Patent Ownership: Controversy Renewed on Fruits of Government Research and Development

The long-standing controversy over ownership of patents resulting from federally financed research was renewed last week on Capitol Hill.

The immediate setting was a hearing before a subcommittee of the House Committee on Science and Astronautics, but the issue is a far-reaching one that extends through a variety of jurisdictions in Congress, into the executive department's biggest spending agencies, and finally to the vast industrial and research complex financially sustained by federal expenditures. The heat of the patent controversy has fairly well kept pace with the meteoric rise of the federal research and development budget, which now accounts for about 65 percent of all R&D in this country; the total R&D expenditure will be $12.4 billion in the coming fiscal year, an increase of $2.2 billion over the current annual sum; out of this enormous investment in R&D has come a plethora of inventions, some, of course, with only relatively narrow applications, but a good many of vast financial potential. At issue is the question of who is to collect the benefits from the exploitation of these inventions: the particular contractor who developed it, or the "public," meaning any qualified producer.

Hearings over the past few years in the House and Senate have boiled the controversy down to the contentions (i) that if the invention-producing contractor is not permitted to exploit his success he will lack incentive and (ii) that the general public has paid for the invention and, therefore, should be offered the benefits that supposedly accrue from the competition among producers.

The Defense Department, which is the biggest R&D buyer in the nation, generally follows a policy of reserving for itself a royalty-free license while permitting the contractor to retain title to the invention. Industry is well satisfied with the Defense Department's policy, and the Department, which could change this setup administratively if it wanted to, appears to be equally well satisfied. In testimony last June before the House Space Subcommittee, Graeme C. Bannerman, the Department's chief of procurement, frankly stated that the policy keeps the R&D contractors happy and is therefore regarded to be in the interest of the Department.

"Our goal," he stated, "is not the mere placement of research and development contracts, but the placement of those contracts with firms currently developing the most advanced technology. It is vital, in our considered view, that such firms freely accept DOD [Department of Defense] contracts and put their best technical effort and background ideas wholeheartedly in problem solutions for national defense. The government has no power to compel this. It is a matter of mutually agreeable terms which appear to offer advantages to both parties."

The hearings held last week before the House Space Subcommittee involved the patent policies of the National Aeronautics and Space Administration, which is required by statute to take title to patents resulting from its research contracts unless the NASA administrator decides to waive title. The decision to do so is something of a rarity, and NASA contractors have been chafing under the agency's patent policy. Under the Eisenhower Administration, NASA described itself as not too happy with the policy and favored legislation which would put the agency in line with the Defense Department. But at last summer's hearings, NASA reversed its stand and announced that it no longer regarded its patent policy to be a burden. This turnabout has considerably reduced the steam behind the bill now before the subcommittee, H.R. 1934, which in substance passed the House in 1960, but failed in the Senate. Under the bill, NASA would generally follow a policy of giving its contractors title to their inventions, unless the NASA administrator decided prior to making the contract that it would be in the national interest to retain title.

The Justice Department, which has traditionally opposed giving contractors title to government-financed inventions, questioned the need for the change on a number of grounds, including antitrust implications.

The Justice Department's case was stated by Lee Loevinger, head of the antitrust section, who said that a relatively small number of firms have already become dominant in the aerospace field and that the proposed patent revision would help them consolidate their position.

Loevinger also questioned the need for revising NASA's patent policies, pointing out that "there seems to be no evidence that NASA's research program under its title policy has lagged for lack of interested contractors." The Atomic Energy Commission, which has a patent policy virtually identical to NASA's, has had no difficulty in attracting contractors, Loevinger added.

He also questioned the feasibility of determining prior to making a contract whether it would be in the national interest to retain title to inventions that might emanate from it. And, finally, Loevinger raised the question of why R&D contractors feel they should have the right to inventions stemming from government research when they withhold such rights from the employees who produce the inventions for them.

"Nothing in the bill," he noted, "requires the contractor to compensate the inventor in any manner proportionate to the commercial value of his invention. It would be paradoxical to tax the public to raise funds for scientific research, on the premise that this research advances the general good, and then give the results of this research to a private company for exclusive commercial exploitation."

Industry representatives tried to blunt this argument by pointing out that many firms follow a policy of rewarding employees for inventions, but they agreed that the policy is a voluntary one and is not universally followed. The spokesmen conceded that the government should have a right to procure from any source items for which it financed research that led to patentable inventions. But, as Emerson S. Reichard, Jr., a vice president of the Aerojet General Corporation, argued:

"It is not seen to be necessary for the government to acquire rights in inventions beyond those necessary to utilize the invention for governmental purposes. Private industry is far better equipped to encourage commercial application and development of inventions than is the government, and if the greatest benefit to the public is to be achieved, the commercial aspects should remain in the hands of private industry."

The congressional prospects for patent revision in this area seem at present to run against any loosening of NASA's policies, with increasing signs of support for some across-the-board policy to govern ownership of inventions arising from the government's vast expenditures in R&D.

The turnabout in NASA's position last summer is regarded with special interest, since the Kennedy Administration has yet to commit itself to any broad policy on the patent question.

NASA's sudden switch is thought to stem not from any new developments in its relations with its R&D contractors, but rather from the passing away of the Eisenhower Administration and its replacement by an administration which is far less business-oriented.

Loevinger, who was expressing the traditional Justice Department view, urged that NASA's title-holding provisions be enacted into a uniform policy for all government agencies. The Defense Department's satisfaction with its present arrangement dictates strongly against any such blanket policy, but the increasing dominance of federal money in the nation's R&D effort is providing powerful pressure for some spreading of the opportunities to exploit the commercial possibilities of government-financed inventions—D.S.G.

Project West Ford: Failure Believed Due to Mechanical Malfunction; New Attempt Has Not Been Scheduled

The cause of failure in Project West Ford is believed to have been a mechanical malfunction which resulted in the release of the needle package without a spinning motion. The conclusion is a tentative one, which the Lincoln Laboratory, director of the project, is withholding pending completion of a number of studies. Persons associated with the project report, however, that the mechanical malfunction theory appears to be the most likely.

West Ford, which was first attempted last October, was intended to place in orbit a ring of 350 million fine copper wires for experiments in jam-proof communications. The wires were embedded in a 6- by 17-inch napthalene cylinder which was to receive a spinning motion as it was released from the rocket that carried it aloft. As the naphthalene sublimated in space, the wires were expected to come free and be dispersed by the force of the spin. Repeated radar searches, however, have failed to turn up any indication of a band of wires; on several occasions a number of relatively large objects have been contacted in the expected path of the needle package, suggesting that the package may have disintegrated but that, because of the lack of spin, the pieces are remaining close together.

When another attempt will be made is at present uncertain. The initial announcement of the West Ford project drew strong objections from radio and optical astronomers who claimed that the needle belt would interfere with their observations. These fears were discounted by a number of review groups, and the launching was carried out after a panel of the President's Science Advisory committee concluded that the experiment would produce no adverse effects. There is considerable reluctance, however, to make a second attempt until there is reasonable assurance that the needles of the first package will not suddenly blossom forth.—D.S.G.

Overhead Allowance: HEW Renews Effort To Raise 15-Percent Limit

The Department of Health, Education, and Welfare is making another attempt this year to raise the overhead allowance on its research grants.

The present maximum, set at 15 percent in HEW's appropriation act, has long been a sore point with university administrators. They argue that the allowance, which is supposed to cover the costs outside of salaries, supplies, and equipment, is inadequate; in effect, they charge, universities accepting government research projects are expected to provide a subsidy.

HEW, which would ideally like to have a flexible allowance rule that would permit it to cover all indirect costs, is modestly seeking an increase to 20 percent. It can anticipate a friendly reception in the Senate, where the Appropriations Committee last year went along with a request for a 100-percent allowance on overhead costs. The modesty of the request is due to the anticipation of difficulty in the House, where Congressman Fogarty, of Rhode Island, chairman of the HEW Appropriations Subcommittee, has adamantly opposed raising the allowance.

Fogarty, who has led the way in pressing money upon the National Institutes of Health, which handles the bulk of HEW's grant funds, has fixed upon the overhead issue as a point for economizing in research expenditures. He has remained unimpressed with surveys that place overhead costs generally in excess of 30 percent; he has noted that no institutions are declining federal research grants because of the overhead limitation—an observation which HEW officials say appears to be correct, but which takes no account of the fact that institutions often are forced to deprive some departments in order to accept grants for others.

The Administration, faced with the task of reconciling its budget-balancing desires with assurances that it would seek to raise the allowance, has compromised. The recently submitted budget provides $5.4 million to pay for an increase to 20 percent, but the change would not go into effect until the latter half of the coming fiscal year, 1 January to 30 June 1963.—D.S.G.

Bears: The Federal Aviation Agency Says They Play No Role in Crash Studies

The Federal Aviation Agency gave assurances last week that it has no intention of using bears in its research on crash injuries. The assurances were contained in a letter to the New York *Times* from James L. Goddard, the civil air surgeon of the FAA. Several persons had expressed their concern to the agency since it was erroneously reported that the FAA considered bears to be anatomically suitable substitutes for humans in crash studies, and would so employ them.

The original report, as carried in the press, stated: "Because of their ability to stand upright and other general physical similarities with humans," a number of bears would be strapped into fuselages, which would then be subjected to various stresses, including sharp impacts. The report added that it was anticipated that some of the bears would be killed or so seriously injured that they would have to be put to death.

Goddard wrote that he was pleased to have an opportunity to correct the news story. He said the error arose from an interview between a reporter and an FAA researcher.

The researcher was asked, Goddard explained, "whether laboratory animals such as mice could be used in conducting experiments on human tolerance in aircraft accidents.

"To clarify the point, the scientist pointed out that anatomical differences would render mice valueless, and if an animal were used it would have to be one of a more comparable size, shape and one which walked upright, such as a bear; an analogy which apparently led to the misinterpretation."

Goddard said his statement covers present as well as future FAA policy toward bears.—D.S.G.