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Improving the Quality Control for Patents

Harold L. Marquis*

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A significant number of patents have been and currently are being granted for trivial innovations. Examples could be cited, but only a reader possessed of technical expertise and presented with a scientifically selected sample could be expected to make a fair judgment about the quality control of the patent procedure. While such a scientific study should prove helpful in the consideration of patent reform, any final judgment about quality control will obviously be subjective. It is sufficient that the preliminary consideration of patent law reform undertaken in this Article is based not only upon the author's own experiences but also upon his discussions with other patent attorneys, who share his conclusions. The object of this Article is to develop several proposals for improving quality control in the procedures both for issuing patents and for clearing the channels of commerce of invalid patents prior to their normal expiration.

* Professor, Emory University School of Law. The author acknowledges the assistance of Ms. June McClure, J.D., Emory University, 1972, in the preparation of this Article.

I. BASIC PATENTS AND IMPROVEMENT PATENTS

The Patent Act of 1952¹ gave the first statutory life to a standard of patentability which the courts had been applying for over a century.² To the traditional statutory standards of novelty and usefulness,³ Congress added the requirement of "non-obvious subject matter."⁴ The Act provides:

A patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains⁵

Despite this attempt to codify a long line of judicial precedents, there remains "a notorious difference between the standards [of patentability] applied by the Patent Office and by the courts."⁶ A principal cause for this difference is the excessive number of patent applications, each imposing upon the Patent Office the requirement for a careful examination and a time-consuming search. There is a tendency for examiners to resolve any doubt in favor of the applicant and protect the "inventor" of a minor improvement against the use of his improvement by others. Unfortunately, the only option to refusing protection is to grant a 17-year monopoly. In many cases, examiners seem to compensate for the duration of the monopoly by allowing only claims of narrow scope, relying on technical distinctions between the "invention" and prior art. In contrast, a court disturbed by the duration of the 17-year monopoly may invalidate a "doubtful" patent, despite its narrow scope. Any efforts by the Patent Office to refine its standards of patentability and to conform them to the standard of nonobviousness applied by the judiciary are inhibited by a lack of resources and the limitations of *ex parte* proceedings.

One method of reconciling the Patent Office's standards with current judicial attitudes would be to authorize two classes of utility patents.⁷ The 17-year term and rigorous examination requirements could be maintained for a class of patents to be granted for "basic" inventions, while a patent for a shorter term such as five years could be available upon less rigorous examina-

1. 35 U.S.C. §§ 1-293 (1970).

2. See *Graham v. John Deere Co.*, 383 U.S. 1, 12-17 (1966).

3. 35 U.S.C. §§ 101-02 (1970).

4. *Id.* § 103.

5. *Id.*

6. *Graham v. John Deere Co.*, 383 U.S. 1, 18 (1966).

7. For a similar proposal which the author consulted, see C. KAYSSEN & D. TURNER, *ANTITRUST POLICY 171-72* (1959) [hereinafter cited as *KAYSSEN & TURNER*].

tion for "improvement" inventions. An applicant could apply for either class of patent, but many inventors of mere improvements would be deterred from applying for a basic patent by a higher fee and more rigorous examination standards.⁸ The availability of a "consolation prize" would make it easier for the Patent Office to resist granting a basic patent for an insignificant invention⁹ and thereby narrow the gap between Patent Office and judicial basic patent standards. The reduced term of the improvement patent might assuage judicial concern over granting a monopoly for a minor invention.

A. DUAL PATENT SYSTEMS IN OTHER COUNTRIES

West Germany was the first country to enact a special law to protect minor inventions. The Gebrauchsmuster (Utility Model) law,¹⁰ which has been an impetus and model for several other countries,¹¹ authorizes protection only of the shape or configuration of a useful article. This narrow coverage excludes manufacturing processes, electrical circuitry, chemical products, and complicated mechanisms. Actually, the Utility Model laws occupy an area of subject matter between regular and design patent laws. In a few countries, however, the subject matter for minor patents is more nearly coextensive with that for regular patents.¹²

Germany requires novelty, technical progress, and inventive step for a Gebrauchsmuster registration just as it does for a regular patent, but the standards for technical progress and inventive step are quantitatively lower. While the German Patent Office examines an application for registration only as to form and suitability of the subject matter, the registration is subject to both validity attack in infringement litigation and nullity proceedings in the Patent Office. In Japan, an application for

8. W. Lovett, *Patents and Headstarts: A Study of the Polyolefin Plastics* 316 n.38 (1969) (unpublished thesis in Michigan State University Library) [hereinafter cited as Lovett].

9. KAYSSEN & TURNER, *supra* note 7, at 172.

10. See Crotti, *The German Gebrauchsmuster*, 39 J. PAT. OFF. SOC'Y 566 (1957); Lynfield, *German Utility Models*, 47 J. PAT. OFF. SOC'Y 374 (1965); Mott, *The Concept of Small Patent in European Legal Systems and Equivalent Protection Under United States Law*, 49 VA. L. REV. 232 (1963).

11. 2 J. BAXTER, *WORLD PATENT LAW AND PRACTICE* 29-35 (1974) [hereinafter cited as BAXTER]. There are similar laws in Brazil, Italy, Japan, the Philippines, Poland, Portugal, South Korea, Spain, Taiwan, and Tangier.

12. See, e.g., Lecca, *New French Patent Law and Rules of Practice*, 51 J. PAT. OFF. SOC'Y 356, 357 (1969). In France a regular patent must be sought for medicines and processes for their manufacture.

a Utility Model patent is subject to the same patentability requirement as a regular patent application, except that less technical advance is required.¹³ In many countries, the term of a Utility Model registration is shorter than that of a regular patent.¹⁴ Opposition proceedings are frequently permitted under Utility Model laws.¹⁵

In Germany, an inventor may file simultaneous applications for a regular patent and a Gebrauchsmuster registration; the Gebrauchsmuster application remains open until there is a decision on the grant of a regular patent. If a regular patent of sufficient scope is granted, the Gebrauchsmuster application may be abandoned. If a regular patent is denied or is limited in its scope, the Gebrauchsmuster registration may be pursued. Germany allows both types of patents to be granted for the same invention, but some countries require an election.¹⁶ While Germany does not permit one type of application to be converted into another, some countries permit a regular patent application to be converted into a utility registration application,¹⁷ and a few countries permit either type to be converted.¹⁸

B. A PROPOSAL FOR A DUAL PATENT SYSTEM IN THE UNITED STATES

1. Patentability Standards

A system of two classes of patents is a compromise between the premise that innovation should be encouraged and the opposing premise that the burden of patent monopolies on the con-

13. Otani, *Introduction to the Japanese Patent System*, 7 PAT. TRADEMARK COPY. J. RES. & ED., Sept., 1963, at 14-15.

14. There is considerable variation in the length of the term and the point from which it is computed: Brazil (10 years from filing); France (6 years from filing); Germany (6 years from day following filing); Italy (4 years from filing); Japan (10 years from publication); Philippines (15 years from issue); Poland (10 years from filing); Portugal (no set term, but may be renewed every 5 years); South Korea (10 years from registration, but cannot exceed 12 years from filing); Spain (20 years); Taiwan and Tangier (10 years from filing). In several countries, it is necessary to pay periodic renewal fees to keep the patent in force: Germany (renewal fee after 3 years); South Korea (annual renewal fee). BAXTER, *supra* note 11, at 30-34, 218.

15. Opposition proceedings are permitted in Japan, Portugal, South Korea, Spain, and Taiwan. *Id.* at 31-34. France does not have an opposition procedure for the Certificate of Utility but does publish the application for comments by third parties. These comments are simply transmitted to the applicant who is not required to respond but is permitted to amend his claims in light of the comments. *Id.* at 219.

16. For example, an election must be made in France. Lecca, *supra* note 12, at 357.

17. *Id.*

18. *E.g.*, BAXTER, *supra* note 11, at 32.1 (Poland).

sumer should be minimized. Thus the proposed system is based on the assumption that the beneficial inventions included in the new class are likely to be produced despite the prospect of a shorter period of patent protection. Obviously, this cannot be reliably and inexpensively determined for any particular invention, as the only direct evidence might be the self-serving testimony of the inventor or his sponsor, while indirect evidence would probably be inconclusive. Nevertheless, there are methods that might produce a crude estimate of the inventions that are likely to be foregone in the absence of long-term patent protection. Since such inventions would often involve costlier research, the length of the patent term could be based on the amount spent on research. In principle, this approach would be objectionable because it would penalize the inventors of superior ability who are able to avoid high costs. In practice, it would tempt investors to incur unnecessary expenses in developing an invention where long-term protection is thought to be commercially valuable. This would necessitate the development of a maze of rules for the allocation of expenses to a particular invention.

It would be more logical to determine the duration of patent protection on the basis of the distinction between basic and improvement inventions. Since research leading to a basic invention often is more costly and entails more risk of failure than improvement research, the proposed distinction may indirectly achieve the objective of rewarding monetary investment with proportionate patent protection, thus crudely sorting out costly inventions which would not be made without the prospect of a long-term patent. The basic/improvement distinction offers the practical advantage of being somewhat familiar to members of the scientific community, whose informal judgments should be a valuable source for filling in the content of the distinction. The distinction between the two classes of patents should not hinge on implicit conceptual differences, as it is difficult from a technical standpoint to determine the degree of similarity between any invention and the prior art. Rather, the distinction should be based upon different standards of nonobviousness and the extent to which the invention advances the technology. Under such an approach, no new definitions would be needed for improvement patents, since the present definition of nonobviousness could be used and no further requirement for technical advancement should be imposed. However, a different definition of nonobviousness would be needed to carve out a new class of basic inventions.

To obtain a basic patent, the inventor should be required to show that the innovation represents a significant technical advance. This could be determined objectively by examining the invention in relation to the prior art, without attempting subjectively to probe the inventor's mental processes. Evaluation of technical progress should be based upon the scientific aspects of the invention, not its commercial importance which might be attributable to such totally different factors as extensive advertising, appealing design, superior manufacturing technique, and ready access to markets. Because the scientific community often makes this evaluation of innovations for a variety of purposes, the opinion testimony of scientists would aid greatly in making the decision and perhaps would serve to increase the predictability of decisions through the creation of a body of precedent. The requirement for technical advance might also serve to select a high percentage of the more costly innovations for longer-term protection, at least where the research expenditures have been made with a modicum of skill and judgment. Furthermore, it would be more equitable to make the patent reward commensurate with the inventor's contribution to technical progress and thus roughly proportionate to inventive ability. This approach may be more consonant with the patent clause of the Constitution¹⁹ than the present system, in that the duration of the patent would depend upon the extent to which the progress of science and the useful arts has been promoted.

In addition to the requirement for technical advance, a higher standard of nonobviousness should be applied to innovations for which a basic patent is sought. One appealing way to raise the standard of nonobviousness would be to require somewhat more than "ordinary skill" in the pertinent art.²⁰ When protection is being sought for a basic invention, the basis of skill might be defined as the ordinary inventive skill of the scientist engaged in research and the production of inventions in the pertinent art. Such a scientist is expected to have a modicum of inventive skill even though he may never make a significant invention. While a high degree of creativity should be attributed

19. "The Congress shall have Power . . . [t]o promote the Progress of . . . useful Arts, by securing for limited Times to . . . Inventors the exclusive Right to their respective . . . Discoveries." U.S. CONST. art. I, § 8.

20. In order for an innovation to be patentable under present law, it must not "have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. § 103 (1970).

to the model scientist, the definition must stop short of circuitously defining the scientist as the one who makes basic inventions. Because there is some appreciation within the scientific community of the distinction between basic and improvement inventions, it is more likely that there will be too many proposed definitions than too few.

The present definition of the "pertinent art" as that dealing with the kind of problem which the innovation is designed to solve²¹ should continue to be applied to basic patents. This definition would be especially appropriate for basic patents in a dual patent system, since the alternative definition of the art as the industry for which the innovation is designed would often be too narrow or even nonexistent for basic research which may involve several scientific disciplines. Because the focus of basic research is on problem solving, adoption of a problem-solving definition may be essential to any attempt to increase the skill-level standard.

With any definition of two classes of patents, the Patent Office and the courts would have difficulty drawing a line that could be followed with a high degree of reliability. Since the majority of "basic" and "improvement" inventions should be easy to classify, however, drawing a line would be a problem with only a small percentage of innovations, and even then no more difficult than the distinction presently required between obvious and nonobvious innovations. Moreover, the economic consequences of the classification under the proposed system with its "consolation prize" should be less severe than those which result under the present single-patent system.

If the proposed standards of patentability were followed, the adoption of the system should not directly cause an increase in the rate at which patents are issued. However, there is a risk that the shorter term of the improvement patent would encourage examiners and courts to lower the standard for those patents. If the proposed legislation should fail to clearly condemn this natural tendency, the resulting system might be more anti-competitive than the present system. Continuation of the present nonobviousness standard for improvement inventions would make the examination of all applications imperative. A registration system involving no examination for nonobviousness would be undesirable because of the great uncertainty concerning the validity of a patent prior to a judicial decision. Because

21. See *Graham v. John Deere Co.*, 383 U.S. 1, 35 (1966).

it would be more difficult to render reliable infringement advice to a manufacturer if claims of improvement patents were not required to define precisely the metes and bounds of the invention, the same standards of clarity and preciseness should be required for both types of patents.

2. *Single Embodiment Rule*

Under present law, a patent is restricted to a single invention where "two or more independent and distinct inventions are claimed in one application."²² Although this requirement may be designed to produce more revenue by limiting examination to one invention per filing fee,²³ it may also simplify the examination by focusing the search of prior art. While this requirement should be maintained for both proposed classes of patents, the improvement application should be further restricted to a single embodiment of the invention. This would reduce the scope of the prior art search and minimize the proliferation of claims for the same improvement. An application with two distinct embodiments might require far more time to search than an application with only one. Examination of a multitude of applications covering different embodiments of the same invention would be avoided by restricting the inventor of an improvement to patent protection for a single embodiment. This would be a reasonable restriction, since two embodiments of an improvement are not separate inventions even though different from each other.

Under the present system, inventors of minor inventions are often allowed claims, in either single or multiple applications, covering several embodiments in two or more statutory classes. This seems to be broader coverage than is deserved, as usually only one embodiment constitutes the heart of the invention. For example, the heart of the invention seldom resides in both a new composition and the process for its preparation. Once the composition is conceived, the process for its preparation us-

22. 35 U.S.C. § 121 (1970). This section authorizes the Commissioner of Patents to restrict an application to a single independent and distinct invention, and Patent Office Rule 141, 37 C.F.R. § 1.141 (1973), prohibits claiming more than one independent and distinct invention in one application. Patent Office Rule 142, 37 C.F.R. § 1.142 (1973), further provides that "[i]f two or more independent and distinct inventions are claimed in a single application, the examiner . . . shall require the applicant . . . to elect that invention to which his claim shall be restricted"

23. See Isaacs, *Requirement for Restriction: Time for a Change?*, 45 J. PAT. OFF. Soc'y 442 (1963).

ually involves only a slight modification of an existing process and vice versa. If this conclusion is accurate, patent coverage for more than one embodiment of an improvement improperly extends the patent monopoly. The Constitution authorizes Congress to grant patents to "inventors" for their "discoveries" rather than for all the subject matter related to their discoveries.²⁴ Where either a single patent contains a multitude of claims or several patents cover different aspects of the same invention, infringement opinions are complex and uncertain. Restricting the inventor of an improvement to a single embodiment may reduce the unwarranted intimidation that minor patents often exert on small unsophisticated manufacturers confronted by such complexity and uncertainty. Since an inventor would have to consider the patentability of all embodiments of his invention and select one of them for protection, the quality of improvement patents should be increased by a single embodiment rule. The rule should not be detrimental to the inventor who selects for protection the embodiment which appears to be of the greatest commercial significance.

The single embodiment rule would prevent an inventor from presenting in an application for an improvement patent claims in different statutory classes, such as apparatus and process or composition and process, or which differ greatly in scope, such as genus and species or combination and subcombination. Although claims varying in scope of definition are usually essential in providing adequate patent protection, satisfactory scope can be achieved with one independent and a limited number of dependent claims.

An inventor should be required to elect the embodiment he wishes to protect at the time of filing, and any subsequent application covering the same improvement should be rejected. Because he may not know which embodiment is of greatest commercial importance at the time he first files, the inventor should be permitted to correct subsequently any error of judgment by filing an application covering a different embodiment and abandoning the original application. Permitting only one application per improvement to be pending at one time would reduce the examination burden. Denying a substituted application the benefit of the earlier filing date of the abandoned application would discourage the inventor from changing the embodiment originally selected, except where he has made a serious error of judgment.

24. U.S. CONST. art. I, § 8.

To implement the single embodiment rule, the patent examiner would be required to determine whether an application covers more than one embodiment. This determination should seldom be difficult if the applicant is restricted to a single independent claim and a limited number of dependent claims. As under present law,²⁵ each dependent claim should be required to include all the limitations of the independent claim. To ensure that only one embodiment is claimed per application, all dependent claims should be required to be in the same statutory class as the independent claim.²⁶ In addition, a dependent claim should not be permitted if it will require a separate prior art search.²⁷ Adoption of these rules should minimize the occasions when a difficult decision must be made as to whether more than one embodiment is being claimed within the same application.

The single embodiment rule basically would require a determination of identity or nonidentity of invention between two or more patents or applications.²⁸ Since claims would be directed to embodiments rather than to the broader inventive concept, it would be necessary to examine the description in the specifications to determine the invention, which often must be done under present law to decide anticipation issues. The rule of one embodiment per invention has much in common with the double patenting prohibition. Each rule has a similar rationale, in that the double patenting prohibition is designed to prevent *temporal* extension of the patent monopoly while the single embodiment rule is designed to prevent *scope* extension. Both rules apply only where the relevant patents or applications have a common inventor. Like single embodiment, the issue of double patenting hinges on a determination of the identity of invention, although the task involves only a comparison of the claims.²⁹ Because of these similarities, it would be logical to turn to the double patenting cases for guidance in refinement of the single embodiment rule. For example, a holding of double patenting between a patent and an application need not be based upon

25. Patent Office Rule 75 (c), 37 C.F.R. § 1.75 (c) (1973).

26. This is not required under present law. U.S. PATENT OFFICE, *MANUAL OF PATENT EXAMINING PROCEDURE* § 608.91(n), p. 48 (3d ed. 1961, rev. 1973) [hereinafter cited as MPEP].

27. A dependent claim which might require a separate search is not improper under present law, but restriction may be required. *Id.*

28. Under present law, identity of invention between patents or applications must be determined for purposes of anticipation, interference declarations, and double patenting. 4 A. DELLER, WALKER ON PATENTS § 266, at 180-81 (2d ed. 1965).

29. *Id.*

identity of the claims, but may be based upon simply a lack of patentable distinction between the claims in light of the prior art.³⁰ Only an improvement which is inventive over the first patent may be the subject of a further patent. In the administration of the single embodiment rule, the issue of identity of invention should likewise hinge on the presence or absence of a patentable distinction between the two disclosures. This means that the second application must cover a different improvement. The fact that the two embodiments are in different statutory classes should not compel the conclusion that they represent separate inventions.

3. *Conversion and Simultaneous Application*

In light of the lower standards of nonobviousness and the shorter term recommended for improvement patents, it would be natural for an examiner to allow claims of broader scope for an improvement patent than for a basic patent. The development of a great disparity in the breadth of claims allowed by the Patent Office for the two types of patents might induce many inventors of basic inventions to opt for an improvement patent, especially if a basic patent should involve a longer delay. Too great a disparity must therefore be prevented, as it could result in disuse of the basic patent and thus deny many inventors of basic inventions the patent protection proportionate to their technical contribution. Such a development might also result in the granting of improvement patents so broad as to stifle competition.

Flexibility in the conversion of an application filed for one type of patent into an application for the other type would be desirable, because at the time of filing it would be difficult to predict which type of patent would be allowed by the Patent Office. An applicant for a basic patent might be willing to accept an improvement patent if his application is rejected by the Patent Office. An applicant for an improvement patent might similarly desire to convert to a basic patent, if he originally underestimates the significance of his invention. The conversion of either type of application seems unobjectionable so

30. *Southern Implement Mfg. Co. v. McLemore*, 350 F.2d 244 (5th Cir. 1965); *In re Ockert*, 245 F.2d 467 (C.C.P.A. 1957); *In re Asseff*, 173 F.2d 253 (C.C.P.A. 1949); *In re Fischer*, 57 F.2d 369 (C.C.P.A. 1932). See I. SEIDMAN & L. HORWITZ, PATENT OFFICE RULES AND PRACTICE § 79.5, at 269, 272 (rev. 1968) [hereinafter cited as SEIDMAN & HORWITZ]. *But cf. Traitel Marble Co. v. U. T. Hungerford Brass & Copper Co.*, 22 F.2d 259 (2d Cir. 1927).

long as the application being converted is still pending. Flexibility in conversion can be maximized if the formal requirements for the claims and specifications in the two types of applications are identical. A conversion fee can be used to discourage excessive conversion.

An applicant should also be permitted to file simultaneous applications for both basic and improvement patents covering the same invention. It is preferable that such an applicant have the option of either leaving the improvement patent application pending until a decision is made on the basic patent or seeking the improvement patent first, perhaps to stop infringement. Even an inventor who initially files only an application for a basic patent should be allowed to subsequently file an application for an improvement patent to stop infringement, especially if consideration of the basic patent application is protracted. Although greater delay in the examination of applications for basic patents may be unavoidable, due to the more rigorous examination demanded, potential injury from the extra delay must be minimized, so that inventors of basic inventions are not deterred from applying for basic patents.

If an improvement patent is issued while an application for a basic patent covering the same subject matter is pending, the subsequent grant of a basic patent should be conditioned on the surrender of the improvement patent, and the expired portion of its term should be subtracted from the term of the basic patent granted. An applicant should be permitted to obtain both a basic patent and an improvement patent covering a single embodiment of a basic invention, except where this would result in double patenting.³¹ This right should not add greatly to the examination load, as only a small percentage of the total patents issued are likely to be in the basic patent class and the inventor could usually claim the embodiment in a basic patent alone, obtaining better protection at lower cost.

Some basic patents could be issued under the proposed system for inventions that the courts might later decide are entitled only to the protection of an improvement patent, especially if the courts continue to apply higher standards of patentability than does the Patent Office. If the invention meets the stand-

31. Double patenting would not exist if the basic invention is claimed in either the first application to be filed or the first application to be granted. It would result only if the basic invention is claimed in the application that is the second both to be filed and to be granted. See SEIDMAN & HORWITZ, *supra* note 30, §§ 79.26-.30, at 295-305.

ards of patentability for an improvement patent, a logical remedy in such a case would be judicial conversion of the basic patent into an improvement patent, with the expired portion of the basic patent's term being deducted from the statutory term for the improvement patent. Obviously, where the determination is made after the expiration of the statutory term for improvement patents, invalidity would be the only remedy.

The owner of a basic patent who doubts its validity might want to convert it into an improvement patent. This would be similar to the present practice of dedicating the remaining term of a patent to the public. Voluntary conversion should be permitted on the same terms as judicial conversion. Once an applicant has accepted an improvement patent with no basic patent application pending, however, he should not be permitted to convert the improvement patent into a basic patent, even with a successful Patent Office examination, since such a conversion would be unfair to parties who rely on the shorter term of the protection. Any improvement patent issued where a basic patent is pending should contain a notice of the pendency.

C. EFFECTS OF THE PROPOSED SYSTEM

The establishment of two classes of patents should improve the sagging reputation of the patent system by reducing the gap between Patent Office and judicial standards of patentability, a gap which has rendered the patent validity opinions of even the best attorneys little more than speculation in many cases. The courts would be less inclined to invalidate a patent claiming a minor invention when its term is commensurately short, and examiners would tend to be more discriminating in granting basic patents. Hopefully, the mean standard of patentability would be raised under the proposed system by significantly improving upon the present standard for basic inventions without lowering it for improvement inventions. Two classes of patents with different terms would make it possible to grant a reward that is more commensurate with the contribution of the inventor.

The basic aim of the patent system is to encourage inventing by making it more profitable. This aim has been premised on an uncritical subscription to the belief that it is impossible to encourage too much investment of capital and talent in research activities. This uncritical thinking may be due to a belief that research must continue to develop marvelous new things or to a fascination with research itself, as in the case of the space program. More realistically, total investment in research

ought to be subjected to the economic test that the projected future net income, appropriately discounted for uncertainty and the cost of opportunity capital, should be at least equal to the original investment.³² Admittedly, such a calculation is difficult, due to the unpredictability of research success, but failure to attempt a rough guess can result in gross over- or under-investment in research. It is easy to forget that investment in research competes with all other investment opportunities, and that excessive investment in research may divert too much of the nation's resources and talent from such other activities as education which also contribute to progress. The author is not suggesting that contemporary investment in research is necessarily disproportionate, but is raising these considerations simply to place in proper perspective the choice that must be made between such investment and other activities.

Even if consensus could be reached on the total amount of innovative effort which is desirable, the effect of a dual patent system, or any reform of patent standards, would depend on the elasticity of the supply of commercial innovative effort to changes in patent protection. A decrease in protection may discourage innovation, while an increase may be costly to the consumer in the form of higher prices.

There is reason to think that the elasticity of innovative supply is relatively low. In any event, it would be most difficult to sort out those types of innovations that are directly influenced by changes in patent protection. Certain types of innovations are not motivated by the patent system; many occur spontaneously³³ or in response to an immediate need. Because of competitive drive and the tax advantages of research deductions, the research activities of large corporations may not be greatly influenced by a change in the degree of patent protection afforded. The innovator's headstart advantages, such as reduced production costs or increased demand for the innovation, also provide incentive for investment in research.³⁴ An improvement can usually be rapidly put to use in the production of an existing product and its secrecy can be preserved at least until the product is marketed. As a result, the first user may enjoy a significant headstart over competitors, regardless of patent protection. Even after the marketing of a product utilizing the

32. Kahn, *The Role of Patents*, in *COMPETITION CARTELS AND THEIR REGULATION* 308, 313 (J. Miller ed. 1962).

33. Plant, *The Economic Theory Concerning Patents for Inventions*, 1 *ECONOMICA* (n.s.) 30, 33 (1934).

34. Lovett, *supra* note 8, at 1, 48, 55.

improvement, there may be considerable delay before competitors are able to duplicate the improvement. This is particularly true where the improvement relates to the production process and is difficult to duplicate on the basis of an examination of the product alone.

Unfortunately, headstart advantages may most frequently accrue to well-established firms with ample resources. In addition, the impact of headstart advantages upon investment in research may not be very great because the investor can only guess whether his headstart advantages will enable him to recoup his research costs. Thus, while the *total* research effort of large corporations may not be greatly influenced by changes in patent protection, care must be exercised not to discourage investment in particular long-term, risky projects. On the other hand, patent protection may be a much more general motivating factor for the individual inventor and the small corporation.

The immediate impact of increasing quality control in the patent process would be to divert innovative effort from projects for which patent protection cannot be obtained to projects for which it is available. Obviously, it would result in a wiser utilization of research resources if the diversion were from projects to develop trivial innovations to more important research efforts. Society should pay a greater price for a greater contribution. Granting less patent protection for trivial innovations would also reduce the amount of socially wasteful "inventing around" such innovations by competitors.

Diversion of investment from trivial to more important and therefore better protected innovations might not be very great in the case of an investor who cannot accurately predict his headstart advantages until the research project nears completion. Nevertheless, if inducement of investment in research is a function of the patent system, adequate patent protection should be provided for important innovations where the investor possesses no significant headstart advantages and must incur significant costs of commercial development not incurred by later entrants. Unless the commercial development can be patented or kept secret, as with certain types of commercial processes, later entrants can freely share the benefit of the development by incurring only the costs of production and distribution.

A shorter term for improvement patents would still, in general, enable investors to recoup their research and development expenses, since the development costs for improvement innovations are likely to be less than for basic inventions and thus

recoverable in a shorter time. Also, improvement inventions can generally be put into production sooner, with a smaller capital outlay than basic inventions, and with significant headstart advantages over competitors. Furthermore, investors frequently may be able to recoup their development investment solely from improvements in the product or the benefits of lower production costs, even where there are no headstart advantages. An improved product may generate increased demand, while lower production costs may permit producers to lower their prices to take advantage of any significant elasticity of demand. These benefits would be shared by all firms that are able to increase their production and retain their share of the market. Even if the demand for the product is inelastic, lower production costs can be translated into higher unit profits, which also benefit all firms using the improvement. There are usually fewer market risks with an improvement than with a basic invention, since an improvement involves a product that is already in the marketplace. Producers may invest in improvement research simply to avoid being outstripped by competitors. Thus, the present 17-year term may not be a necessary incentive for improvement research, and substitution of a shorter term should not be expected to unduly discourage beneficial research.

A shorter term for an improvement patent would enable competitors to use the patented improvement earlier and thereby reduce the anticompetitive impact of the patent grant, while still preserving for the patent owner a headstart over his competitors. Under the present system, the author suspects that a significant percentage of patents of doubtful validity could be classified as improvement patents. Even a patent of doubtful validity and importance may sometimes keep competitors in line and deter firms, particularly small firms, from entering the field. Admittedly, a single improvement patent is usually of little competitive significance unless it provides strong patent protection for a commercially important invention. It is quite likely, however, that the competitive power of a firm increases faster than the mathematical increase in the size of its improvement patent portfolio. This synergistic effect may have significant adverse ramifications for competition within an industry. It may enhance the strength of a portfolio of weak improvement patents so that even strong firms are deterred from entering the field, and may provide the cement for building a loosely knit cartel based upon extensive licensing of the portfolio. Using a number of license restrictions, such as the nonexclusive grant-

back clause and the field of use limitation, the owner would be able to tighten his control of the cartel without violating the antitrust laws. Although the licensor and licensees may recognize the mutual advantages of exercising restraint in price competition, the royalties received from licensing would give the portfolio owner a competitive edge even in the absence of such cartelization effects. In addition, widespread licensing of the portfolio may discourage "inventing around" research by the licensees; it may be more profitable and less risky for competitors simply to accept a license. The accumulation of additional improvement patents from the portfolio owner's own research activities and from his licensees by operation of grant-back clauses may perpetuate his control of the market. These anticompetitive effects cast doubt upon the commonly held assumption that competition is fostered by licensing and suggest that additional legal limitations upon licensing may be in order.³⁵ However, some of these anticompetitive effects could also be reduced by adoption of the proposed patent system. The shorter term for the improvement patent should mean that its adverse effects would be felt for a shorter period of time and that it would be more difficult to put together a large portfolio of such patents.

The tendency of the proposed system to stimulate competition should not be overstated. At present, competitors often succeed in "inventing around" many patented improvements within a time shorter than any realistic term for improvement patents. Other patented improvements frequently become obsolete because the basic invention has been displaced by another basic invention. License offers would become more attractive to competitors compared to the "inventing around" alternative, because royalties would be paid over a shorter period under the improvement patent. However, it is doubtful that there would necessarily be increased licensing, since the prospect of decreased royalties might make exclusive exploitation more attractive to the owners of improvement patents. By refusing to grant licenses, the patentee might retain some headstart advantages even when the patent expires. Under the present system, the owner of a patent covering an improvement seldom retains any significant advantage after expiration, as the improvement is likely to be obsolete after 17 years.

The inventor of an improvement invention should be able to obtain patent protection more rapidly than at present, since

35. See Marquis, *Limitations on Patent License Restrictions: Some Observations*, 58 IOWA L. REV. 41, 43-48 (1972).

examiners would tend to be less dilatory in examining applications for patents of a shorter term. Although the more rapid granting of improvement patents might deter competitors from using the improvement when it first appears on the market, the earlier expiration of the patent will bar them from the field for a shorter time. Under the present system, competitors are reluctant to use a new improvement upon which a patent application has been filed without first obtaining a license, because they may eventually be excluded by the issuance of a patent. A competitor who has made substantial investment and commitment in the invention is in a poor bargaining position to obtain a license on favorable terms after a patent is issued. The tooling expenses necessary to use the improvement and the lost sales when its use must be stopped can easily outweigh any gain from its temporary use. Under these circumstances, the patent owner may have effective patent protection for longer than the 17-year term. While the proposed system would not eliminate this problem, it would reduce the duration of the exclusion in the case of improvement inventions.

The proposed system should reduce the search and examination load on the Patent Office, primarily by virtue of the single embodiment rule, and should permit greater concentration on the examination of applications for the longer-term basic patents. The simplicity of the improvement patent application should lead to reduced attorneys' fees for filing and prosecution. This result would be especially beneficial to the independent inventor, who has been hardest hit by the rising costs of patent prosecution.

II. CITATION PERIOD

The constantly increasing deluge of patent applications upon an inadequately staffed Patent Office has inevitably increased the number of patent applications which are not subjected to a thorough search and examination of prior art. Consequently, the most pertinent prior art sometimes is either overlooked or improperly applied, resulting in the issuance of a patent of doubtful validity. Indeed, courts often invalidate patents on the basis of prior art that was not cited by the Patent Office.³⁶ Although the validity of any patent is subject to attack in the courts, the attack must be made at the expense and inconven-

36. *Hearings on the American Patent System Before the Subcomm. on Patents, Trademarks, and Copyrights of the Senate Comm. on the Judiciary, 84th Cong., 1st Sess. 185 (1955).*

ience of a potential or actual infringer. A patent of doubtful validity is thus a weapon its owner can use to intimidate his competitors, especially weaker firms, during the patent's existence. The weapon is often available for the entire 17-year term, in the absence of validity litigation. The significant number of patents held invalid by the courts is convincing evidence of the poor quality control which brings discredit upon the patent system.

In recognition of the technical expertise of competitors in the field, some countries have provided them with an incentive to discover pertinent prior art during the examination process. These countries have established an opposition procedure which allows any interested party to attack a patent within the patent office shortly after the claims have been found allowable.³⁷ Although the procedure varies, it generally commences when the patent office publishes in the official patent journal a report of claims that have been found allowable and notice that copies of the patent are available to the public.³⁸ Any interested person has a short time in which to file an opposition petition, on grounds basically identical to those the patent office itself can assert against the issuance of a patent.³⁹ The filing of this peti-

37. Opposition proceedings are used in Australia, Austria, Brazil, Denmark, Germany, Great Britain, Hungary, Japan, the Netherlands, New Zealand, Norway, Sweden, Union of South Africa, and several other countries. STAFF OF SUBCOMM. ON PATENTS, TRADEMARKS, AND COPYRIGHTS OF THE SENATE COMM. ON THE JUDICIARY, 84TH CONG., 2D SESS., OPPOSITION AND REVOCATION PROCEEDINGS IN PATENT CASES 1 (Comm. Print 1957) [hereinafter cited as OPPOSITION STUDY]. For discussions of opposition proceedings see Reichel & Frishauf, *Opposition Proceedings in the German Patent Office in Light of the Sixth Transfer Law Effective July 1, 1961*, 44 J. PAT. OFF. SOC'Y 52 (1962); Stuart-Prince, *Patent Oppositions in Great Britain*, 40 J. PAT. OFF. SOC'Y 769 (1958); Zentner, *Opposition and the Validity of Patents in the English Speaking Countries*, 40 J. PAT. OFF. SOC'Y 47 (1958).

38. OPPOSITION STUDY, *supra* note 37, at 2. Patent opposition procedure is similar to that used in oppositions in trademark cases before the United States Patent Office. Under the latter procedure, a mark is published in the Official Gazette of the Patent Office once it has been found to be entitled to registration. 15 U.S.C. § 1062(a) (1970). Any person who believes he would be damaged by the registration may file an opposition petition stating the grounds therefor within 30 days after publication. 15 U.S.C. § 1063 (1970). The procedure is similar to civil trial procedure except that the proceedings are usually conducted by correspondence and the Trademark Trial and Appeal Board decides the case by deposition. See 37 C.F.R. §§ 2.101-106, 2.117-136 (1973).

39. OPPOSITION STUDY, *supra* note 37, at 2. In Germany any person may raise an objection. In Great Britain, the challenger must have a real and substantial interest. *Id.*, at 4, 8.

tion institutes an *inter partes* proceeding in which the applicant has the right to answer and each party is permitted to present evidence. The procedure is similar to the interference procedure used in the United States.⁴⁰ The decision is usually made on the basis of the written opposition petition and affidavits rather than testimony before the body that decides the issue.⁴¹ The opposition is frequently based on prior art not cited by the examiner, but issues such as prior public use can also be raised in some countries.⁴² If the patent office sustains the opposition, it may require cancellation or modification of the claims. Opposition proceedings do not delay the patentee's protection in most countries since, even though he cannot bring an infringement suit until a patent is granted, he is entitled to damages for any infringement during the pendency of the opposition.⁴³

While the opposition procedure clearly strengthens the validity of the patents issued, it adds to the applicant's prosecution costs and increases the work load of the patent office. More importantly, it has been suggested that the opposition procedure is frequently used by corporate giants against patents in which they have an interest, with the effect of making it more difficult and costly for small firms to obtain patents.⁴⁴ Oppositions have also reportedly been instituted to coerce an applicant into licensing the opposer in exchange for dropping the opposition.⁴⁵ In such a case, the patent office may continue the opposition, but without the opposer's technical expertise and usually with less vigor. These objections, and the American experience with cumbersome interference proceedings,⁴⁶ have thwarted the adoption of a formal opposition procedure in the United States.

Under present Patent Office regulations, anyone may cite prior art pertinent to any pending application.⁴⁷ This is rarely

40. 35 U.S.C. § 135(a) (1970); Patent Office Rules 201-87, 37 C.F.R. §§ 1.201-287 (1973).

41. OPPOSITION STUDY, *supra* note 37, at 4 (England), 9 (Germany). However, German procedure permits the patent section that decides the case to summon and hear the parties and order the examination of witnesses. There may be few occasions to resort to this procedure, as most oppositions are based on prior printed publications. *Id.* at 8-9.

42. *Id.* at 5 (England), 8 (Germany).

43. *E.g., id.* at 3 (England), 8 (Germany).

44. Stuart-Prince, *supra* note 37, at 789.

45. Reichel & Frishauf, *supra* note 37, at 61.

46. STAFF OF SUBCOMM. ON PATENTS, TRADEMARKS, AND COPYRIGHTS OF THE SENATE COMM. ON THE JUDICIARY, 84TH CONG., 2D SESS., THE PATENT SYSTEM AND THE MODERN ECONOMY 65 (Comm. Print 1957).

47. See Patent Office Rule § 291, 37 C.F.R. § 1.291 (1973); MPEP, *supra* note 26, § 1309.02, at 228.1-2.

done, however, except where there has been an interference, because the Patent Office is required to preserve the secrecy of the application.⁴⁸ Furthermore, a person with relevant knowledge may be reluctant to cite prior art because of doubt as to whether it would receive careful consideration late in the prosecution stage. "To increase the likelihood that all pertinent prior art is considered before issuance of a patent . . .,"⁴⁹ the President's Commission on the Patent System recommended the publication of all applications and the adoption of a citation period of six months following publication. During this period anyone, without regard to standing, could cite any prior patents or publications to be considered by the Patent Office in *ex parte* reexamination proceedings with the applicant.⁵⁰ In addition, the citation period would make the issuance of a patent known to those who might wish to initiate *inter partes* proceedings⁵¹ to determine whether there has been public use or sale to bar the issuance of a patent.⁵² Knowledge of the application would undoubtedly result in increased use of this presently rarely used procedure.⁵³ Since the citations would be used in the continuation of *ex parte* proceedings with the applicant, citation or failure to cite would not preclude a subsequent challenge by an actual or potential infringer.

The Patent Reform Acts of 1967⁵⁴ and 1969⁵⁵ (both unenacted) incorporated the Commission's recommendation of a citation period, but authorized the Commissioner of Patents to fix the term between three and six months after publication of the application. A bill introduced by Senator McClellan in 1969 extended the proposed citation period to one year commencing when the patent is issued.⁵⁶ Thus infringers would be liable during the citation period if the patent should be upheld. Despite some opposition by the patent bar and industry, whose

48. 35 U.S.C. § 122 (1970).

49. PRESIDENT'S COMMISSION ON THE PATENT SYSTEM, TO PROMOTE THE PROGRESS OF . . . USEFUL ARTS 23 (1966) [hereinafter cited as PRESIDENT'S COMMISSION].

50. *Id.*

51. Patent Office Rule 292, 37 C.F.R. § 1.292 (1973).

52. 35 U.S.C. § 102(b) (1970).

53. See *Hearings on S. 2, S. 1042, S. 1377, S. 1691 Before the Subcomm. on Patents, Trademarks, and Copyrights of the Senate Comm. on the Judiciary*, 90th Cong., 1st Sess., pt. 1, at 185 (1967).

54. S. 1042, 90th Cong., 1st Sess. § 136 (1967); H.R. 5924, 90th Cong., 1st Sess. § 136 (1967). These identical bills were introduced by the Administration in both houses on the same day.

55. S. 1569, 91st Cong., 1st Sess. § 136 (1969).

56. S. 1246, 91st Cong., 1st Sess. § 191 (1969).

major objection was the possibility of more frequent public use proceedings,⁵⁷ the Patent Reform Act of 1971⁵⁸ (unenacted) retained the proposal but fixed the citation period at six months after issue of a patent.

This proposal, with a few refinements, is equally desirable under the present system and as an ingredient of the proposed basic/improvement patent system. To discourage the indiscriminate filing of citations and to recoup a portion of the reexamination costs, a small fee could be charged. It is preferable that the time period for presenting citations be short (e.g. three months) to minimize the period of uncertainty concerning the status of the patent. Any injury to the patentee due to the delay involved in the period of citation and reexamination could be reduced by issuing the patent at the time of publication, subject to cancellation or modification in the event of reexamination.⁵⁹ Unlike mere publication, issuance of the patent would permit the patentee to recover for any infringement during the citation and reexamination period in the event the patent is sustained, although infringement suits would be barred until reexamination is completed.

In recognition of the limitations of the *ex parte* reexamination procedure for resolving controverted factual issues and in an effort to keep the procedure simple and expeditious, citations should be limited to prior art not cited by the examiner. Such limitation can be effective only if the institution of public use proceedings in the Patent Office is not permitted after publication of the patent. Otherwise, publication would provide the knowledge of pendency essential to those who wish to institute public use proceedings. In any event, there is little reason to retain public use proceedings, which are rarely used anyway. Courts which hear the witnesses testify are better suited for resolving controverted factual issues than the Patent Office, where the case is decided on the basis of depositions.⁶⁰

In order to keep the reexamination procedure simple, a citation should be evaluated by the examiner handling the application. If he should determine that a citation is meritorious, it could be incorporated into a reexamination office action and for-

57. E.g., *Hearings on S. 2, S. 1042, S. 1377, S. 1691 Before the Subcomm. on Patents, Trademarks, and Copyrights of the Senate Comm. on the Judiciary*, 90th Cong., 1st Sess. pt. 1, at 185 (1967) (statement of State Bar of Texas).

58. S. 643, 92d Cong., 1st Sess. § 191 (1971).

59. This is the procedure proposed in the Patent Reform Act of 1971. *Id.*

60. Patent Office Rule 272, 37 C.F.R. § 1.272 (1973).

warded to the applicant, who could respond in a manner similar to a regular office action and would have the usual right of appeal. Permitting the citator to intervene in the proceedings would probably make them too complex and expensive. If the examiner should decide that the citation is not meritorious, he should terminate the reexamination proceedings. A revised patent must be published if any of the claims are modified or cancelled, and the disposition of all proceedings should be published in the Official Gazette.

Few citations will be made if infringers, who have the greatest incentive and expertise, are discouraged from making them. Thus it may be necessary to preserve the anonymity of citators,⁶¹ so that potential or actual infringers will freely provide citations without fear of inviting a later infringement investigation by a successful patentee.

Knowledge of the identity of the citator might aid the patentee in strengthening the claims of his patent, as well as in pursuing infringement litigation. Thus there is a risk that potential citators will be reluctant to use the citation procedure, because they would lack the opportunity to answer the patentee's response and because citation would afford the patentee the opportunity to put his claims in better shape to withstand subsequent validity attacks. However, it would be much cheaper for a potential citator to use this procedure than to wait to attack the patent through litigation. There is a lesser risk that examiners would rely upon citators rather than conduct careful searches themselves, but this can be controlled by administrative supervision and by the examiner's natural incentive to locate the relevant prior art without assistance. The success of the citation procedure could also be jeopardized by the examiner's reluctance to admit his failure to find the relevant citation, but it may be less embarrassing at the reexamination stage than if the citation is the basis for a subsequent judicial holding that the patent should not have been granted. The validity of these fears can only be tested by the adoption of the procedure. However, one must be willing to abandon it if it proves to be of little value.

The adoption of a citation period might further the policy of keeping invalid patents out of the channels of commerce. This policy can be more efficiently pursued by improving the

61. Anonymity of citators was recommended by the PRESIDENT'S COMMISSION, *supra* note 49, at 23, and has been incorporated in the un-enacted Patent Reform Acts. *E.g.*, S. 1569, 91st Cong., 1st Sess. § 136 (1969).

quality of the examination process in the Patent Office than by encouraging subsequent validity litigation.⁶² Even though fewer invalid patents might be challenged in the courts as a result, the legal presumption of validity of patents need not be strengthened, since the citation process would likely have been used with only a small percentage of invalid patents.

III. CANCELLATION AND REVOCATION PROCEDURES

While the adoption of a citation procedure would improve the quality of examination and thus decrease the number of invalid patents issued, its effectiveness would depend upon the existence of interested parties during the citation period. It certainly could not ensure that the issuance of an invalid patent would be a rare occurrence. Although the invalidity of a patent can be asserted as a defense when the patent owner alleges infringement or seeks to collect unpaid royalties from a licensee,⁶³ the avenues for challenging a patent are somewhat limited in the absence of litigation commenced by the patent owner.

A. CURRENT PROCEDURES FOR CHALLENGING DOUBTFUL PATENTS

An alleged infringer does not have to wait for the patent owner to bring an infringement action against him but can instead seek a declaratory judgment that the patent is invalid or, if valid, that he is not infringing it.⁶⁴ However, in order to meet the case or controversy requirement, the person bringing the declaratory action must be an interested party⁶⁵ subjected to a sufficient threat of infringement litigation.⁶⁶ Active production of the article alleged to infringe or active preparation for its production satisfies the standing requirement, but mere consideration of the advisability of commencing production is probably insufficient.⁶⁷ Thus, a potential infringer may have to make a

62. The Court in *Lear, Inc. v. Adkins*, 395 U.S. 653, 764 (1969) endorsed a "strong federal policy favoring the full and free use of ideas in the public domain" in repudiating the licensee-estoppel doctrine and thus encouraging validity attacks.

63. A patent licensee is no longer estopped from challenging the validity of a patent under which he is licensed in a suit brought by the licensor for unpaid royalties. *Id.* at 661-74.

64. 28 U.S.C. §§ 2201-02 (1970). For a discussion of the declaratory action, see *E.W. Bliss Co. v. Cold Metal Process Co.*, 102 F.2d 105 (6th Cir. 1939).

65. See *Sweetheart Plastics, Inc. v. Illinois Tool Works, Inc.*, 439 F.2d 871 (1st Cir. 1971).

66. *Tremond Co. v. Schering Corp.*, 122 F.2d 702 (3d Cir. 1941).

67. See *Sweetheart Plastics, Inc. v. Illinois Tool Works, Inc.*, 439 F.2d 871 (1st Cir. 1971) (manufacture and token sale of 100 plastic con-

substantial financial commitment before being able to litigate the validity of a blocking patent or its applicability to the article in question. An adjudication before any financial commitment is made might prevent substantial economic waste and useless expenditure of money.⁶⁸ On the other hand, the standing requirement should not be liberalized to the point where potential infringers can harass the patent owner by forcing him to continuously defend his patent.⁶⁹ This is the main objection to permitting suit by someone who is merely contemplating the manufacture of the article in question. A satisfactory balance between these opposing interests could be achieved by granting standing to a party who can *prove* that he would produce the article *but for* the blocking patent. The potential infringer should not be permitted to bring an action until he has settled upon plans to produce a definite embodiment of the patented invention. Otherwise, the validity issue would be moot and the applicability of the patent could not be determined. This prerequisite should be an adequate safeguard against easy judicial acceptance of self-serving statements of a potential infringer's intention.

Since the passage of the Declaratory Judgment Act,⁷⁰ the range of conduct legally sufficient to constitute a threat has been expanded by the courts to include implied and indirect threats⁷¹ and infringement charges against customers of the party seeking the declaratory judgment.⁷² Nevertheless, the requirement

tainers in question with contingent plans for further production held insufficient). See also *Wembley, Inc. v. Superba Cravats, Inc.*, 315 F.2d 87 (2d Cir. 1963), which established the test that "[m]ajor stress should be placed on the 'definite' intention of the plaintiff to take 'immediate' action to utilize its potential and this intention should be 'evident' from the preparatory steps outlined in its complaint," and found that the manufacture of a single necktie and its submission to the patent owner for an infringement opinion was not sufficient to meet the test. For further discussion, see 6A J. MOORE, FEDERAL PRACTICE ¶ 57.20 (2d ed. 1972).

68. E. BORCHARD, DECLARATORY JUDGMENTS 807 (2d ed. 1941).

69. *Id.*

70. 28 U.S.C. §§ 2201-02 (1970).

71. 6A J. MOORE, FEDERAL PRACTICE ¶ 57.20 (2d ed. 1972). *Dewey & Almy Chem. Co. v. American Anode, Inc.*, 137 F.2d 68 (3d Cir.), *cert. denied*, 320 U.S. 761 (1943) carried the indirect threat concept quite far in finding a sufficient threat to plaintiff in defendant's infringement against another firm using the same type of process as the plaintiff, even though the defendant denied knowledge that the plaintiff was using the process in question. For a criticism of this case, see Kreiger, *The Federal Declaratory Judgments Act as it Applies to Patent Actions*, 52 J. PAT. OFF. Soc'y 440, 448-49 (1970).

72. *Tremond Co. v. Schering Corp.*, 122 F.2d 702 (3d Cir. 1941)

of threat of infringement action is still a significant impediment to a declaratory action, since the patent owner can avoid the action by simply refraining from giving any indication of a threat. For example, a potential infringer might try to force a response from the patent owner by sending him a description or prototype of the article he plans to make and requesting the patent owner's views on whether the article infringes the patent. If the patent owner simply refuses to state a position, the potential infringer is frustrated in that he has received neither a sufficient threat to bring an action nor a statement of noninfringement that permits him to safely commence production. Under these circumstances, the case or controversy requirement should be considered satisfied if there is a serious question whether the patent covers the article. Deciding this issue as a preliminary matter would be no more difficult than determining whether a sufficient threat has been made. It is hardly an unfair imposition upon the patent owner to require him to defend his patent once a serious question has been raised concerning its applicability and he has refused to state his position, especially when he enjoys a patent monopoly granted by the government. The prerequisite of a serious applicability question should provide the patent owner with adequate protection against undue harassment; in addition, the courts can prevent abuse by exercising their discretion to refuse to entertain declaratory actions.⁷³

Considerable support for liberalizing the case or controversy requirement in patent cases can be found in *Lear, Inc. v. Adkins*.⁷⁴ In that case the Court held that the licensee-stoppel doctrine, which had prevented licensees from challenging the validity of the patents under which they were licensed, must yield to the "important public interest in permitting full and free competition in the use of ideas which are in reality a part of a public domain."⁷⁵ The Court observed that licensees are often the only parties with sufficient economic incentive to challenge the validity of patents.⁷⁶ Potential infringers are the only other group which may have such an economic incentive and, in fact, are the only group in the case where the patent is not licensed.

The policy adopted in the *Lear* case can be carried out only

(indirect threat of suits for contributory infringement made to purchasers of article in question from plaintiff held sufficient threat).

73. See 28 U.S.C. § 2201 (1970).

74. 395 U.S. 653 (1969).

75. *Id.* at 670.

76. *Id.*

if the courts refuse to impose a stringent case or controversy requirement upon a licensee who brings a declaratory action challenging either the validity of the patent or its applicability to the article he is producing. The same "interested party" standards ought to be imposed upon a licensee as upon an alleged infringer, because the mere existence of a license does not mean that the licensee is necessarily producing the article. The presence of an actual controversy between the parties about either the validity or the applicability of the patent should substitute for an adequate infringement charge,⁷⁷ as it is preferable that the controversy be settled prior to the accrual of damages or termination of the license. Such a controversy exists when the licensor disputes the licensee's contention that he does not owe royalties because the patent is either invalid or inapplicable. Insisting that an "actual" charge of infringement be made by the licensor would compel the licensee to take the risky step of repudiating the license so he could bring suit. This would conflict with the *Lear* policy of removing the barriers to challenges by licensees.

Even with liberalized standing requirements, licensees may be reluctant to attack the validity of patents under which they are licensed, since success also frees unlicensed competitors to use the invention. Thus, the only way to implement the *Lear* policy of clearing invalid patents from the channels of commerce

77. *American Mach. & Metals, Inc. v. De Bothezat Impeller Co.*, 166 F.2d 535, 537 (2d Cir. 1948). In *Medtronic, Inc. v. American Optical Corp.*, 327 F. Supp. 1327 (D. Minn. 1971), the court held that the licensee's declaratory action was justiciable because threats by the licensor and his right to terminate the license at any time created the prerequisite reasonable apprehension of liability on the part of the licensee. The court rejected the licensor's contention that because of the license there would not be the charge of infringement which was essential to justiciability. *Id.* at 1333. The policy of the *Lear* case that patent validity should be open to challenge by licensees was relied upon by the court in holding the controversy justiciable. *Id.* at 1331. *But see Thiokol Chem. Corp. v. Burlington Indus., Inc.*, 313 F. Supp. 253 (D. Del. 1970), *aff'd*, 448 F.2d 1328 (3d Cir. 1971), in which a federal court declined jurisdiction to entertain a declaratory action brought by a licensee prior to the termination of the license because he was basically seeking to have the federal court declare that he had a valid defense to any action by the licensor under state law to collect unpaid royalties. The court thought that a charge of infringement was essential to federal jurisdiction and that there could be no charge prior to termination or repudiation of the license. *Id.* at 255. In a later declaratory action involving the same parties, *Thiokol Chem. Corp. v. Burlington Indus., Inc.*, 319 F. Supp. 218 (D. Del. 1970), *aff'd*, 448 F.2d 1328 (3d Cir. 1971), the court held it had jurisdiction on the ground that the legal barrier to an infringement charge was removed by the licensee's termination of the license prior to bringing suit.

may be to reduce the legal impediments to challenges by potential infringers, the only other group with sufficient economic incentive.

Although neither the present patent law⁷⁸ nor its predecessors⁷⁹ authorized the government to sue to cancel invalid patents, the Supreme Court in 1888 recognized the government's right to maintain an action in equity to cancel a patent procured through fraud.⁸⁰ The Court recognized the need for a remedy equivalent to the English writ of *scire facias*⁸¹ and relied upon the government's analogous right to set aside a land patent obtained by fraud. In a later suit against the same patent owner,⁸² the Court indicated that the government would not have standing to challenge the validity of a patent on other grounds, which would have been available to a private party. The Court saw no need for a collateral attack upon the judgment of the Patent Office on grounds which any person could raise as a defense to the assertion of the patent against him. The government has brought very few suits to protect the public from fraudulently procured patents and has apparently prevailed on the merits in only one case.⁸³ The inactivity of the government may be due to the difficulties of proving fraud by clear and convincing evi-

78. 35 U.S.C. §§ 1-293 (1970).

79. The major prior patent acts were: Patent Act of 1870, ch. 230, 16 Stat. 198; Patent Act of 1861, ch. 88, 12 Stat. 246; Patent Act of 1836, ch. 357, 5 Stat. 117; Patent Act of 1793, ch. 11, 1 Stat. 318; Patent Act of 1790, ch. 7, 1 Stat. 109.

80. *United States v. American Bell Tel. Co.*, 128 U.S. 315 (1888). This right had been previously recognized in *United States v. Gunning*, 18 F. 511 (C.C.S.D.N.Y. 1883).

81. This common law writ issued in the name of the king to revoke charters and patents granted by false suggestion. 128 U.S. at 368-69.

82. *United States v. American Bell Tel. Co.*, 167 U.S. 224 (1897).

83. The only reported case found in which a patent was cancelled is *United States v. Saf-T-Boom Corp.*, 164 U.S.P.Q. 283 (E.D. Ark.), *aff'd per curiam*, 431 F.2d 737 (8th Cir. 1970). The court found that there was either actual or constructive fraud by the applicant in filing a false affidavit upon which the Patent Office relied in issuing a patent. One other action is apparently still pending, *United States v. Marifarms, Inc.*, 345 F. Supp. 858 (D. Del. 1972) (motion to stay action denied). In all the other reported cases found, the government apparently failed to obtain cancellation of the patent. *United States v. Standard Elec. Time Co.*, 155 F. Supp. 949 (D. Mass. 1957), *appeal dismissed*, 254 F.2d 598 (1st Cir. 1958); *United States v. Hartford-Empire Co.*, 73 F. Supp. 979 (D. Del. 1947); *United States v. Cold Metal Process Co.*, 62 F. Supp. 127 (N.D. Ohio 1945), *aff'd*, 164 F.2d 754 (6th Cir. 1947); *Attorney Gen. ex rel. Hecker v. Rumford Chem. Works*, 32 F. 608 (C.C.D.R.I. 1876) (defective because United States not a named party); *United States v. Frazer*, 22 F. 106 (N.D. Ill. 1884); *United States v. Gunning*, 18 F. 511 (C.C.S.D.N.Y. 1883).

dence.⁸⁴ It is also difficult for the government to prove the elements of fraud: that the applicant both intended to deceive and knowingly misrepresented a material fact which induced the Patent Office to grant the patent.⁸⁵ Consequently, this remedy has been of little significance in protecting the public from invalid patents.

While the government can challenge the validity of a patent involved in an illegal restraint of trade and seek to have it cancelled,⁸⁶ this method of attack is ancillary to an antitrust action and thus can be used only under limited circumstances. It has been held that the use of a fraudulently obtained patent to exclude competition is an unfair method of competition under section five of the Federal Trade Commission Act,⁸⁷ and that the Federal Trade Commission has the authority to order compulsory licensing of any such patent.⁸⁸ This authority has been exercised only once, perhaps for the same reasons that there is a dearth of direct governmental attacks upon fraudulently procured patents. These two methods of attack are clearly of little significance in the elimination of invalid patents.

A provision permitting an individual to bring an action to cancel a fraudulently procured patent was included in the Patent Act of 1790⁸⁹ but was deleted by the Patent Act of 1836,⁹⁰ which included several statutory defenses to an infringement action.⁹¹ An individual right of action has not been revived in subsequent patent legislation. In 1871 the Supreme Court decided that this omission precluded a private party from maintaining an action

84. *United States v. American Bell Tel. Co.*, 167 U.S. 224, 251 (1897).

85. *United States v. Cold Metal Process Co.*, 62 F. Supp. 127, 140 (N.D. Ohio 1945), *aff'd*, 164 F.2d 754 (6th Cir. 1947).

86. *United States v. Glaxo Group Ltd.*, 410 U.S. 52 (1973) (government challenge to the validity of patents involved in an antitrust violation permitted even though defendant did not rely on the patents as a defense).

87. 15 U.S.C. § 45 (1970).

88. *American Cyanamid Co. v. FTC*, 363 F.2d 757 (6th Cir. 1966). The defendant was subsequently ordered to license the patent at a royalty no higher than 2.5 percent of the licensee's net sales. *American Cyanamid Co.* [1967-1970 Transfer Binder] TRADE REG. REP. (FTC Complaints and Orders) ¶ 18,077, at 20,504, 20,522 (FTC 1967), *aff'd*, *Charles Pfizer & Co. v. FTC*, 401 F.2d 574 (6th Cir. 1968), *cert. denied*, 394 U.S. 920 (1969).

89. Act of April 10, 1790, ch. 7, § 5, 1 Stat. 111 (1790). This provision was included in the Act of February 21, 1793, ch. 11, § 10, 1 Stat. 323 (1793), unchanged except that the period for challenge, was increased from one to three years after the issuance of a patent.

90. Act of July 4, 1836, ch. 357, 5 Stat. 117.

91. *Id.* ch. 357, § 15, 5 Stat. 121.

to cancel a fraudulently procured patent.⁹² The Court reasoned that the government was the logical party to bring a cancellation suit, since a private action would only bind the parties to the suit and would not cancel the patent as to other parties.⁹³ In this regard, the Court's reasoning was faulty because it is inherent in the cancellation remedy that it be universally binding regardless of the parties. The Court was also concerned that a lack of universal binding effect might subject a patentee to vexatious suits even after a determination that the patent is valid. This concern may be unwarranted, as the persuasiveness of a well reasoned decision upholding a patent should deter most potential challengers. In any event, revival of the private right to bring a cancellation action would be of little practical significance unless it included grounds for challenge other than fraudulent procurement.

A final decision of patent invalidity in an infringement action is now nearly tantamount to cancellation of the patent. In *Blonder-Tongue Laboratories, Inc. v. University of Illinois Foundation*,⁹⁴ the Court held that a patent owner whose patent has been adjudicated invalid in a prior infringement action is collaterally estopped from relitigating the validity against a different defendant, unless he can prove that he lacked a full and fair opportunity to defend validity in the prior action. The Court decided that the rigid mutuality of estoppel rule, which permits a litigant to use a prior judgment only if he and the other party were both parties in the first action, would no longer be applied in patent infringement litigation. This decision falls short of creating a cancellation remedy in infringement litigation only to the extent that a patent owner is not collaterally estopped if he does not have a satisfactory opportunity to defend the patent in the first litigation. The Court said that in the second trial the patent owner can question the first court's understanding of the technical subject matter and the correctness of the standard of nonobviousness it applied.⁹⁵ The patent owner can also introduce new evidence or witnesses that could not have been introduced in the first suit. Because the courts should seldom require a complete trial to dispose of such issues and because there appears to be no sound reason for not applying collateral estoppel even when the second action is

92. *Mowry v. Whitney*, 81 U.S. (14 Wall) 434 (1871).

93. *Id.* at 441.

94. 402 U.S. 313 (1971).

95. *Id.* at 333.

declaratory, the *Blonder-Tongue* decision virtually creates a private cancellation action wherever the case or controversy requirement is met. While this decision will reduce relitigation after a patent has been held invalid and represents a big step towards the creation of a private cancellation remedy, the infringement or declaratory action approach still has limitations which would not be present in a private cancellation action.

B. CANCELLATION OF PATENTS IN OTHER COUNTRIES

A number of countries have dealt with the problem of invalid patents by authorizing private parties to bring revocation proceedings before the patent office.⁹⁶ Such proceedings basically serve to extend the opposition period and can be brought in most of these countries on any ground on which an opposition could have been brought, or if there is no opposition procedure, on any ground on which the original application could have been rejected.⁹⁷ Revocation proceedings are brought after the patent has been granted but are otherwise similar to opposition proceedings. In some countries, the private revocation action is brought in court rather than in the patent office.⁹⁸ The highly developed British and West German revocation procedures could serve as models for adoption in the United States.

In the United Kingdom, any "person interested" who did not oppose the grant of a patent may apply to the Comptroller-General of Patents, within 12 months after sealing, for revocation on any grounds upon which opposition could have been based.⁹⁹ This is essentially a belated opposition and follows a similar procedure.¹⁰⁰ Evidence is generally limited to documents and affidavits, but a right to an oral hearing exists.¹⁰¹ An additional procedure enables any person interested to bring an action in the High Court at any time during the life of a patent to revoke

96. Among the countries which provide for revocation proceedings in the patent office are Austria, Germany, Japan, Mexico, the Republic of South Africa, and the United Kingdom. *WORLD PATENT LITIGATION* (H. Durham ed. 1967). For a discussion of such proceedings, see *OPPOSITION STUDY*, *supra* note 37, at 1-2.

97. *OPPOSITION STUDY*, *supra* note 37, at 2.

98. Among these countries are Argentina, Australia, Belgium, Canada, Italy, Nigeria, and Rhodesia. *WORLD PATENT LITIGATION* (H. Durham ed. 1967); *BAXTER*, *supra* note 11.

99. The Patents Act, 1949, 12, 13 & 14 Geo. 6, ch. 87, § 33.

100. 29 *HALSBURY'S LAWS OF ENGLAND* 92 (3d ed. 1960).

101. D. FALCONER, W. ALDOUS & D. YOUNG, *TERRELL ON THE LAW OF PATENTS* 189-92 (12th ed. 1971) [hereinafter cited as *FALCONER*]. The Comptroller has the power to take oral evidence and permit any witness to be cross-examined on his affidavit. *Id.* at 192.

it on any ground that would be a defense in an infringement action.¹⁰² As the proper course is to bring a revocation action, an action seeking a declaration of invalidity cannot be brought.¹⁰³ While it is necessary to have a real and substantial interest to be a "person interested,"¹⁰⁴ this does not seem to be as onerous as the standing requirement for federal declaratory actions in the United States. The defendant in a British infringement action may counterclaim for revocation.¹⁰⁵

In Germany, the only method of attacking a patent is a nullity action before the Senate of Nullity in the Federal Patent Court,¹⁰⁶ as the courts do not have jurisdiction to revoke a patent in an infringement action¹⁰⁷ and no alternative revocation procedures are available to private parties. Unlike the revocation action before the Comptroller-General in the United Kingdom, the German action may be brought at any time during the life of the patent and can even be brought by a person who had brought an opposition against the grant of the patent.

The German nullity procedure has served as a model to a professional working party, appointed by the Commission of the European Economic Community, in the preparation of a Draft Convention Relating to a European Patent for the Common Market.¹⁰⁸ Under this convention, a European patent system

102. The Patents Act, 1949, 12, 13 & 14 Geo. 6, ch. 87, § 32. Such an action may lie after the expiration of a patent. FALCONER, *supra* note 101, at 293.

103. North-Eastern Marine En'gr. Co. v. Leeds Forge Co., 23 Pat. Cas. 529 (1906). See FALCONER, *supra* note 101, at 293.

104. FALCONER, *supra* note 101, at 169-70. The *locus standi* for revocation proceedings is the same as for opposition proceedings. The Patents Act, 1949, 12, 13 & 14 Geo. 6 ch. 87, § 14.

105. The Patents Act, 1949, 12, 13 & 14 Geo. 6, ch. 87, § 61.

106. M. STIEFEL, EUROPEAN PATENT LAW AND PRACTICE 609-10 (Practising Law Institute, Copyright, Trademark & Literary Property Transcript No. 5, 1971).

107. *Id.* If a nullity action is pending, the judge in an infringement action involving the patent may suspend the proceedings until the nullity decision is made. However, the judge in an infringement action in regard to a Utility Model can decide upon its validity, since it is granted without any examination on the merits. See text accompanying notes 10-13 *supra*.

108. *Draft Convention Relating to a European Patent for the Common Market* (unadopted) (1970). For English translation, see 2 CCH COMM. MKT. REP. ¶ 5751 *et seq.* (1971). This Convention is designed to set up a single Community patent in the Common Market. It implements the more general provision of the *First Preliminary Draft Convention for a European System for the Grant of Patents* (1970), which would include European countries that are not members of the Common Market. For English translation, see 2 CCH COMM. MKT. REP. ¶ 5678 *et seq.* (1971) (Implementing Regulations to the Convention for a Euro-

with its own patent office would be established to grant patents effective throughout the Common Market.¹⁰⁹ Any interested person could apply to the European Patent Office for the revocation of a Community patent¹¹⁰ on basically the same grounds on which the grant of the patent could have been denied.¹¹¹ The patent owner would be notified of the application and afforded an opportunity to submit his comments with regard to the grounds asserted in the application.¹¹² If the application were admissible, the Revocation Division of the Patent Office would render a decision after examination and oral arguments.¹¹³

C. AMERICAN PRECEDENTS FOR CANCELLATION AND REVOCATION PROCEDURES

Administrative revocation proceedings are not totally alien to the American system. The Lanham Act provides for the cancellation of registered trademarks at the petition of a person who is or will be damaged by continued registration.¹¹⁴ Cancellation may be sought on any ground upon which registration could have been refused, but the petition must be filed within five years of registration as to marks registered on the principal register,¹¹⁵ except on such grounds as fraudulent procurement or the mark's having become descriptive. The cancellation decision is made by the Trademark Trial and Appeal Board,¹¹⁶ which can read, but does not hear, the testimony of witnesses taken by oral deposition with the right of cross-examination.¹¹⁷ The decision may not be based entirely upon the written record,

pean System for the Grant of Patents). The working parties have prepared a *Second Preliminary Draft Convention for a European System for the Grant of Patents* (1971). For English translation, see 2 CCH COMM. MKT. REP. ¶ 5503 *et seq.* (1971). The *Second Preliminary Draft* has not yet been adopted by the International Patent Conference and the *Draft Convention Relating to a European Patent for the Common Market* has not been revised to reflect the changes made in the *Second Preliminary Draft*.

109. *Draft Convention Relating to a European Patent for the Common Market* arts. 1-2 (unadopted) (1970). For English translation, see 2 CCH COMM. MKT. REP. ¶ 5753-54 (1971).

110. *Id.* art. 54, 2 CCH COMM. MKT. REP. ¶ 5806 (1971).

111. *Id.* art. 52, 2 CCH COMM. MKT. REP. ¶ 5804 (1971).

112. *Id.* art. 56, 2 CCH COMM. MKT. REP. ¶ 5808 (1971).

113. *Id.* arts. 57-59, 2, CCH COMM. MKT. REP. ¶¶ 5809-11 (1971).

114. 15 U.S.C. § 1064 (1970).

115. *Id.* There is no time limit for marks registered on the supplemental register.

116. *Id.* § 1067.

117. Rules of Practice in Trademark Cases, 37 C.F.R. § 2.123 (1973).

however, since the parties have the right to make oral arguments to the Board.¹¹⁸

There have been numerous proposals to introduce various forms of cancellation proceedings into United States patent law. One of the earliest proposals was the recommendation made in 1943 by the National Patent Planning Commission that any person be permitted to institute cancellation proceedings in the Patent Office within six months after the grant of a patent.¹¹⁹ The short time limitation would have made the proposed proceedings little more than a belated opposition. The House Judiciary Committee, in its work on the revision and codification of the patent laws which resulted in the Patent Act of 1952,¹²⁰ prepared a preliminary draft which included a proposal for patent revocation.¹²¹ This draft would have permitted the Patent Office or any interested person to initiate revocation proceedings in the Patent Office within one year after the grant of the patent. The one-year limitation would have seriously impaired the effectiveness of this procedure in eliminating invalid patents. The draft also authorized courts to require a party attacking the validity of a patent to initiate revocation proceedings in the Patent Office within a period designated by the court or abandon the validity issue. The Committee eventually deleted the revocation proposal, believing it to be too controversial.¹²²

In 1966, the President's Commission on the Patent System recommended the creation of a procedure in the Patent Office for the cancellation of claims in patents.¹²³ The Commission considered this procedure to be faster and less expensive than court proceedings. The Patent Reform Act of 1967 (unenacted) adopted this recommendation in proposing that any person or governmental department could petition the Patent Office within three years after the issuance of a patent for the cancellation of any of its claims on the basis of prior art.¹²⁴ If the Patent Office determined on the basis of the petition that a claim should not have been allowed, the patentee would be notified and given

118. *Id.* § 2.128(c)–129.

119. NATIONAL PATENT PLANNING COMM'N REPORT, THE AMERICAN PATENT SYSTEM, H.R. Misc. Doc. No. 239, 78th Cong., 1st Sess. 4 (1943). The Commission had been established by the President.

120. 35 U.S.C. §§ 1-293 (1970).

121. OPPOSITION STUDY, *supra* note 37, at 18-19.

122. *Id.* at 18.

123. PRESIDENT'S COMMISSION, *supra* note 49, at 29.

124. S. 1042, 90th Cong., 1st Sess. § 257 (1967); H.R. 5924, 90th Cong., 1st Sess. § 257 (1967) (identical bills).

an opportunity either to amend the claim or to seek reconsideration before the Patent Office Board of Appeals. The bill sought to discourage the use of the procedure as a means of harassment by providing for a \$500 filing fee and authorizing the assessment against an unsuccessful petitioner of the patent owner's reasonable expenses of defending the patent, including attorney's fees of up to \$1000. This procedure was proposed as a "poor man's declaratory judgment action,"¹²⁵ but would have differed from a judicial declaratory action in that the filing of the petition would have simply initiated post-prosecution proceedings between the patent owner and the Patent Office, with the petitioner having no subsequent involvement. The *ex parte* nature of these proceedings and their substantial cost might have led a potential infringer to prefer the *inter partes* court challenge where he would have a better opportunity to present his case. Cancellation provisions have been omitted from recent patent reform bills.¹²⁶

D. A PROPOSAL FOR CANCELLATION AND REVOCATION PROCEDURES

Although *inter partes* cancellation procedures may generally be patterned after the proposals in recent patent bills, the preferable forum for private cancellation actions may be the United States district courts rather than the Patent Office. A court which hears witnesses testify may be better suited for resolving controverted factual issues than the Patent Office, which may have to base its decision on depositions. The central location of the Patent Office would make it difficult and expensive for the parties to have the trial conducted there. In any event, it may be preferable to interject the fresh viewpoint of the district courts, which are less likely than the Patent Office to have strongly held opinions about patent law concepts. Although the *Blonder-Tongue* decision comes close to creating a private cancellation remedy,¹²⁷ obstacles will most likely be encountered unless the action is specifically authorized in legislation. The main difference between cancellation of a patent and an invalidity decision is that cancellation would conclusively bar the patent owner from asserting the patent against another party

125. *Hearings on Patent Law Revision Before the Subcomm. on Patents, Trademarks, and Copyrights of the Senate Comm. on the Judiciary*, 90th Cong., 1st Sess., pt. 1 at 95 (1967) (testimony of Senator Rife, Chairman of the President's Commission on the Patent System).

126. See, e.g., S. 643, 92d Cong., 1st Sess. (1971).

127. See *Blonder-Tongue Laboratories, Inc. v. University of Ill. Foundation*, 402 U.S. 313 (1971).

even if he could show that he did not have a satisfactory opportunity to defend the patent in the cancellation action. A defendant in an infringement action ought to be permitted to seek cancellation in a counterclaim. In other respects also the proceedings for cancellation should be similar to invalidity proceedings, with liberalized standing requirements.

Since patents are granted as a result of examination by the Patent Office, the Office has an interest in seeing invalid patents revoked and should therefore be empowered to institute revocation proceedings. Indeed, the Patent Office may be more likely than any other institution to receive information casting doubt upon patents, primarily from third parties, but also from sources within the Office. The expertise of the Patent Office could be best utilized by conducting within the Office the proceedings which it initiates. The creation of a continuous reexamination procedure after the issuance of a patent could be avoided by confining the grounds for revocation to those not raised in the examination of the application. While the ground of nonobviousness ought to be considered a second time if the challenge is based upon prior art not cited by the examiner in the original application, neither a new method of applying prior art cited in the examination nor any other new argument should be sufficient ground for revocation. Otherwise the revocation procedure would create too much uncertainty about patents.

The fact that some patents are not commercially utilized until late in their life and grounds for revocation may not be promptly discovered weighs heavily in favor of permitting the initiation of revocation proceedings in the Patent Office at any time during the life of a patent. Firms that are in or are seriously considering entering the business to which the patent relates would be a prime source of revocation information, and a time limitation would effectively bar a significant number of revocation actions based on such information. There is a legitimate fear that an unlimited period would leave the status of patents too uncertain and consequently would discourage investment in and exploitation of the patent. However, that fear no more justifies a time limitation on revocation proceedings than on declaratory actions challenging validity, which similarly make the status of patents less secure.

Revocation proceedings ought to correspond closely to the proposed citation proceedings, in which the Patent Office would also examine the challenge. Anyone, without regard to standing, should be allowed to bring prior art not cited in the original

examination to the attention of the Patent Office. A small fee charged for each complaint could partially cover the expense of the proceedings and reduce the number of complaints filed for harassment purposes.

Whether the source of revocation information comes from a private complainant or is independently discovered within the Patent Office, a revocation question initiated in the Patent Office could be best handled by the same division and preferably the same examiner that examined the application. If the Patent Office should determine that revocation is required, it could set forth the reasons in an office revocation action with the usual right of appeal. Regardless of how the proceedings are handled, it is important that they be expedited to shorten the period of uncertainty concerning the patent in question.

In a revocation proceeding, the patentee would best receive the protection his invention deserves if he were allowed to amend the claims or substitute new claims. Justice dictates, however, that the patentee be barred from submitting *broader* claims, since he had that opportunity when he filed the application and other parties might have relied in various ways on the limitation of the patent to its original claims. On the other hand, even challengers of patents which are upheld might benefit from amendments which clarify coverage or narrow the scope to exclude prior infringing activity. While amendments might strengthen the patentee's position in future court battles, opponents of the amendment right can legitimately complain only about the timeliness of such amendments. It might be argued that the patentee should have submitted valid claims during the original examination, but at least part of the "fault" must be assigned to the examination process in the Patent Office.

Permitting complainants to intervene in Patent Office revocation proceedings would make them expensive and time-consuming and result in an increase in the period of uncertainty about a patent. The creation of an *inter partes* judicial cancellation procedure would greatly reduce the need for such intervention. Moreover, because other parties might have revocation information not already before the Patent Office, the institution of Patent Office proceedings could be publicized to afford an opportunity for such information to be brought to the attention of the Office. To expedite the proceedings, only a short period should be allowed for this purpose.

Unless the Patent Office adopts a costly periodic reexamina-

tion program, it is unlikely that it will often discover grounds for revocation on its own initiative. Consequently, the success of the proposed revocation procedure may depend largely upon the willingness of private parties to file complaints. Potential complainants may be deterred for the same reasons as potential citators if they cannot remain anonymous. Increasing the presumption of validity arising from a decision upholding a patent would deter a potential complainant because it would weaken his case in a subsequent *inter partes* court challenge. Only a slight increase in the presumption would be justified in any event, since the Patent Office proceedings would not be *inter partes*. Potential complainants should be informed of the disposition of the case. Indeed, the uncertainty created by the proceedings can only be terminated by publication of the outcome.

A Patent Office decision against revocation should not bar an *inter partes* court challenge but should bar subsequent proceedings in the Office on the same issue or any other issue that reasonably could have been presented in the first challenge. As in the case of a holding of invalidity, either judicial cancellation or revocation by the Patent Office should be retroactive to the extent of barring a suit by the patentee for infringement or collection of royalties accruing prior to the time of the decision. However, the legitimate financial planning of patentees would be unduly disrupted by permitting licensees restitution of royalties already paid.

Adoption of the Patent Office revocation procedure should help eliminate invalid patents and increase respect for the patents that survive the process. Because the revocation procedure would be relatively inexpensive to a complainant, it could become a fairly effective "poor man's remedy," provided that the proceedings are expedited. The efficacy of the procedure could be jeopardized if the Patent Office should be unwilling to admit error, but there is no reason to believe that this would occur.

IV. CONCLUSION

Sympathy for inventors, the *ex parte* nature of the examination process, and a heavy work load have caused the Patent Office to apply a standard of invention approaching mere novelty. Concern for the cost of the patent monopoly to consumers has motivated the courts to apply a higher standard, resulting in the invalidation of a significant number of patents and the doubtful validity of many others. If one accepts the author's

conclusion that the Patent Office grants many patents for trivial innovations, one solution for narrowing the gap between the two standards would be to create a short-term "improvement" patent and retain the present 17-year term only for "basic" inventions. The filing procedures and subject matter coverage ought to be identical for both classes, but the basic patent should be reserved for significant innovations. The present standard of nonobviousness should be used for the improvement patent, while the skill of the research scientist should become the standard for the basic patent. In addition, a significant technical advance should be required for the basic patent.

Restricting an improvement to a single patent covering a single embodiment would reduce the examination burden by limiting the subject matter that must be searched. Inventors of improvements can survive this restriction simply by choosing to protect the embodiment with the greatest commercial potential. Permitting the conversion of an application for one class of patent into an application for the other class would reduce the adverse consequences of initially filing for the wrong class. Authorizing the filing of concurrent applications for both basic and improvement patents would be desirable for the same reason, and also because less rigorous examination might allow the improvement patent to be issued earlier. In the event the improvement patent is issued first, its surrender should be a condition for the granting of a basic patent and the expired portion of its term should be deducted from the term of the basic patent. Judicial conversion to an improvement patent should be allowed for basic patents which fail to meet the higher standards.

This two-tiered system should close the gap between the standards of invention applied by the Patent Office and the courts, while still providing an adequate incentive for innovation. The reward granted would be more commensurate with the inventor's contribution and the amount spent on research. Long-term protection is less necessary for improvements than for basic inventions, since the development cost for improvements is usually lower and can generally be recovered by the inventor with headstart advantages. Also, improvements often create benefits of higher efficiency and lower costs. The improvement patent should diminish the examination burden, simplify patent prosecution, and reduce the costs which are especially burdensome for the independent inventor.

The present patent system lacks a method by which competitors may challenge the grant of patents. As a result, the

overworked Patent Office too often fails to find or properly apply the appropriate prior art. Adoption of a citation period following the publication of an application would provide a realistic opportunity for competitors to present objections to the grant of a patent. This procedure would be less expensive and less susceptible to abuse by corporate giants than the opposition procedure used in some countries. Uncertainty about the status of patents could be minimized by keeping the citation period short and limiting citations to prior art not cited by the examiner. Injury to the patentee due to the delay involved in the citation process could be avoided by issuing the patent at the time of publication but subject to cancellation or modification as a result of reexamination. The overall effect of the citation period should be to reduce the number of invalid patents entering the channels of commerce.

In addition to the citation procedure, an interested party should have the right to bring a cancellation action in federal district court. The declaratory action is currently not a satisfactory substitute because of the onerous standing requirement, but the *Lear* policy of clearing the channels of commerce of invalid patents¹²⁸ may lead to liberalization of those requirements. Although the *Blonder-Tongue* decision came close to creating a private cancellation remedy,¹²⁹ it is limited by the case or controversy requirement and by the right of the patent owner to relitigate on the ground that he lacked a full and fair opportunity to defend the patent in the first action.

The Patent Office has a sufficient interest in the revocation of invalid patents to justify its right to institute a revocation action. Such an action should be conducted within the Office, in order to utilize its expertise and knowledge about the patent. The requirement for continuous reexamination could be avoided by limiting the grounds for revocation to those not raised in the original examination. There would be little justification for imposing a time limit on revocation actions when none is imposed on declaratory actions. Like the citation proceedings, revocation proceedings in the Patent Office should be conducted *ex parte* by the same division that examined the application. It is important that the patentee be permitted to limit his claims during the proceeding in an effort to avoid invalidity. The anonymity of complainants and care not to strengthen the presump-

128. See *Lear, Inc. v. Adkins*, 395 U.S. 653 (1969).

129. See *Blonder-Tongue Laboratories, Inc. v. University of Ill. Foundation*, 402 U.S. 313 (1971).

tion of validity of patents unsuccessfully challenged would be required to encourage the filing of complaints with the Patent Office. An expeditious revocation procedure could become an effective "poor man's remedy."

The proposals made in this Article for improving quality control must be carefully evaluated as to their likely impact upon research and investment in innovation. Central to this evaluation is the elasticity to changes in patent protection of both innovative effort and investment in innovation. If the author is correct either in his tentative conclusion that the elasticities are low or in his judgment that these proposals would not radically decrease overall patent protection, then these proposals should have no serious adverse effect on innovation. They would unquestionably improve the mechanism for quality control.

