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STANFORD—

Strong political momentum is building for changes in U.S. patent licensing policy which will entrench big business, help foreign competitors, and make it far harder to bring innovations to the marketplace, according to Niels Reimers, director of Stanford's technology licensing program.

Ironically, the strongest support for the changes comes from those normally allied with innovation, consumers, and small business—Admiral Hyman Rickover, Senators Gaylord Nelson and Russell Long, and the Justice Department's Anti-Trust Division.

All have protested the "giveaway" of patent rights on inventions coming as a byproduct of federally funded research. Assistant Attorney General John H. Shenenfield recently testified that such patents should be made freely available on a noncompetitive basis to prevent "windfall profits," especially by large firms.

While this "sounds good," according to Reimers, its actual effect would be "devastating" to U.S. leadership in technological innovation. Without short-term exclusive rights small firms can't take the risk of bringing innovations to the commercial market. But large foreign firms can—and are—doing so with ideas gleaned from U.S. funded research.

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White House Science Adviser Frank Press last month noted that rising competition from both advanced and developing nations has made the U.S. exceptionally dependent on marketing future innovations.

"Many of our intermediate and some of our high technologies are being successfully adopted by the developing countries who, on some items, can now successfully compete with us. . . .

"As this transfer of technology and industrial capacity takes place on one level, it is essential that the advanced countries continue to advance their innovation and productivity. Otherwise, the major markets will begin to collapse around the world, we will be resorting to protectionism instead of industrial creativity to save our domestic economies, and eventually global chaos will ensue.

"The harsh truth is that we are now very much locked into a dynamic system of global economic growth, and it is one based on technological change and innovation. . . . There are enormous pressures ahead for us to innovate and improve productivity."

Press indicated the Commerce Department would study "such things as the impact of federal regulations on industry, the availability of investment capital, assertions that industry is becoming increasingly defensive in its research and development, that it is turning from longer-term research and bolder innovation to emphasis on short-term needs and product improvement."

Of special interest to Reimers and other members of the Licensing Executives Society, which meets in Washington Friday, April 7, is Press' statement that "we are considering ways to change this situation. . .to increase the development and implementation of innovation."

As federal research has increased and private research diminished "small companies, at least in high technology, are finding the government can be their greates competitor," Reimers says

"Market dominating companies, with the nonexclusive patent policy favored by the Justice Department, can treat government technology as a large patent pool, with no threat to their market dominance.

"If only nonnexclusive licenses are available, then foreign industry has equal access in using the results of government-funded research."

The National Technical Information Service, a Commerce Department agency which provides low-cost summaries of federally funded research, is opening an office in Japan to meet soaring demand for there data there. Canada recently surpassed Japan as the top customer for NTIS summaries.

In a recent letter to Attorney General Griffin Bell, Reimers noted that after Stanford issued an exclusive license for a variation of an existing instrument to a U.S. company "we were challenged by a foreign manufacturer who demanded to know how we could give exclusive rights to an invention from U.S.-public funded research.

"For the same invention, another foreign firm—the market leader—obtained Stanford's research files through the National Science Foundation, using the Freedom of Information Act. The foreign firm charged patent interference, and the invention has yet to be developed."

Foreign firms aren't the only source of delay in getting inventions to the commercial marketplace, he adds. The Department of Energy now has a nonexclusive patent policy which requires a lengthy waiting period—often 18 months to two years—to obtain any waiver of patent rights.

"Many allege that the Atomic Energy Commission-Energy Research and Development Administration-DOE policies have acted to inhibit innovation in energy technology and also have limited participation in DOE research primarily to large companies. For these firms, proprietary rights are less significant in innovation than small companies."

At ERDA patent policy hearings in 1976, all universities and all small companies testifying opposed the ERDA policy. Support came only from General Electric, Westinghouse, and a major oil firm.

Even with exclusive licenses, it is difficult to get companies to bring university discoveries to the marketplace, Reimers notes. Any example where an exclusive license based on government research has in fact achieved a "monopolistic" or "dominating market position" would be helpful—but Reimers has yet to find one.

Most inventions are relatively minor improvements in an existing art, which have to compete with alternative ways of accomplishing the same function and with the likelihood of being surpassed by newer inventions in time.

Reimers says the Justice Department position can be traced back to a 1947 report which contained no operational data. He has asked Bell, in vain, for even a single example where patent rights from government research "have set the price of goods to the public, rather than competition, and where the profit was disproportionate to the risk capital contribution of the company making the technology available."

In contrast to the Department of Energy, the Department of Health, Education, and Welfare has permitted universities to enter Institutional Patent Agreements (IPAs).

These give the universities the option of granting exclusive licenses for a limited period, usually not more than five years after the first commercial sale of an invention. The government retains the right to buy any resulting product on a royalty free basis. It may also "march in" if it finds the exclusive licensing contrary to the public welfare.

The HEW IPA program "clearly has been the most successful in government in enabling innovation. No other agency can point to such a record of success," Reimers says.

But now universities are becoming "increasingly alarmed" that HEW may change its policies. "HEW Secretary Joseph Califano's recent 'marching in' to cancel an exclusive licensing to a small Massachusetts company (American Science and Engineering) in favor of the market-dominating firm (Technicare) in the same field has obvious potential for being devastating to a university's ability to encourage industry to invest risk capital to develop an embryonic invention from government-funded research," he notes.

"Universities not holding IPA's now report that approvals of patent waiver requests by HEW have been virtually halted." These permit exclusive licensing on a case-by-case basis.

"When waivers are not granted, the historical record shows the chance of delivery of an invention to the public is minimal," Reimers adds.

Patent rights are frequently lost during the waiver period, especially in foreign countries. Most professors publish their research findings immediately, yet foreign patents can only be obtained if filed before publication. Because of differences in patent protection, foreign coverage has become more valuable than domestic patents, in many instances.

Those seeking to end exclusive licensing practices have rarely, if ever, investigated actual case histories of how industry adopts innovations based on federally funded research, Reimers says. "It is incomprehensible that they have not bothered to do so, and ironic that the policies they espouse will achieve the opposite result from that which they intend."

Substantial data on technology transfer is included the hearings of the House Committee on Science, Research, and Technology, headed by Rep. Ray Thornton, on the Uniform Federal Research and Development Utilization Act of 1977. This supports a licensing type policy.

At Stanford, Reimers and a small staff receive four to six inventions a month from Stanford faculty. These are screened for marketability, often in conjunction with small local firms.

If the inventions are marketed successfully, any net proceeds are divided equally between the inventor, the inventor's academic department, and the University, helping support more research and education.

"We endeavor to license at an early stage," Reimers notes."Our mode of operation is directed to promptly placing an invention with a company motivated to bring it forward to a product, and then to go on to the next invention."

In a speech last month to the Society of University Patent Administrators, HEW Patent Counsel Norman J. Latker took sharp issue with Assistant Attorney General Shenenfield's claim that exclusive licensing may actually hurt the commercialization of inventions.

"A strong argument can be made that allowing (federal) contractors and grantees to retain patent rights will tend to promote competition, whereas if government adopts a policy of normally dedicating the invention to the public or licensing on a nonexclusive basis, concentration and monopoly will be enhanced."

Where industries are oligarchical in structure, he added, "a policy of nonexclusive dedication or licensing tends to serve the interests of the dominant firms, for whom patent rights are not normally a factor in maintaining dominance.

"Rather, control of resources, extensive marketing and distribution systems, and superior financial resources are more important factors in maintaining dominance and preventing entry of new firms and ideas. . . .

"Dominant firms may well be foreign-based, and dominate due to subsidization by their governments, making the inadequacies of a policy of normally licensing on a nonexclusive basis. . .even more pronounced. . . .

"On the other hand, smaller firms in an industry and firms requiring premarket clearance by the government must necessarily rely on a proprietary position in innovations and products in order to protect their investment in foreign and domestic markets. Thus, patent rights tend to be a much more significant factor affecting their investment decisions.

"They may need the exclusivity of patent rights to offset the probability that a successful innovation will lead to copying by a dominant firm which would soon undercut their position by marketing, financing, and other commercial techniques.

"Accordingly, nonexclusive licensing. . .may in fact be anticompetitive, since it encourages the status quo by discouraging promotion of innovations which displace old technology. Also, it is clear that the government can determine with whom it wishes to contract and rule out firms it deems to be dominant if deemed appropriate."

If the share of government funding of research were to approach 100% nationally and if patent rights were a primary factor in obtaining private resources for developing government funded inventions, he asked, "Does not the government then control whether most new ideas are developed or not?

"Is not the control of development of all ideas the ultimate regulation, and support Henry Ford II's recent admonition that the government's growing web of industrial regulations is fast bringing us to a point where only the largest companies can survive?"

If Senator Nelson's policy were to be adopted, through legislation or administrative action, he concluded "it seems clear that the industrial sector's effectiveness in sensing the needs of our society in introducing new technology to meet such needs would be severely impacted, starting our country down a long road to mediocrity."

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