

**PROPOSAL FOR THE SIMPLIFICATION AND REFORM OF
THE UNITED STATES PATENT SYSTEM**

Cecil D. Quillen, Jr.

Published in the American Intellectual Property Law Association
Quarterly Journal, Vol. 21, No. 3 (1993), pp. 189-212
(Cite as: 21 AIPLA Q.J. 189)

**PROPOSAL FOR THE SIMPLIFICATION AND
REFORM OF THE UNITED STATES PATENT SYSTEM**

Cecil D. Quillen, Jr.*

I. INTRODUCTION.....	190
II. OBJECTIVES OF A PATENT SYSTEM.....	190
III. CURRENT FEATURES OF THE US PATENT SYSTEM THAT ARE CONTRARY TO THE OBJECTIVES A SYSTEM SHOULD SEEK.....	192
A. <i>Diminished Standards for Patentability</i>	192
B. <i>Excessive Damages for Patent Infringement</i>	195
C. <i>Uncertainty</i>	197
IV. THE PROPOSALS.....	199
A. <i>First to File</i>	200
B. <i>Provisional Applications and Publication</i>	201
C. <i>Patent Term and Enforceability</i>	202
D. <i>In re Hilmer</i>	203
E. <i>Standards for Patentability and the Presumption of Validity</i>	204
F. <i>Remedies for Patent Infringement</i>	205
V. COMMENTARY ON OTHER RECOMMENDATIONS OF THE COMMISSION.....	205
A. <i>Patent Enforcement Issues</i>	205
B. <i>Best Mode</i>	206
C. <i>Disclosure Obligations</i>	207
D. <i>U.S. Patent and Trademark Office Funding</i>	207
E. <i>Reexamination/Reissue/Deferred Examination</i>	208
VI. SUMMARY OF PROPOSALS.....	208
VII. SUMMARY OF THE ADVANTAGES OF THE PROPOSALS.....	209
A. <i>Patentees</i>	210
B. <i>Innovators</i>	210
C. <i>The U.S. Patent & Trademark Office</i>	211
D. <i>Consumers</i>	212

* Senior Advisor, Putnam, Hayes & Bartlett, Inc. (Economic and Management Counsel), formerly Senior Vice President, General Counsel and Director, Eastman Kodak Company. Bachelor of Science in Chemical Engineering, Virginia Polytechnic Institute & State University; Bachelor of Laws, University of Virginia; graduate of the Executive Development Program of the University of Tennessee. The views expressed in this paper are those of the author and should not be attributed to Putnam, Hayes & Bartlett, Inc. or Eastman Kodak Company.

I. INTRODUCTION

The Advisory Commission on Patent Law Reform, established in 1990 by then Secretary of Commerce Robert Mosbacher, delivered its report (referred to herein as the Commission Report) to the Secretary of Commerce in August 1992. The Commission confined its recommendations to issues affecting the U.S. patent system as they pertain to "harmonization" of U.S. patent laws with those of other countries, to procedural issues regarding the enforcement of patents in the courts and to certain specialized patent issues, and did not deal with substantive issues of patent law.¹ This Article goes beyond the report of the Commission and identifies substantive features of present U.S. patent law which are contrary to the objectives that should be sought to be achieved by a patent system, including changes in U.S. patent law which have occurred in the past decade, and, in addition to commenting on certain of the Commission's suggestions, sets forth substantive proposals for the reform and simplification of the U.S. patent system which deal with those features and changes.²

II. OBJECTIVES OF A PATENT SYSTEM

For purposes of this Article and the proposals contained herein, it has been assumed that the overriding objective of a patent system is to enhance consumer welfare by fostering innovation, the commercialization of new products and new processes.³ A patent system seeks to achieve this objective by offering the prospect of a subsidy from the consumer to those who create or discover new ideas, disclose them to the public, and exploit them commercially. The prospective subsidy is in the form of a supra-competitive price for the patented goods or goods made by the patented process, and is made possible by the exclusive right granted to the patentee which enables him to exclude others from practicing the patented invention in competition with him

¹ The issues considered by the Commission, as reported in its Overview of Recommendations, dealt with three topics: Harmonization-Related Issues, Patent-Enforcement Related Issues, and Unique Issues Facing the Patent System. Commission Report, at 7.

² Many of the suggestions herein are not original with the author and have previously been made or endorsed by others, e.g. the Advisory Commission on Patent Law Reform, the Section of Patent, Copyright and Trademark Law of the American Bar Association, and the authors of many of the articles cited herein. The author's hope is that he has drawn together in one Article the most important reforms which should be made to the U.S. patent system.

³ Millions of words appear to have been written on this topic, not all of which have been read by the author. This summary of the objectives of a patent system is, the author hopes, a fair approximation of the better thinking expressed in those works he has read. A particularly interesting treatise on the topic is Kaufer, *The Economics of the Patent System* (1989). Also of interest is Schlicher, *Patent Law: Legal and Economic Principles* (1992), which approaches the topic from a different perspective.

or charge them a royalty for practicing the invention.⁴ The extent to which such a supra-competitive price can be charged depends upon consumer demand for the patented product (or for the product of the patented process) and the extent to which economic (not technical) substitutes are available.⁵ Consumer welfare is also enhanced by innovation in the form of imitations of patented goods or patented processes by those who "design around" the patents covering them, an activity which is aided by the diffusion of knowledge resulting from public disclosure of patented inventions. This latter form of innovation, "designing around," is an expression of competition and increases the variety of choices available to consumers. Presumably the two forms of innovation, that by patentees and their licensees, and that by those who introduce imitation products or processes by "designing around," are equally virtuous. The latter, "designing around," is considerably more common.⁶ The enhancement in consumer welfare should at least equal its cost (i.e., the supra-competitive price paid by the consumer), and the administrative costs inherent in the system should be held to a minimum and should be borne by those receiving the subsidy.⁷

A patent system, like any legal regime, should inform those affected by it of their rights and duties so they can act accordingly. The outcome of disputes or possible disputes should be predictable in advance to minimize

⁴ Some might object to the characterization of the supra-competitive price as a subsidy. Perhaps the exclusive right is necessary to discourage "free riders" and enable the patentee to recover his costs. Thus the underlying hypothesis is that the prospect of obtaining the monopoly made possible by the exclusive right conferred by a patent is necessary to induce the research and development work and investment that led to the new product or new process in the first place, and there would have been no new product or new process in the absence of that prospect. Interestingly enough, it does not appear that this hypothesis, which is the central justification for a patent system, has ever been verified by empirical research, except possibly for a few specific industries. See Kaufer, *supra* note 3, at 21-22. It is certainly possible that much modern corporate research is driven by the necessity to maintain parity with competitors, and would be done even in the absence of the possibility of a patent and the hope for a monopoly profit, and that the patenting of such research is primarily "defensive" to assure the opportunity to use the fruits of one's own work. It is almost certain that government funded research would go forward without such a prospect.

⁵ "Cross elasticity of demand" is the term economists use to characterize and quantify the extent to which one product is an economic substitute for another. Mansfield, *Principles of Microeconomics* (3d ed. 1980), at 169.

⁶ With the possible exception of pharmaceuticals and chemical compounds, which frequently are a single chemical substance, and either are or are not covered by a patent, even the simplest of products or processes can be affected by tens, or even hundreds, of patents. Thus most innovators, even those who are patentees, face the task of designing around numerous patents owned by others. This, together with the increased number of valid patents brought about by today's lowered standards for patentability, has made the task of the innovator more complicated and expensive for the reasons noted elsewhere by the author. See Quillen, *infra* note 9.

⁷ This essentially means the system should be self supporting through fees paid by patent applicants and patentees. These costs, however, would be reflected in the prices charged by patentees and their licensees for patented goods and goods made by patented processes and thus would ultimately be borne by consumers who are said to be the beneficiaries of the system. This is entirely appropriate as it merely requires consumers to bear the costs of a system operated for their benefit and enables them through their purchasing decisions to determine which patented innovations are of value to them.

uncertainty, and so that litigation to ascertain ones' rights and duties is unnecessary, or at least minimized and simplified. This requires a simple and explicit analytic method that can be applied easily to possible disputes. The system should impose the least possible cost on those who are affected by it, and transaction costs, including the litigation costs to resolve those disputes that do arise, should be minimized to the extent possible.

III. CURRENT FEATURES OF THE U.S. PATENT SYSTEM THAT ARE CONTRARY TO THE OBJECTIVES A PATENT SYSTEM SHOULD SEEK

The U.S. patent system, as it presently operates, is unnecessarily complicated and uncertain and imposes excessive and unnecessary costs on innovators, and thus is a deterrent to innovation in the United States.⁸ The excessive costs result from three features of current U.S. patent law: diminished standards for patentability, excessive damages for patent infringement, and unnecessary uncertainty as to the outcome of patent disputes and patent litigation. Each will be dealt with briefly in turn.⁹

A. *Diminished Standards for Patentability*

Virtually all commentators have agreed that the standards for patentability in the United States have been lowered in the past decade.¹⁰ This has been brought about by three concurrent changes in U.S. patent law affecting (1) the relevance of nonstatutory factors to the determination of nonobviousness under 35 U.S.C. Section 103, (2) the scope of prior art regarded as relevant to the obviousness/nonobviousness issue, particularly as it relates to "combination" patents, and (3) the presumption of validity.

*Graham v. John Deere*¹¹ and *United States v. Adams*,¹² decided by the

⁸ See Rutter, *The Great Patent Plague*, Forbes ASAP, March 29, 1993, at 58.

⁹ The effect of these three features on innovation in the United States has been discussed elsewhere by the author. See Quillen, *Innovation and the United States Patent System Today*, presented October 19, 1992 at Antitrust and Intellectual Property: Practice and Policy Issues for the 1990s, ABA Continuing Legal Education Institute (co-sponsors Section of Antitrust Law and the Section of Patent, Copyright & Trademark Law).

¹⁰ For example, see Klitzman, *The Federal Circuit is Making New Law*, presented at PIPA Congress, Chicago, Illinois (October, 1985), Lee, *The Most Significant Patent Cases Relating to the Question of Obviousness Under 35 U.S.C. Section 103*, presented at ABA Annual Meeting, New York, NY, (August, 1986), Adelman, *The New World of Patents Created by the Court of Appeals for the Federal Circuit*, 20 U.Mich.J.L. Reform 979 (1987) at N. 1 and at 991 (hereinafter Adelman, *The New World*), and Merges, *Commercial Success and Patent Standards: Economic Perspectives on Innovation*, 76 Cal.L.Rev. 805, at 810- 811 (hereinafter Merges, *Commercial Success*).

¹¹ *Graham v. John Deere*, 383 U.S. 1 (1966). For a discussion of *Graham v. John Deere* and a historical review of the development of the nonobviousness standard, see Kitch, *Graham v. John Deere Co.: New Standards for Patents*, 49 J.Pat.Off. Soc'y 237 (1967), reprinted from 1966 Sup.Ct.Rev. 293.

¹² *United States v. Adams*, 383 U.S. 39 (1966).

Supreme Court on the same day, prescribed the test for determining whether an invention has met the nonobviousness requirement of 35 U.S.C. Section 103. The Supreme Court statutory test requires a three- step factual analysis: (1) determining the scope and content of the prior art, (2) ascertaining the differences between the prior art and the claims at issue, and (3) resolving the level of ordinary skill in the pertinent art. The question of obviousness or nonobviousness is determined against this factual background.¹³ *Graham* and subsequent Supreme Court cases made it plain that nonstatutory factors, the so-called "secondary considerations," are only of conditional relevance in determining whether the nonobviousness requirement has been met.¹⁴ Decisions of the Court of Appeals for the Federal Circuit, however, have elevated the nonstatutory factors to primary importance, stating that they must always be considered,¹⁵ and that they can even override a conclusion that the invention did not meet the nonobviousness requirement under the Supreme Court's three-step statutory test.¹⁶

¹³ *Graham*, 383 U.S. at 17.

¹⁴ "Such secondary considerations ... *might* be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries *may* have relevance." *Graham*, 383 U.S. at 17-18 (emphasis supplied). In commenting on the Scoggin patent, also at issue in *Graham*, the Court said "However, these factors do not, in the circumstances of this case, tip the scales of patentability." *Graham*, 383 U.S. at 36. This position was subsequently reiterated by the Supreme Court in *Anderson's-Black Rock v. Pavement Salvage*, 396 U.S. 57 (1969) and *Sakraida v. Ag Pro*, 425 U.S. 273 (1976). In essence the Supreme Court cases hold that nonstatutory factors cannot overcome a determination of obviousness under the statute using the three-step analytic method prescribed in *Graham*. Hence, under the Supreme Court test the nonstatutory factors are only of conditional relevance, to be considered only if there is doubt remaining after application of the three-step statutory test.

¹⁵ See *Fromson v. Advance Offset Plate*, 755 F.2d 1549 (Fed.Cir. 1985) where, notwithstanding the conditional relevance accorded the nonstatutory factors in *Graham* and the subsequent Supreme Court cases, the court said "[E]vidence of secondary considerations must always when present be considered in the process of determining obviousness." 755 F.2d at 1556. See also *Stratoflex v. Aeroquip*, 713 F.2d 1530 (Fed. Cir. 1983) where the court said "It is error to exclude ... evidence [of secondary considerations] from consideration." 755 F.2d at 1539. The Federal Circuit has characterized the nonstatutory factors as "objective evidence of nonobviousness," *Perkin-Elmer v. Computervision*, 732 F.2d 888, 894 (Fed. Cir. 1984), although they are considerably less "objective" than are the statutory factors. See Merges, *Commercial Success*, *supra* note 10, Whelan, *A Critique of the Use of Secondary Considerations in Applying the Section 103 Nonobviousness Test For Patentability*, 28 B.C.L.Rev. 357 (1987), and Harris, *The Emerging Primacy of "Secondary Considerations" as Validity Ammunition: Has the Federal Circuit Gone Too Far?* 71 J.Pat. & Trademark Off. Soc'y 185 (1989) (hereinafter Harris, *Secondary Considerations*).

¹⁶ "[T]he teachings of the prior art *prima facie* would have suggested to one of ordinary skill in the art the claimed invention.... However, the evidence of secondary considerations ..., particularly commercial success, is extremely strong, and is entitled to great weight. In considering the evidence of obviousness/nonobviousness collectively, we conclude the trial court's decision that the ... invention ... would have been obvious ... must fall." *Simmons Fastener v. Illinois Tool Works*, 739 F.2d 1573, 1575-76 (Fed. Cir. 1984). "This is one of those cases where evidence of secondary considerations 'may ... establish that an invention appearing to be obvious in light of prior art was not.'" (citations omitted). *Alco Standard v. TVA*, 808 F.2d 1490, 1501 (Fed. Cir. 1986). *Demaco v. von Langdorff*, 851 F.2d 1387 (Fed. Cir. 1988) appears to be another such case. See Adelman, *The New World*, *supra* note 10, at Ns. 40 & 46; Harris, *Secondary Considerations*, *supra* note 15, at N. 1. None of these cases, however, provide any analytic method other than "considering the evidence collectively" for relating the nonstatutory factors to the three-step statutory analysis mandated by *Graham*, or for determining when their weight is sufficient to overcome a determination of obviousness under the statutory analysis.

The scope of prior art regarded as relevant to the obviousness issue has been narrowed by the Federal Circuit to preclude considering collectively the teachings of prior art references which do not themselves suggest that they be considered together.¹⁷ This is contrary to the approach followed by the Supreme Court in *Graham* and subsequent Supreme Court cases.¹⁸ The implicit assumption in the Federal Circuit cases apparently is that the "man of ordinary skill in the art" does not keep himself informed of developments in the arts pertinent to his work, and that he is a literalist, devoid of even the tiniest amount of imagination or creativity, and is totally unskilled at problem solving.¹⁹ The Federal Circuit approach leads to the result, deplored by the Supreme Court, in *Anderson's-Black Rock, Sakraida, and A & P v. Supermarket* of valid patents on combinations of old elements in which each element does only what the prior art taught that it would do, and which achieve no new or unexpected result.²⁰ Finally, the presumption of validity prescribed in

¹⁷ For example, see *Ashland Oil v. Delta Resins*, 776 F.2d 281, 293 (Fed. Cir. 1985), *Panduit v. Dennison*, 774 F.2d. 1082, 1093 (Fed.Cir.1985), *ACS Hospital v. Montefiore*, 732 F.2d. 1572, 1577 (Fed.Cir.1984), *Lindemann v. American Hoist*, 730 F.2d. 1452, 1462 (Fed.Cir.1984), and *Medtronic v. Cardiac*, 721 F.2d 1563, 1575 (Fed.Cir.1983). The practical effect is to read Section 103, the nonobviousness section, out of the statute and to make patentable all inventions that are "not identically described or disclosed" in a single prior art reference. See Schlicher, *supra* note 3, s 5.04[3] at 5-77, 81; Nguti, *Patent Law: Doctrinal Stability--A Research and Development Definition of Invention is Key*, 20 Val.U.L.Rev. 653 at N. 219 (1986).

¹⁸ In *Graham*, in evaluating the obviousness of the insecticide sprayer bottle patent assigned to Cook, the Court considered the collective teachings of references from the pump sprayer art and references relating to liquid containers with pouring spouts, even though the references did not themselves suggest that they be considered together. *Graham*, 383 U.S. at 35. Elsewhere in *Graham* the Court stated: "[T]he ambit of applicable art in given fields of science has widened by disciplines unheard of a half century ago. It is but an evenhanded application to require that those persons granted the benefit of a patent monopoly be charged with an awareness of these changed conditions." 383 U.S. at 19. In *Dann v. Johnston*, 425 U.S. 219 (1976), the Court said "[I]t can be assumed that such a hypothetical person would have been aware both of the extensive use of data processing systems in the banking industry and of the system encompassed in the Dirks patent" even though there was no such suggestion in the Dirks patent. 425 U.S. at 229. In *Sakraida* he was assumed (perhaps tongue-in-cheek) to be familiar with Greek mythology. See *Sakraida*, 425 U.S. 273, N. 1.

¹⁹ In *Standard Oil v. American Cyanamid*, 774 F.2d 448, 454 (Fed.Cir.1985), the Federal Circuit said: "A person of ordinary skill is ... one who thinks along the line of conventional wisdom in the art and is not one who undertakes to innovate..." Every engineer or scientist with whom the author has ever worked would be offended by this characterization. This is certainly not the man of ordinary skill in the Supreme Court cases.

²⁰ *A & P v. Supermarket*, 340 U.S. 147 (1950). The six patents in *A & P, Graham, Adams, Anderson's-Black Rock*, and *Sakraida* were all "combination" patents. Five of the "inventions" were held obvious (and hence the patents were invalid) because they were combinations of old elements each of which did only what the prior art taught it would do, and which achieved no new and unexpected result. One, the invention in *Adams*, although a combination of old elements, was determined not to be obvious because it achieved a new and previously unknown result. The Supreme Court has told us the standard for patentability applied in these cases has its origin in the Constitution. See *Graham*, 383 U.S. at 5-6; *Anderson's-Black Rock*, 396 U.S. at 61; *Sakraida*, 425 U.S. at 273. The Federal Circuit however has not followed Supreme Court law on "combination" inventions. For example, see *Environmental Designs v. Union Oil*, 713 F.2d 693, 698 (Fed.Cir.1983) and *Medtronic v. Cardiac*, 721 F.2d 1563, 1566 (Fed.Cir.1983). In *American Hoist & Derrick v. Sowa*, 725 F.2d 1350, 1360 (Fed.Cir.1984) jury instructions which followed the Supreme Court test in *haec verba* were characterized by the Federal Circuit as "wholly erroneous." See Harris, *Prospects for Supreme Court Review of the Federal Circuit Standards for Obviousness of Inventions Combining Old Elements*, 68 J. Pat & Trademark Off. Soc'y 66 (1986).

35 U.S.C. Section 282 has been transformed into a heavy burden of persuasion which can be overcome only by "clear and convincing evidence."²¹

The consequence of the diminished standards for patentability is that valid patents can now be obtained on inventions that once could not have been the subject of a valid patent. Simply put, there are more valid patents. The availability and existence of more valid patents makes it necessary for would- be innovators to seek and deal with more patents (and thus incur higher costs) than they otherwise would. The would-be innovator however obtains no advantage from his additional patents because the same opportunity (or necessity) applies to his competitors as well. At the end of the day everyone has more patents and no one has gained an advantage. All have found it necessary to incur higher costs.²²

These changes have had two other effects beyond the increased costs resulting from the lowered standards for patentability. They have made patent litigation (both discovery and trial) more complex and costly, and they have made the outcome of patent disputes and patent litigation more uncertain. Increased litigation costs result from the simple fact that there are more (and more complex) issues to be tried, which increases the length of trials and the scope and amount of discovery necessary to prepare for them. Outcomes have been made more uncertain because of the increase in the number and complexity of issues (the more and more complex the issues on which probabilistic predictions must be made, the more uncertain is the ultimate prediction), and because there is no prescribed analytic method for dealing with these issues other than to "consider the evidence collectively."²³

B. *Excessive Damages for Patent Infringement*

The intention of the patent damages statute, 35 U.S.C. Section 284, according to the Supreme Court, is to compensate the patentee for harm suffered as a consequence of infringement.²⁴ Current law often overcompensates

²¹ See, e.g., *Connell v. Sears Roebuck*, 722 F.2d 1542, 1549 (Fed.Cir.1983).

²² The beneficiaries are those whose incomes have been enhanced and jobs made more secure by the increased work, e.g., patent attorneys who advise and represent patent applicants, patentees, and innovators; patent examiners who examine the additional patent applications; licensing managers who must negotiate more licenses; consultants and experts who assist in litigation; and arbitrators and mediators who practice ADR. See Rutter, *supra* note 8, at 62.

²³ This is a paraphrase from *Simmons Fastener v. Illinois Tool Works*, in which the court said, "In considering the evidence of obviousness/non-obviousness collectively, we conclude the trial court's decision that the ... invention ... would have been obvious ... must fall." 739 F.2d at 1576.

²⁴ See *Aro v. Convertible Top*, 377 U.S. 476 (1964) and *General Motors v. Devex*, 461 U.S. 648 (1983). See also articles cited *infra* notes 27, 30.

the patentee.²⁵ Many cases award the patentee as damages both his "pecuniary loss" and a "reasonable royalty,"²⁶ and the Federal Circuit has said that a "reasonable royalty" should be more than the "normal, routine royalty noninfringers might have paid."²⁷ The author has argued elsewhere²⁸ that the literal interpretation of the patent damages statute is that the patentee is to receive as damages either his "pecuniary loss" as a consequence of the infringement or a "reasonable royalty"²⁹ for the infringer's use of the invention, that the two are mutually exclusive, and that the patentee should receive the greater of the two, one or the other, but not some combination which exceeds either of them.³⁰ To award a combination of the two, or a reasonable royalty which exceeds that which a noninfringer would have paid, is to give the patentee more than he would have earned in the absence of the infringement and to treat the patent damages statute as punitive, not compensatory.³¹ Those who innovate by designing around existing patents³² may sometimes find that their conclusions of noninfringement or invalidity were incorrect and that they are patent infringers instead. It is fair that innovators who find them-

²⁵ The excessive compensation frequently awarded patentees may to some extent account for the fifty percent increase in patent litigation between 1980 and 1990. See Seabrook, *The Flash of Genius*, *The New Yorker*, January 11, 1993, at 38, 40. Perhaps patentees, like Willie Sutton, know "where the money is."

²⁶ See, e.g., *State Industries v. Mor-Flo*, 883 F.2d 1573 (Fed.Cir.1989) and *Radio Steel v. MTD*, 788 F.2d 1554 (Fed.Cir.1986).

²⁷ *Panduit v. Stahlin*, 575 F.2d 1152, 1158 (6th Cir.1978), which has been adopted by the Federal Circuit as setting forth approved methodology for calculating both "lost profits" and "reasonable royalty." In *Stickle v. Hublein*, 716 F.2d 1550, 1562-63 (Fed. Cir. 1983) the court said: "[T]he trial court may award an amount of damages greater than a reasonable royalty so that the award is 'adequate to compensate for the infringement.' [quote from Panduit omitted] Such an increase, which may be stated by the trial court either as a reasonable royalty for an infringer (as in Panduit) or as an increase in the reasonable royalty determined by the court, is left to its sound discretion." For a criticism of the Federal Circuit approach, see Adelman, *Infringement Damages--Law and Policy*, presented October 19, 1992 at Antitrust and Intellectual Property: Practice and Policy Issues for the 1990s, ABA Continuing Legal Education Institute (co-sponsors Section of Antitrust Law and Section of Patent, Copyright & Trademark Law (cited herein as Adelman, *Damages*).

²⁸ See Quillen, *supra* note 9.

²⁹ "Pecuniary loss" is what the patentee would have earned had the infringement not occurred. It may be price erosion on the patentee's sales, it may be lost profits on sales the patentee lost to the infringer, it may be foregone royalties if the patentee had licensed his patent, or it may be some combination of the foregoing. "Reasonable royalty" is the amount a willing licensee would have paid for using the invention.

³⁰ In addition, patent damages awards today typically do not take into account the additional income taxes the patentee would have paid on his additional income in the "but for" world, and are calculated based on lost income rather than lost cash flow (even though the award will be paid in cash and only cash can be invested to earn interest). See Quillen, *supra* note 9; Jarosz, *Pre-Tax Versus After-Tax Patent Damages: Do The Courts Have It Right?*, 74 *J.Pat. and Trademark Off. Soc'y*, 938 (1992); Quillen, *Income, Cash, and Lost Profits Damages Awards in Patent Infringement Cases*, 2 *Fed.Cir. Bar J.* 201 (1992); Jarosz, *Considering Taxes in the Computation of Lost Business Profits*, 25 *Creighton L.Rev.* 41 (1991).

³¹ Adelman, *Damages*, *supra* note 27, pointed out that the law of enhanced damages is available to punish those infringers whose conduct was willful.

³² This is most innovators. See *supra* note 6.

selves in this position should compensate patentees for the harm they have done, or pay a reasonable price for their use of the invention, whichever is the greater. But to require more, as the current law frequently does, is to discourage efforts to innovate by designing around existing patents.

C. Uncertainty

As noted above, uncertainty in patent law has been increased by proliferating the number of issues which must be tried to resolve a patent infringement suit, and by the number of instances in which no simple analytic method is prescribed, and a determination one way or the other is to be made by considering all of the evidence collectively, based on the totality of the circumstances, or committed to the sound discretion of a judge. In such instances no one can ascertain in advance whether a proposed course of conduct is proper or improper, and the answer is not known in the absence of litigation.³³

Preliminary injunctions in patent cases have also become a source of increased risk to innovators. Previously such injunctions were available only upon a showing by the patentee of, inter alia, likelihood of success on the merits and irreparable harm.³⁴ As a consequence preliminary injunctions in patent cases were rare.³⁵ Now it has been ruled that patent infringement itself is presumed to be irreparable harm.³⁶ That, along with the presumption of validity which can be overcome only by "clear and convincing" evidence, places the patentee who can show a "reasonable likelihood of success" on the infringement issue in the position where he need demonstrate neither likelihood of success on the validity issue nor irreparable harm. Both are presumed for him, and the defendant has the task of rebutting those presumptions.³⁷ Thus, preliminary injunctions are now common.³⁸ Similarly, final injunctions were almost always stayed until after the appellate process was concluded.³⁹ Now, however, stays of final injunctions are regularly refused, and the defendant who is unsuccessful in the district court is frequently out of

³³ See *infra* note 43.

³⁴ Foster, *The Preliminary Injunction--A New and Potent Weapon in Patent Litigation*, 68 J.Pat. and Trademark Off. Soc'y 281, 282 (1986).

³⁵ See Szczepanski, *Licensing or Settlement: Deferring the Fight to Another Day*, 15 AIPLA Q.J. 298, 302-303 (1987), and Morrison, *The Impact of the Creation of the Court of Appeals for the Federal Circuit on the Availability of Preliminary Injunctive Relief Against Patent Infringement*, 23 Ind.L.Rev. 169 (1990).

³⁶ *Smith International v. Hughes Tool*, 718 F.2d 1573, 1581 (Fed.Cir.1983).

³⁷ See *Roper v. Litton Systems*, 757 F.2d 1266 (Fed.Cir.1985).

³⁸ Morrison, *supra* note 35. But see Glazer, *Preliminary Injunctive Relief: A View From the '90s*, J. Proprietary Rts. January, 1992, at 2, for an indication that the Federal Circuit has recently tempered its treatment of preliminary injunction motions.

³⁹ Szczepanski, *supra* note 35, at 301-302.

business before his appeal can be concluded.⁴⁰ Both of these changes significantly increase the risk and uncertainty for one who has sought to innovate by designing around another's patent (and has concluded it is not infringed or is invalid), and is considering an investment for a new product or new process based on that conclusion. The possibility that investments may be rendered worthless by a premature injunction, even if the conclusions ultimately prove to be correct, creates a risk that few prudent businessmen would (or should) assume, thus discouraging economic conduct that enhances consumer welfare.⁴¹

Not all of the causes of uncertainty are new to patent law; many of them have been with us for decades. For example, the secrecy afforded patent applications means that an innovator can never be certain a relevant patent will not appear, even long after his new product or new process has been commercialized. This is compounded by the ability to file continuation, continuation-in-part, and voluntary divisional applications which makes it possible for an applicant to prolong the pendency of patent applications (and the expiration of the patents granted thereon) for years, or even decades.⁴² Interferences, which are conducted in secret, likewise postpone the issuance of patents, and are a source of similar uncertainty. The innovator, in effect, is subject to an indeterminate "black out period" as to the possibility of subsequent patents that may affect his innovations.

A significant source of uncertainty for would-be innovators whose innovations may be affected by patents granted on domestic inventions arises from our "first to invent" system. Because such patents are entitled to the benefit of their "invention dates" in the United States, rather than the filing dates of the applications on which they were granted, would-be innovators cannot know in the absence of litigation and discovery whether the references on which they might rely in evaluating such patents are effective as prior art (unless the reference was published more than a year prior to the patent's filing date). Even if the file history of the patent of concern happens to contain a Rule 131 affidavit, the actual invention date may not be revealed. This is just one of several instances in current U.S. patent law in which the facts necessary for evaluation of a dispute or potential dispute cannot be known without engaging in litigation and discovery. The result for would-be innovators is another source of uncertainty and risk.

Perhaps the greatest source of uncertainty is the "doctrine of equivalents" which affords the patentee protection beyond the scope of his patent

⁴⁰ Szczepanski, *supra* note 35, at 301-302; Gerstein, *Death to Infringers--Or--The Two Chances of Obtaining a Stay Pending Appeal*, III Ct.App.Fed.Cir. Newsletter 115 (ABA App.Prac.Comm., Litig.Sec.) No. 4, January- July 1986.

⁴¹ Morrison, *supra* note 35, at 195-197.

⁴² The continuing patent application is one of the more bizarre features of U.S. patent law. It is an invitation to sloppy work by those who practice before the P.T.O., and is a source of much abuse by those who file a sequence of continuing applications and "reinvent" their claims in light of subsequent developments by others. It also compounds the workload of the P.T.O. by requiring that it reconsider, frequently time after time, matters already presented to it.

claims.⁴³ The innovator who has identified all of the patents relevant to his proposed product or process and carefully designed his product or process so as to avoid their claims is nonetheless at risk.⁴⁴ The uncertainty associated with the doctrine of equivalents has been compounded in recent years by decisions of the Federal Circuit which have articulated different, and difficult, analytic approaches to the question.⁴⁵

The effect of risk and uncertainty is to increase the cost of capital⁴⁶ for innovations affected by patents,⁴⁷ those which at the end of the day turn out to be perfectly proper as well as those which turn out to have been infringements. In those instances in which the risk or uncertainty is excessive or the cost of capital exceeds the expected return, the innovation does not occur, even if it would have been entirely proper. Uncertainty is corrosive in this regard; it discourages the worthy as well as the unworthy.

IV. THE PROPOSALS

The Report of the Advisory Commission on Patent Law Reform pre-

⁴³ "The dissent's argument is based on the utopian belief that a copier 'should be able to look at the patent claims and know whether his [or her] activity infringes or not.' Although this may be a desirable goal for the patent laws, it is not the law as it exists. In particular, the doctrine of equivalents has been judicially created to ensure that a patentee can receive full protection for his or her patented ideas by making it difficult for a copier to maneuver around a patent's claims. In view of this doctrine, a copier rarely knows whether his product 'infringes' a patent or not until a district court passes on the issue." *Paper Converting v. Magna-Graphics*, 745 F.2d 11, 19 (Fed.Cir.1984). One commentator has observed that "This view by the CAFC that a copier rarely knows the scope of a patent until it is litigated violates the *raison d'être* of the U.S. patent system. The establishment of the Patent Office in 1836 to examine patent applications and determine inventions was intended specifically to remedy the prior situation in which courts had determined the meaning and scope of patents during litigation. A return to that time of uncertain patents and the accompanying infringement litigation cannot be expected to encourage innovation." Hantman, *Patent Infringement*, 71 J.Pat. and Trademark Off. Soc'y 454, at 515-16 (1990).

⁴⁴ The "doctrine of equivalents" is said to be an "equitable" doctrine. It is decidedly inequitable. The infringer is by definition one who successfully designed around the claims of the asserted patent, an innovation activity said to be encouraged by the patent system, and then was found to be an infringer anyway. Abolition would not be unfair to patentees who after all get to draft the claims that define their inventions. In practice most patent claims are drafted by attorneys who have passed an examination for competence. The public, including innovators, should be able to take patentees (and their competent attorneys) at their word.

⁴⁵ See Harris, *Three Ambiguities of the Doctrine of Equivalents in the Federal Circuit*, 69 J.Pat. and Trademark Off Soc'y 91 (1987), and Adelman and Francione, *The Doctrine of Equivalents in Patent Law: Questions that Pennwalt Did Not Answer*, 37 U.Pa.L.Rev. 673 (1989). Hantman, *supra* note 43, at 506- 507, also suggests that Pennwalt did not settle things. These predictions appear to have been borne out. See, e.g., *Wilson Sporting Goods v. David Geoffrey*, 904 F.2d 677 (Fed.Cir.1990). Adelman and Francione, *supra*, at 729, conclude "We have shown in this Article that justice can be achieved in almost all cases without the use of the doctrine of equivalents. Hence, it should receive a proper burial from the Federal Circuit except and to the extent that no other just doctrine is available."

⁴⁶ The cost of capital is greater for uncertain and risky projects than it is for less risky projects. See Quillen, *supra* note 9.

⁴⁷ This includes most innovation projects. See *supra* note 6.

sents the opportunity to consider a more comprehensive and substantive reform of the U.S. patent system. The proposals presented here are intended to simplify U.S. patent law and to eliminate from it those features which impose excessive and unnecessary costs, risks, and uncertainties on innovators. These proposals, if adopted, should reform the U.S. patent system so that it no longer functions as a deterrent to innovation in the United States.

A. First to File

Interferences should be abolished and patents should be granted to the first inventor to file an application.⁴⁸ The "first to invent" principle should be abandoned entirely except that there should be provided by statute an affirmative "prior inventor" noninfringement defense, personal to the accused infringer, to the effect that there is no infringement if the accused article or process (or the feature that causes it to be accused) was actually reduced to practice in the United States by the alleged infringer prior to the effective filing date of the asserted patent.⁴⁹ The person entitled to raise this defense should be the "prior inventor," his assignee if the assignee, at the time the invention was made, was entitled to assignment of the invention by virtue of an agreement with the actual inventor or by law, or a purchaser of the entire business to which the prior invention relates from a person entitled to raise the defense.

Adoption of the "first to file" system will eliminate two major sources of uncertainty and expense from the U.S. patent system; interferences and the aforementioned inability of would-be innovators to evaluate patents on domestic inventions in light of references published less than one year before the filing date of such patents. Other arguments favoring the "first-to-file" system are set forth in the Commission Report and will not be repeated here.⁵⁰ In addition, interferences to determine who is the first inventor are a

⁴⁸ This is among the principal recommendations of the Advisory Commission on Patent Law Reform for the purpose of enabling "harmonization." A "first to file" system is important in its own right, for reasons noted herein by the author, and should be adopted in any event and without regard to "harmonization." The Commission also recommended that assignees of inventions be permitted to file applications for patents thereon. This is also a salutary proposal which should be adopted. For assignee-filed applications, the assignee should be required to identify the actual inventor or inventors and make an oath that he believes her/him/them to be true and original inventors.

⁴⁹ This is a substitute for the "prior user right" defense proposed by the Commission. Commission Report at 11-12, 21, and 48-53. The availability of this defense should eliminate the necessity for filing "defensive" patent applications, i.e., those which are filed only to assure the inventor the right to use his own work, and thus reduce the workload of the P.T.O.

⁵⁰ Commission Report, at 11-12, 21, 43-55. It is often argued that a first-to-file system is arbitrary and unfair. A "first-to-file" system is no more arbitrary or unfair than our present "first-to-invent" system. U.S. interference practice depends on such arcane notions as "conception," "diligence," "actual reduction to practice," "constructive reduction to practice," "senior party," "junior party," etc., and gives a decided advantage to the first to file. In the end, the current U.S. system reaches a result that is no less arbitrary than that of a "first-to-file" system. If we are to have an arbitrary system for ascertaining which of two or more inventors is entitled to a patent, and it is inevitable that we must, then why not have a simple and inexpensive arbitrary system which does not require a special proceeding and in which the outcome is certain, rather than our present complicated and expensive arbitrary system in which the outcome is uncertain until the proceeding is concluded?

source of major delay in the granting, and hence, expiration, of patents, and the continuation of first-to-invent system would be wholly inconsistent with a patent term dated from the filing date as recommended by the Commission, or from the publication date as proposed by the author.

B. Provisional Applications and Publication

Provisional applications should be permitted for nonconvention applications only, at the option of the applicant.⁵¹ The P.T.O. should be required to provide the nonconvention applicant with a complete prior art search and first office action within nine months after the filing date of a provisional application, or a complete application if the applicant chose not to file a provisional application.⁵² The applicant should then have until twelve months after the filing date of his provisional application, or complete application if no provisional application was filed, in which to convert his provisional application into a complete application, to amend his complete application if he did not file a provisional application, or to abandon his application.⁵³ Conversion of a provisional application into a complete application, or amendment of a complete application when no provisional application had been filed, should be liberally permitted, subject to a "unity of invention" requirement. This

⁵¹ Commission Report, at 11-12, 21, 45-46. The Commission did not draw a distinction between convention applications and nonconvention applications. The rationale for the provisional application is to enable applicants to file a "low cost, informal application to secure their rights to obtain patent protection" to be followed within twelve months by a complete application so as to afford the applicant time, among other things, "to explore the commercial opportunities for the invention." Commission Report, at 11. The applicant who files a convention application has already had twelve months for such exploration. To permit convention applicants to file a provisional application is unnecessary and would give them an unwarranted advantage over nonconvention applicants.

⁵² The nine month period was selected as a convenience for U.S. applicants contemplating filing foreign patent applications under the convention so as to afford them the opportunity to reevaluate their inventions in light of the prior art and revise their applications accordingly before filing their convention applications. If this is not thought important, the nine month period could be lengthened and the time for filing the prepublication amendment correspondingly extended. The Commission recommended the availability of an expedited search upon payment of an additional fee. Commission Report, at 23 and 61. The early search and office action for a nonconvention application proposed herein by the author would be mandatory, making the expedited search unnecessary.

⁵³ The Commission recommended that the one year "grace" period provided by 35 U.S.C. Section 102(b) be retained. Commission Report, at 11, 21, 47- 48. This is perhaps unnecessary. An applicant can file a provisional application to secure his effective filing date and then have one year in which to do the things the "grace" period is said to enable. Even today the "grace" period is of no value to U.S. applicants who intend to file abroad because it is not recognized by any of the industrial countries in which U.S. applicants customarily file. A better change would be to substitute for the present Section 102(b) a provision that the applicant forfeits his opportunity to obtain a patent on his invention if his application is not filed within one year after his first commercial use of the invention without regard to whether the use was a "public use" or a "secret" use. This would codify current law. See *Metallizing v. Kenyon*, 153 F.2d 516 (2d Cir.1946).

would permit applicants to revise their notions of what they had invented and their unpublished applications in light of the prior art search and knowledge obtained by them in the interval between their first filing and the prepublication amendment.⁵⁴

All applications (both convention and nonconvention) should be published 18 months after their effective filing dates unless they were expressly abandoned prior to publication.⁵⁵ The P.T.O. should publish the abstract and one claim of the application in the Official Gazette. The complete file of the application, including all communications between the applicant and the P.T.O., both prior and subsequent to publication, should thereafter be open to public inspection and copying.⁵⁶ Applications which are abandoned should also be published unless the applicant requests that the application be maintained in secret and not published.⁵⁷ No applicant (or assignee) would be permitted to file a subsequent application for patent for an invention that was the subject of an earlier application by the same applicant (or assignee), and continuation, continuation-in-part, and voluntary divisional applications would be abolished.⁵⁸

C. Patent Term and Enforceability

The patent term should commence when the patent is granted and terminate 18 1/2 years after the publication date of the application on which it was granted (i.e., 20 years after the effective filing date of the application on which the patent was granted). Although the patentee would not be permitted to file an

⁵⁴ The opportunity to revise in light of later discovered information is the justification most often proffered for the need for continuation-in-part applications. Liberal amendment of unpublished applications should meet that need and permit the abolition of all continuing applications, including continuations-in-part.

⁵⁵ The Commission suggested publication within 24 months from the earliest priority date claimed. Commission Report, at 12, 23, and 61-63. Eighteen months should be adequate. It is the time period followed in virtually all other industrialized countries, it accelerates the commencement of the time for which damages can be collected if a patent is ultimately granted, and it provides earlier notice to would-be innovators of the applicant's claims, and thus reduces the possibility of costly surprises.

⁵⁶ This is essentially the same as the Commission's proposal. Commission Report, at 23, 61-63.

⁵⁷ The ability to continue to maintain an invention in secret if it turns out to be unpatentable is the reason given for the need for secret patent applications. Under the author's proposal that opportunity is preserved. Nonconvention applicants need not decide whether the application will be published until after they have received an office action and prior art search from the P.T.O. Convention applicants may well receive a prior art search from the patent office in which they first filed. In any event they have ample time to conduct their own prior art search and make their own patentability evaluation.

⁵⁸ The Commission apparently did not consider whether continuing applications should be abolished, but did recommend that the term of patents granted on continuing applications be dated from the earliest claimed U.S. filing date for a complete patent application. Commission Report, at 12, 22, and 57-59. This still leaves open the possibility that an innovator could be surprised by the issuance of a patent long after his innovation had been commercialized and preserves opportunities for abuse and sloppy practice. The better solution is to eliminate all continuing applications, i.e., continuations, continuations-in-part, and voluntary divisionals. See *supra* notes 42, 54. This would also permit the P.T.O. to stop worrying about "double patenting."

action seeking damages or an injunction until the patent is granted, damages, either "pecuniary loss" or a "reasonable royalty," as proved by the patentee, should "relate back" to the publication date of the application.⁵⁹ Injunctions should not be available until after the patent had been granted.

D. In re Hilmer

The *In re Hilmer* doctrine should be abolished, but not in the way suggested by the Commission. Rather, published U.S. patent applications should be effective as references for all purposes as of their publication dates, i.e., 18 months after their effective filing dates, not before, and an affirmative noninfringement defense should be provided, available to all accused of infringement, to the effect that there is no infringement if the accused article or process (or the feature which causes it to be accused) is disclosed in or obvious in view of prior art as to the asserted patent and any U.S. patent or published U.S. application having an effective filing date prior to the effective filing date of the asserted patent.⁶⁰

The author's proposal eliminates all distinctions between domestic and foreign origin patents and published patent applications insofar as their effect as references against other patents and patent applications is concerned; does not impute to patent applicants knowledge they could not have had, i.e. unpublished patent applications; but, through the noninfringement defense, assures that innovators do not infringe two (or more) patents which are mere obvious variations of one another. The noninfringement defense here described, together with the personal "prior invention" noninfringement defense referred to in the discussion regarding first to file, should be the only survivors of our first-to-invent system. All of the rest, interferences, Sections 102(e) and 102(g), should be abolished.

⁵⁹ This feature of the author's proposal is similar to the Commission's suggestion of Provisional Rights, Commission Report, at 12, 23, 63, and results in an effective patent term of 18 1/2 years from the publication date of the application on which the patent was granted. Under the author's proposal a patent will terminate 20 years after the effective filing date of the application on which the patent was granted, which is similar to the Commission's recommendation of a 20 year term from the filing date of the complete application. The commission selected the filing date of the complete application because of the requirements of the Paris Convention, and to place domestic applicants on the same footing as foreign applicants. Commission Report, at 12, 22, and 57-59. Under the author's proposal the effective term of a patent (18 1/2 years) is the same as under the Commission proposal, domestic and foreign applicants are treated the same, and the publication (and ultimately, the expiration) of patents is expedited.

⁶⁰ The Commission, Commission Report, at 12, 65-66, recommended that, contingent on a satisfactory harmonization treaty, U.S. patents and published U.S. applications be applicable as prior art references for novelty as of their earliest effective filing date (foreign priority date) and for both novelty and obviousness as of their U.S. filing date. This is unnecessarily complicated and is an invitation to complex invalidity litigation. The solution proposed by the author, i.e., a noninfringement defense that the accused infringement is anticipated by or obvious in view of prior art and published applications and patents having effective filing dates prior to the effective filing date of the asserted patent, is simpler. Adoption of these proposals should not await a satisfactory harmonization treaty. They should be adopted immediately to abolish unnecessary complications from U.S. patent law.

E. *Standards for Patentability and The Presumption of Validity*⁶¹

The standard for determining whether an invention has met the nonobviousness requirement of Section 103 should be restored to the three-step statutory test mandated by the Supreme Court in *Graham, Adams*, and subsequent Supreme Court cases and the nonstatutory factors should be abolished entirely as indicators of nonobviousness.⁶² The three-step factual analysis prescribed in *Graham* should be the exclusive method for evaluating whether the nonobviousness requirement has been met. It should be made plain that the "scope and content" of the prior art to be considered on the obviousness issue includes all prior art relevant to the problem that was solved, without regard to whether the prior art itself suggests that it be considered together.⁶³

The presumption of validity should be restated so that it is clear the accused infringer has the initial evidentiary burden of going forward with the evidence, and that his burden of persuasion is to establish the facts underlying the obviousness/nonobviousness determination only by a "preponderance of the evidence." There is no reason in logic why the burden should be any higher, or extend to the legal question of obviousness. The pressure in the P.T.O. to "deal with the backlog," which it can do only by issuing patents,⁶⁴ suggests that any higher burden makes it "more likely than not" that a lot of patents that never should have issued in the first place will be ruled valid (or not invalid) under the clear and convincing standard.⁶⁵

⁶¹ The proposals in this section, along with those in the next section concerning damages and injunctions, would perhaps be unnecessary if appellate jurisdiction in patent cases is restored to the regional Courts of Appeals, which are less likely to ignore Supreme Court jurisprudence. Such a restoration of appellate jurisdiction to the regional Courts of Appeals would have the additional virtue that patent appeals would be heard by courts that regularly hear other cases involving significant issues of economic policy and thus would afford the opportunity for patent decisions to be made by judges familiar with a broader economic context. Of greatest importance, the Supreme Court would again become the final arbiter of legal policy issues affecting patents, but would face those issues only after the arguments on all sides had been developed and articulated in several (at least two) of the regional Courts of Appeals unimpeded by *stare decisis*, and would not have to deal with them as cases of first impression, which is often the current situation with the Federal Circuit. See Davis, *Why a Single Court for Patents Isn't Enough*, New York Times, Nov. 28, 1992.

⁶² Kitch, *supra* note 11, at 281-287, argued that commercial success should not be relevant to the obviousness issue. Whelan, *supra* note 15, at 377- 380, argues that commercial success, licensing, copying by an infringer, and progress through the Patent and Trademark Office are not independently relevant to the question of obviousness. Merges, *Commercial Success*, *supra* note 10, at 874, suggests that only failure of others is directly relevant, and that reliance on commercial success risks rewarding efforts the patent system is not designed to reward.

⁶³ This, together with restoration of the analytic method prescribed by the Supreme Court in *Graham* and *Adams*, should resolve the "combination patent" conundrum.

⁶⁴ See Kitch, *supra* note 11, at 297. The problem is compounded by the ability to file continuing applications which enables a determined applicant to make it impossible for the P.T.O. to "dispose" of his application except by granting a patent.

⁶⁵ The rationale for the "clear and convincing" standard is the alleged expertise of the P.T.O. *American Hoist & Derrick*, 725 F.2d 1350, 1359 (Fed.Cir.1984). The Supreme Court does not share this regard for the P.T.O. See *Graham*, 383 U.S. at 18, where the Supreme Court said "We have observed a notorious difference between the standards applied by the Patent Office and by the courts," and expressed the hope that "[T]he Commissioner [of Patents would] ... strictly adhere to the 1952 Act as interpreted here."

F. Remedies for Patent Infringement

The damages statute should be restated to more clearly provide that the patentee is entitled to recover as damages either the "pecuniary loss" suffered as a consequence of the infringement, or a "reasonable royalty" which is a reasonable payment for the infringer's use of the invention, that the two are mutually exclusive, and that the patentee is entitled to the greater of the two, but not some combination of them.⁶⁶ The injunction statute should be amended to state explicitly that infringement of a patent shall not be presumed to be "irreparable harm." One seeking a preliminary injunction should have the burden of establishing by proof all of the traditional elements prerequisite thereto, including irreparable harm and the likelihood of success on the merits, and the courts should return to the practice for patents not previously adjudicated valid of staying injunctions during appeal. Infringement by virtue of the "doctrine of equivalents" should be abolished.⁶⁷

V. COMMENTARY ON OTHER RECOMMENDATIONS OF THE COMMISSION⁶⁸

A. Patent Enforcement Issues

The Commission's suggestions on this topic, with three exceptions, appear to be standard recommendations frequently made to expedite the disposition of any litigation. No one can disagree with suggestions that trial dates should be set early in litigation and adhered to, that lawyers should be civil to one another, that judges' time should be conserved by use of magistrates and masters, that mediation or other forms of voluntary settlement should be encouraged, that experts should be controlled and their testimony limited to factual issues, that more judges should be appointed to handle the litigation flood, etc. The three exceptions, specialized patent trial courts, inter-circuit sharing of judges having patent trial experience, and "small claims"

⁶⁶ See *supra*, note 29.

⁶⁷ See *supra*, notes 43, 44, 45.

⁶⁸ These comments on the remaining suggestions and recommendations of the Commission are limited to those on which the author believes he is qualified to comment by virtue of his experience. Some, e.g. those related to computer software inventions (Commission Report, at 17, 33-34, and 145-168), are beyond the author's personal experience. However, a casual walk through a "software supermarket" certainly leaves the impression that there is no shortage of new ideas incorporated in the software products that are available, which presumably has taken place prior to the prospect of patent protection. This does at least suggest serious inquiry as to whether the prospect of obtaining the monopoly made possible by the exclusive right conferred by a patent is necessary to induce new ideas in the computer software industry. Perhaps normal market forces alone are sufficient. See *supra* note 4.

procedures for certain patent cases, are unique to patent litigation.⁶⁹

What all of these suggestions fail to address, at least with respect to patent litigation, is the source of the problem. Even if followed, they are unlikely to produce a salutary result if the problem itself is not addressed. The problem, as alluded to earlier, is the proliferation of issues to be resolved in patent litigation and the absence of any prescribed analytic method for dealing with those issues other than to consider the evidence collectively, weigh the totality of the circumstances, or rely on the sound discretion of a trial judge. If patent litigation is to be brought under control, the number of issues to be tried and the facts relevant thereto (and the discovery necessary to prepare for trial of them) must be reduced and a simple analytic method for dealing with the reduced number of issues must be prescribed. Hence the author's recommendations that consideration of the nonstatutory factors in connection with the obviousness inquiry be abolished, that we return to the three-step analytic method prescribed by the Supreme Court in *Graham, Adams* and subsequent Supreme Court Cases, and that infringement by the doctrine of equivalents be abolished. Potential litigants using the Supreme Court analytic method should be able to make better predictions about the outcome of potential litigation and thus arrange their affairs so as to minimize the possibility of litigation. The litigation which does occur should be easier to deal with because discovery or trial of the nonstatutory factors would never be required. Patent litigation should not (and need not) be more complicated than any other type of litigation.⁷⁰ A patent trial should require for the liability portion only documents and expert testimony on the two sides of the novelty issue, the three statutory factual inquiries set forth by the Supreme Court for the obviousness issue, and the infringement question.⁷¹

B. *Best Mode*

The "best mode" requirement⁷² should not be eliminated. If it is a source of confusion, it should be clarified. Surely it is not unreasonable to

⁶⁹ Adoption of the suggestions that there should be a specialized patent trial court or a cadre of traveling specialist judges for patent trials would be to concede that patent law cannot be made to perform its function of informing those affected by it of their rights and duties without the need for litigation. How can mere mortals be expected to predict outcomes in advance and arrange their affairs accordingly if a priesthood of experts is required to resolve disputes?

⁷⁰ This assertion is almost certainly wishful thinking and undoubtedly underestimates the ability of lawyers to make complicated things which should be simple, and perhaps is not applicable to a lost profits damages claim which requires the creation of a world that never was through expert analysis and testimony. In any event the scope and cost of litigation is more often than not proportional to the stakes involved and the size of the litigants' pocketbooks. Proper and coherent damages rules as recommended by the author should reduce the stakes in many cases, and that may help. Impoverishment of litigants would be a more certain cure.

⁷¹ Even the testimony of the inventor would not be required as Section 103 makes irrelevant the manner in which the invention was made.

⁷² Commission Report, at 100-103.

expect a patent applicant who is seeking an exclusive right from the public to disclose to the public the best mode known to him for practicing the invention as to which he seeks the exclusive right and to identify it as such. To do otherwise is to invite a lack of candor and encourage concealment. Applicants who file a provisional application or a complete application in lieu of a provisional application should disclose in their applications the best mode then known to them. Subsequently, when they convert to a complete application or amend the earlier filed complete application, they should disclose the best mode known to them at the time of the conversion or amendment.

C. Disclosure Obligations

In the same vein, the Commission's suggestion that an applicant's obligation of candor should be regarded as satisfied if the P.T.O. finds and considers a material reference, no matter how it comes to its attention, should be rejected.⁷³ Applicants (and their attorneys) should be expected to disclose to the P.T.O. all material references known to them at the time they file an application, and all that come to their attention during the course of prosecution of the application. They should suffer a penalty if they do not, even if the P.T.O. finds the reference by other means. Any lesser standard invites "game-playing," and establishes standards of conduct that are inconsistent with an attorney's ethical obligations and what we should expect of one seeking an exclusive right from the public.

D. U.S. Patent and Trademark Office Funding

Should the author's recommendations be followed and the P.T.O. adhere to the higher standards for patentability prescribed in the Supreme Court cases and be required to provide nonconvention applicants with a complete prior art search and first office action within nine months after filing, there is a distinct possibility of higher funding requirements for the P.T.O.⁷⁴ Consistent with the principle enunciated earlier that the costs of providing the subsidy represented by the exclusive right of a patent should be borne initially by those receiving the subsidy, i.e., by patentees, any higher funding requirements should be met by increased fees.

⁷³ Commission Report, at 14, 28, 111-115.

⁷⁴ This may not turn out to be the case. The office action and prior art search must be provided anyway, and doing it for nonconvention applications within nine months after filing affects only when, not whether, it is done. The P.T.O. should certainly be able to realign its priorities to accommodate the nine month requirement for nonconvention applications which comprise only about half of current filings. The restored higher standards for patentability and elimination of the necessity to file "defensive" patent applications should result in the filing of fewer original patent applications, and significant P.T.O. resources would be made available by the abolition of interferences and the need to reexamine subject matter already considered in continuations, continuations-in-part, and voluntary divisional applications.

E. Reexamination/Reissue/Deferred Examination

Reexamination and reissue are separate procedures for dealing with two facets of the same problem, the failure of patent applicants and the P.T.O. in the original examination process to "get it right the first time." This perhaps suggests that emphasis should be placed on the original examination process, rather than providing remedies for its failures. Nonetheless, if these procedures are to be continued, it would seem sensible to combine them into a single procedure with a clearly defined purpose. Perhaps what should be done is to have a single procedure in which the patentee could amend claims that he believes to be invalid or of improper scope, and in which he could have his patent reconsidered in light of uncited prior art of which he and his attorney were unaware during the original examination. Any broadening of claims should be strictly limited,⁷⁵ and innovators who had commercialized new products or new processes before the reissue application or made substantial preparation to do so in reliance on the narrower claims should be provided with a personal noninfringement defense to permit them to continue. The procedure should not be available during the pendency of litigation in which the validity or infringement of the patent is in issue. There should be no "enhancement" of the presumption of validity for patents which have gone through the procedure.

The Commission recommended that we not adopt a deferred examination procedure. That recommendation is sound. Deferred examination simply introduces and prolongs uncertainty about whether a patent will be granted and what its scope will be. As noted repeatedly herein, excess and unnecessary uncertainty is a feature of the current U.S. patent system which should be eliminated to the maximum extent possible. We should not intentionally add to uncertainty.

VI. SUMMARY OF PROPOSALS

The principal proposals set forth herein are as follows:

1. Patents are granted to the first inventor to file an application. The applicant may be the actual inventor or his assignee. Interferences are abolished.

2. Patent applications are published eighteen months after their effective filing dates and patents terminate 18 1/2 years after the publication dates of the applications on which they were granted. Nonconvention applicants initially may file either a complete application or a provisional application, and receive a complete prior art search and first office action within nine months after filing. Applicants for nonconvention applications are permitted to amend their applications up until twelve months after their effective filing dates. Patent applications are published unless they have been expressly

⁷⁵ The Commission suggested a one year time limit on broadening reissues. Commission Report, at 130.

abandoned. Abandoned applications are also published unless the applicant expressly requests otherwise. No applicant is permitted to file a second application for the same invention, and continuation, continuation-in-part, and voluntary divisional applications are abolished.

3. Prior art for determining patentability includes public knowledge or use in the United States, patenting in the United States or elsewhere, and description in a printed publication (including a published U.S. patent application) in the United States or elsewhere prior to the effective filing date of the application. No patent is effective as a reference (as a patent) until its granting date and no published patent application (U.S. or elsewhere) is effective as a reference until its publication date. The earliest date available to a patent applicant for antedating a prior art reference is his effective filing date.

4. The standards for patentability mandated in *Graham, Adams*, and subsequent Supreme Court cases are restored, and the nonstatutory factors now required to be considered in regard to the obviousness question are abolished. The prior art regarded as available to and considered by the "man of ordinary skill in the art" includes all prior art relevant to the problem solved, without regard to whether it states that it should be considered together.

5. The presumption of validity is restated to require proof of the underlying factual issues only by a preponderance of the evidence, and the injunction statute is restated to indicate that patent infringement is not presumed to be irreparable harm. Infringement by the doctrine of equivalents is abolished. Two additional affirmative noninfringement defenses are provided: that the article or process accused of infringement (or the feature which causes it to be accused) was actually reduced to practice in the United States by the accused infringer (or by one from whom he was entitled to assignment of the invention at the time it was made, or by one who purchased the entire business to which the invention relates from a seller who was entitled to the defense) prior to the effective filing date of the asserted patent; and that the article or process accused of infringement (or the feature which causes it to be accused) was described in or obvious in view of the prior art listed in paragraph 3 of this summary and any U.S. patent or published U.S. patent application having an effective filing date earlier than the effective filing date of the asserted patent.

6. The patent damages statute is amended to make it more clear that the patentee is entitled to recover as damages the greater of either his pecuniary loss or a reasonable royalty, one or the other, not some combination of them.

VII. SUMMARY OF THE ADVANTAGES OF THE PROPOSALS

The foregoing provides a comprehensive plan for simplification and reform of the U.S. patent system which should prove advantageous to all affected by it-- patentees, innovators who introduce new products and new processes, the P.T.O., and, perhaps most important of all, consumers, whose interest the system is supposed to serve. The advantages to each will be dealt with in turn.

A. Patentees

Patentees are provided a straightforward and simple system for securing their patent rights. They file their applications, receive (in the case of nonconvention applicants) a prompt and complete prior art search and office action, and are afforded the opportunity to amend their applications before they are published, or, if they choose, to abandon their applications and have them remain secret forever. The examination of their applications is straightforward; there is no concealed prior art (e.g., prior U.S. inventions or unpublished but prior filed U.S. patent applications) to be considered. Rule 131 affidavits and interferences and the need to prove dates of invention are a thing of the past, as are "double patenting" rejections. The granting of patents is not delayed because of interferences or because the P.T.O. is diverted from its examination task by the need to reexamine in continuing applications subject matter that it has already examined in prior applications. The effective term of patents is lengthened: it is 18 1/2 years, rather than the present 17. The evaluation of validity and infringement issues is simplified. There are clear and simple analytic methods for doing so and the only "non-transparency" for the patentee is the "prior invention" defense by the alleged infringer. All other defenses are based on information that is readily accessible to the patentee. He should face fewer disputes, and those which do occur should be more easily (and less expensively) resolved. He is distressed to learn that the restored higher standards for patentability mean fewer of his existing patents are respected by others (and to be advised that some of them are probably invalid and shouldn't be enforced), but relieved when he changes to his role of innovator to be told that there are fewer patents owned by others that are of concern with respect to his new products and new processes. There is unmitigated joy when he realizes he can reduce the size of his patent and licensing departments and his R & D staff can return to its primary job of creating new products and new processes, rather than spending large amounts of time with patent attorneys, because the restored higher standards for patentability mean he needs (and can get) fewer patents and that there are fewer patents of others that affect his new product and new process plans.

B. Innovators

The "black-out" period for pending patent applications is no longer indeterminate; it is the eighteen months between the filing and publication of a patent application. By evaluating the patents which have been granted and the patent applications which have been published as of the date his innovation is commercialized and for a period of eighteen months thereafter he can be certain that he is aware of all of the patent problems he will ever encounter for that innovation and can reach an informed judgment as to what he should do. Abolition of the doctrine of equivalents makes more certain his conclusions regarding noninfringement. The evaluation of validity questions can proceed with more certainty because of the simple analytic method

applicable thereto. There are no "non-transparencies" for the innovator; he can evaluate all of his defenses, including his affirmative noninfringement defenses (prior actual reduction to practice by himself or his assignor, and anticipation or obviousness in view of prior art and applications or patents having effective filing dates prior to the effective date of the patent of concern) on information that is readily accessible to him. The prior actual reduction to practice noninfringement defense assures that he will be able to continue to use his own earlier work and can discontinue filing "defensive" patent applications for that purpose, and the anticipation/obviousness noninfringement defense assures that he will never be required to pay more than once for the use of a single innovation. Because of the restored higher standards for patentability he faces fewer disputes with other patent owners, and those which do occur are more easily (and less expensively) resolved. He is relieved when he learns that there are fewer patents owned by others that affect his innovations, but distressed (when he changes to his role of patentee) to be told that fewer of his existing patents are respected by his competitors and that he shouldn't attempt to do anything about it. There is unmitigated joy when he realizes he can reduce the size of his patent and licensing departments and his R & D staff can return to its primary job of creating new products and new processes, rather than spending large amounts of time with patent attorneys, because there are fewer patents of others that affect his innovation plans and because the restored higher standards for patentability mean he needs (and can get) fewer patents.

C. The U.S. Patent & Trademark Office

The resources of the P.T.O. are conserved because it no longer need devote time and energy to the resolution of interferences or the reexamination in continuing applications of subject matter that already has been presented to it before in prior applications.⁷⁶ Fewer patent applications are filed because

⁷⁶ The question does arise of what transition provisions should be applied to presently pending U.S. patent applications, both original and continuing applications. The answer should be simple. Apply the new law to them as soon as it becomes effective. Those which have received an office action and prior art search as of the effective date of the statutory amendments should be afforded the opportunity to amend or abandon within three months after the effective date of the amendments and those which are not abandoned should be published nine months after the effective date. Those which have not received an office action and prior art search should receive them within nine months after the effective date of the statutory amendments and thereafter should proceed on the same schedule as a newly filed nonconvention application, i.e., amend or abandon within three months after the office action and publish six months thereafter if not abandoned. The term of these transition patents should be seventeen years from the granting date of the patent or eighteen and one-half years from the publication date, at the election of the patent applicant made at the time of his first response to the P.T.O. after the effective date of the statutory amendments. Validity for all patents should be evaluated under the restored higher standards for patentability, the new noninfringement defenses should become effective as to all patents as of the effective date of the amendments, and no continuation, continuation-in-part, or voluntary divisional applications should be permitted after the effective date of the amendments. Pending interferences should be concluded expeditiously and no new interferences should be declared after the effective date of the amendments. Or perhaps all interferences should be discontinued and the applications handled as outlined above. A prior inventor who was the second to file would have a personal noninfringement defense that would permit him to practice his invention.

the necessity to file "defensive" patent applications no longer exists and because the restored higher standards for patentability mean that fewer patents are available (and because patentees and innovators have reduced the size of their patent staffs and thus their capacity to file large numbers of patent applications). Patent prosecution is simplified and expedited because all prior art to be considered is accessible to the P.T.O. For the P.T.O. there are no "non-transparencies." Rule 131 affidavits to prove priority and "double patenting" rejections are a thing of the past. Factors and considerations once regarded as relevant no longer need be considered. Patentability evaluations are simplified and expedited because of the explicit and simple analytic method to be applied.

D. Consumers

Consumers benefit most of all. Resources provided by the consumer for the examination of patent applications and for the resolution of patent disputes (courts, judges, etc.) are conserved. The restored higher standards for patentability mean that the excessive innovation costs made necessary by today's lowered standards for patentability are reduced. The elimination of risks and uncertainties for innovators reduces the capital costs for innovation investments. As a consequence of the reduction of these excess costs, which are borne by the innovation process and diminish the amount of innovation, there are more innovations. The consumer has available more new products (and products made by new processes), and their prices are lower. That is a good thing.