THE SWITCH TO A MINICOMPUTER

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One year ago, we became so frustrated with our efforts to get reasonable electrostatic plotting service from the University's computer center that we ordered a PDP 11/34 minicomputer to drive a local electrostatic plotter. Eight months ago we took delivery. Originally it was not our intention to shift the bulk of our computing load over from the large computer to the minicomputer, but by four months ago our entire computing load had in fact shifted to the minicomputer. Anticipating no more monthly bills from the comp center, we doubled our capital investment by getting a 300-Megabyte disk, hardware floating point, and boosting core size from 96 Kbytes to 264 Kbytes.

Besides meeting our original goal to get good plot service, we also found tape handling to be far less frustrating. Our data library quickly went from about ten to about a hundred tapes. Furthermore, numbers of inexperienced students may now be exposed to real data without the risk of dragging us into bankruptcy. It is with some excitement that we look forward to the arrival of our array processor next month, as we will then have a very respectable facility not only for pure research, but also for sizeable test production jobs.

We are now time-sharing with eight terminals into the minicomputer whereas a year ago we had only two terminals into the big computer. The population increase has come from two directions. First, there has been an upsurge in interest in exploration among geophysics students. Second, three electrical engineering students who are interested in signal processing maintain the operating system and some of the hardware in exchange for access to the facility.

We feel some euphoria with the change to a new environment of "free" computer time, 960 character/sec CRT terminals, CRT graphics, pen-style electrostatic plots in seconds, section-style plots in minutes, programs for report generation, spelling checking, telecommunication, and even chess playing. Of course, the real limitation of a minicomputer is the small core memory size.

This limitation hasn't impacted any of our applications yet, but there is always the chance that it could in the future. When that happens, we'll do what we always have done: rent some time on a big machine.