

From Sequoia and Kings Canyon

The "old veterans" of Sequoia and Kings Canyon's growing array of data processing equipment are a Datapoint 1550 operated by the Division of Resources Management, and an IBM PC in Research: . . . both are scarcely one year old.

The Datapoint is a word processing workhorse, providing electromagnetic storage and convenient updating of plans, such as the Natural Resources Management Plan, Bear Management Plan, Fire Management Plan, and others that require extensive amendment in draft and annual revisions. This word

processing capability has eased greatly what had become a fearsome secretarial bottleneck.

Thanks to his previous programming experience, Fish and Wildlife Specialist Harold Werner has developed local programs in BASIC and FORTRAN to manage an extensive water quality data base that permits non-expert users to access and enter data. A combination of commercial and local programs is similarly under development for a bear management data base. Although the Datapoint clearly has been an advantage, its limited memory and available software will tend to cramp new uses in the future.

Research operates an IBM PC that is used, at present, for data analysis, data base management, and word processing. The hardware continues to evolve, but presently is configured with 576 KB RAM, 2 DS DD floppy drives, an IBM monochrome monitor with a Hercules graphics card, a dot-matrix printer, and letter-quality printer on order. We rely extensively on RAM (psuedo) disk software to reduce the read/write time that comes with floppy disks.

The IBM is used for a large variety of tasks by the research scientists, technicians, and clerk-typists. An on-going acid rain research project generates a number of extensive data sets on water chemistry, meteorology downloaded directly from automated weather stations, vegetation, and a bibliography. Commercial data-base management, statistical analysis/graphics, and word processing programs are used extensively for data input, analysis, and editing/formatting tasks. Local programming to date has been in interpreted BASIC, but a FORTRAN compiler is available to exploit the many resources programs in that language, and we are exploring the use of "C."

In terms of console time, both computers are heavily loaded. In future we may consider a multi-user operating environment with additional terminals. This would require a hard disk to handle the additional storage requirements and to speed read/write times.

In FY 1985 Sequoia and Kings Canyon will embark upon a long-term geo-based resource information system including the extensive collection and storage of many large inter-related data sets. This almost certainly will require addressable memory and processing speed beyond the capability of the IBM PC. We are considering for this task a "high-end" microcomputer with large virtual memory capable of supporting a multi-user environment, and hard disk.

One thing I've discovered that appears to have been true for all the computers (now numbering 8) in these parks: There seems to be a several-months lag period before users become comfortable with the machines and have refined their thinking to where the machines are transformed from expensive playthings to useful tools. Once that point is reached, however, utility seems to grow in almost a logarithmic fashion; so does use, as more people see the computer in action and want to become involved. Then comes a scramble for keyboard time . . .

These parks recently implemented a Computer Management Committee to promote the most efficient use of equipment and software presently owned, and to provide systematic planning for the future.

David M. Graber
Sequoia/Kings Canyon NP's
Three Rivers, CA 93271