

the SMP program."

As both Caltech and Wolfram learned, it is hard to take anything for granted about ownership in a university setting. Part of the difficulty of unraveling intellectual property rights in a university is that the university is an open environment, designed to promote exchange of information and ideas, so that even in the best of circumstances making it clear who owns what may be tricky. Ownership in a university is determined by employment contract and university policy. Such policies try to weigh factors such as who did the work, who paid for it, whether university contracts with sponsors are involved, and what resources were used. Underlying these policies is, of course, the law.

University policy also covers the issues of conflict of interest between research or teaching obligations to the

university and competing outside commercial ventures in which the faculty might be involved. In fact, many universities have been examining their policies in view of recent developments in biotechnology—developments believed to have the potential to make both large amounts of money for investors and to raise complex issues for universities and scientists. Thus many universities are reevaluating and revising their policies on intellectual property and conflicts of interest.

Three of the leading US universities in computer science are changing their policies on intellectual property. A joint administrative-faculty committee at Carnegie-Mellon University is reviewing its policy on software, according to Daniel Berg, provost for research. At present, MIT policy on software leaves ownership of the copyright to MIT but gives the program

authors a share in any revenue, Kenneth Smith (a vice president at MIT) told us. Stanford is now in the process of rewriting its policy.

Attempting to realize the commercial potential of SMP led Wolfram and his coworkers into a long and trying series of negotiations. The end result of these negotiations is that no one at Caltech now has a proprietary interest in this company, except Caltech itself. To keep his interest in CMC, Wolfram was forced to leave Caltech. Goldberger described this as "a truly unfortunate ending." Wolfram told us, "I am disturbed because the whole thing wasted my time. The way it was done will affect me for the next five to ten years. At least I learned that when you work for a university you make it very clear beforehand what role they can play in what you do and what you own."

—JC

AIP says NSF should receive education funds

The AIP Governing Board affirmed on 11 March that the National Science Foundation is the appropriate Federal agency to receive funding to alleviate what is being called the crisis in precollege science education (PHYSICS TODAY, July 1982, page 57).

In one of two resolutions, it recommended that a substantial fraction of the unspent \$15 million targeted for precollege science at NSF for fiscal 1983 be released and devoted to teacher training in math and science. In the other resolution, it recommended that at least \$225 million be added to the fiscal 1984 budget for NSF "for

- designing and implementing mathematics and science teacher-training programs in the subject areas where there are critical shortages; and
- attracting scientifically talented people to become qualified pre-college teachers; and
- developing science and mathematics courses, involving use of modern computer and laboratory equipment, for a broad spectrum of students."

Without explicit reference to any bills, the second resolution does concern matters now before Congress. The House on 2 March passed bill HR 1310 to authorize \$425 million to be spent on new science-education programs in public schools. The amount exceeds President Ronald Reagan's request by \$350 million. Under the bill, sponsored by Carl D. Perkins (D-KY) and Don Fuqua (D-FL), the Department of Education would receive \$295 million, much of it to be awarded as block grants, and NSF would get \$130 mil-

lion. A parallel bill in the Senate combines features of bills proposed by Claiborne Pell (D-RI), Pete Domenici (R-NM), Paul Tsongas (D-MA) and Lawton Chiles (D-FL).

The AIP resolutions emphasize that NSF already has as primary missions "both the support of programs generating new scientific knowledge and the support of programs in science education at all levels" and that it "has strong ties to the scientific community that are essential to establishing effective teacher institutes and in-service training programs." The resolutions did not mention the Department of Education. In fact, during a meeting of officers of AIP Member Societies that recommended the two resolutions for consideration to the Governing Board, Bill Aldridge (executive director, National Science Teachers' Association) contrasted NSF with the Department. He said that NSF is a small independent agency with a reputation for administering programs of very high quality that are selected on the basis of merit with a minimum of political interference. On the other hand, he maintained that in the Department, where little contact is made with scientific communities, political factors have interfered with funding decisions. At the Department's National Institute of Education, he said, appointments to the Advisory Board have frequently been made on the basis of conservative politics rather than on experience in educational matters. Aldridge also pointed out that dispersing the money in the form of block grants would entail consuming much of it in administrative activities and in the duplication of policy-making efforts.

the physics community

Crystallographers elect Templeton vice president

The American Crystallographic Association has elected David H. Templeton to be 1983 vice president. A professor of chemistry at the University of California at Berkeley, Templeton will succeed the 1983 president, David Sayre, a member of the research staff at the IBM Research Center, Yorktown Heights. In turn, Jerome B. Cohen has become past president.

Templeton received a BS in 1941 from the Louisiana Polytechnic Institute, an MA in 1943 from the University of Texas and a PhD in chemistry in 1947 from the University of California at Berkeley. He was appointed instructor of chemistry at Berkeley upon his graduation and became professor there in 1958. He has conducted research on properties of radioactive isotopes, nuclear reactions and structure of crystals.

Robert A. Sparks (Nicolet Corporation) was reelected treasurer. Also elected were members of the standing committees: Larry W. Finger (Geophysical Laboratory, Washington, DC) to the committee on apparatus and standards, A. Wallace Cordes (University of Arkansas) to the committee on continuing education, Gerald G. Johnson Jr (Pennsylvania State University) to the committee on crystallographic computing and data and Gordon S. Smith (Lawrence Livermore Laboratory) to the committee on publications.

The Association has also formed two new special interest groups, one on neutron diffraction and another on small angle scattering. □