Minuteman Missile Has Fan Club in Lab

Are you looking for a small, all-purpose digital computer, easy to maintain, highly reliable, rugged enough to be carried around in the back of a truck, and worth $240,000 but delivered to your door for only a $30 freight charge? The U.S. Air Force may have just the thing for you. It is giving away the guidance control computers of the Minuteman I, former backbone of the country's land-based nuclear missile force.

From bases in Ohio and Utah, the computers are dispatched to begin new life styles in laboratories and hospitals. At Texas A & M University a pair is being reprogrammed to control and gather data from a study of light scattering in the ocean. In the Tulane University medical school, New Orleans, a former missile guidance control computer now analyzes measurements of the components of blood serum.

So popular have the computers become that a users' association has been formed to exchange tips and software. The Minuteman Computer Users Group held its first meeting in the Disneyland Hotel, Anaheim, in 1970 and now includes more than 150 member institutions.

The fee for joining this somewhat exclusive club is only $100, but the first hurdle is laying hands on a Minuteman computer. Now the word has got round, they are in hot demand. The procedure, if you have a government grant, is to ask your project officer to apply for one either directly from the Defense Supply Agency (if you have a military grant) or via the General Services Administration.

If successful, you will receive a circular lump of metal, about 3 feet in diameter and weighing 200 pounds. The shape of the computer enables it to sit high in the nose cone of the missile, immediately below the warhead. Round the outside is the detoxified outer skin of the missile—Minutemen are coated with a toxic chemical, possibly as a security device. In the center of the ring you will find the stable platform containing the missile's gyros and accelerometers (unless your project is unclassified, in which case these items will have been removed). The computer's memory will have been erased in order to protect the data indicative of its flight dynamics, maneuverability and, presumably, its target. Since the early 1960's, nearly 1000 Minuteman I missiles have been built, of which some 200 are still in service. The computers have been made available because of the deployment of Minuteman III, a missile with a multiple warhead.

Air Force Denies Security Risk

Could acquisition of the Minuteman computer and its attendant parts be of any interest to countries lacking a reliable ICBM force? Air Force spokesmen say there is no concern on these grounds, since the computer's technology dates from the late 1950's and many of the components are now available commercially. The computer, made by North American Rockwell, is a general purpose machine with nothing special about its design except an ability to withstand high *g* forces.

The popularity of the Minuteman I guidance computer owes much to Charles H. Beck, an electrical engineer at Tulane, who pioneered its adaptation to peaceful uses. Beck is also founder and chairman of the users' group, which holds its fifth meeting at Tulane this April. There are reports that, in one of the computers, he found a serious wiring fault in the central processing unit which would have caused a malfunction. Beck says the fault may have been caused when drilling out the gyros and would in any case have been noticed before launch.

Developing new, peaceful software for the computer, Beck says, has been like reinventing the wheel. But the Air Force has been most cooperative, donating enough spare parts to last indefinitely. And so as to give him a better start when the new generation of missiles is declared surplus, the Air Force has presented Beck's group with some of the guidance computers for the Minuteman III.—NICHOLAS WADE

gave up the post of ranking member of the Education and Labor Committee and chairman of its subcommittee on higher education to transfer to the Appropriations Committee. Mrs. Green is highly knowledgeable about education matters and helped to shepherd through Congress the body of higher education legislation enacted during the Johnson Administration. In recent years, however, she has become disenchanted with a number of education programs and has sometimes found herself in the minority in votes on Education and Labor. It was assumed that her move to Appropriations was based on an expectation that she would continue to deal with education programs. Her views were seen as congenial to Mahon's, and there was some speculation that before too much time passed she might move into an authoritative role on education matters. She was given a logical assignment to the Appropriations labor–health, education, and welfare subcommittee. She is the most junior member of the subcommittee, somewhat ironically, following Obey in seniority. (Obey, 23d ranking Democrat, also got a seat on the military construction subcommittee. Last year he sat on Interior and District of Columbia panels.)

The conservatism of the Appropriations Committee is partially understandable in light of the fact that it is the only House committee charged with looking at federal expenditures as a whole. Traditionally, members of Appropriations have seen their role as curbing the excesses of the profligate spenders on the legislative committees. Ever since government functions have expanded beyond delivering the mail, collecting customs duties, and fighting Indians, the Appropriations Committee has come closest to being a congressional mechanism for keeping spending and revenues in balance. One of the weaknesses of Congress in its current contest with the Executive over control of the budget is that it lacks the machinery for real budget management. The Appropriations Committee has acted as a financial watchdog for Congress, but it has tended to act its fiercest with social programs and then roll over and play dead when military appropriations or pork-barrel questions are at issue.

Through the years Appropriations has not been overgenerous with research funding—National Science Foundation budgets were frequently pared