FEDERAL PATENT POLICY AND H.R. 8596

ISSUE

There is reason to believe that the present legislative framework and administrative policies governing the disposition of Government-funded inventions may be inhibiting their commercial development.

Representative Thornton, joined by 13 Congressmen, including the Chairman of the Committee on Science and Technology, has introduced H.R. 8596, which would establish a comprehensive Government-wide policy regulating the allocation of rights to inventions made by Government grantees, contractors, and employees. The bill also provides legal authority, now lacking in a number of Federal agencies, for the licensing of Government-owned patents. The ultimate objective of the bill is to promote and maximize the commercialization and utilization of inventions and technology which result from Government-funded research.

There is considerable interest in H.R. 8596 both within the Government and in the private sector prompting a need to formulate an Administration position on this bill. Moreover, the National Science and Technology Policy, Organization and Priorities Act of 1976 directs OSTP to review current legislation and agency practices with the view of recommending and developing,

> "Federal patent policies ... based on uniform principles, which have as their objective the preservation of incentives for technological innovation and the application of procedures which will continue to assure the full use of beneficial technology to serve the public." (Title I, Section 101 (C)(4) of P.L. 94-282.)

Summary of H.R. 8596

Briefly, the major provisions of H.R. 8596 are:

Title I, which contains a statement of findings and purposes.

Title II, which provides an institutional framework through OSTP and FCCSET to assure uniform implementation of the Act's provisions.

Title III, Chapter 1, which would allow grantees and contractors the right to retain title to inventions subject to various limitations and conditions.

Title III, Chapter 2, which is an effort to codify the criteria of Executive Order 10096 initially issued by President Truman allocating rights in inventions made by Federal employees in performance of official duties, and which also includes authority for an incentive awards program covering inventions made by such employees.

Title IV, which provides all Federal agencies authority to license Federally-owned inventions. It also provides the Department of Commerce with certain additional authorities, so that a centralized Government licensing program could be undertaken, although participation in the Commerce program is left to agency discretion., and

Title V, which contains definitions, amendments and repealers of existing statutes.

The bill, except for Title III, Chapter 1, should not prove controversial, since most of its provisions embody precedents and conclusions that have been to some degree uniformly agreed upon. There may be some debate concerning the bill's procedures for granting licenses under Government-owned patents, especially exclusive licenses, although as presently written the bill would seem to contain sufficient procedural safeguards to satisfy most critics of exclusive licensing.

Controversy over Title III, Chapter 1, seems inevitable, since it would supplant approximately 22 different statutory and administrative policies and procedures covering allocation of contractor and grantee inventions. Title III, Chapter 1, permits contractors and grantees the first option to title in inventions made by them under Federally-funded contracts or grants, subject to various rights that would be obtained by the Government. But it allows case-by-case deviations by individual agencies which might be desirable, for example, in those isolated cases where the Government is fully funding the development of a product or process to the point of commercial application.

Genesis of H.R. 8596

H.R. 8596 is the culmination of years of discussion and agency operating experiences starting from the increased influx of Government research and development funds after World War II to the present 22 billion dollar annual investment. The bill had its genesis in, and is basically an adaptation of, a draft bill that was prepared in 1976 by the Interagency Committee on Government Patent Policy of the FCST (now the FCCSET). This draft bill was, in turn, partially inspired by the

Report of the Commission on Government Procurement, which was issued at the end of 1972. This bipartisan commission made up of Congressional, Executive branch, and private members recommended that Government patent policy continue to be guided by the President's Memorandum and Statement of Government Patent Policy first issued in 1963 by President Kennedy and revised in 1971 by President Nixon. However, the Commission also put forth an alternative recommendation for legislation quite similar to the H.R. 8596 approach in the event experience under the then recent 1971 revisions was not satisfactory.

Subsequent to that report a Justice Department memorandum maintaining that disposition by the Executive Department of future inventions at the time of contracting constitutes disposition of property requiring statutory authority, and lawsuits filed by Public Citizens, Inc., based on that thesis, have cast a cloud over Government patent policy. In addition, the Congress has since instituted a number of new research and development programs through statutes having patent policy provisions inconsistent with the Commission's recommendations. Notwithstanding the withdrawal of the Justice memorandum and dismissal of the Public Citizens suit on procedural grounds, the probability of additional suits based on the same thesis and additional piecemeal legislation prompted the Committee on Government Patent Policy to develop the 1976 draft bill.

Patent Policy Alternatives

The most basic aspect of Government patent policy involving grantees and contractors is the type of patent clause that is included in any given grant or contract. Basically there are three types of clauses that might be used in any given situation:

(a) A provision giving the Government title to all contractor inventions.

(b) A provision providing for contractor retention of title, subject to whatever licenses and other rights it is agreed that the Government will obtain, or

(c) A provision that the Government will have the right to determine the disposition of rights in any inventions after they are identified (the "deferred determination" approach).

Debate over Government patent policy has centered on which and under what circumstances these types of clauses should be used in Government contracts and grants. To a lesser extent the debate has also involved

the criteria for leaving exclusive rights to a contractor under a deferred determination clause.

For the most part Government agencies now use only the last two types of clauses listed, since even most so-called "Title in the Government" clauses provide to the contractor the right to request greater rights than a nonexclusive license after an invention has been made (unless otherwise precluded by statute).

Legislation on this issue has tended to be sporadic and inconsistent. Some legislation applies to all R&D activities of an agency (NSF and NASA), some to a particular field of technology (AEC/ERDA), some to particular R&D programs of an agency (Coal Research Act and Saline Water Conversion Act), and some to programs which cross agency boundaries (Solid Waste Disposal Act). Some legislation requires the Government to take title with no exceptions (Water Resources Act), while others permit exceptions, as in "appropriate circumstances" (Atomic Energy Act), in the "public interest" (NASA and ERDA) or in the "National defense" (Coal Research Act). Some legislation requires rights to be allocated in accordance with Presidential policies (Solid Waste Disposal Act and Federal Fire Prevention and Control Act), while the NSF Act requires invention rights to be allocated so as to protect the public interest and the equities of the contractor. In all, there are about 20 separate statutes governing patent policy.

Notwithstanding the number of outstanding statutes, most agencies, including major research and development agencies such as DOD and HEW, have no statutory provisions regulating their policies. For the most part such agencies have been guided by the Presidential Statement of Government Patent Policy and, in fact, many of the agencies with statutes have generally followed that policy to the extent that it is not incompatible with their statutes. However, the Presidential Policy Statement only establishes general guidelines as to when title in the Government, title in the Contractor, or deferred determination clauses should be used. It has not prevented the development of a maze of individual agency regulations and procedures, and has provided no guarantee that agencies would consider similar contracts as requiring similar clauses. Universities and private concerns dealing with the Government are thus confronted with a variety of clauses, waiver provisions, forms and procedures. H. R. 8596 has as one of its objectives the elimination of this current web of statutes and regulations.

Available Approaches for a Legislative Government Patent Policy

But, more importantly, H.R. 8596 has as its basic objective the development of a policy that will maximize economic growth by maximizing

utilization of Government-supported inventions. The primary issue remains whether the approach taken in Title III, Chapter 1, of H.R. 8596 is the best one in this regard. It is anticipated that opponents of the bill will argue that allowing contractors to retain title is a "give-away," "anticompetitive," and provides contractors with a "windfall."

Objective review of the subject has been difficult to achieve in the past, since opponents are wont to dispose of the issue through the catchwords cited above, and others such as "what the Government pays for it should own." Experience indicates that there are few situations in which the Government funds inventions resulting from its programs to the point of practical application. Notwithstanding this experience, it is not possible at this time to statistically conclude that the contractor's ultimate financial contribution to bringing an invention resulting from Government funding to the marketplace is always significant in comparison to that of the Government (although studies have shown that development costs normally exceed "inventing costs" by at least a factor of 10). This leads to what is believed to be the most persuasive argument or approach available to opponents of the H.R. 8596 approach . . . that disposition be made at the time of contracting on a case-by-case basis or deferred until identification of an invention.

Under such an approach, it is contemplated that disposition, whether made at the time of contracting or after identification of the invention, will take into consideration the equities of the Government vis-a-vis the contractor in ultimately bringing the invention to the marketplace. However, since the equities of the parties at the time of contracting in a yet-to-be-made invention are virtually impossible to assess objectively, opponents of H.R. 8596 have indicated a clear predilection toward deferring determination of ownership until an invention has been made, so that deposition can be made on better facts. Accordingly, it is believed that if uniformity is to be one of the prerequisites of a legislative Government patent policy, the choice appears to be realistically limited to the H.R. 8596 and deferred determination approaches. (As already noted, a "title in the Government" approach which does not take into consideration requests for greater rights in the contractor after an invention has been made has been virtually abandoned by the major R&D agencies, as it is not considered a realistic means of maximizing utilization of Government-funded inventions, since it rejects the need for the patent incentve in the contractor in all situations.) Accordingly, the remainder of this paper is limited to comparing these two approaches against the objectives sought by a legislative Government patent policy.

The Objectives of Government Patent Policy

There is general agreement that the primary objectives of Government patent policy should be to (1) promote further private development and utilization of Government-supported inventions, (2) ensure that the Government's interest in practicing inventions resulting from its support is protected, (3) ensure that patent rights in Government-owned 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.

Comparison of the Deferred Determination and the "Title-in-the-Contractor" Approach Against the Objectives of Government Patent Policy

Objective (2) is satisfied equally by either approach, since the Government as a minimum will retain a royalty-free license, even if the contractor has title.

The fourth objective (minimizing administrative costs) is best met by the H.R. 8596 approach, since agency experience indicates that a great amount of Government and contractor time is required to process requests for rights made under deferred determination clauses. Indeed, a great hardship would be involved in shifting to a Government-wide deferred determination approach unless this was accompanied by a significant increase in the patent and related support staffs of a number of agencies. For example, a preponderance of DOD contracts now include clauses allowing the contractor to retain patent rights. It is unlikely that DOD could expeditiously process each contractor request for patent rights under a deferred determination procedure with present staffing.

The fifth objective (attracting the best qualified contractors) seems best satisfied by H.R. 8596, since there is evidence that many firms with established commercial positions and which are not primarily engaged in Government contracting would refuse to undertake or compete for Government research and development contracts (or subcontracts) in the area of their established positions if the Government insisted upon the use of a deferred determination clause. It is not realistic to believe that such firms will jeopardize a privately established commercial position on only the chance of ownership of a major improvement of such position because it is touched by Government funding. Thus, insistence on a deferred determination clause in all situations would result in many of the best qualified firms' refusing to contract with the Government.

DOD for years has argued that such a policy would lead to inferior work at higher costs. To avoid this problem, the policy would have to leave open the negotiation of other terms in cases which demand deviation from a deferred determination clause. However, this would necessarily increase the administrative costs of a deferred determination approach, further evidencing that H.R. 8596 best meets the fourth objective, since it has been the experience of many agencies that engaging in negotiation over special patent clauses at the time of contracting can be a difficult and time consuming process. More important is the fact that no definitive criteria has ever been developed, nor does it appear that it can be developed, which would establish when such a deviation was justified.

It is believed that the most important part of the debate centers on which approach best meets the objectives of promoting utilization of Government-funded inventions while guarding against abuse (objectives 1 and 3).

Opponents of H.R. 8596 argue that leaving first option to rights in inventions to contractors will not really ensure greater utilization and will lead to abuses, i.e., either suppression of inventions in some cases, or higher prices ("a windfall") in others because of the patent monopoly, or concentration in industry. Proponents argue that the H.R. 8596 approach will maximize utilization of Government-funded inventions, that the potential abuses are more theoretical than real, and that in any case, the bill's "march-in" provisions are available to rectify any abuses that might develop. They also argue that the issue of higher prices, to the extent it is true, assumes that the invention is commercialized. They maintain that under the deferred approach many fewer inventions will be commercialized, and for those that are not, the issue of price is moot, and the public and the economy have been deprived of many new or improved products.

Factors Affecting Utilization

A decision by any firm to invest in the development and marketing of a patentable invention is dependent on numerous factors, only one of which may be patent ownership. Obviously, patent rights will not be a factor in such decisions unless a potential market is envisioned. But all other things being equal, the ownership of patent rights is a positive incentive for investment in commercialization. Ownership may well be the deciding factor on commitment of private capital, since studies have shown that the cost of bringing an invention from its initial conception or reduction to practice (which is as far as most Government inventions are funded by the Government) to the commercial market is many times the cost expended in first inventing

it under a Government grant or contract. In many situations this investment will not be made if it is perceived that a competitor could piggy-back on to it and thus uncercut and undersell the original developer.

Further, as a general proposition, the inventing organization is more likely to be interested than will other organizations in commercializing an invention due to inherent ability to assess the merits of the invention from inception through early stages of development.

It is probably also better qualified, or at least as qualified as any other firm, to promote or undertake further technical development, since it may have know-how not necessarily available to other companies. It will also normally have an inventor and technical team willing to advocate that their idea be brought to fruition. Further, in the case of many commercial contractors a Government-funded invention may only be an improvement on extensive contractor-owned technology and, therefore, will not alone form a basis for a major new commercial line.

Can the Deferred-Determination Approach Minimize Monopoly Profits Without Inhibiting Utilization

Because of the above circumstances, proponents of H.R. 8596 argue that there is little reason to deny the inventing contractor the opportunity to retain title to the invention and commercialize it. Indeed, in the case of nonprofit organizations or smaller non-manufacturing firms, they would argue that it is unreasonable to expect any effort in transferring the invention to commercial concerns capable of marketing without the incentive of ownership. Thus, it is argued that there is little point in going through a deferred determination process if the Government's objective is to maximize utilization. Deferred determination advocates would claim that the Government can make a better judgment after the invention is identified, and that exclusivity will not always be needed. Implicit in this claim is the assumption that Government personnel will either be in a position (i) to determine if the existence of exclusive patent rights is needed as an incentive to further development, or (ii) to find a better qualified firm to commercialize the invention through a Government licensing effort after taking title to the invention.

In regard to the question of whether exclusivity is needed for private investment to be made in an identified invention, it should be recognized that if the Government determines that exclusivity is not needed but is wrong, no further development may take place. On

the other hand, if the Government was right, consumers may save the hypothetical difference in price that would be charged by someone holding exclusive rights, as opposed to someone who developed the product without exclusive rights. In any case, the public will presumably get an improved product or process which they find more beneficial than its previous alternative.

Moreover, for the Government to be right more often than not when making a deferred determination would require extensive technical, marketing, and economic studies of the firms, technology, industries and market involved. The cost to taxpayers of such programs could be more than any savings they would produce for consumers. This appears to be true, since in most deferred determination cases exclusivity has been deemed necessary, and the costly determination process has been engaged in simply to confirm this fact. This has been substantiated in practice by NASA, HEW and NSF (the three agencies who have historically made the largest number of deferred determinations) by the grant of over 90 percent of the requests for "greater rights" over a period spanning ten years.

Similarly, the ability of Government personnel to decide after an invention is identified that utilization will best be promoted by the Government's taking title and offering the invention for licensing, assumes that commercial developers, other than the inventing contractor, can be found (presumably but not necessarily on a nonexclusive basis). There is really no effective means for Government personnel to ensure that other firms, whether licensed exclusively or nonexclusively, would do a better job of developing the invention than a willing contractor or a licensee of the contractor. As noted previously, other firms often lack some of the "know-how" of the contractor and will not have the inventor or co-inventors working for them. One can be sure that in most cases the inventing organization will have little interest or incentive to transfer its know-how to another firm, possibly a competitor. Moreover, the very process of attempting to find alternative developers will simply serve to delay private investment and cool the interest of the inventing contractor. It will also force the Government into the expense of filing patent applications in order to assure that a patent is available if exclusive licensing is ultimately deemed necessary.

It is important also to emphasize that a deferred determination that is truly geared to resolve the questions that trouble opponents of H.R. 8596 approach would be so costly, complex, and time consuming as to discourage many contractors from requesting rights in the first instance, especially small businesses and universities. They may even

neglect to report the invention under such circumstances. In all likelihood, without a request for rights to trigger the deferred determination process, most agencies will have no incentive to do anything with the disclosure, and the invention will fall into the public domain to be available to all and, in most cases, practiced by no one, as seems to be the case with a very substantial portion of the 28,000 patents now in the Government's patent portfolio. Indeed, under a deferred determination approach the agencies would probably be devoting so many resources to those cases where rights were requested that they would have insufficient personnel or interest to study inventions and encourage development and marketing where rights were not requested. Thus, it appears that H. R. 8596 is more likely than alternate approaches to maximize the commercialization of Government-funded inventions.

Other Concerns of Deferred Determination Advocates

In addition to the monopoly profit concern, advocates of the deferred determination approach have generally voiced two other concerns. First, they express the fear that some contractors will take advantage of patent rights to suppress the utilization of an invention. Such fears have been expressed throughout the years, but no case of such suppression has ever been documented, despite the thousands of instances in which Government contractors have retained title to inventions. Further, H.R. 8596 includes so-called "march-in" provisions that would remedy any such abuse. And even under a deferred determination clause it is unlikely that the Government would have any way of recognizing that a contractor requesting greater rights in an invention intended to suppress its use.

Finally, proponents of a deferred determination approach argue that allowing contractors to retain title in inventions may lead to monopolization of an industry by a contractor. Studies indicate that contractors normally license their patent technologies, and that, in any event, alternative technologies are generally available. No example of such monopolization has ever been given. It is also questionable whether the Government could identify the possibility of such monopolization during the deferred determination process.

A strong argument can be made that allowing contractors to retain patent rights will tend to promote competition in an industry, whereas a deferred determination approach where the Government normally retained title and either dedicated the invention to the public or licensed the invention on a nonexclusive basis approach would do otherwise. The proposition that title-in-the-contractor can lead to monopolization

is very much dependent on the assumption of a competitive marketplace in which all concerns start with equal capacities. In fact, many industries are currently oligarchial in structure and do not fit the model of pure competition. When this is the case the retention of rights in the Government and a policy of nonexclusive dedication or licensing tends to serve the interests of the dominant firms for whom patent rights are not normally a major 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. It is important to note that such firms may well be foreign-based and dominant through subsidization by their governments, making the inadequacies of a policy of the Government's normally acquiring title even more pronounced. Certainly the Government should not be conducting research and development and permitting the results to enure to the benefit of foreign countries to the detriment of our own economy.

On the other hand, smaller firms in an industry must of necessity rely on a proprietary position in new 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 could soon undercut their market through marketing, financial, and other commercial techniques. Accordingly, the deferred determination approach in which title normally is retained by the Government may, in fact, be anti-competitive, since it encourages the status quo.

Conclusion

Analysis of the situation leads to the conclusion that the H.R. 8596 approach is most likely to maximize utilization of Government-funded inventions which, in turn, will promote job creation and economic growth. The H. R. 8596 approach contains sufficient safeguards to remedy any of the potential abuses which, in fact, have been more hypothetical than real. It is also doubtful whether other approaches would better prevent the possibility of abuse, even if found to be of concern. It would be misguided to attempt to formulate a Government patent policy based on the proposition that every conceivable abuse must be forestalled, since this can be done only through establishing an environment which would not be conducive to attracting the private capital necessary to develop and utilize Government-funded inventions. In addition to not maximizing the utilization of Government-funded inventions, such an approach would carry a high administrative cost.