

My temperature probe is dissolving! Or rather the tape it's wrapped with is. I tried using naphthalene for cooling curve experiment and the probe didn't like it at all. I should be able to rewrap it but beware. I've used the whole system for demonstrations and several times wished I could erase the entire screen at a single keystroke. We also found the rate program would not run; it turned out that an invisible CONTROL C was embedded at the end of the name in the directory. We renamed the program without the CONTROL C and the program works satisfactorily.

Using the program to measure heartbeat is elusive and not very reproducible, but fun enough to be worth playing with. In a few places the manual tells you to do one thing and the program something a bit different. For instance, you are told to use three waterbaths to calibrate the temperature sensor; after setting them up you only use two.

OVERALL EVALUATION:

Compared to any other interfacing kit I've seen, this is by far the easiest and most interesting to use. If you have been lucky enough to meet Dr. Tinker in one of his many workshops, you will be happy to find the same cleverness and thoughtfulness throughout the package. I'm going to send a copy of this review to Cambridge Development Laboratories. With a little quality control the above weaknesses should disappear by the time you read this. The package without the above problems is easy to use, and provides you with intriguing possibilities.

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COMPUTERS IN CHEMISTRY AT THE UNIVERSITY OF WATERLOO by Chung Chieh*

There have always been many applications of computers in chemical research, particularly in theoretical chemistry, crystallography, and spectroscopy. Some schools have acquired mainframe computer facilities for use in undergraduate instruction. Recently, we have established a micro-computer network dedicated for use in chemical education. This network consists of eight IBM Personal Computers all connected to one master controller IBM-PC, which has one floppy and one hard disk drive; however, it is expandable to 32 slave computers. The network was developed by the Department of Computer Service (DCS) at the University of Waterloo. The network software was written by J.F. Bolce and C.E. Pilkington, whereas the network interfacing was developed by A. Weerheim. Two of them (J.F.B. and A.W.) were involved in developing a similar network for the Physics Department before the IEEE-488 board became available. The group responsible for development of the network named it JANET standing for Jerry-Adrian NETWORK or Just Another NETWORK. Since JANET is a rather nice name, we choose to name our network the Chemistry JANET.

The hard disk in the master has a storage capacity of 17 megabytes. The disk is partitioned into many virtual disks. These virtual disks can be system disks, such as IBM-DOS, NETWORK COMMANDS, FORTRAN, APL, PASCAL, WORD-PROCESSING, course disks which hold specific software for certain courses, private disks for faculty members or students to do their work, and student disks assigned for courses. Some disks contain software, which is in a public library, other disks can be accessed only by those having a password to them.

Every IBM-PC in the network is a work station, which performs like a stand-alone PC, but the users never have to worry about finding the right disk to insert into the proper drive. A user at a work station can access a maximum of 4 disks. Disk A can be a system disk, a course disk, or a boot disk, whereas disk B is the user's own disk which is accessed in write mode. Disks C and D can be accessed as one of the languages or programs in the public domain.

At the time this article was submitted the system was in operation for only a few weeks. Initially, we set up a few demonstration accounts (no password required) to encourage anyone interested in the system to try it. One of the demonstration programs provides real plots of the Van der Waal's equation. He, Kr, N₂, CO₂, and H₂O were chosen as examples. These plots look rather nice on the screen, but they can also be printed out on the EPSON dot-matrix printer.

The advantages of a network like JANET is that many users can share softwares without having to be bothered with the managing of many floppy disks. It is ideal for a chemistry department like ours. I would like to exchange programs as well as ideas with other institutions or colleagues so that I can build up a rich library of software for the education of chemists.

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