Cluster/One: Timesharing has come to the microcomputer world

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PALO ALTO — If things work out, Harry Saal could become a kind of social chairman for the personal computer industry.

Saal's new company, Nestar Systems Inc., has developed a system that can bring those microcomputers together to do things they could never do alone. Nestar makes a little white box that brings the concept of timesharing to the microcomputer world.

For Saal, the possibilities are endless. Bank customers could stop by for financial consultations with the computers; storefront computer centers could provide entertainment or computation services to the public; and each member of a school class could learn the same lesson on his or her personal computer at the same time.

Saal, 34, is a former university computer science instructor and software designer for IBM. The other three principals in the firm, Leonard Shustek, Nicholas Fortis and James Hinds, also are former employees of firms that manufacture large computers. They've decided to think small, Saal said, because of the growth they see in the microcomputer's future.

Market researchers estimate that the market, now about $500 million strong, should grow to at least $2.4 billion by 1982. Nestar expects to piggyback on, and accelerate, that growth with its new product, Cluster/One.

The hobbyists and whiz kids comprising the hard core of the microcomputer market have developed thousands of programs, for nearly every imaginable game and practical function, Saal explained. But the programs are kept on cassettes. When they're made available they cost between $10 and $50 each and it takes several minutes to load each from one computer to another. That tends to limit each microcomputer's "library" of information.

The Cluster/One, the little white box, contains two diskettes that hold about 630,000 bytes of data, which translates into about 200 different programs. Each of as many as 30 microcomputers in a room or building is connected, by hardwiring, to the Cluster/One. Each small computer user has only to call up a particular program from among the 200, and his or her own computer is loaded and ready to go in a couple of seconds.

Saal said the Cluster/One goes one step better than timesharing because each station, the microcomputer, is a self-contained computer that merely draws on the memory of the central unit. In large-system timesharing, if several stations want to use the central computer at the same time, the demands on the computer create long delays.

Each station can use a different program from the Cluster/One at the same time as well. For example, if 30 students at the 30 computers are learning at 30 different levels, the system provides those 30 different programs at one time.

The Cluster/One also can mix apples and oranges, or, in the case of small computers, Apples and Pets and TRS-80s and any other microcomputer brand on the market.

Nestar's first market target is the school system, and Saal is undaunted by the post-Proposition 13 tightening of district budgets throughout the state. The Cluster/One system with four microcomputers sells for about $10,000, "and that's $90,000 cheaper than $100,000," which is what Saal said a similar computer system would cost a school a few years ago. Once schools realize the computer's value as a teaching aid, Saal said, every school in the country, on elementary, secondary and college levels, will be using them.

"I believe the computer will insinuate itself into education in a way that is irreversible," he said. Several Peninsula schools already have a collection of microcomputers for student use, and Nestar has been busy showing those schools how the Cluster/One ties the computer together and increases their capacities.

Saal also said the microcomputer is being used in college chemistry classes, to simulate experiments that are either too dangerous or costly for each student to perform in the lab.

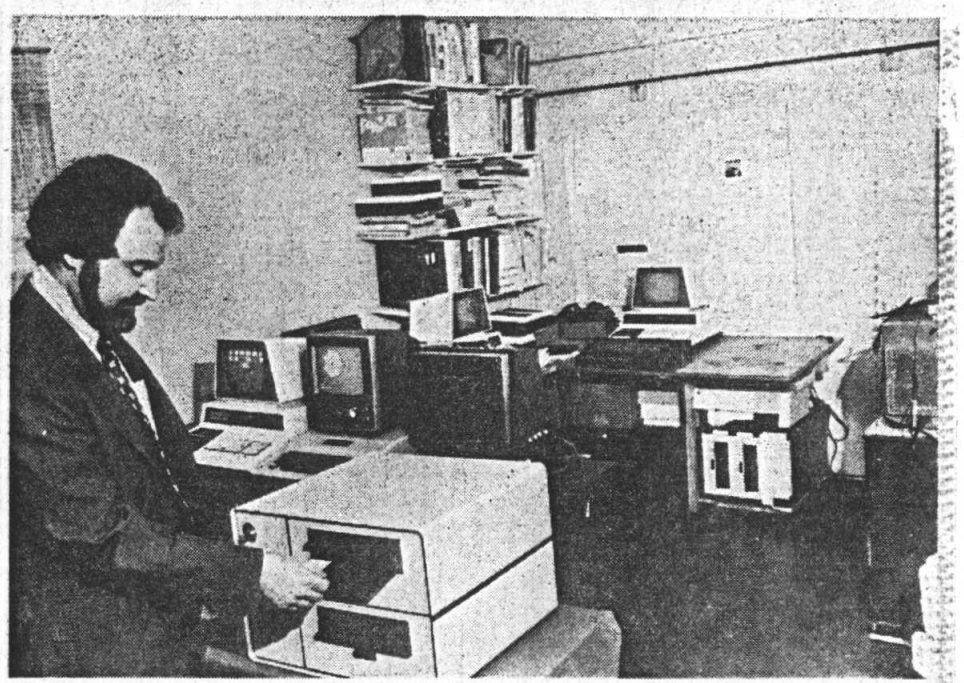
One problem with marketing to public school districts, he conceded, is the time between the staffs request and school board's approval to buy a system.

But the firm is exploring other avenues. It is negotiating to take part in a franchise network of stores to help students prepare for standardized examinations like the Scholastic Aptitude Test or law school admissions tests. Each student would work on practice exams on the microcomputer, and the Cluster/One would contain dozens of training programs for the different exams.

"There are 1.5 million students each year who take the college boards alone," said Saal. "And many of them get coaching. We'll be able to update the programs from year to year as the tests change their emphases, and each program will work on the weaknesses of the student."

Nestar is a start-up business in its "garage" stage, in the Hewlett-Packard tradition. The Nestar employees congregate in Saal's home, and the Cluster/One and a gaggle of microcomputers are on line in the converted garage. Next month the firm plans to move into an office suite on Sherman Avenue, however.

So far, the company has been financed by the four principals, but Saal said they'll be looking for venture capital later this year as production demands increase.



Times staff photo by Gene Tupper

Harry Saal checks one of the diskettes in Nestar's Cluster/One, while the microcomputers elsewhere in the corporate headquarters (Saal's garage) flash some of the Cluster's programs.