The Department of Defense Patent Policy at the Cross Roads: An Argument for the Retention of Traditional Incentives

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THE DEPARTMENT OF DEFENSE PATENT POLICY AT THE CROSS ROADS: AN ARGUMENT FOR THE RETENTION OF TRADITIONAL INCENTIVES†

by

Arthur John Keeffe* and David M. Lewis, Jr.**

Perhaps the most serious attack on the American patent system in recent years has been in the area of government-sponsored research. Many persons have expressed grave reservations about granting an inventor a protective right to a patent for the statutory seventeen year period,1 when he has conceived a patentable process under a research and development contract with the United States. A basic question to be asked in studying any aspect of the patent system is whether the express Constitutional intent of promoting "the Progress of Science and the Useful Arts"2 is being preserved. A worthwhile patent system should encourage invention and benefit the general public welfare by providing a stimulus to make these new products quickly available in the marketplace.

The authors urge that the Department of Defense's policy of leaving title to patents developed under its research and development contracts, while retaining a royalty-free license in the military applications of such inventions,3 is meeting the test expressed above. This policy, to which the Department of Defense has adhered for five years, is commonly known as a "license" policy. The Department of Agriculture, National Aeronautics and Space Administration (NASA), and Atomic Energy Commission (AEC) however, follow another policy—that of taking title for the government to patents filed pursuant to these contracts. This approach is commonly called a "title" policy.

The battleground between these competing policies has been well-defined in recent Congressional sessions. In hearings before the Subcommittee on Patents and Scientific Inventions of the House Committee

†This article expresses the personal views of the authors for which no one else is responsible.

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2 U. S. CONST. ART. I, § 8, cl. 8.

3 Such provision is found in the Armed Services Procurement Regulations, ASPR 9-107.1 (July 1, 1960).
on Science and Astronautics (conducted last year by Representative Erwin Mitchell, and hereafter called the Mitchell Subcommittee), a proposal to amend NASA's title provisions was under consideration. Senator Russell B. Long's Subcommittee of the Select Committee on Small Business was examining, at the same time, the effect of the license approach on small businesses, especially as it is practiced by the Department of Defense.

A criticism of the license approach which recurred many times in the hearings was that some companies are building up advantageous commercial patent monopolies by keeping title. But, is this alone good enough reason for revising the procurement procedures when the problem posed is essentially one which might be handled under the antitrust laws? The law in this area has developed to the extent that most patent abuses can be effectively curbed. In Ethyl Gasoline Corp. v. United States, the Supreme Court warned against the affixing of provisions in restraint of trade to licensing agreements by the patentee. The sanctions of the Sherman Act have been extended to licensing agreements which combine monopolistic practices with the fixing of prices to be charged by the licensees. Any such unlawful arrangements could surely be overthrown today without reference to how the patents were acquired by the licensor.

In addition, since Hartford-Empire Co. v. United States, the court can order a patentee who abuses antitrust laws by collusive combinations to fix reasonable royalties on its licenses in the interest of increased competition. The language of the Supreme Court, however, suggested that there are constitutional barriers which would preclude an order that the patents be dedicated to the public royalty-free:

That a patent is property protected against appropriation both by individuals and by government has long been settled. In recognition of this quality of a patent the courts, in enjoining violations of the Sherman Act arising from the use of patent licenses, agreements, and leases, have abstained from action which amounted to forfeiture of the patents. 

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4 Hearings on P. L. 85-568 Before the Subcommittee on Patents and Scientific Inventions of the House Committee on Science and Astronautics, 86th Cong., 1st Sess (August 19, 20, November 30, December 1, 2, 3, 4, 5, 1959).
6 No attempt is made to examine all the testimony in these hearings. For a more detailed investigation, the reader is referred to the texts of these hearings. In addition see Hearings Pursuant to S. Res. 240 on S. 3156 and S. 3550 Before the Subcommittee on Patents, Trademarks of the Senate Committee on the Judiciary, 86th Cong., 2nd Sess (May 17, 18, 1960).
7 309 U. S. 436 (1940).
9 323 U. S. 386 (1945).
10 Id., at 415.
Nevertheless that dedication has been accomplished, under judicial pres-
suring, through the use of consent decrees which are in wide usage under
the antitrust laws.\(^{11}\)

It is true that a patentee may suppress a patent free of the antitrust
sanctions.\(^{12}\) If public exigencies direct, however, the government will not
be helpless in suppression cases. Under 28 U.S.C. § 1498 (1958), the
owner of a patent may sue in the Court of Claims to collect damages
when the government makes use of his patent without a license. Mr.
William H. Davis, representing New York City Bar Association, advised
the Mitchell Subcommittee\(^{13}\) that the government, if need be, might
infringe a patent without the institution of a condemnation suit and pay
reasonable compensation when sued under section 1498. The payment
would satisfy the constitutional ramifications\(^{14}\) which prompted the judi-
cial restraint in Hartford-Empire, supra.

Thus, the government has remedies at its disposal to deal with vari-
ous patent abuses when they arise. On this point, there would seem to
be no need to disturb a well-ordered license policy at the procurement
level.

The fact that government funds, rather than private risk capital, are
being expended gives rise to other serious public policy considerations.
Senator Long advanced the proposition that the public is caught in a
squeeze play, having to pay twice for inventions under a license policy.\(^{16}\)
First, the public pays in tax dollars to finance the research; second,
industrial concerns which make up part of the public must pay royalty
fees to share in the production of the inventions, and then the public
ultimately pays the price of the finished product on the consumer market.
Is this a valid observation? The answer, so far as the Department of
Defense is concerned, has to be no. What the public pays for in reality
is the royalty-free license which the Department of Defense reserves for
its purposes. This factor is taken into account, during negotiations, in
the attempt to arrive at the consideration to be paid the contractor. If
the government were to demand title at the outset the consideration
would undoubtedly be a good deal higher, the cost of procurement would
rise, and the public would be paying the same price, or better, in a lump

\(^{11}\) In this connection see Swift & Co. et al. v. United States, 276 U. S. 311 (1928), for
a discussion of the Attorney General's authority in imposing sanctions under consent decrees.


\(^{13}\) See note 4 supra at 461-463.

\(^{14}\) U. S. Const. amend. V: "No person shall be . . . deprived of life, liberty, or
property, without due process of law; nor shall private property be taken for public use,
without just compensation."

\(^{16}\) See note 5 supra at 115 and 319.
The public welfare would suffer to the extent that the Department of Defense would be unable to meet its vital procurement demands under such an arrangement. Indeed, it has been urged vehemently that some companies would refuse Department of Defense contracts if conditions reserving full title to patents in the government, were attached. Or, in the alternative, contracts might be taken, but the contractor will assign second-rate technicians to the projects to lessen the chance for an important and meaningful break-through. In either case the defense program loses the benefit of valuable know-how.

Nor, is it entirely sound to say, merely because public funds are being expended in the research and development field, that there is no risk involved on the part of the contractor. Skilled personnel are devoted to a research and development project in the hope that the corporate contractor will be able to score a break-through and that follow-on contracts will subsequently issue. If such expectations are unfulfilled the contractor has a relatively small profit margin, generally in the neighborhood of six percent, to show for his efforts. Many such break-throughs might well be ascribed to prior know-how and competence on the part of the personnel working for the contractor. Yet, when these intangible factors, which may have greatly influenced the awarding of the contract, contribute to the discovery of a patentable invention, the title would be lost to the company if the resulting invention were in actual pursuit of the contract. Many inequities would result. It is not surprising that many companies with a reasonable anticipation of success would be wary of accepting government work.

It is conceded that there are some "captive" industries, notably military aircraft, which could be forced to accept research and development work under repugnant conditions. It might be argued that no private risk is apparent in these situations, since so much of the know-how has been accrued on government funds. Still, there are administrative difficulties which would be encountered. First, it would be difficult at the negotiation stage to determine what, if anything, will result from the contract. It would be extremely vexing to attempt to place a price tag on the ultimate significance and commercial value of something which is not yet in existence. Therefore, contracting will bog down in negotiations unless provision is made allowing for further negotiations and adjustments during the life of the contract. The shrewd contractor, realiz-

16 See note 4 supra at 398-399 and 412.
17 Id., at 419-421. Note particularly the testimony of Mr. J. King Harness, representing Automobile Manufacturers Association and Michigan Patent Law Association.
ing for instance that space inventions might open up an entirely new commercial field in the near future, may not be willing to do business on such a basis, even if provision is made for raising fees. There is no assurance that today's captive industry might not discover a newly arisen collateral market in the commercial field tomorrow.

Some have attempted to make an analogy between the relationship of the contractor and the government and that of the inventor-employee and his corporation. The argument here is that the company is financing the inventor's research and is taking title to his patents pursuant to standard employment contracts. The distinction between these two relationships was well pointed out by Charles Shelton, Director of the United Aircraft Corporation, before the Mitchell Subcommittee. He urged that the corporate researcher is in the business of manufacturing and selling products while the employee, by very nature, contracts to sell his services. Emphasis in other testimony was to the effect that the employee receives job security plus other current employee incentives such as retirement pensions, advancements in position, and stock bonuses. The contractor has none of these fringe benefits. Being a lone wolf in a highly competitive field, he lacks the benefit of any sort of contract security but must have means to protect his present accrual of know-how to insure his success and possibly even his survival in the future. Corporate ingenuity is a powerful asset which it would be foolish to bargain away in full, while the employee is able to insure his personal security by just such an agreement.

These arguments probably fall short of satisfying the public conscience in full. Certainly, they lose some force in the case of the one hundred percent or "captive" government contractor. It is helpful to ask then what positive public good is being served when the government takes title to patents. It might seem quite sound to advocate a system whereby title to patents developed under research and development contracts is vested in the government on the premise that information placed in the public domain and made available to all of industry would more readily be put to use for the public welfare. The answer is that the American patent system was drafted against a background of competitive enterprise. In such a system as this, license rights available to all competitors may be of little value to any of them. Mr. James D. Burns, representing the National Council of Patents Associations, presented the following illustration before the Mitchell Subcommittee:

18 Id., at 240-241.
All right. Let us take a look at what has happened in the Alien Property Custodian's field. We vested all enemy-owned patents in the Alien Property Custodian. The Alien Property Custodian forthwith put out the most expensive brochures I have ever seen, the most expensive paper, the most beautiful, glamorous thing, telling what a wonderful thing it was going to do for American industry. They were going to grant licenses at $50 apiece base to try to cover a little bit of the clerical overhead. Nobody wanted those licenses. Everybody could have them and what everybody can have nobody wants, particularly where it takes investment to develop and create a market.

Who is going to go out and spend that money and create the market and have his arch competitor move in? Somebody, as spokesman for that agency, may tell you they granted a whole lot of licenses. Well, at $50, what the heck. But nobody used them, nobody exploited the rights.19

This type of situation prompted William H. Davis, New York patent attorney to cite a parallel between the government as patent holder and the Parable of the Unfaithful Servant.20 The patent rights might be expected to become as valueless as the talents which were buried in the ground. There might be a taker now and then, but he would most certainly be running a great risk in plunging into mass production without enjoying a competitive advantage. But, when the incentive to bring new products to market is left in industry, the public will benefit.

Should the government then take upon itself the burden of bringing these new products to market when the incentive to private industry is undermined? The government would have to exercise its exclusionary rights under the patents by suing in the courts to enjoin infringers. This it has not done in the past.21 The government would have to police contractors extensively to determine that all patentable processes were reported, as there might well be some hedging under a title system. Admittedly, these might constitute valid, constitutional government functions. However, many taxpayers might rightly question the wisdom of added governmental activity and expense in a sphere that could be handled effectively in industry.

It is interesting to note that the Mitchell Subcommittee discovered a middleground between license and title upon which to base its Report.22 The middle of the road approach suggested was a set of criteria which a contracting officer would apply as a test, to decide whether the National Aeronautics and Space Administration should acquire title or license only to patents filed under research and development contracts. The criteria,

19 Id., at 223.
20 Id., at 456.
as set out below, are admittedly a move away from the straight title approach which has been NASA's practice in the past.

In determining whether the public interest and equities of the contractor would be best protected by the reservation of an irrevocable, nonexclusive, nontransferable, royalty-free license, by the acquisition of the entire right, title, and interest to the invention involved, or by the reservation or acquisition of other rights, the National Aeronautics and Space Administrator should consider—

(1) Any of the following elements which may exist, being circumstances normally favoring retention of title by the contractor:

(A) Where the technological field being explored under the contract is so related to fields of commercial endeavor that the inventions likely to result would have substantial promise of commercial utility and their early development would be apt to benefit the national economy;

(B) Where the insistence upon more than an irrevocable, non-exclusive, nontransferable, royalty-free license for governmental use would preclude or seriously impair contracts for the desired research and development work and alternative sources for the contract are not readily available;

(C) Where inventions likely to be involved under the contract have been conceived and constructively reduced to practice by the contractor prior to the contract; and

(D) Where the contractor has extensive competence and experience in the field of technology which is to be explored under the contract and inventions likely to result would be attributable to such competence and experience;

(2) Any of the following elements which may exist, being circumstances normally favoring the right to acquire title by the Government:

(A) Where the contract calls for exploration into fields which directly concern the public health, safety, or welfare and the inventions likely to result would be useful directly in such fields, and the public interest would be best served by making such inventions available for all to produce or use without payment of royalties;

(B) Where it is likely that any inventions actually reduced to practice under the contract will have depended in substantial degree upon the prior or parallel conceptions and work or other parties, governmental or private;

(C) Where the Government has been, at the time of contracting, the sole or prime developer of the field of technology involved, or has provided all or virtually all of the funds required for the operations and activities of the contractor in such field; and

(D) Where the field of technology involved in the contract is entirely new without significant commercial or private history, and with little chance of nongovernmental development in the foreseeable future; . . .

\[28\] Id., at 34-35. These criteria were proposed as a statement of legislative history behind the amendment of section 305(a) of the NATIONAL AERONAUTICS AND SPACE ACT OF 1958. The proposed amendments were part of H. R. 12049 which passed the House of Representatives but was not reported out of committee in the U. S. Senate.
A great deal of interest has arisen in these criteria as to whether the Department of Defense might incorporate them into its procurement regulations. This, of course, would represent a move away from the license policy now practiced by the Department of Defense.24

Perhaps a general criticism of the use of such criteria is that they would be very difficult to administer. The criteria are framed in very broad language and do not define exclusive, pigeon-holed categories. Many situations can be envisioned wherein title equities and license equities both exist; the contracting officer is in a dilemma when such conflicts develop. It would be nearly impossible to frame such guidelines with enough clarity to assure a certainty of application in any given situation. It is certain, however, that criteria such as these would be unworkable in regulations which aim for precision. The negotiations picture would be beset with undue complexities.

In interpreting the criteria set out in section (2) (A) the contracting officer might well be inclined to inquire what invention developed under a Defense Department contract does not "directly concern the public health, safety, or welfare." Indeed, the entire field of government contracting is carried on for the purpose of satisfying some aspect of "public welfare." The language is not limited to the development of "a big and important weapon of great interest to national defense." Mr. A. L. Lyman, President of the California Research Corporation, suggested this as an instance in which the government should contemplate taking title.25 The language here could just as well have reference to brakes on a jeep or landing gear on airplanes. These are two inventions which "would have substantial promise of commercial activity," to suggest but one troublesome conflict with license criteria.

Is the situation corrected if specific areas of health, safety and welfare are clearly designated? It would seem that it is in these very areas where the patent incentive should be retained if the public is to benefit. There is testimony to the effect that the Surgeon General, for instance, feels the need for patent incentives to induce companies to research in the cancer field.26 This is a grim realization of the fact that most drug companies are more profit-minded than Nobel Prize minded. Moreover, as has been pointed out, the taking of title by government will probably result in the burying of discoveries for want of an entrepreneur to exploit them. The government has sufficient authority to deal with private concerns which

24 See note 3 supra.
25 See note 4 supra at 385.
26 See note 5 supra at 360-362. Note particularly the testimony of Mr. Parke M. Banta, General Counsel, Department of Health, Education, and Welfare.
would exploit such inventions in abuse of the patent laws. The govern-
ment probably has sufficient additional authority along this line either to
condemn or infringe a patent and pay a reasonable compensation to the
original owner. The possibility of future patent abuses is hardly a con-
tingency which the contracting officer is competent to anticipate during
negotiations.

Section (2) (B) of the title criteria is quite ambiguous, especially in
its use of the term "substantial degree." Of course, every invention de-
pends somewhat upon prior discovery. It is submitted, however, that this
criterion would be a guide tending to direct the contracting officer to
provide for government title to all improvement patents. This covers a
very wide and vital area of Defense Department contracting. Such a pro-
vision would tend greatly to hamstring negotiations on extremely im-
portant projects.

On the other hand, the words "prior or parallel concept" represent
a term of art to the members of the patent law profession. The unique
nature of an invention must be shown by any potential patentee who
applies to the Patent Office. This criterion could be construed to require
the very basic ingredients of novelty which must be established before a
patent issues. The Subcommittee must have been using this term of art
in another context, for if a contractor's employee failed to establish the
novelty of his invention satisfactorily, there would be no patent issued to
which the government could obtain title.

Section (2) (B) then probably would apply in a situation in which
a team of contractors are working on one project. A situation could arise
where Contractor C makes the actual break-through in developing a
patentable invention but is aided by information gleaned from prior
efforts of Contractors A and B, who fell just short of success. C's equitable
right to claim title might be a matter of some concern, but this situation
presents a question primarily of his rights in relation to A and B. The
government's equity is no greater than if C had been the only contractor
from beginning to successful completion. The criterion does not include
the factor of governmental funds being expended several times for the
same project with only one successful result. Granted, this additional
condition might give rise to an equity in the government's favor. Giving
the government title in the case where several contractors work as a team
and borrow experience from each other's efforts deprives all of the con-
tractors of the traditional incentive. It is difficult to discern the logical
basis for such a result. Section (2) (B), as framed, makes little sense.

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Section (2)(C) appears to contemplate special treatment for the captive industries, discussed above. Despite the apparent equities in favor of the government in this area, the Department of Defense has treated all of its contractors alike in the application of license provisions. Mr. Emerson Reichard, Jr., representing Aerojet—General Corporation, explained to the Long Committee the reasons his company is interested in retaining title to patents:

Why then does Aerojet-General Corp. continue to file patent applications when it obtains no commercial advantage? There are a number of reasons for this. One, of course, is the hope that at some future time a commercial market for one or more of the products involved will be developed, which would permit this company to broaden its line of commercial products. Another important reason is the fact that we are faced with the problem of preventing others from rediscovering an invention made by us in the performance of classified work and obtaining a patent which would hinder or impair our activities under United States Government contracts or induce the Government to grant production contracts to the later discoverer by reason of the patent obtained by him. This problem stems from the fact that an organization such as ours is not permitted in the usual course of events to publish articles disclosing simple improvements and discoveries so as to place them within the public domain because of security restrictions governing most of our work. Thus the only certain way open to us for preventing the acquisition of an adverse patent by another and perhaps later discoverer is to file an application to the U. S. Patent Office to obtain a firm record date for the invention, thus establishing our priority. Another reason, often overlooked, is the professional stimulus which results from the maintenance of an aggressive patent policy by a corporation such as Aerojet-General Corp. The professional esteem which is associated with the issuance of a U. S. patent to an inventor as well as the modest financial remuneration given the inventor under Aerojet-General Corp.'s Patent Award Plan is considered by us to be a substantial stimulus to original and incentive thinking in the performance of our work. We consider this stimulus important in view of the practical impossibility of monitoring the thoughts and work of individuals in an organization as large as ours to be certain that all inventions are promptly reported so that appropriate action can be taken toward obtaining patent protection and also to insure that inventive contributions are brought to the attention of those who are in a position to implement and use them to advance the state of the art.\textsuperscript{29}

The Long Subcommittee, of course, was concerned primarily with the effect of government patent policies on small business. Mr. Reichard expressed the belief that a title policy in this area would be of a greater harm to small businesses than to the larger corporations. He explained that a good portion of such contract work is subcontracted to small business which gets the advantage of the license policy. Patents, though of a somewhat dubious commercial application in this area, undoubtedly do provide an important incentive to small businesses to take the subcontracts. A commercial break-through, however remote a possibility, could transform a smaller company into a bonanza overnight.

In addition it should be stressed again that even though research in

\textsuperscript{29} See note 5 supra at 105.
certain fields is being exclusively financed by public funds the government is getting the full benefit of that for which it pays in the rights under a royalty-free license. Commercial exploitation and licensing of patents has not been a traditional government function, and there is grave doubt as to whether it would be an efficient one. While equitable considerations might tend to favor government ownership, practical realities certainly would favor development by industry with its commercial know-how. The worst that can be said for this result is that it represents subsidization. This is not a new phenomenon in American economic development.

The main trouble with the criterion set out in section (2) (D) is that it would be very hard to administer. First of all, one might ask what and when is a "field of technology . . . entirely new?" Does this apply to so large an area as represented by jets and missiles? The latter portion of the criterion is of little help in directing the contracting officer to form a judgment on the likelihood of "nongovernmental development in the foreseeable future." This presents another situation where the contracting officer cannot make a valid determination and must rely on untrustworthy speculations. In two areas, atomic energy and space development, the Department of Defense has precluded any such speculation by placing in its procurement regulations provisions to coincide with the title practices of the Atomic Energy Commission and the National Space and Aeronautics Administration. Section (2) (D) would be very difficult to work with unless such specific areas of research are spelled out.

Why are not the patent incentives important in the "new" fields? In time such areas of research will give rise to potential commercial markets just as will the captive areas covered in the criterion set out in section (2) (D). Of course, the new commercial applications which arise will prove to be very valuable and dramatic. In some cases it will be difficult to classify these new applications of inventive knowledge as strictly commercial as they will be of such a general public interest that many might consider them best managed by the government. However, it would not be nearly so troublesome to distinguish those applications which are directly concerned with the national defense effort from the others. The Defense Department would be in a new and strange position in attempting to introduce into the marketplace the commercial products which are not foreseeable today but which will inevitably become realities. The solution at this point would be for the Department of Defense to license private enterprise without the allowance of competitive advantages. For reasons heretofore mentioned, the logic of this system is basically un-

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80 ASPR 9-107.4, 9-107.7 (July 1, 1960).
sound. The new products will be discovered, manufactured, and marketed sooner and more surely if the patents are left to industry.

Various arguments and counter-arguments in this complex policy area are due to be discussed again in the new Congress. The legislators may be expected to restudy the present programs and to arrive at new compromises between the more obvious imperfections and injustices of either a straight title or license system. It is hoped that they are able to advance keener guidelines than those represented by the Mitchell criteria. This promises to be an exacting task. Whether any action is contemplated regarding a statutory change in the Department of Defense's policy, in the absence of a prior change in existing departmental regulations, is undetermined.

The authors feel that the case for the retention of the existing license policy in the Department of Defense is sound. The present patent policy has been highly successful in so far as it has fostered a willing cooperation between research and development contractors and the Department of Defense. To discourage contractors in their efforts by veering toward any type of title policies would be unwise at a time in which the national defense program is of such a vital importance. So long as there are means to curb patent abuses by diligent governmental action, a possible weakening of the hopes for a strong national security would be a grave disservice to the national welfare. The Department of Defense must take industry as it finds it, and to date, by the clear weight of testimony which has come from the Washington hearings, traditional patent incentives are still of paramount importance. Patriotic devotion to the furtherance of buttressing national strength might not be enough to fill the incentive gaps which would be created by a change. The arguments for reform are numerous, and the reader is referred again to the formal texts of the hearings for his own investigation. The authors submit that these arguments are not so persuasive, or irrefutable as to justify the risks which will accompany a change in the present Department of Defense program. Indeed, the final direction of reform should become more apparent as other governmental agencies begin to take a long, hard look at the successful contracting operations now conducted by the Department of Defense.
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