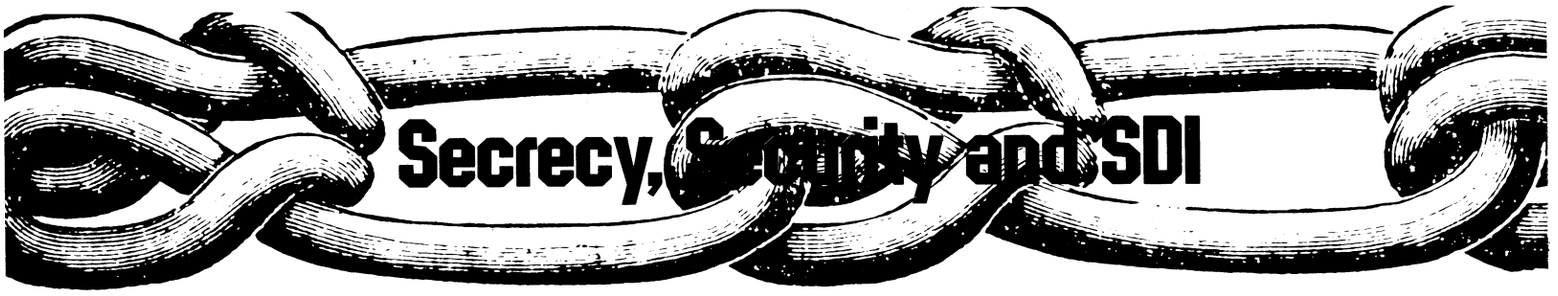

The Pentagon's Strategic Defense Initiative provokes strong campus reaction while export-control issues fade into the background

By IVARS PETERSON

The relationship between the Department of Defense (DOD) and the university research community has often been prickly. Lately, many scientists and engineers have faced a particularly painful dilemma. Financially squeezed universities see relief in the Pentagon's growing research programs. But the scramble for DOD contracts is also forcing some researchers to ponder their participation in weapons programs they consider ill-conceived and dangerous.

The Pentagon now provides more than 10 percent of all federal funds for university research. It is pushing ahead with its Strategic Defense Initiative (SDI), exploring the possibility of an effective space-based defense against missiles carrying nuclear weapons (SN: 7/14/84, p. 26). On several university campuses, SDI has already drawn protests and petitions. Some university scientists have publicly announced that they will refuse to take part in the SDI research program.

"I see it as potentially an extremely divisive area between universities and DOD," says Richard M. Cyert, president of Carnegie-Mellon University in Pittsburgh. Cyert made his remarks earlier this month at a meeting of the DOD-University Forum. The forum, with about a dozen university members, advises DOD on issues affecting the Pentagon's ties with universities (SN: 3/27/82, p. 218).

"We're a research program and a research program only," insists Lt. Gen. James A. Abrahamson, SDI director. "We are not asking any university to endorse SDI or to change its research structure." Almost all of the funded projects will be unclassified fundamental research, he says.

So far, SDI's "innovative science and technology" office has attracted about 2,700 proposals from university researchers. But some of the country's most talented scientists have not submitted ideas. The problem, as DOD sees it, is that too few people understand SDI's aims.

At the forum, Donald A. Hicks, Under Secretary of Defense for Research and Engineering, proposed that a meeting be held as soon as possible so that DOD can present its case before what would probably be a largely skeptical university audience. Hicks complains that too much "misinformation" about SDI is in circulation.

"There is a deep need for us to get intelligent people to understand what is going on," says Hicks. "We need to have the support of the university community."

"This [SDI] is probably the hardest technical job of the century," says Robert L. Sproull, president emeritus at the University of Rochester. "We need to raise the level of discussion at universities above the bumper-sticker level."

While the SDI debate continues to boil, the older issue of controls on the dissemination of research results simmers quietly in the background (SN: 12/8/84, p. 358). After several years of argument about the tradeoffs between security by achievement and security by secrecy, says David A. Wilson, executive assistant to the University of California president, there is a widespread opinion in government and in the academic community that the cost of controls clearly outweighs the advantage of keeping technical information away from the Soviet Union. "We now have a framework of policy, law and regulations that provide a prudent base for action," he says.

Earlier this month, President Reagan finally signed the long-awaited "national policy on the transfer of scientific, technical and engineering information." The policy states that "no restrictions may be placed upon the conduct or reporting of federally funded fundamental research that has not received national security classification." Essentially, it extends DOD's current policy to all government departments and agencies.

The recent passage of the Export Administration Act (SN: 7/6/85, p. 5) and the impending publication of new export-control regulations, which include an exemption for technical data and educational information derived from basic research, further strengthens the case for open research, says Wilson.

Yet some issues remain unresolved. Last April, DOD forced the introduction of a new category of technical session — open only to U.S. citizens and authorized foreign visitors — at a Society of Photo-Optical Instrumentation Engineers (SPIE) meeting (SN: 4/20/85, p. 247). In September, the presidents of 12 scientific and engineering societies, including SPIE, the Institute of Electrical and Electronics Engineers and the American Chemical Society, wrote to Secretary of Defense Caspar W. Weinberger, saying, "... our organizations will not be responsible for, nor will they sponsor, closed or restricted-access technical sessions at meetings or conferences conducted under their auspices."

Another disturbing issue is controls on access to supercomputers (SN: 9/21/85, P. 181). The National Science Foundation (NSF) is negotiating with government officials to develop a policy that covers NSF's four new supercomputer centers. This policy may very well serve as a model for later agreements involving other supercomputer centers. "We are very close to a solution ... that should be acceptable to everyone," says NSF Director Erich Bloch.

Meanwhile, the academic community should remain vigilant, says Hicks. Individuals within government "may have their own agendas," he says, despite any words that may appear in official documents. "There are many things you have to watch out for here," says Hicks.

One sign of the continuing skirmishes between different DOD branches was a report, released last month, on the Soviet acquisition of militarily significant Western technology. The report names 62 universities that it says are important sources of technical information for Soviet agents.

"One of the difficult issues we have to contend with," says Richard N. Perle, assistant secretary of defense, "is the obvious tension between the desire to foster open, scientific communication in a free and democratic society on the one hand and the fact that a great deal of scientific communication bears on military matters." He adds, "What we are hoping to achieve ... is to sensitize the scientific and technical community to the fact that there is a large and very well organized Soviet apparatus that has targeted scientists and engineers and universities and the like for military purposes." □