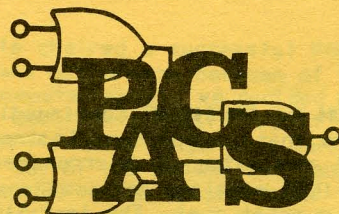


THE DATA BUS

Philadelphia Area Computer Society



VOLUME 8 NUMBER 4 OCTOBER 1983

FROM THE PRESIDENT

by STEPHEN A. LONGO

The Philadelphia Area Computer Society, PACS, was founded in June 1976 by Dick Moberg. The Society was formed "...for the purpose of education and intercommunication among computer users in the Greater Philadelphia area, and to inform the general public concerning computer technology and its implications for the future. Membership is open to all persons interested in any aspect of computer arts and science..." (PACS charter). The meetings are on the third Saturday in the month. Except for the first couple of meetings, the monthly meetings have been held at LaSalle College. There are presently over one thousand members, many who are actively involved in more than one of the more than dozen special interest groups, SIGs. The SIGs represent all the major hardware manufacturers from **Apple** to **Zenith**, as well as software interests from CP/M to Pascal.

In the mid-70s there were really no microcomputers nor any software systems as there are today. Back then one purchased chip sets: microprocessors, memory, and some logic chips. It was the days of homebrewing, rolling your own. One had to know a great deal of electronics; therefore, the first PACS members were generally engineers and ham radio operators.

The engineers were mainly interested in using the microprocessor not as a computer, but as a simple electronic controller replacing dozens of discrete components. It was not the decrease in the part count, but the increase in flexibility that was causing the interest. That is, when a new job came along one did not build another controller, one simply reprogrammed the standard controller. These microprocessors were teamed up with 1K or 4K memories. By today's standards that's nothing--too small to hold most languages, or even an operating system. That did not bother the engineers; all they wanted to do was to open a valve for a little while then close it, etc. The ham radio operators interest was fun and excitement. Besides these hardware-freaks there were some main frame software addicts.

These three groups--engineers, ham radio operators and software specialists--showed up at the early PACS meetings, all dreaming of owning their own systems. In those early days there were no special interest groups; there was only one interest: to build a computer. A typical PACS meeting consisted of a flea market, a mapping session (questions), and a main meeting.

We all crowded into the main meeting to listen to a guest speaker discuss how to build a system, or relate a failure (that is, how not to build a system). There were always more of the latter than the former. Occasionally we would have someone demonstrate a system that worked.

One of the most exciting meetings was when Rob Smith brought in his homebrew computer! He designed and built the entire system; it was not a kit. The audience held its breath as Rob, in order to better explain his system, pulled this part out, then that one, then shoved them back together--and the computer still worked! Some other events of interest during that first year were:

- John Dilks' PC'76 --the first computer show. It was held in August in Atlantic City, you had to be there!
- The DATAC 1000, a single board computer designed by club members Carmen DiCamillo and Roland James. Once "perfected", this SBC would introduce many PACS members, and others, to the field of microcomputers.
- Another great help for PACS members was Will Mathys, a top designer from MOS Technology. Will arranged for PACS members to obtain cosmetically rejected chip sets--the start needed by many early PACS members. Will also told us about a project that MOS was working on, called the **PET**.

By the end of the first year PACS had one hundred members and some SIGs, namely: 6800, 6502, 8080, 8008, Medical Application and Digital Group 8080A. The SIGs reflected the times: the first four SIGs were hardware oriented, centered around specific microprocessors. The medical applications group was Dick Moberg. He was working at Jefferson Hospital and it was

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there that he met Karl Amatneek. Karl was the real motivator of microprocessor applications via IEEE meetings and seminars. This city owes him a great deal. The last SIG was a precursor of the next phase in PACS - the kits.

The kits--Altair, Digital Group, Imsai, Processor Technology, to name a few--have all passed-on. With kits, all, or most, of the electronics was figured out for you. The kit contributions were the printed circuit boards and a standard bus, the S-100. Now the emphasis shifted from chip sets to which were the best kits to buy, and how to connect your computer to the outside world--interfacing. Mark Brindle's discussions on analog/digital conversions helped many members design their own interfaces.

In order to better utilize the computer and its peripherals, it was necessary to get more involved in software. Programs were becoming longer, so Rob Smith showed us how to design a cassette interface. In those days writing a program didn't mean simply software; one still had to understand the hardware. To help us see and better understand this relationship, Jon Bondy told us about computer architecture, and Dave Brown explained operating systems. Besides these presentations, we had a PET demonstration, a Radio Shack demonstration, a request by Neil Lipson to start an Apple users group, our first Games Festival, and a series on the language BASIC was started. By the end of our second year the SIGs were replaced by courses: DATAC SBC, System Programming, A/D conversion, and starship subgroup (graphics). The membership had grown to over three hundred, and we extended honorary membership to Drs. Mauchly and Eckert, the inventors of the first digital computers, and to Will Mathys for his help.

There were a number of changes within PACS during its third year of existence, June '78-May'79. Besides being president of PACS, Dick Moberg had been serving as the editor of the DATA BUS, the society's monthly publication. Dick's many other commitments demanded that PACS find another editor for the DATA BUS. We were in luck: Diane and Donald Nafis volunteered. They took over in August and the DATA BUS took on a new external form: a new layout, and each issue printed on different colored paper. The Dilks' show was too big for Atlantic City and so PC'78 was held in Philadelphia. PACS, with the support of PC'78, sponsored its first Music Show. Each month brought something new to PACS: in October, Computers for Kids was

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started. In November, we held the second annual Games Festival. In December, Hal Brown started the TRS-80 user group. In January, Larry Ellison started the PET group, and Don DeRosa started an OSI group in June. In the spring the society held elections and a new governing board took over in August.

At the end of the third year, the society's membership had not grown, but there were lots of new faces. The hardware interest was gone, and with it a number of great individuals. New faces appeared at PACS. A new era started, it was the beginning of the "appliance computer". You could go to "any" store or magazine and buy a complete system. All you had to know was how to program.

PACS continued to evolve and grow under its second president Eric Hafler. Software was the main interest. There were a number of articles on computer chess and electronic bulletin boards. The appliance computer owners didn't have much interest in flea markets but the mapping sessions were still important and the main meetings were still the center of interest. One of those meetings stands out in

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my mind: Arch Robison's presentation on star-ship graphics. Arch designed and built a graphics hardware system, and also the software. He wanted to do more, but he was leaving to start College. Arch was one of the first PACS computer "wiz kids". Its a little strange, but not unusual, to see grown-ups listening to a young boy or girl explain an esoteric point about a computer or programming.

During Eric's second year (1980-81) the society added some more user groups. Bill Friedman started the **Atari** group, Saul Cohen, Larry Charry and Joanne Kipnis started the **CAI** group. The **Apple III**, the **VIC-20** and the **Sinclair** were announced. Diane and Don retired and Larry Charry took over as editor of the **DATA BUS**.

There were always interesting articles in the **DATA BUS**, but one became very prophetic. Ron Kushnier felt that members were concerned only about their SIGs and seemed to be forgetting PACS. Little did I realize when I became president in June 1981 that I too would raise the same concern.

In June 1981 PACS had about 400 members, a figure that would skyrocket. The main reasons for this growth were the PACS show and the acceptance of the microcomputer by the business community. In the summer we found out that there would not be a PC show. A number of PACS members, in particular Joe Flynn, felt that Philadelphia should have a show. Less than six months, and a lot of headaches later, we put on PACS-81, the Philadelphia Area Computer Show. We had an excellent turn out, with more than 4000 attending the show and conferences. We had a number of distinguished guests: Dr. Presper Eckert, Mrs. Kathleen Mauchly, Jim Finke (then the president of **Commodore**), and a number of Philadelphia dignitaries. At the time of the show, both the **Osborne** and the **IBM** machine had been announced. These systems had a great effect on the business community. Craig Uthe formed the **IBM** group and it quickly became one of the most popular PACS SIG.

By the end of my first year as president, the society had grown to more than 700 members. But the year ended on a sad note--Larry Charry's sudden death. Ron Stoloff and Mike Tankle temporarily took over the **DATA BUS**. A few months later, Louise Schultz volunteered and has been doing a very professional job.

The society is now over seven years old. Our monthly meetings are well attended. We plan to continue with the PACS Games Festival, but we are shifting the emphasis to educational

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games. Mike Tankle chaired a successful PACS-82 computer show and conference. Because of the proliferation of computer shows, we decided not to offer a PACS-83. This past August we started a new event--a Ham & Chips flea market. It was the hottest day of the summer but people still came. Since '76 we've helped with the Trenton computer festival and plan to continue this service.

Like the microcomputer industry, PACS has evolved from hardware, through programming, into the appliance computer. What is the next phase? I think we are already seeing the beginning of the next era--software packages: e.g. data base management, spreadsheets--more importantly, the integration of packages into software systems.

I think that tomorrow's SIGs will be centered around specific software packages rather than particular machines. This shift in emphasis, coupled with economic pressures of the

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CP/M REPORT by Al Lundquist
(Denver Area Computer Society)

ZCPR2, a Z80 enhanced replacement for the CP/M Console Command Processor (CCP) by Richard Conn is available and squeezed into four (4) 8" diskettes in the CP/M SIG Library. The complete ZCPR2 in its unsqueezed form is actually spread across ten (10) diskettes. ZCPR2 provides a Z80 computer with efficiencies approaching CP/M version 3 functions. Some of the ZCPR abilities are: DIR can display system files, ERA has a tagging option to selectively verify the files before they are erased. Additionally, ERA displays the names of all the files it erases. REN can delete, with your approval, any non-read-only file it is renaming. TYPE pages by the screenful, stepping through the typed file. LIST prints the file on the list device without paging. SAVE accepts either decimal or hex arguments with specifications for 128 or 256 byte sectors to be saved. GET loads a file anywhere in addressed memory. GO re-executes any COM file residing in the TPA (like the null directory entry trick in std CP/M). JUMP can call a subroutine addressed anywhere in memory. Multiple command line and drive and user threading features and tricks. PATH allows display and alternate paths through directories which ZCPR looks for COM files.

PHILA AREA PPC CHAPTER MEETS--at 7 pm Monday night, 17 October, at the Hewlett Packard office, 22750 Monroe Blvd., Valley Forge PA, for demos of HP computational products, possibly including the newly announced personal computer (HP-150?). Contact Jake Schwartz at (609) 858-5390 after 7 pm weekdays for info.

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marketplace, will result in a decrease in the number of hardware dealers. This reduction in competition could have a detrimental effect on the consumer. There would be a necessity for large, multi-SIGed, well organized societies to place greater emphasis on consumer protection and awareness. Hopefully, PACS will be one of those societies.

Like many groups and businesses that experience rapid growth, PACS has had (and will have) growing pains. The PACS SIGs are very large now and we must face the question Ron proposed three years ago. Essentially, what is PACS; can it offer a service that the SIGs can't? I think it can. As history has shown us, the SIGs will change; something must remain in order to continue. If you believe that, then support PACS; if you don't, then at least express your views.

COMPUTER GRAPHICS FILM SHOW--to be offered at the 13 October (this Thursday) joint meeting of the Princeton chapters of ACM and IEEE Computer Society, starting at 8 pm, at the David Sarnoff Research Center, RCA Labs, Princeton NJ. Call Ron Lusen (609) 683-2544 or Jim Bennett (609) 734-2859 for details.

EARLY ASSESSMENT OF ADA--is the topic for the 17 November joint meeting of the Princeton chapters of the IEEE Computer Society and the ACM, at 8 pm in the Convocation Room of the Engineering Quad at Princeton U. For information on the pre-meeting dinner, contact Jim Bennet at (609) 466-2546 or Albert Pica (609) 734-2859.

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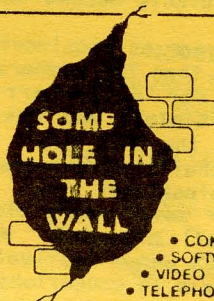
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