tage of its tax-favored status to compete unfairly with private enterprise. The ACIL has no thought of competing with the large-scale industrial R&D projects sponsored by NASA or the AEC, nor is it against contract research at universities when the research is of a fundamental nature. Rather, it is concerned because, under the guise of these acceptable relationships, a great many universities have permitted or encouraged the applied research in "gadgetry" that makes up a sizable proportion of the business of the private laboratories. Representative of the kind of work that agitates ACIL members are the testing of primary aluminum windows and sliding glass doors performed at one southeastern university and the testing of a variety of fans at an institution in Texas. Similar activities are conducted in many other universities as well. "At a time when the need is greatest and growing for our universities to fulfill their traditional and honored functions of education and advancement of knowledge," says a pamphlet recently issued by the association, "university people increasingly engage in what may properly be considered non-university activities—sponsored industrial and government nonbasic and developmental research. No substitute exists," the pamplet continues, "for the primary and vital responsibilities of universities once educators divert their talents into other directions."

"We do not mind bidding against other laboratories which pay taxes on their profits, building and equipment, and which charge 100% for the truly pro-rated salaries and wages of the people working on the project because this is competition in the American sense," says another statement from an ACIL representative in New Jersey. "But we cannot survive if we must compete financially with a tax-free institution." Thus, aside from the fact that the ACIL holds such "gadgetry" to be objectionable in itself as a university activity, it also feels that the university's ability to perform it rests on an abuse of its tax-favored status, which permits it to underbid private laboratories seeking the same work from both government and industry. Equipment, frequently acquired by the university through a route other than direct purchase, does not have to be calculated as part of costs; other needed facilities already exist; graduate students provide a ready supply of low-cost labor. The result, stated simply, is that university-affiliated institutions may be able to perform the same job for less money than the private labs. The manufacturer may also prefer the seal of approval of a university to that of a private lab. A further affront to the tax collector, according to ACIL, is the fact that after performing work on this basis, at least in the case of some industrial contracts, the universities agree to forego scientific publication to protect commercial secrets.

Although clearly this situation makes life difficult for the private laboratories, its existence is not without justification. Some economists would say, for example, that multiple use of university-owned equipment that would otherwise lie idle for certain hours is socially useful in itself. Others would point out that however inequitable such discrepancies may be, some universities are simply better qualified than some laboratories to perform certain work.

Nonetheless, the fact is that the situation the ACIL is protesting is part of a larger problem. Many other people—without economic gripes—have worried that the teaching function of the university is being eroded by too much emphasis on research of all kinds. Most critics have concluded that the situation is here to stay, and have comforted themselves with the belief that research is a valuable form of intellectual activity and that even if students never do get to see their busy, famous professors, mere geographical proximity can somehow be instructive in itself. What the ACIL has done is to point out that not all that is going on under the heading of "research" is very significant, and that a good part of it is the routine evaluation of sheerly commercial items. It seems to be the case that many universities discreetly encourage this kind of work along with the other kinds, in part to ensure their faculty members ample opportunity to supplement their official salaries. Many bystanders, while publicly lamenting the trend to commercial research, have privately rejoiced to see the opportunities develop, and for a variety of reasons, many favor still closer ties between the academic and the business communities.

At least one school of thought within the government falls into the latter category, for while the private laboratories are worried about university competition, the Commerce Department is worried about serious lags in the application of scientific knowledge to civilian products. As one way around this, the department's Civilian Industrial Technology (CIT) program sought to encourage industry to give more research and development work to universities. Although the CIT program was thoroughly emasculated in Congress, J. Herbert Holloman, assistant secretary of commerce for science and technology, has been doing some stumping for the principle at a variety of local conferences of state university and industry representatives, and in fact Holloman's activity is one of the things that has spurred the ACIL to take a renewed interest in what is going on in Washington. And while it may be the case in the short run that the civilian technology program will lead industry to turn to universities more readily, perhaps at the expense of some private labs, in the long run any program directed toward a basic expansion of the civilian economy should work to the benefit of all participants in the field.—ELINOR LANGER

Announcements

Massachusetts Institute of Technology has made available 180 sets of the first section of a manufacturing description of the **Laboratory Instrument Computer** (LINC). Copies will be provided at cost on a first-come-first-served basis, one set per organization. The first section will contain enough information to allow individuals to acquire and fabricate all LINC parts and subassemblies. Later sections will include material dealing with overall system assembly, programming, and operation theory.

The LINC, a small, stored-program digital computer, was developed at M.I.T. as a biomedical research tool; it was supported by NIH and NASA. Inquiries must be received by 15 May. (MIT-CDO, 292 Main St., Cambridge, Mass. 02142)

Grants, Fellowships, and Awards

Travel and subsistence grants are available for science teachers to attend a program in **marine microbiology** 15 June to 24 July at the Institute of Marine Science of the University of Miami. The program is supported by the National Science Foundation. (C. H. Oppenheimer, Institute of Marine Science, 1 Rickenbacker Causeway, Miami, Fla. 33149)