



STATEMENT
ON
UNIVERSITY AND SMALL BUSINESS PATENT
PROCEDURES ACT, S. 414

BY
HOWARD W. BREMER
PATENT COUNSEL
WISCONSIN ALUMNI RESEARCH FOUNDATION
614 NORTH WALNUT STREET
MADISON, WISCONSIN 53705

BEFORE
THE SUBCOMMITTEE ON THE CONSTITUTION
COMMITTEE ON THE JUDICIARY

JUNE 6, 1979

UNIVERSITY AND SMALL BUSINESS
PATENT PROCEDURES ACT, S.414

COMMENTS AND OBSERVATIONS

by

HOWARD W. BREMER
PATENT COUNSEL

WISCONSIN ALUMNI RESEARCH FOUNDATION

June 6, 1979

It is a great pleasure for me to speak today in support of the University and Small Business Patent Procedure Act, S.414. My remarks are made on behalf of the University of Wisconsin, one of the foremost research universities in the world, the Wisconsin Alumni Research Foundation, of which I have been Patent Counsel since 1960, and the Society of University Patent Administrators, of which I am currently the President.

The Wisconsin Alumni Research Foundation (WARF) is a non-profit organization, incorporated in 1925, which functions as the patent administrative arm of the University of Wisconsin and is the designee of the University under the Institutional Patent Agreements between the University and the Department of Health, Education and Welfare and the National Science Foundation. In each year WARF's total income is given, without restriction, to the University of Wisconsin for use in support of research.

The Society of University Patent Administrators is a professional society of individuals all of whom have some responsibility for administering inventions and patents at or in connection with some university. It currently has approximately 95 members

representing about 60 universities and as one of its major intended purposes, is concerned with the education of its individual members to the techniques for accomplishing the transfer of the results of basic research conducted at the universities to the market place, primarily through utilization of the patent system.

At the outset I would like to state that I firmly believe that inherent in the introduction of this legislation and in its politically broad and numerically large co-sponsorship is the recognition of the close link between technological progress and overall economic outlook; the recognition that the climate for innovation can and does affect the public personally; the recognition that it is more important to focus upon the benefit which would accrue to the public as a whole from technology transfer rather than upon the fear that some few would profit from such transfer; the recognition of the necessity for stimuli to inventive activity and innovation; and the recognition that our patent system provides such stimuli through the incentives which it offers for the conversion of scientific knowledge into production benefiting human welfare.

Such recognition has been slow in coming. At the heart of the problem has been the absence of a single or overriding patent policy which addressed itself to inventions made in whole or in part through the expenditure of some Government monies and which was cognizant of the equities of the parties and the needs of the public.

In considering such a policy it must be presumed that Government research dollars are made available in the expectation of not only developing basic knowledge, but also in the expectation that the funded research will lead to products, processes and techniques which will be useful and acceptable in all or part of our society to improve the well-being of the society in general.

In the face of this presumption it is apparent that inventions, whether made through the expenditure of private or governmental funds, are of little value to society unless and until they are utilized by society. In order to achieve such utilization it is essential that the invention be placed in a form or condition which will be acceptable and beneficial to the public. In other words, the technology must somehow be transferred to the public sector.

In a free enterprise system such transfer is normally accomplished as the result of pertinent and appropriate activities of private enterprise. Since such activities obviously entail the commitment and expenditure of substantial monies -- many times the amount needed to make the invention -- adequate and appropriate incentives to such commitment and expenditures must be afforded. Consequently, and since the patent system provides such incentives and is the most viable vehicle for accomplishing the transfer of technology, full and careful consideration must be given to the making of any policy which will affect the transfer of technology that has been generated in whole or in part by Government funded research.

For many years the university sector has sought a uniform Government patent policy. There was general agreement within and without the Government that the primary objects of such a policy should be to:

1. promote further private development and utili-
zation of inventions made with Government funds;
2. ensure that the Government's interest in practicing inventions for Governmental purposes resulting from its support is protected;
3. ensure that patent rights in such inventions are not used for unfair, anticompetitive or suppressive purposes;
4. minimize the cost of administering patent policies through uniform principles; and
5. attract the best qualified contractors.

However, of all of the considerations attendant upon the establishment of a Governmental patent policy only one consideration should be paramount:

In whose hands will the vestiture of primary rights to inventions serve to transfer the inventive technology most quickly to the public for its use and benefit?

What is the situation that pertains when the Government takes ownership of a patent? It is in a sense an anomaly. The patent system was created as an incentive to invent, develop and exploit new technology - to promote science and useful arts for the public benefit. When the Government holds the patent under the aegis that the inventions of the patent should be freely available to all, much the same as if the disclosure of the invention had been merely published, the patent system cannot operate in the manner

in which it was intended. The incentives inherent in the right to exclude conferred upon the private owner of a patent, and which are the inducement to development efforts, are simply not available.

With regard to Government ownership of patents an interesting bit of history is presented by Marcus B. Finnegan¹ in which he calls attention to the famous case of United States v. Dubilier Condenser Corporation. The court issued its original opinion on April 10, 1933.² Then on May 8, 1933, the court, on motion of the Solicitor General, struck from its opinion³ a paragraph which questioned the authority of the Government to hold ownership to a patent thereby giving, by negative implication, judicial sanction to the Government's practice of taking title to patents. Of importance to my remarks today and to the provisions of S.414 is the following language from the stricken paragraph with respect to the question of whether title to the patented invention in dispute should be awarded to the Government:

"In these circumstances no public policy requires us to deprive the inventor of his exclusive rights as respects the general public and to lodge them in a dead hand incapable of turning the patent to account for the benefit of the public."

1 "The Folly of Compulsory Licensing", Les Nouvelles (Journal of the Licensing Executives Society) Vol. XII, No. 2, June 1977.

2 289 U.S. 178 (1933)

3 289 U.S. 706 (1933)

The experience with licensing of Government owned patents, with the Government in the main espousing a nonexclusive licensing policy, has irrefutably been one of non-use.⁴ This has already been made abundantly clear in the record of S.414. When title to patents is vested in the Government one can indeed conclude that they are lodged "in a dead hand incapable of turning the patent to account for the benefit of the public."

It should be obvious that without the introduction of new products into the economy, economic growth and job expansion would come to an eventual halt. While people can disagree whether particular technological innovations are good or bad, we doubt that anyone would seriously argue that a slow-down in technological innovation would not result in slower economic growth. With the fraction of R & D performed in this country that is Government supported now having reached about two-thirds, it is inescapable that a Government patent policy that discourages investment in the development of the inventions made during that research would have a negative effect on economic growth.

4 See Resume' of U.S. Technology Policies - Dr. Betsy Ancker-Johnson- Les Nouvelles (Journal of the Licensing Executives Society) Dec. 1976, Vol. XI No. 4, p. 186; Statement before the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, Dec. 11, 1976. (This latter document also contrasts the experience of universities in licensing patents owned by them some or most of which may have resulted from research supported in whole or part by Federal monies).

In the early 1960's when I first became involved with the questions raised by Government funding of research at universities, the Department of Health, Education, and Welfare was functioning basically with a title with waiver policy, even though a number of IPAs were outstanding. In that period we encountered circumstances where requests for determinations of waiver and reminders of the running of statutory bars against patenting would go unanswered until after the bar had run. Then too, on the very few occasions where a waiver was granted it was so fraught with restrictive provisions that it presented an unworkable basis for transferring technology. No commercial firm would accept the conditions which were imposed by the waiver.

The effect of such circumstances was to completely discourage the inventor from seeking to commercialize his inventions and, in fact, of even recognizing the presence of invention - the burdens attached because of the posture and attitudes of that Department toward the transfer of technology were simply too overwhelming.

The issuance of an IPA to the University of Wisconsin by the DHEW, with the Wisconsin Alumni Research Foundation (WARF) as its designee under that Agreement, simplified the handling of inventions at the University. By giving the University the first option of ownership of the invention it provided the certainty which permitted earlier patent actions to be taken and, therefore, earlier contacts with industry.

The argument between the advocates of the title-in-the-Government policy and the title-in-the-contractor policy has

gone on for some 30 years. For most of those years the argument tended to be rhetorical with neither proponent having at hand good and sufficient evidence in support of its position. Since the advent of the Institutional Patent Agreements (IPAs) as between various universities and the Department of Health, Education and Welfare and the National Science Foundation under the provisions of which the universities have the first option to title to any invention made under such agreements, there has been mounting evidence that under such less restrictive policy more and more technology is being effectively transferred from the university into public use.

Let me give you, as an example, what has happened at the University of Wisconsin.

Prior to the effective date of the IPA, December 1, 1968, no inventions made at the University of Wisconsin with funds from DHEW had been licensed to industry (one invention not falling under the IPA was licensed after that date). Since that date, WARF has received a total of 69 invention disclosures under the IPA, has filed 79 applications on 55 of those disclosures and has had 55 United States patents issue.

A total of 20 licenses were issued under one or more of these patents and patent applications, 14 of which are still extant, and under which four new products have been marketed with the strong promise of yet other products to be introduced after significant development work by licensees has been completed. Three of the products now in the market show significant promise for alleviating human suffering.

Also, and importantly, numbers of foreign patents have been obtained on some of those inventions and promise to return royalties through licensing which will aid in alleviating our balance of payments deficit.

On a broader base, since 1969, when DHEW began using a less restrictive patent policy, until the fall of 1974, DHEW estimated that the rights to 329 inventions made in the performance of DHEW funded research were being managed by institutions. During that period these organizations had negotiated 44 non-exclusive and 78 exclusive licenses under patent applications or patents on the 329 inventions. By the end of fiscal 1976 the number of inventions held by such organizations had increased to 517. DHEW estimated that the risk capital generated under the licenses on various of these 517 inventions was approximately \$150,000,000.⁵

This experience strongly supports the general proposition that the less restrictive the patent policy the greater is the transfer of technology. And it is significant in this regard that the major thrust of the IPA and of S.414 is the same, namely, that the contractor has first option to title to any invention made under the contract. Moreover, in both situations the Government and the public is adequately protected through appropriate "march-in" provisions.

5 Science Policy Implications of DNA Recombinant Molecule Research. Hearings before the Subcommittee on Science, Research and Technology of the Committee on Science and Technology, U.S. House of Representatives, 95th Cong. 1st Sess. (No. 24) p. 965.

I submit that such first-option-in-the-contractor policy promotes the transfer of technology for the following reasons:

1. It reduces the uncertainties as to the status of invention rights and thereby permits:
 - (a) the prompt filing of appropriate patent applications by the contractor-grantee;
 - (b) an early effort by experienced technology transfer groups and patent management organizations to locate and engage private enterprise in further development of inventions;
 - (c) an early decision by the industrial developer that the intellectual property rights in the innovation being offered are sufficient to protect its risk investment.
2. It is a recognition by the agency that the nature of the research being supported through funding under a grant or contract is fundamental or basic and that inventions and the making of them are by-products of and not a specific object of the grant or contract.
3. It is a recognition that any invention evolved will require further development to bring it to the marketplace--development which should involve private enterprise since under our free enterprise system private parties and not the Government should engage in such activity.
4. It provides motivation for a contribution by a commercial organization, in cash or in kind, to Government-

funded research projects--the certainty of the grantee (contractor) having the first option to any invention arising from such project providing the basis for this now recognized attitudinal change by industry.

5. It provides a climate which encourages the investigator-inventor's continuing participation in the transfer of his inventive technology to the public-- a particularly important consideration where university-generated inventions are involved since such inventions tend to be embryonic in nature.
6. It more fairly recognized the equities and contributions of all of the parties to the inventive technology.
7. It provides the opportunity for the university-contractor to generate income as consideration for the technological innovation being offered, which income is earmarked to support further research at the university--the public thus benefits a second time.
8. It permits timely consideration to be given to foreign patent protection and thereby enhances the possibility of generating payments from foreign sources for the transfer of the patented technology under license with an attendant favorable impact upon the balance of trade.

I also submit and firmly believe that the policy set forth by S.414 is wholly in the public interest. Such belief is based upon:

1. the past records of many universities as successful agents for the transfer of technology;
2. the willingness, as taught by experience, of the private business sector to deal equitably and in good faith with universities in such technology transfer endeavor;
3. the good experience which has been enjoyed by the universities in the integrity of its technology transfer industrial "partner;"
4. the improving attitude of commercial organizations toward research at a university where a less restrictive patent policy controls as evidenced by increasing numbers of instances where companies have made contributions, in cash or in kind to Government-funded research projects where only the prospective rights to inventions, yet unmade is involved--the certainty that the universities will have first option to title to such invention apparently being the prime motivation;
5. the unwillingness, based upon experience, of the private business sector to become a licensee of the Government; and
6. the lack of successful technology transfer as represented by Government-owned patents to the private sector.

Under the accepted definition of an underdeveloped country which is "one that exports raw materials to maintain its balance of payments, while it imports finished goods to maintain its

standard of living" we are now an underdeveloped nation. We are exporting our cotton, timber, grain, coal and other raw materials in order to pay for cameras, TV sets, radios, tools, steel, clothing and a host of other finished products.

We cannot afford to further weaken our economic position by weakening our patent system or the ability to extend exclusive rights to intellectual property - rights afforded under our Constitution.

The fact that the number of patents granted to citizens of the United States has fallen off significantly has already been made a part of the record on this legislation. The statistics also indicate fewer "big" inventions - the rate of new drug introductions today is about one-fourth the rate of 15 or 20 years ago - and it takes longer to put them in the market. In the chemical field it averages about seven years from the laboratory to the market; 15 years ago it took an average of two years.

We as a nation are spending less on research, using fewer people, and producing fewer inventions; and fewer of the inventions we do produce reach the marketplace, and it takes them longer to reach it.

In today's technologically intensive atmosphere some protection for the heavy investment required in development is more than ever necessary. The lead time given by exclusive knowledge or patents is shorter than ever before. If that lead time disappears, through a further weakening of our patent

system, or weakening of the ability to extend exclusive rights to intellectual property, it may become economically sound to be second in the field. There is already some evidence of the second-place philosophy in the medically-oriented and other fields today. Further erosion of the exclusive rights to intellectual property afforded under the Constitution could lead to a second-place attitude through much of United States industry. The next step is willingness to be a second-place nation.

We are in dire need of this legislation as a strong beginning to dismantle the roadblocks to innovation - roadblocks built upon a lack of understanding of the innovation process, the necessity for and the functioning of the patent system in such process, political opportunism based upon outspoken but unsupported claims to the guardianship of the public interest or welfare, and the self-protective caution which attends a highly bureaucratic government.

We must realize that the innovative processes that bring revolutionary changes in society involve unpredictability, long gestation periods, huge sums of capital, genius and extraordinary perserverance on the part of free individuals and organizations.

We cannot afford to continue to leave decisions on the disposition of invention rights to the discretion of Government agencies; nor can we afford to consider legislation which, as a practical matter, will do so.

S.414 serves to functionalize a system, as represented by the Institutional Patent Agreement, which has been proven to be workable and, in my opinion, recognizes that innovation has become the preferred currency of foreign affairs.

I thank you for the opportunity to express my views on this extremely important legislation.