike Van Waas or Kevin Ohlson at the above phone numbers or P.O. Box. We're anxious to hear from you!

In the near future we will propose to the membership that we acquire software libraries put together by major East Coast PC clubs such as the Boston Computer Society, the Washington Software Exchange and the NYC Amateur Computer Club.

Because of the volume of software involved, minimal or no editing is done by the club prior to its circulation. While we thus can't guarantee the quality of the software, or its freedom from bugs, we will make every effort to fix (or at least announce) any bugs brought to our attention.

Circulation Policy:

SPACL software is circulated on double-sided, double density diskettes which are made under PC-DOS Version 1.10 and formatted for 320K. This DS/DD, 320K format will be the club standard for the foreseeable future. Disks are topic-oriented, currently split into the following categories:

Utility Programs:	(SPACLU00 to SPACLU07)
Games for the Monochrome Monitor:	(SPACLG00 to SPACLG02)
Games for a Color Monitor:	(SPACLC00 to SPACLC01)
Business/Financial Software:	(SPACLB00)
"Special Interest" programs:	(SPACLS00)
and 2 disks containing the Forth Language	(SPACLF00 and SPACLF01)

More categories may be added later, but these are the basics.

Under current policy, there is one full set of club disks available to club members to copy as they like. At club meetings, and in the future in the monthly club newsletter, we will announce when and where members can get access to the disks. This will typically be at a volunteers home or office with an IBM PC available, and people can copy what they like. We'll try to have at least two times a month when these disks will be available, but this depends on how many volunteers we get.

We are currently asking a \$2.00 fee per diskette copied. This is the bare minimum it costs us to acquire the freeware - and the diskettes to copy them onto. You pay when you copy, and to whomever the volunteer is that day. Cash or checks are fine; checks can be made out to "Stanford/Palo Alto PC Club" or something quite close to that. We may change this price structure in the future, particular if we raise club membership fees from the current \$10.00. This topic will be discussed at the club meetings and announced in our newsletter if it happens.

21 June 1983

(MVA)