Cryptography settlement raises questions

By Frank Hratch

The controversy surrounding the publication of classified research in cryptography was heightened earlier this month in a decision by a nine-member academic panel to employ a voluntary review plan. In a new proposal, all computer scientists working on cryptography would be required to study the National Security Agency (NSA) before publication.

After considerable argument, the panel voted 8 to 1 to adopt the voluntary review plan amid growing concern that research in cryptography is creating a powerful threat to national security. The panel was formed by the American Council on Education (ACE).

Supporters of the new plan maintain that unannounced publication of research in cryptography may have an adverse effect on national security. But the ACE committee's voluntary plan is much weaker than the Government's request for a moratorium on publication of all cryptography research results.

MIT Associate Professor of Mathematics Leonard Adleman, currently on a one-year leave of absence at the University of Southern California, is at the center of this controversy. Adleman became concerned when he discovered that funding for his research in cryptography had been switched from the National Science Foundation (NSF) to the NSA. There was a possibility that the NSA might exert pressure on him to alter his research. The NSA said that, if they agreed to fund Adleman, they might try to persuade him to classify some of his work. Adleman, however, was concerned with the option of choosing funding from either organization, and he chose to be funded by the NSA.

Professor George David of the Georgia Institute of Technology was the lone dissenter in the ACE panel's vote. He expressed fear that the decision would have a "chilling" effect on cryptography research. "David complained about the NSA's "seeming obsession with wanting to control cryptography, even non-military applications," and he added that the NSA had achieved a "real victory" by naming only two people who "understand the importance of cryptography" to the nine member ACE panel.

UROP budget has grown

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for Paul E. Gray '54 and Stuart H. Cowen, Vice President for Financial Affairs, "The decision was made that we could go ahead on applying overhead on stipends paid to students, said MacVicar.

She noted that the UROP budget has grown from an original level of $25,000 to a figure of approximately $325,000 to $350,000, although these figures do not reflect the total impact on UROP expenses. In addition, the faculty currently contributes $850,000 through the overhead waiver system to student stipend support, according to MacVicar. This is up from the $15,000 paid by the faculty when the waiver system was first instituted in 1973. She described the overhead waiver system as having been "a trial basis for the first year or two" and noted that the amount exempt from overhead charges has grown considerably. She mentioned that there is a limit for total per annum overhead waiver for undergraduate salaries of $1,000,000, and added that this figure will probably be approached sometime in the 1981 academic year.

When the UROP Program began, no wages were available for student participants. As UROP evolved, however, the program began to fund students on a limited basis. At that time, 100 percent of UROP student salaries were funded by the program.

The situation has changed, according to MacVicar, who described the funds allocated for direct support of UROP as "seed money" or "leverage money." She noted that procedures were instituted at the behest of the faculty, by which faculty members could assume some of the costs for student salary support through their research budgets. At first, faculty members had to match funds 50 percent to 50 percent; now that has changed so that UROP finances 40 percent of some student proposals while the individual faculty members finance the other 60 percent.

Since funds provided under the overhead waiver plan come directly from research grants from the federal government, they are theoretically vulnerable to budget cuts. MacVicar admitted that this may pose some threat to the program, adding, "The biggest tragedy would be if we began to go into things that we don't believe in... I find that type of prohibition is very difficult to live with and I have great faith in this Institution and the people [here] who would not be put off in that type of activity.

MacVicar indicated that most of the cuts would probably be made in support of long-term basic research and would not affect Engineering School research, where much UROP activity is concentrated.

Another area of potential vulnerability for the program may appear in the next eighteen months when federal requirements for university charges for overhead are changed. At that time, colleges will be able to charge researchers 40 percent of their total expenses for overhead, rather than the 7.5 percent for wage and salary expenses currently allowed.

MacVicar indicated that "people are quite aware of student need" and that this awareness was reflected in decisions like the one made last spring to raise the UROP wage to $4.50 per hour.

"Asked to define her conception of the primary objective of UROP, MacVicar replied, "I think the objective is... with a minimum of hassles and obstacles to smooth the way for people who want to undertake an inquiry."