XIII. ASSIGNEE FILING

A. Introduction and Overview

The United States is the only country which does not permit the assignee of an invention to file a patent application in its own name. Currently, all U.S. applications are filed in the name of the inventor, although in fact most are filed by the inventor's assignee in the name of the inventor.

Assignee filing was recommended in the 1966 Report of the President's Commission on the Patent System as a means of simplifying the formalities of application filing and of avoiding delays caused by the need to identify and obtain signatures of all inventors. The 1966 Commission noted the particular need for assignee filing if the filing date were treated as the date of invention. There has been no material change in the reasons for recommending assignee filing since the 1966 Commission. Indeed, the increased interest in a first-to-file system mandates reconsideration of the issue.

Even without a first-to-file system, the advantage of easy and quick filing of applications may outweigh any meaningful disadvantages. The principal perceived disadvantages -- the derogation of the rights of inventors in their inventions and the lack of a personal guarantee of complete disclosure of material information -- can be overcome by procedural requirements and by imposing obligations on the assignee. An inventor's rights can be preserved by requiring the naming of the inventor and the filing of an assignment or other proof of legal title to the assignee. The threat of invalidity or unenforceability of a patent should be sufficient to prevent intentional misnaming of the inventor. Complete disclosure of information material to patentability may be imposed on the assignee, who in many instances may be better situated than the inventor, particularly regarding access to prior art, to provide such information. The assignee may also be obliged to request such information from the inventor. In addition, requiring a delayed filing of an inventor's oath will serve its traditional purpose of imposing responsibility on the inventor regarding originality.

The interest in harmonizing worldwide patent systems is an additional reason for consideration of assignee filing. Harmonization interests aside, the efficiency gained by assignee filing is sufficient reason for its adoption.

The Commission's recommendations are intended to permit assignee filing while protecting the interests of inventors and of the public to a full and complete disclosure.

B. Summary of Public Comments

The public response on this issue was split between those favoring assignee filing and those opposed to it. Several public comments raised the issue of the constitutionality of assignee filing, alleging that assignee filing might be unconstitutional. Some respondents raised concerns that assignee filing might encourage the theft of inventions by corporations. Those in favor of assignee filing noted that it is almost universally accepted in other patent systems, and that it would facilitate securing early filing dates in a first-to-file system.

C. Recommendations and Discussion

Recommendation XIII-A

The owner or owners of full legal title to an invention should be permitted to file a patent application on the invention, to prosecute the application, and to receive any resulting patent thereon, provided:

(i) within such time after filing the application as the Commissioner prescribes, the owner(s) submits to the USPTO a declaration which

(a) identifies the application by title and filing date;

(b) provides the name and last known address of the

inventor or inventors of the claimed invention;

(c) states that the identified inventor(s) is/are believed by the applicant to be the original and first inventor(s) of the claimed invention;

(d) states that the applicant(s) owns or is entitled to ownership of full legal title to the claimed invention;

(e) acknowledges the duty of disclosure to the USPTO of information material to examination of the application as set forth in the USPTO rules; and

(f) certifies that copies of the application as filed and the applicant's declaration were provided to, or sent to the last known address of, each named inventor and provides the date thereof; and

(ii) prior to payment of the issue fee for any patent issuing from the application or relying upon the application for priority, the applicant(s) either has:

(a) filed in the USPTO an assignment by each inventor to the applicant(s) of full legal title to the specific invention disclosed in the application and an oath or declaration by each inventor meeting the requirements of 37 C.F.R. § 1.63, or

(b) has received a ruling from the Commissioner approving issuance without inventor(s) participation under conditions comparable to those set forth in 35 U.S.C. §§ 117 or 118.

Recommendation XIII-B

The name of the inventor should be printed on the face of any patent issued on an application filed by an owner-applicant.

Recommendation XIII-C

No examination of an application filed by an owner-applicant should be conducted until after receipt of the owner-applicant's declaration.

These recommendations do not address how an unnamed inventor learns of the filing by an assignee. Absent publication of pending applications, unnamed inventors have no way of learning of the application and could not claim inventorship prior to issuance. Under the present system, unnamed inventors are protected by potential invalidity or unenforceability of the issued patent should improper inventorship be the result of deceptive intent. The same principles will work to encourage an owner-applicant to name all inventors for a particular application. Of course, where misnaming of inventors is inadvertent, there should be no effect on validity and correction may be made under standards comparable to those required by 35 U.S.C. §§ 116 and 256.

In the event the U.S. adopts publication of pending applications, any requirement for filing inventor assignments and declarations should not arise before publication of the application. This will ensure that unnamed inventors will know when an application has been filed and will take steps to protect their rights.

A difference of opinion exists over the need for an oath or declaration by the inventor in which he claims to be the first and original inventor and in which he acknowledges the duty of disclosure. Some believe an inventor's oath is needed to insure that the inventor reviewed the application, will attest the originality of the subject matter, and will comply with the duty of disclosure. Others believe an oath or declaration by the inventor, in addition to that of the owner-applicant, at the least, would be superfluous and, at best, would

eliminate one of the principal advantages of assignee filing.

Overall, the Commission concluded that the advantages of an oath or declaration by the inventors outweighed the perceived disadvantages. The speed and efficiency of filing gained by assignee filing would not be lost by requiring an oath be filed before issuance. Moreover, since the Commission believed an assignment from inventors was necessary to establish before issuance the owner-applicant's legitimacy, there would be no significantly greater burden on the owner-applicant to get a signed oath at the same time. Accordingly, the recommendation proposes that both an assignment and an oath signed by the inventors be filed before issuance of a patent.

As to the duty of disclosure, the recommendation does not establish a new or different standard from that set forth in the USPTO rules. There is no intention to impose on a corporation, if it happens to be an owner-applicant, a duty of disclosure greater in scope than that required by the USPTO rules.

A change to assignee filing will require amendment of certain sections of the patent law. For instance, § 102 is directed to a "person" and subsections thereof to "applicant's invention." It will be necessary to distinguish between an "applicant" and an "inventor." Since patentability under § 102 in part depends on proper inventorship, misnaming of inventors, with deceptive intent, should be grounds for invalidity. On the other hand, if inventorship is no longer deemed critical to patentability, certain subsections of § 102 should be eliminated. These issues are beyond the scope of the Commission's mandate.

One issue raised in several public comments was the constitutionality of assignee filing, presumably referring to the mandate to secure to inventors the exclusive right to their discoveries. Under existing law, an inventor is permitted to assign an invention, the patent to which issues and secures to the assignee the right to exclude others from making, using and selling the invention. Few would seriously argue that the existing law or procedure is unconstitutional. Since the proposed assignee filing in reality effects no fundamental change either in this procedure or its consequences, no constitutional impediment should stand in its way.

XIV. DEFERRED EXAMINATION OF PATENT APPLICATIONS

A. Introduction and Overview

Patent applications filed in the United States are subjected to automatic examination according to their filing date. U.S. patent examiners search the prior art and render decisions on patentability as an integrated process of examination. Under current law, an applicant has an extremely limited right to defer examination of a filed patent application. An applicant may petition for a deferral of the automatic examination process only for a short period, and only for "good and sufficient cause."[32] Furthermore, no such petition may be granted if the applicant is under an obligation to respond to some action by the USPTO.

In contrast, in most foreign patent systems having deferred examination, there is neither an automatic search nor an automatic examination of the filed applications. Instead, the applicant, or a third party, must specifically request a search and then an examination within a fixed period from the filing date. For example, the Japanese and Dutch require the applicant or a third party to request examination within seven years from the effective filing date of the application. If no request is received, the application is considered withdrawn or abandoned. In the EPO, a request for examination must be received within six months of the notice of publication of the initial search report.

Thus, deferred examination systems provide discretion to the patent applicant to voluntarily defer the examination of a previously filed patent application for a finite period. As is the case with the model contemplated by the 1966 Commission and in place in certain foreign countries, the overall examination process is segmented into discrete, successive stages. Completion of one stage necessarily precedes a later stage (e.g., search must formally precede actual examination) with a minimum time period between each stage.

The concept of deferred examination is recognized but strictly limited in the WIPO Draft Harmonization Treaty. Article 16(2)(b) allows individual member countries to provide deferred examination, but requires that any request for substantive examination be made within three years of the application filing date. The intent of the provision is to encourage prompt examination.

The 1966 Commission recommended adoption of an optional deferred examination system. Under this system, the right to request examination would be preserved for the applicant or third parties for a five-year period, measured from the effective filing date of the application. Prompt inspection for formal requirements and publication of the application would follow filing, and would be considered integral parts of the proposed system. Prior art searches would be delayed until an applicant requested full examination. Third parties would be permitted to request examination without disclosure of their identity. Finally, when examination of one application was requested, all members of a family of applications would be examined concurrently.

B. Summary of Public Comment

The public response on this issue was divided. Several respondents opposed any system which would not provide for immediate examination of filed patent applications. Other respondents favored a "flexible" examination process which would permit a party at its election to defer one or more stages of a "phased examination" process.

Many associations expressed strong opposition to the concept of a deferred examination system. Their primary concern was the creation of uncertainty due to the presence of a large inventory of published, unexamined patent applications. Most parties expressing such concerns emphasized the importance of prompt examination, particularly in rapidly

developing technologies. Some parties also believed that giving discretion to the patent applicant to defer examination except in exceptional cases would lead to abuses.

Of those favoring providing applicant's discretion in deferring examination, most favored a finite, limited deferral period. Most suggested that the period not exceed three years. Some suggested that examination commence following publication and that the search and examination phases be separated, with separate fees, as done in Europe.

Those in favor of deferred examination cited two main advantages. First, they argued that giving patent applicants a fixed period in which they could defer examination of a filed patent application would permit such applicants to test the commercial merits of an invention before committing to the actual examination process. Second, parties argued that segmenting the examination process into two stages (e.g., search and examination) would lead to higher quality examination, because examiners would have a smaller amount of cases, and therefore, would have more time to discover relevant prior art. Thus, if examination were not explicitly requested, after a fixed period the application would be abandoned.

C. Recommendation and Discussion

Recommendation XIV-A

(i) Do not enact provisions to permit a patent applicant to voluntarily defer examination of a filed patent application.

(ii) Accelerated examination should be available, with the payment of a special fee, upon the request of the patent applicant or third parties.

The Commission opposes giving patent applicants discretion to defer examination of previously filed patent applications. Under the existing structure of the USPTO, the search and examination phases are part of an integrated, automatic process that is triggered by the filing of the patent application. As the disclosure of these filed applications is prevented until either the patent issues or is published abroad, the public is unaware of applications filed in areas of technology in which they are interested. Furthermore, in our current system, the term of a patent does not commence until a patent is granted. Thus, providing patent applicants with the authority to voluntarily defer examination for any reason would provide an opportunity for abuse of the practice, and would disadvantage the public's interest in rapidly disseminating information contained in patent disclosures.

In a first-to-file system, certain arguments in favor of deferred examination may be more persuasive, but on the whole, the Commission believes that such a system would still be detrimental to the public's interest and unnecessary. For this reason, a more comprehensive discussion of the arguments for and against optional deferred examination is provided.

1. The Benefits of an Optional Deferred Examination in a First-to-File Patent System

Of the various arguments offered in support of a deferred examination system, the most persuasive tend to be those stressing improvements in the increased availability of prior art to the examiner and to the patent applicant. Advocates of deferred examination argue that allowing patent applicants to defer examination will give them the benefit of knowing the most relevant prior art before having to begin the examination process. Likewise, if examination could be deferred until foreign search reports were available, there would be a higher chance that the applicant, as well as the U.S. examiner, would be aware of the most pertinent prior art before a final determination of patentability were made. Furthermore, as automatic publication of patent applications would most likely be an integral element of a U.S. first-to-file system, third parties would be able to present prior art. This would ensure the likelihood of discovery of any and all relevant prior art before examination.

A second perceived benefit of a deferred examination system is an increased period for applicants to assess the merits of individual applications before having to make a final decision on whether to proceed with examination. Such a period would enable the applicant to better assess the actual commercial merits of an invention

prior to requesting examination. This opportunity for deferral and evaluation of the strength of the application is believed to be particularly useful in rapidly evolving technologies.

2. Detriments of a Deferred Examination System in a First-to-File System

The most commonly identified criticism of deferred examination systems stems from the uncertainty created by the presence of a published, pending but unexamined application. Uncertainty as to whether and when a published application might mature into a patent has the effect of stifling incentives to conduct research or enter new fields. This is especially true because during the deferral period the burden of evaluating the substantive merits of a published application shifts to the public. The authority to defer examination after publication of the application could easily be abused by parties wishing to stake out future areas of development simply by filing a patent application and deferring its examination. In such cases, competitors, rather than the USPTO, would have to assess the merits of that application, and make a decision whether to risk further investment and development in that field.

In addition, many of the supposed benefits of deferred examination may in practice prove to be illusory. First, the option of allowing an applicant to defer examination to permit reevaluation of the commercial significance of an invention prior to examination misplaces priorities. The marketplace is the proper arena for assessing the commercial viability of a patented invention. Until the patent is granted, the full potential cannot be assessed, particularly where substantial investments are necessary to bring the invention to market. Furthermore, the public's interest in ensuring a rapid determination of rights to the invention is far more important than the patent applicant's needs in determining whether to pursue examination of an already pending application.

Second, the argument that quality of examination would improve under this type of system lacks objective factual support. For example, although deferred examination may result in a decrease in the number of pending applications requiring examination, it is almost certain to increase the total "backlog" of pending unexamined applications. Furthermore, the quality of examination would not necessarily increase if time allotted for examination is used instead to update or review an initial search made by a different examiner.

This latter point raises an important practical consideration. The United States patent examination corps would require a substantial restructuring to implement a phased examination system that would be an integral element of a deferred examination system. Such a restructuring would be implemented by retraining, reassigning of functions, and creating a new division of labor between search and examination operations. This substantial restructuring would place significant financial and other demands on the USPTO, all without a clear showing that such a system would provide tangible benefits.

The concept of delayed examination, especially in view of the ever-accelerating advances in scientific discovery, does not appear to represent an improvement in the U.S. patent system, whatever form such system might take. Mandatory early examination is recommended. In addition, accelerated examination should be available to the patent applicant and third parties upon request and payment of a special fee.

XV. U.S. PATENT AND TRADEMARK OFFICE FUNDING

A. Introduction and Overview

None will dispute the contribution of the patent system to U.S. technological progress. The adoption of comparable systems throughout the world eloquently supports that conclusion. The means of funding USPTO operations is largely a political issue reflecting the USPTO's mission to administer the patent laws, the public policy regarding and the public perception of the value of the patent system, and budgetary constraints. Full user funding, legislatively mandated in 1990, would eliminate the budgetary impact of USPTO appropriations. Full user funding, however, is perceived by many of the "users" as placing an unreasonable burden on those who contribute to "the progress of science and the useful arts."

The concept of "user funding" has become popular in recent years. The Administration and some members of Congress consider it a politically acceptable alternative to reduced benefits or services or to higher taxes. The proposed "user funding" of USPTO operations imposes a special tax on patent and trademark applicants as a means of funding USPTO operations which many feel properly should be funded from general tax revenues.

The USPTO's fiscal year 1992 budget allocates 50% to patent pendency, 7% to trademark pendency, 19% to automation, 13% to information dissemination, public service and administration, 10% to space, and 1% to international intellectual property issues. The full user funding proposal seeks to fund virtually all of these costs from application filing fees, issuance fees, maintenance fees, and other fees charged the to "users."

While it appears that over half of the fiscal year 1992 USPTO budget represents costs directly attributable to use of the USPTO by applicants, patentees and registrants, a portion of the current USPTO costs has no direct bearing on their use of the USPTO. Current applicants are not using the automation systems under development, but they would be paying for them for the benefit of future users, other Government agencies and the public as a whole. Current applicants are not the only ones using USPTO information services and public search files, but they would be subsidizing their use by others fully able to pay. Current applicants are not benefiting from the GATT and WIPO negotiations, but they would be paying a portion of the Government's costs for such negotiations, which are an integral part of national trade policy and presumably are intended to benefit all taxpayers. Current applicants are not using all of the space occupied by the USPTO, but they would be paying for all of the space, including that occupied by USPTO functions devoted to public service and support of other Government agencies.

It would be counterproductive to fund the functions intended to encourage development of inventions in a manner which frustrated use of the patent system by those who developed inventions. Whether full user funding would have that effect is debatable.[33] Nevertheless, since the public benefits from the patent system, and in particular from the public functions of the USPTO, it is appropriate for the public to fund those functions.

B. Public Comments

The public comments, received only from "users" of one form or another, predictably oppose higher fees. The comments, however, were not merely a reaction to higher fees; they implicitly recognized the user funding proposal as a tax on a special group to support the public functions of the patent system. There was no general opposition to paying the costs associated with the services received, but there was generally uniform opposition to an additional tax designed to subsidize the public functions of the USPTO. Many of the public respondents, while implicitly suggesting that the "user funding" proposal operated as a tax on applicants, expressed concern over which of the USPTO activities and their associated costs should be funded by user fees.

At least one comment supported virtually full user funding as a remedy to the vulnerability of competition for funds and to budget cuts, fearing that these place at risk the proper functioning of the patent system. This comment suggested adoption of user funding for all USPTO operations (except, perhaps, for the small entity subsidy) with a Congressional guarantee that all user fees would be dedicated to USPTO operations.

Absent some public funding obligation, some fear neither Congress nor any other entity would exercise control of the USPTO functions. To alleviate concern over Congressional oversight of USPTO operations, a comment suggested establishment of a board to exercise advisory control over fee increases, to assure USPTO efficiency and responsiveness, and to report annually to Congress.

Several means of USPTO funding, as alternatives to any public funding, were suggested in the public comments. A significant number of comments suggested transforming the USPTO into a public corporation which would be capable of issuing bonds for capital improvements such as automation and acquisition of office space. A USPTO corporation, it was asserted, also would be more responsive to user needs, presumably resulting in more cost-efficient services. Services of a USPTO corporation, such as public search libraries and publications, could be charged to the actual users, not to the applicants.

On the other hand, some asserted that a USPTO corporation, like the Postal Service, would no longer be directly responsible to Congress, but unlike the Postal Service, would not have any competition forcing cost efficiencies. Additionally, it has been urged that if the USPTO were transformed into an independent public corporation, it might be precluded from participation in national economic, scientific and trade policy-making, leaving such critical policy decisions to other Government entities having little knowledge or experience in intellectual property issues.

Another issue receiving significant public comment was the effect of full user funding on small entities.[34] Assuming the fees charged to patent and trademark applicants would increase substantially with full user funding, many public comments generally predicted the demise of the independent inventor and small entity. However, this assumption is not supported by the facts. When the fees were increased by 69%, the percentage of small entity filings did not decrease.[35]

Several public comments suggested expanding the definition of a small entity to include those with up to 2000 employees, while others suggested the number of employees should be reduced below 500. Other comments suggested a royalties-received basis for determining small entity status. Certain comments suggested that large public universities and nonprofit organizations should not receive small entity status, while others supported their small entity status in view of the public interest served by their reinvestment of royalty income into further basic research. Some suggested publication of those claiming small entity status so the public could police the validity of such claims.

The general consensus of the public comments is that the small entity subsidy is necessary, if not to insure continued small entity filings, then as a symbol of the public's commitment to promoting technical contributions of individuals and small entities. The majority of comments proposed that the small entity subsidy should be publicly funded, either directly or through various tax schemes. Numerous responses opposed funding of the small entity subsidy by large entities.

Several public comments addressed the advantages foreign patent applicants obtain from the U.S. patent system without providing the same advantages to U.S. applicants in their home country's patent system, noting in particular the higher fees charged in foreign patent systems. Some suggested that the U.S. use reciprocity as a basis for determining small entity status eligibility and patent fees (especially maintenance fees) for foreign applicants.

Comments concerning funding publication of applications were mixed, depending on the position the commentator took on the publication issue. Many comments suggested that careful choice of publication media would minimize costs making user funding acceptable, for example, by using commercial services to publish electronically. Others suggested

making applications publicly accessible at the USPTO, and perhaps at regional locations, but not otherwise publishing. Some suggested user funding, but only if based on fees paid by the true users; that is, those interested in reviewing filed applications, not the applicants themselves.

Some comments suggested that the USPTO may actually reduce costs by extending the pendency of applications beyond 18 months. Other comments were concerned with whether extending pendency would result in an actual cost savings, and if so, whether that cost savings was a mere short-term savings. Certain comments focused on the effects that any cost saving measures might have on USPTO operations.

C. *Recommendations and Discussion*

Recommendation XV-A

The USPTO should be funded by a combination of fees and public funds. The fees should be adjusted annually to recover the projected, pro rata portion of the USPTO budget expended in direct support of the examination and issuance of patents and trademark registrations. Other USPTO costs, funded by public funds, would include automation, public information activities, public search facilities, and legislative and international activities, and the like.

This recommendation is considered to provide a fair and equitable allocation of the funding burden, and it limits public funding to those USPTO activities particularly benefiting the public. The basis for distinction would be made between those costs directly attributable to examination, issuance and maintenance functions and those costs related to public functions of the USPTO.

The automation program, for example, will benefit future users, will benefit other Government agencies, and will benefit the public at large; it is not fair for USPTO users to bear the entire burden of a capital expense which will have such wide benefits and application. As some public comments noted, issuing bonds payable in the future for current automation expenses may have the detriment of inhibiting the USPTO from replacing obsolete automation equipment until the bonds are retired. Since such bonds would be repaid from user fees, bond funding would have the benefit of delaying user funding to a later time, when users may benefit from the automation, but it would still be user funding. The automation program should not be funded entirely by present user fees or user-funded bonds.

This recommendation would allay to a degree the concerns of some regarding the need for Congressional oversight of USPTO activities and priorities. Since the patent system and the USPTO are integral parts of the overall national trade policy, Congressional oversight is necessary. Congress, in using public funds for the public activities of the USPTO, would exercise oversight responsibilities over at least those functions. Additional oversight should be provided as recommended below.

Recommendation XV-B

User fees should be guaranteed solely for use by the USPTO in support of the examination and issuance of patents and trademark registrations.

Absent a guarantee that all user fees will be available for use by the USPTO, the appropriation process could affect the user-funded portion of the USPTO budget. Within the Administration, the USPTO is vulnerable to budget cuts and personnel ceilings, to trade-offs with the budgets of other organizations and programs within the Department of Commerce, and to competing Administration priorities. Such vulnerability could place at risk the proper functioning of the patent system and the quality and efficiency of USPTO operations.

Accordingly, the recommendation is designed to preserve the user fees for USPTO operations directly benefiting users.

Under this recommendation, a meaningful portion of the USPTO budget requires public funding, which is vulnerable

to Congressional budget cuts and competition within the entire Federal Government. Nonetheless, the Commission strongly supports such public funding for the public functions of the USPTO, as outlined above.

Recommendation XV-C

An advisory board, comprising representatives of users and reporting annually to Congress, should be established to advise the Administration on fee increases and to assure responsiveness by and efficient and effective operation of the USPTO.

As previously noted, there is concern regarding exercise by Congress of oversight of USPTO functions not publicly funded. If the preceding recommendation is adopted, Congressional oversight may be limited to those functions subject to public funding, and user-funded USPTO functions may not be subject to any oversight controls. It is appropriate, therefore, to establish a board, comprising representatives of user groups, to advise the USPTO and the Administration on efficient use of user fees and to assure USPTO responsiveness.

Recommendation XV-D

A small entity subsidy should be continued as a matter of public policy.

Recommendation XV-E

A small entity subsidy should be funded by public funds.

If user funding is designed to recover the costs associated with a particular use of the system, there is no justification for fees based upon a presumed ability to pay. The cost of examining and processing an individual's application is the same as the largest corporation's application. Continuation of the small entity subsidy, therefore, cannot be justified absent overriding policy considerations.

Encouraging the technical contributions of individuals and small entities, while not deemed important in some other countries, is and should remain an essential part of U.S. policy. The continuance of the small entity discount will manifest continued support for the individual's contribution to the country's technical progress. The question presented by user funding is not the continuation of that policy, but rather, who should bear the cost of that policy.

Two funding sources were suggested--subsidies through higher large entity fees, or public funding either directly by appropriation or indirectly through a variety of tax schemes such as taxes on royalties or tax credits to small entities. The former is perceived as inequitable by large entities, imposing an additional indirect tax on those already paying a larger portion of tax revenue. The tax schemes generally are perceived as an undesirable complexity, imposing additional bureaucratic burdens on the tax and patent systems just to relieve Congress of an appropriation decision in difficult fiscal times. The tax credit suggestion, however, has the advantage of only aiding small entities who are U.S. taxpayers,[36] but such a tax credit may run afoul of the national treatment provision of the Paris Convention. Moreover, a tax credit will be of no benefit to a small entity having no taxable income or to a non-profit organization.

These recommendations reject funding of the subsidy by large entity user fees, but they are not intended to reject subsidy funding by tax schemes determined to be preferable to direct public funding.

Recommendation XV-F

The Commissioner should periodically reevaluate the definition of a small entity used by the USPTO for subsidy eligibility to ensure that the program as applied is benefiting only those intended by the policy behind the program.

The public comments on the definition of a small entity suggest a need to reevaluate the definition to determine whether the benefits of the small entity program are going to the parties originally

intended. Using the Small Business Administration (SBA) definition may be better than imposing on the USPTO an obligation to develop, administer and police its own definition, but only if the SBA definition serves the intended purpose. Accordingly, this recommendation proposes periodic reevaluation of the small entity definition to ensure that the policy of the small entity program is being served.

The suggestion that large public universities and nonprofit organizations should not receive small entity status may deserve consideration, but other policies supporting universities and nonprofit organizations must be taken into consideration. However, if large entities are required to subsidize the small entity, there may be no justification for subsidizing all small entities, including public universities and nonprofit organizations, having substantial royalty income.

The small entity subsidy recommendations do not reject a nominal across-the-board increase in fees if necessary. The recommendation is satisfied so long as small entities retain a preference which is not subsidized by large entities. Many public comments agreed that a flat 10% fee increase was preferable to loss of the preference.

Recommendation XV-G

A small entity subsidy should not apply to maintenance fees.

Small entities are more concerned with the timing of fee payments than with the amount of those payments. A low-cost initial fee is more important than reduced total fees. If a first-to-file system is adopted, small entities would benefit from a low-cost priority document system. Under the present system, it would be preferable to limit increases in small entity application filing and prosecution fees, the up-front costs which may discourage a small entity from filing in the first place. Rather than suggest additional appropriations to keep small entity up-front costs low, this recommendation is intended to offer an offsetting income source.

While opposed by public comments from small entities and their representatives, there is justification for eliminating the small entity subsidy for all fees, or at least maintenance fees. The small entity subsidy is intended to encourage those with limited financial resources to file for patent protection at a time when the commercial worth of the invention is speculative and financial support is unavailable. A small entity which diligently promotes the invention during pendency of the application and after issuance of the patent should be in a reasonable position to know the commercial worth of a patent by the time the first maintenance fee is due. Indeed, by 3.5 years after issuance, small entities should have either commercialized the patented invention, acquired financial support for its commercialization or at least determined the potential of the invention sufficiently to justify further investment in its protection. A contrary argument is presented by entities entitled to the subsidy, such as universities, which conduct basic research resulting in inventions the value of which may not be apparent until near the end of a patent's life. The difficulty in distinguishing between entities presumed to know the value of a patent early in its life and entities obtaining "late-blooming" patents, however, makes it impractical to establish different rules for these different entities. By eliminating the small entity subsidy in maintenance fees, the additional USPTO income could help fund the subsidy for filing and prosecution.

Recommendation XV-H

USPTO funding should be maintained at a level that supports an 18-month pendency of applications, provided that the quality of examination is not compromised.

Extended pendency presents only a one-time savings, not a continuing savings. The Commission proposes this recommendation because the benefits of reduced pendency outweigh the need for slightly greater funding.[37] The longer the delay in pendency, the greater the uncertainty for competitors wishing to introduce new products. This would be particularly true in fast-developing areas

such as electronics and genetic engineering. Moreover, encouraging inefficiency is not a proper way to save costs.

Recommendation XV-I

Publication of pending patent applications should be funded by public funds, if publication of applications is adopted.

Since publication is for the public's benefit, not the applicant's, publication should be publicly funded. With appropriate attention to use of efficient means of publication, the costs, and therefore the appropriations, could be minimized. Indeed, once full electronic filing of applications is achieved, publication could be effected solely by making the application database electronically available to the public.

D. Other Considerations

1. Foreign Use of Small Entity Subsidy/Relatively Low Maintenance Fees

The U.S. may be the only country which provides a small entity subsidy intended to encourage invention by individuals and establishment of new businesses based upon new technology, the ultimate purpose being to contribute to the technological advancement of the U.S. economy. Granting the small entity subsidy to foreign applicants may encourage development of small businesses in foreign countries and encourage issuance of U.S. patents to the detriment of competitive development in this country. While it may sound xenophobic, there is no reason to provide foreign applicants with access to a program designed to encourage small U.S. business, particularly where funding for such a program is tenuous. If international treaties mandating equal treatment of all applicants permit, consideration should be given to making the small entity subsidy available only to those foreign applicants whose home countries provide a comparable preference to U.S. applicants. Of course, the tax credit scheme discussed above may have the desired effect without the complexity of establishing and administering a policy based on reciprocity.

Almost all countries have maintenance fees, much higher in toto than U.S. fees. Since maintenance fees are primarily taxes having no relation to the efficiency of a particular patent office, maintenance fees could be set at comparable rates on a reciprocal basis, e.g., maintenance fees on a U.S. patent owned by a foreign person or entity would be set at the same level as the home country of the foreign entity charges for patents owned by U.S. entities. This could be justified on the basis that maintenance of a U.S. patent right is at least as valuable as maintenance of a patent in any other foreign country. This approach would probably result in a substantial increase in fees, which could aid in funding USPTO operations. While this approach deserves consideration, practical administrative problems may be overwhelming. Given the different patent systems and bases of maintenance fees, it would be a burden to determine and police a comparability schedule for each country. Although a few countries probably comprise the bulk of foreign-owned patents, such a schedule would be required for each country. Also, a mechanism would be required to determine the true owner of the patent at the time of fee payment. Moreover, such a system raises a serious question of national treatment under Article 2 of the Paris Convention. Reciprocity in maintenance fees is not recommended because of the complications such a policy would create.

2. Government Corporation

It appears that the independence and scope of authority of a USPTO corporation would depend upon the nature of the charter passed by Congress. Comparison to the Postal Service or any other public corporation may be meaningless since each charter would be unique. The benefits and detriments of transforming the USPTO into a public corporation may only come to light after Congress has defined the charter. At this time, no recommendation can be made, particularly since the nature of a USPTO corporation will depend in great measure on political considerations. Clearly, the issue will require further examination by Congress and the public.[38]

NOTES FOR PART THREE

1 National Research Council, Steering Committee for Intellectual Property Issues in Software; Computer Science and Telecommunications Board, Commission on Physical Sciences, Mathematics, and Applications, *Intellectual Property Issues in Software*, National Academy Press, Washington, D.C. (1991).

2 *Id.* at 3.

3 Epstein and Jones, *Intellectual Property At A Crossroads, Global Piracy and International Competitiveness*, Congressional Economic Leadership Institute (1990).

4 Request for Comments for The Advisory Commission on Patent Law Reform, 56 Fed. Reg. 22,702 (1991).

5 H.R. REP. NO. 1476, 94th Cong., 2d Sess. 54 (1976).

6 Diamond v. Chakrabarty, 447 U.S. 303, 206 U.S.P.Q. 193, 197 (1980), (citing S. REP. NO. 1979, 82d Cong., 2d Sess. 5 (1952), and H.R. REP. NO. 1923, 82d Cong., 2d Sess. 6).

7 The Constitution provides Congress with the authority to promote the progress of the useful arts through the grant of limited terms of exclusivity in Article I, Section 8, Clause 8. *See generally* Chisum, PATENTS, § 1.02[4], p. 1-28 (1990).

8 Chakrabarty, 447 U.S. at 303.

9 *See* Arrhythmia Research Technology, Inc. v. Corazonix Corp., No. 91-1091, slip. op. (Fed. Cir. 1992) (clarifying the relationship between several Supreme Court holdings on the question of statutory eligibility for inventions involving mathematical algorithms). The Federal Circuit summarized the appropriate standard as follows:

> The Court [in Diamond v. Diehr, 450 U.S. 175, 185, 209 U.S.P.Q. 1, 7 (1981)] thus placed the patentability of computer-aided inventions in the mainstream of the law. The ensuing mode of analysis of such inventions was summarized in In re Meyer, 688 F.2d 789, 795, 215 U.S.P.Q. 193, 198 (C.C.P.A. 1982): In considering a claim for compliance with 35 U.S.C. § 101, it must be determined whether a scientific principle, law of nature, idea, or mental process, which may be represented by a mathematical algorithm, is included in the subject matter of the claim. If it is, it must then be determined whether such principle, law, idea, or mental process is applied in an invention of a type set forth in 35 U.S.C. § 101. The law crystallized about the principle that claims directed solely to an abstract mathematical formula or equation, including the mathematical expression of scientific truth or a law of nature, whether directly or indirectly stated, are nonstatutory under section 101; whereas claims to a specific process or apparatus that is implemented in accordance with a mathematical algorithm will generally satisfy section 101.
>
> In applying this principle to an invention whose process steps or apparatus elements are described at least in part in terms of mathematical procedures, the mathematical procedures are considered in the context of the claimed invention as a whole.

10 The relationship between global competition and intellectual property protection is explained in *Intellectual Property At A Crossroads, Global Piracy and International Competitiveness* . Epstein, *supra*, note 3.

11 COUNCIL ON COMPETITIVENESS, GAINING NEW GROUND: TECHNOLOGY PRIORITIES FOR AMERICA'S FUTURE (1991).

12 *Id.*

13 EPO, USPTO & JPO, Patentability of Computer-Related Inventions (project 12.5) (September 1989).

14 EPO Guidelines of March 6, 1985, Ch. IV, Part C.2.2-3.

15 Betten, *Patent Protection for Computer Programs in Germany and by the EPO*, 9 EUROPEAN INTELLECTUAL PROPERTY REVIEW 10 (1987).

16 Tani, Yoshikozu, *Preparation and Prosecution of Electronic and Computer-Related Patent Applications in Japan*, (1)-(5), PATENTS AND LICENSING, April 1990, June 1990, August 1990, October 1990, December 1990.

17 Kubota, Kokubun, Fukuda, Takase, and Yamaoka, *Patented Inventions Relating to Application Software*, PIPA (Pacific Intellectual Property Association), 22nd Congress (Rochester, New York, 1991).

18 *Business Today*, Nikkei Sangyo Shimbun, June 17, 1991, p. 1.

19 Official Gazette of the USPTO (patent section), vol. 1119, No. 3, at p. 30 (1990) (the USPTO established a two-phase reclassification plan for two computer program-related subclasses. First, examiners, classifiers and public searchers proposed a new breakdown for each subclass. This proposal was then published for public comment. After evaluating the public comments, a final reclassification schedule was enacted). The USPTO is also investigating other reclassification approaches.

20 35 U.S.C. §§ 181-88.

21 42 U.S.C. §§ 2181-90.

22 Two classes of foreign filing licenses are granted. A Class "A" license (broad) is granted if an application contains no subject matter which the defense agencies have requested the PTO to forward for their review. This class of license permits an applicant to file abroad not only on the original application, but applications containing amendments and/or additional subject matter, so long as the additions do not change the "general nature of the invention." The applicant is notified on the filing receipt for the application whether a class "A" license has been granted.

The second class of licenses, Class "B" or "narrow scope" licenses, are granted on applications which were forwarded to a defense agency for review based upon the category guide lists, but on which no secrecy order was recommended. Here, the applicant may not add additional subject matter to a foreign-filed application unless he/she obtains a separate license, but the applicant may amend the application during the foreign examination. The applicant will not be notified of the imposition of the class "B" license unless a petition for a foreign filing license is filed.

23 Years ago, patent applicants desiring to file patent applications abroad had to seek an export license from the Department of Commerce or the Department of State, as well as obtain a foreign-filing license from the USPTO. However, under current practice, a foreign-filing license from the USPTO alone is sufficient to enable the patent applicant to file the patent application abroad. Thus, once the applicant receives the foreign-filing license from the USPTO, he or she can file the patent application abroad without having to obtain an additional license from the Department of Commerce or the Department of State for export of technical information.

24 When the USPTO receives a petition for rescission, it will forward the petition to the defense agency which recommended imposition of the secrecy order. The defense agency is the party which considers and decides the appropriate response to the petition. The petition itself takes the form of a request for reconsideration of the decision of the recommending agency on imposition of the secrecy order program.

25 Currently, the United States has entered into treaties which preserve the right of foreign-filing for patent applications which have been subjected to secrecy orders with the following countries: Australia, Belgium, Canada, Denmark, France, Germany, Greece, Italy, Japan, Korea, Luxembourg, the Netherlands, Norway, Portugal, Sweden, Turkey, and the United Kingdom.

26 Exec. Order No. 12,356, 3 C.F.R. 166, Parts 100, 101 (1982).

27 Atomic Energy Act of 1954, as amended, 42 U.S.C. § 141 et. seq., and 42 U.S.C. § 2181 et. seq.

28 There are three types of secrecy orders. The first, Type 1, is discussed above. Type 2 secrecy orders apply to classified or classifiable technology that is either owned by the Goverment or for which the owner is bound by a DOD Security Agreement. These applications require handling and storage under procedures set forth in the INDUSTRIAL SECURITY MANUAL and disclosure without written permission from the USPTO is permitted only to those persons with a proper security clearance and a "need to know." Type 3 secrecy orders apply to classified or classifiable technology that is privately owned where the patent applicant is not under a DOD security agreement. Here, the applicant is not required to handle or store the application under the procedures set forth in the INDUSTRIAL SECURITY MANUAL, but *no* further disclosure is permitted without written approval of the USPTO.

29 The Commission commends and endorses the recent report of the National Academy of Science which addresses the role and function of the U.S. export control laws in a modern global setting. See, NATIONAL ACADEMY OF SCIENCE, FINDING COMMON GROUND: U.S. EXPORT CONTROLS IN A CHANGED GLOBAL ENVIRONMENT (1991). This reports a study undertaken at the request of a number of Government agencies and conducted by the National Academy of Science.

30 *See* 35 U.S.C. § 12, which provides the authority for the Commissioner of Patents and Trademarks to establish patent document exchange agreements with other countries. Currently, the USPTO conducts patent document exchanges with over 50 countries.

31 *See e.g.*, 42 U.S.C. § 2182, and 35 U.S.C. § 202.

32 *See* 37 CFR 1.103(a) (1991).

33 Despite fee increases in 1982, 1983, 1986, 1989 and 1991, small entity filings have increased from 31% of all filings in 1983 to 34% of filings in 1991. The fee increases also had no perceivable effect on total filings, which increased from 105,700 in 1983 to 178,000 in 1991.

34 A small entity is defined under 37 C.F.R. § 1.9(f) as being either

- a small business entity having 500 or less employees, defined by 13 C.F.R. § 121.12 and by 37 C.F.R. § 1.9(d);
- an independent inventor, defined by 37 C.F.R. § 1.9(c); or

- a nonprofit organization, the latter including universities and other institutions of higher learning, defined by 37 C.F.R. § 1.9(e).

35 *See* note 33.

36 In 1991, 27% of all small entity filings were of foreign origin.

37 The USPTO funding authorized for FY 1992 is expected to extend pendency of applications to 19-20 months in 1992.

38 On November 26, 1991, the Senate Committee on the Judiciary stated its belief "that the proposal to convert the Office to a government corporation will require thorough examination."