

FTC/DOJ HEARINGS ON COMPETITION AND INTELLECTUAL PROPERTY LAW IN THE KNOWLEDGE-BASED ECONOMY

Statement of Cecil D. Quillen, Jr.*
March 19, 2002

Thanks. Excuse me for rushing but there is a lot of ground to cover and little time to do it. Detailed arguments and citations in support of the points I make are available at the Comments section of the website for these hearings. In addition, the text and slides of today's presentation will also be posted to the website.

I start with the assumption that fostering innovation, the commercialization of new products and new processes, is an objective of both patent law and competition law and that each may have something to learn from the other in that regard. Today I will focus on patent law and its administration, and in particular on the effects of changes in U.S. patent law by the Federal Circuit on innovation in the United States, as well as Patent Office performance. At the end I will draw attention to learning that I believe competition law can offer to patent law.

The first of the Federal Circuit changes I should mention is lowering the standards for patentability, particularly the nonobviousness standard. Prior to the Federal Circuit something like 2/3 of litigated patents were ruled invalid, and Courts, including the Supreme Court in Graham v. John Deere, frequently admonished the Patent Office to follow the higher standards that prevailed in the courts. Following the advent of the Federal Circuit, this

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statistic was reversed, and about 2/3 of litigated patents were ruled valid, with only about 1/3 being ruled invalid.¹

The consequence of the lowered standards is higher costs for innovators, those who commercialize new products and new processes. A common, perhaps universal, strategy for innovators is to attempt to preempt others from obtaining patents that might frustrate commercialization of their innovations by themselves seeking patents on those inventions they might employ commercially. Wes Cohen and his colleagues, in their study that was presented earlier in these hearings, referred to this preemption strategy as "patent blocking." It was the second most common reason for seeking a patent.

This chart illustrates for an innovator following a preemption strategy a thought process for selecting inventions on which to seek patents. And, when the Federal Circuit lowered the standards for patentability, this is what the chart looked like. Innovators pursuing the preemption strategy had to file more patent applications to fill the hole created by the Federal Circuit's lowered standards. Filing more patent applications, of course, costs more money, thus raising innovation costs. But one's competitors must also file more applications. All have incurred higher costs. None have obtained an advantage.

A sense of the magnitude of the additional filing costs can be gained from this chart which shows application filings since 1973. The number has about

¹ These proportions are approximations. More precise figures can be found at Allison and Lemley, *Empirical Evidence on the Validity of Litigated Patents*, *AIPLA Quarterly Journal*, Vol. 26, No. 3 (Summer 1998), pp. 185-275.

tripled since 1983, going from about 100,000 in 1983 to nearly 300,000 in 2000. Bronwyn Hall and Rosemarie Ziedonis, in their study of patenting practices in the semiconductor industry found that the number of patents per R&D dollar in that industry doubled between 1982 and 1992,² which is a strong indication of the increased filings made necessary by the lowered standards.

The result of increased preemptive filings is, of course, more application allowances and more patents, which, as can be seen from this chart, grew from about 60,000 in 1983 to nearly 170,000 in 2000. And this has meant that innovators must face and deal with more patents in order to commercialize their innovations, which has further increased their innovation costs.

A further change by the Federal Circuit was to mandate consideration of nonstatutory secondary factors in the obviousness/nonobviousness determination despite the fact that they were only of conditional relevance under the Supreme Court test as laid out in Graham. In this regard, the Federal Circuit told us to consider "the evidence of obviousness/nonobviousness collectively,"³ whatever that may mean. The effect has been to increase the complexity and cost of patent litigation and to make outcomes more uncertain and less predictable, which, in turn, has

² Hall and Ziedonis, *The Patent Paradox Revisited: An Empirical Study of Patenting in the U.S. Semiconductor Industry, 1979-1995*, *RAND Journal of Economics*, Vol. 32, No. 1 (Spring 2001), pp. 101-128.

³ Simmons Fastener v. Illinois Tool Works, 739 F.2d 1573, 1576 (Fed. Cir. 1984).

increased the amount of litigation.⁴ Claim construction presents similar problems of uncertainty and unpredictability as Prof. Kimberly Moore has reported that 33% of claim construction decisions by District Court Judges are reversed by the Federal Circuit.⁵

A consequence of increased uncertainty is an increase in the cost of capital for innovation investments. Both the diminished predictability and increase in the cost of capital were illustrated in Polaroid v. Kodak. We were found to have employed a patent clearance process "that could serve as a model for what the law requires."⁶ Yet we lost on 7 of the 12 patents in suit for a .417 "batting average." Now that is real uncertainty when the best a model process can do is .417. But, following announcement of the \$909 million judgment (later reduced to \$873 million), the equity market value of Kodak increased by \$921 million (\$795 million at the fifth day),⁷ which meant a corresponding decrease in the cost of equity capital for Kodak as a consequence of elimination of uncertainty as to the outcome of the litigation.

There are other features of our patent law that introduce unnecessary uncertainty, and hence unnecessary costs for innovators. These are

⁴ Judge Easterbrook, in commenting on the antitrust Rule of Reason, said "When everything is relevant, nothing is dispositive. Any one factor might or might not outweigh another, or all of the others, in the fact finder's contemplation. The formulation offers no help to businesses planning their conduct. * * * Litigation costs are the product of vague rules combined with high stakes, and nowhere is that combination more deadly than in antitrust litigation under the Rule of Reason." *The Limits of Antitrust*, 63 Tex. L. Rev. 1, 12-13 (1983), quoted at 66 Antitrust Law Journal 787 (1998). The rules for decision in patent cases are equally vague.

⁵ Moore, *Are District Court Judges Equipped To Resolve Patent Cases?*, Harvard Journal of Law & Technology, Vol. 15, No. 1 (Fall 2001), pp. 1-38.

⁶ Polaroid v. Kodak, 16 USPQ 2d 1481, 1538 (Dist. Mass, 1990).

⁷ Demasi, *Essays On The Effects Of Public Policy*, Harvard University Department of Economics PhD Thesis, May 1991.

discussed in detail in the items I previously mentioned that are available from the Comments section of the website.

Another factor bearing on innovation and the patent system is the standards for patentability followed by the U.S. Patent & Trademark Office, which necessarily reflect the standards pronounced by the Federal Circuit Court of Appeals.

A unique feature of the U.S. patent system is the ability to file continuing applications which claim filing dates of earlier applications and start the examination process all over again. There is no limit on the number of such "refilings" and the only way the Patent Office can rid itself of a determined applicant is to allow his or her patent application. The Annual Report statistics published by the USPTO do not mention continuing applications, so it is not possible from the published Annual Report statistics alone to determine the effect of such continuing applications on the USPTO workload or its application acceptance rates.

Application flow through the USPTO is depicted on this chart. Some of the total applications filed are in fact refilings of subject matter that has previously been examined. Similarly, the subject matter of some of the applications counted as abandoned was in fact the subject of refiled applications, and thus wasn't really abandoned at all.

In early 2000 I obtained information from the USPTO as to continuing application filings for its fiscal years 1993-1998 which revealed that 28.4% of the applications filed in those years were continuing applications that had

already been (or could have been) examined by the USPTO, essentially "rework" imposed on the USPTO by refiled patent applications, the cost of which would have not have been incurred if our law did not permit continuing applications.

These data, along with the USPTO Annual Report data for the same fiscal years, enabled Ogden Webster and me to complete a study of the performance of the USPTO taking continuing applications into account.⁸ This study is also available from the Comments section of the website for these hearings.

We estimated two measures of USPTO performance, Grant Rate and Allowance Percentage. Grant Rate is defined on the Trilateral Website, where it is reported for the USPTO as well as for the European and Japanese Patent Offices. Allowance Percentage is simply applications allowed divided by applications filed, with suitable corrections to take continuing applications into account, and, in what we characterized as a "more refined" calculation, with a 2 year time lag to allow for prosecution time.

This table summarizes our findings. When continuing applications are taken into account, acceptance rates, whether measured by Grant Rate or Allowance Percentage, are substantially higher for the USPTO than for the EPO or JPO, or for the 1977 cohort of German patent applications. This means, of course that the USPTO is less rigorous than the other patent

⁸ Quillen and Webster, *Continuing Applications and Performance of the U.S. Patent and Trademark Office*, *The Federal Circuit Bar Journal*, Vol. 11, No. 1 (August 2001), pp. 1-21.

offices. Policy questions suggested by our findings are set forth in the published study.

Last year the USPTO provided data that enabled us to extend our study back to 1980 for Grant Rates and to 1982 for Allowance Percentages with a two year lag for prosecution time. The study employing these data is still in preparation and has not yet been submitted for publication.

This first chart shows the progress of continuing applications, growing from 15% of the applications filed in 1980 to 28% of the applications filed in 2000. Thus the proportion of the USPTO's workload that is rework has increased over time.

The results for Grant Rates are on two charts. Corrected Grant Rates have gone up over time and, by 2000, when corrected for continuation and continuation-in-part applications, the Grant Rate was 98%, more than 25 points higher than the uncorrected Grant Rate. The second chart shows Grant Rates as reported on the Trilateral Website for the USPTO, the EPO and the JPO, as well as the USPTO Grant Rate corrected for continuation and continuation-in-part applications. The comparative lack of rigor by the USPTO is apparent.

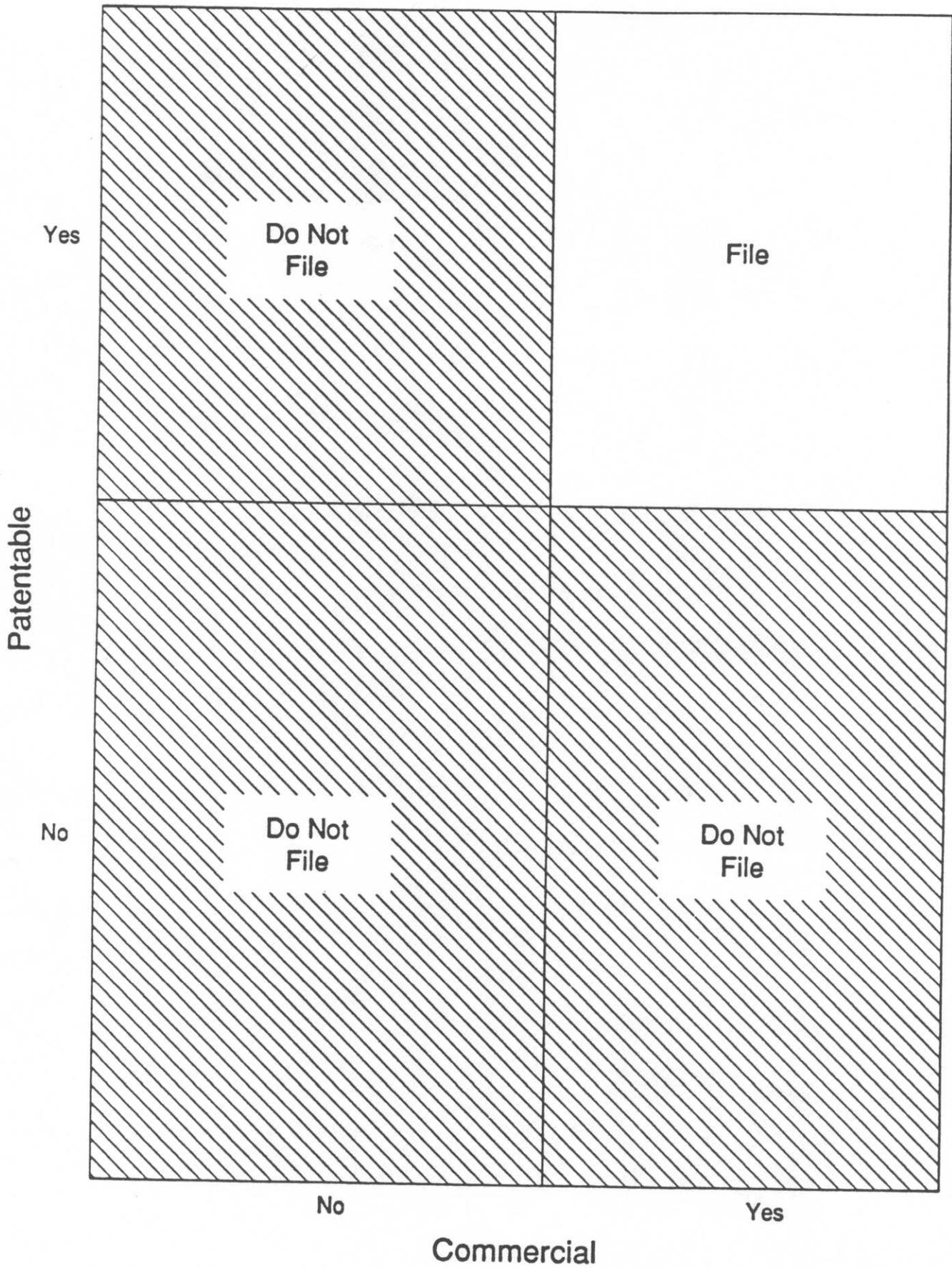
This chart shows the progress of Allowance Percentages over time and illustrates the upward progression that has occurred. The corrected Allowance Percentage for the 2000 fiscal year, based on original applications, is 95%, more than 20 points higher than the uncorrected Allowance Percentage.

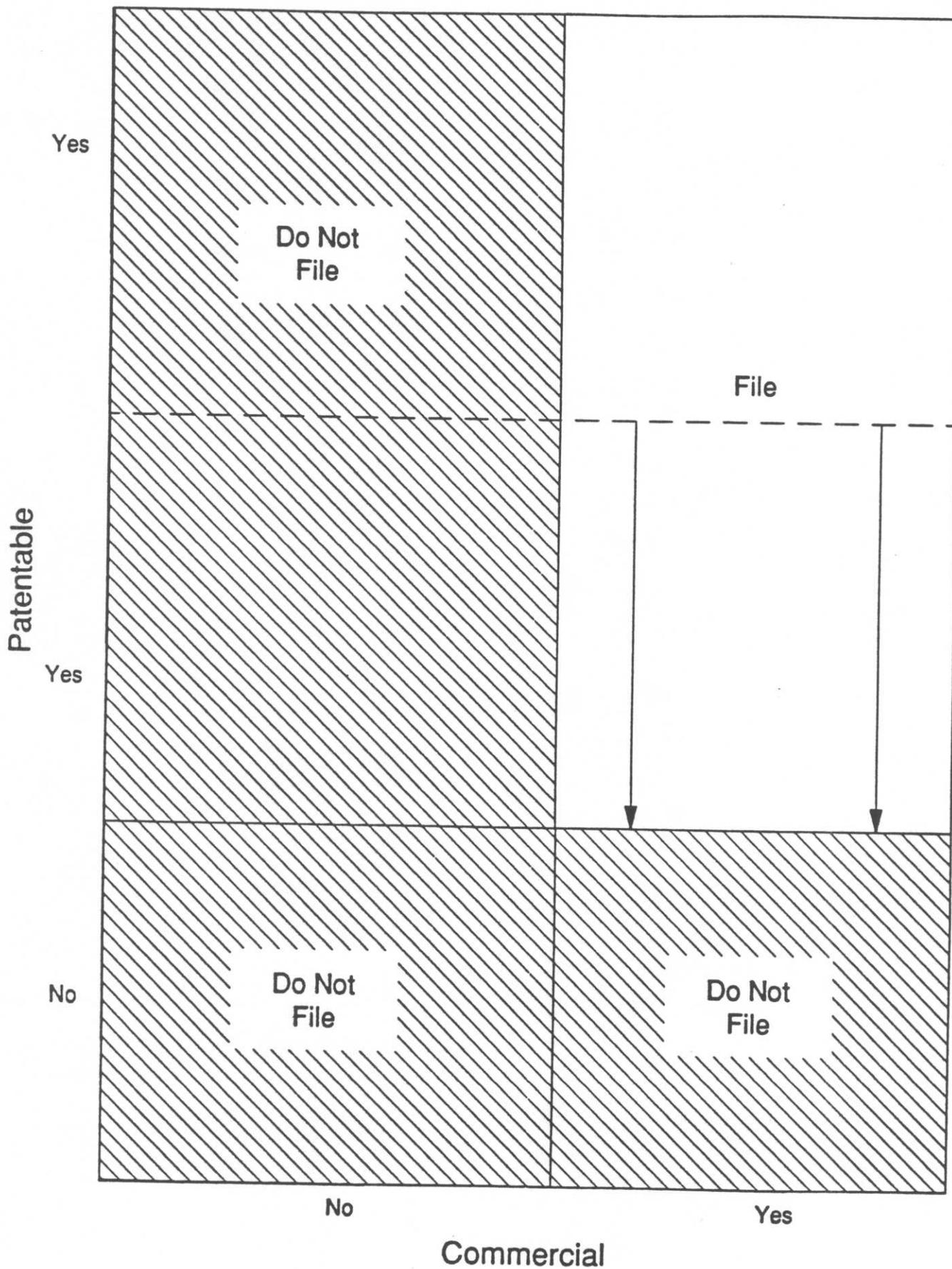
These findings seem to verify the observation of Judge Ellis of the Eastern District of Virginia in 1994 that "the PTO's filter is becoming more porous."

CONCLUSION

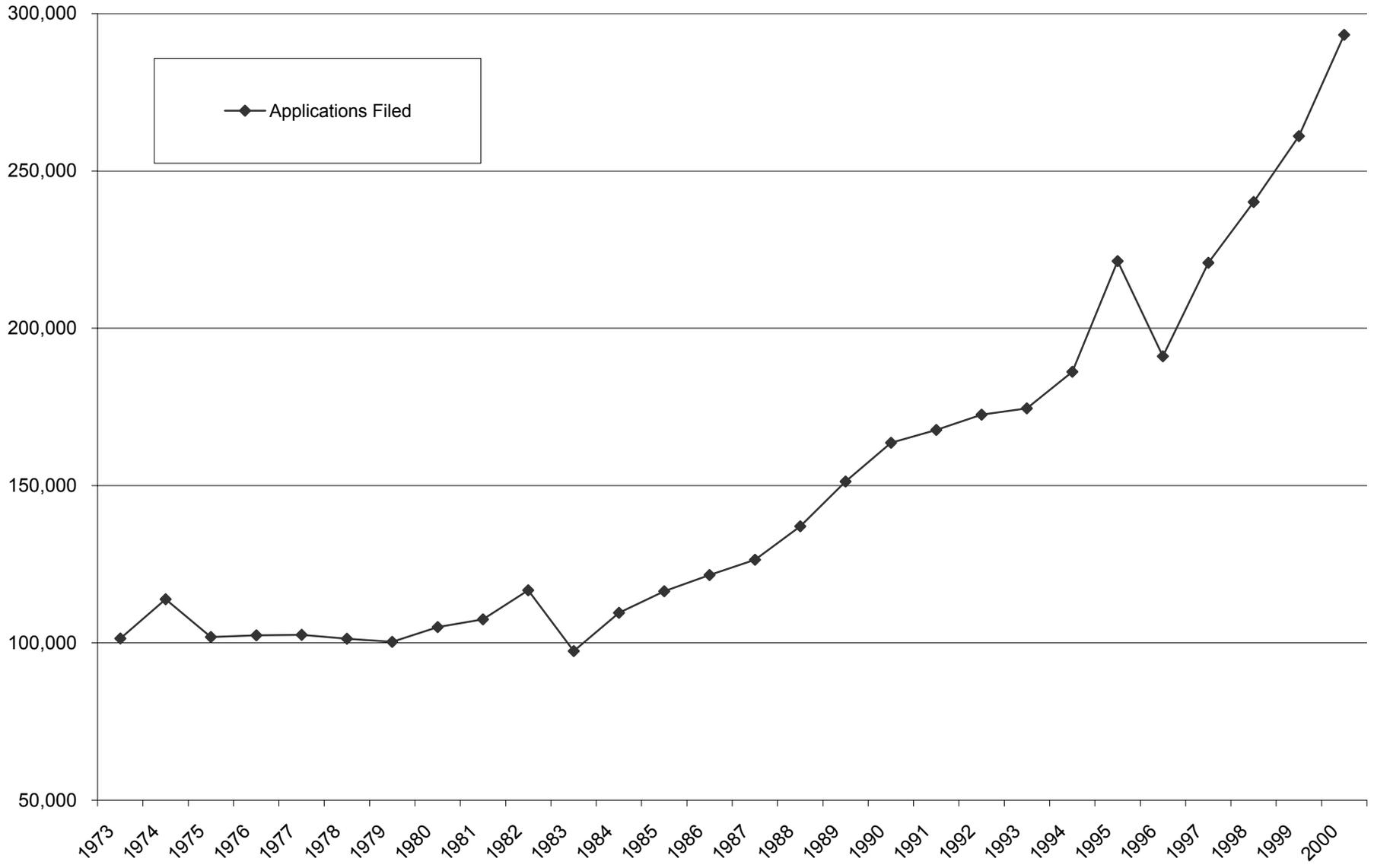
I opened by referring, without attribution, to a speech by Commissioner Muris about reciprocal learning between intellectual property regimes and competition law regimes, and focused my remarks on intellectual property, patents in particular. I believe, and hope it was apparent from the foregoing, that one learning which competition law can offer to patent law is that costs count, and that unnecessary costs, whether incurred directly or in the form of increased capital costs as a consequence of unnecessary uncertainty, are an impediment to innovation. This final slide is a summary of changes needed to "fix" the U.S. patent system. Most are aimed at eliminating unnecessary costs that our present patent system imposes on innovation in the United States.

Chart 1

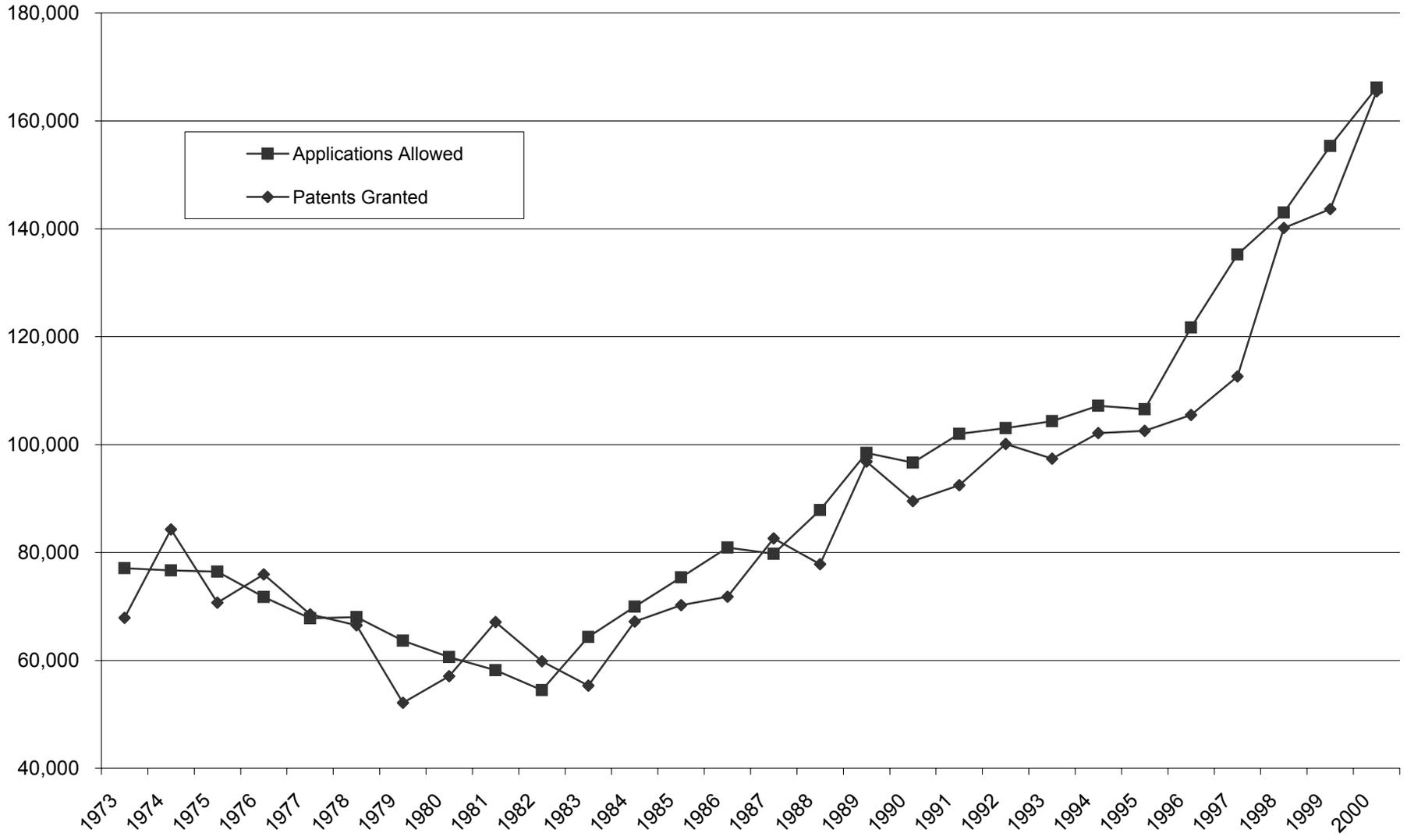


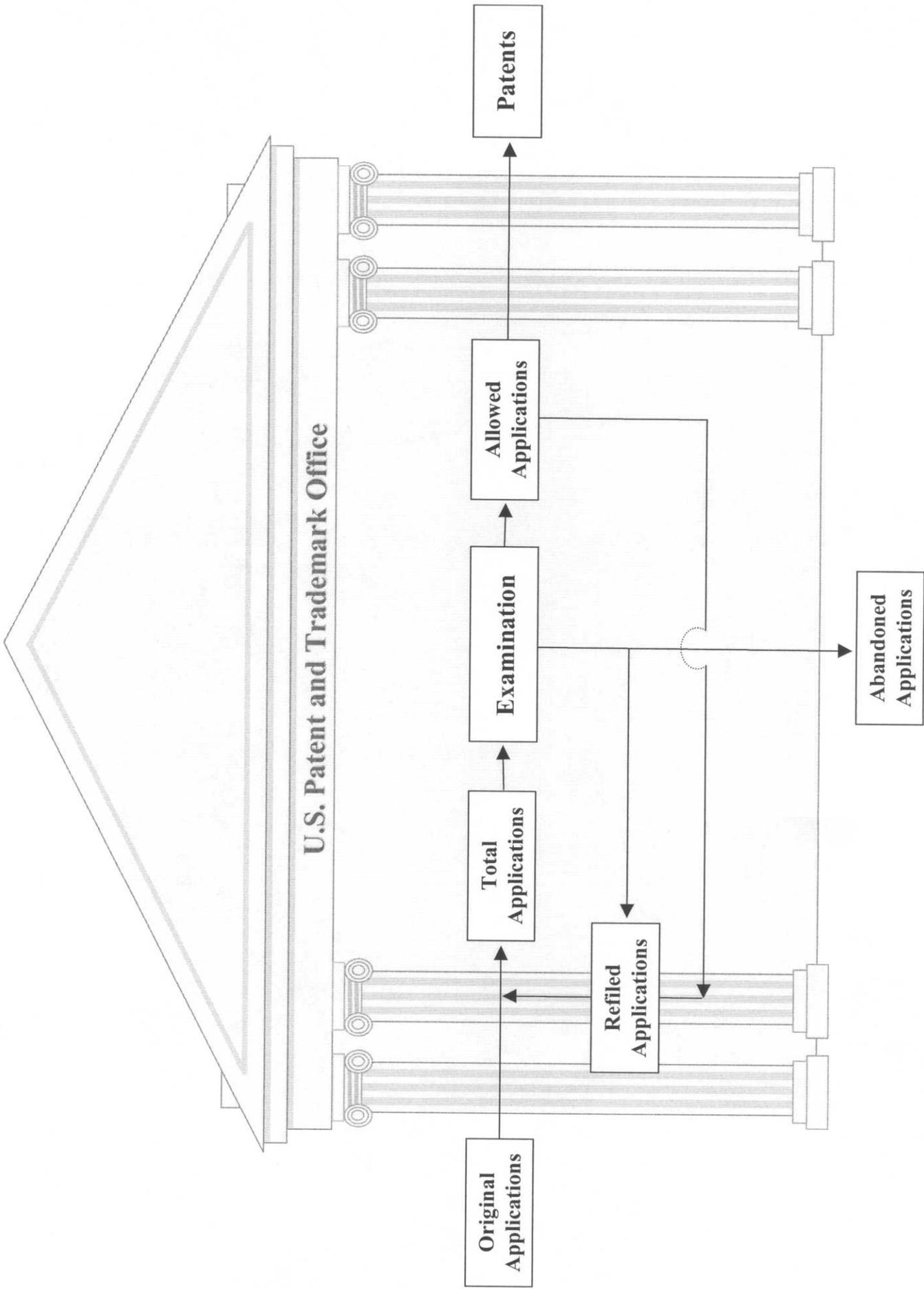


Total Applications Filed (1973-2000)



Application Allowances and Patent Grants - 1973-2000

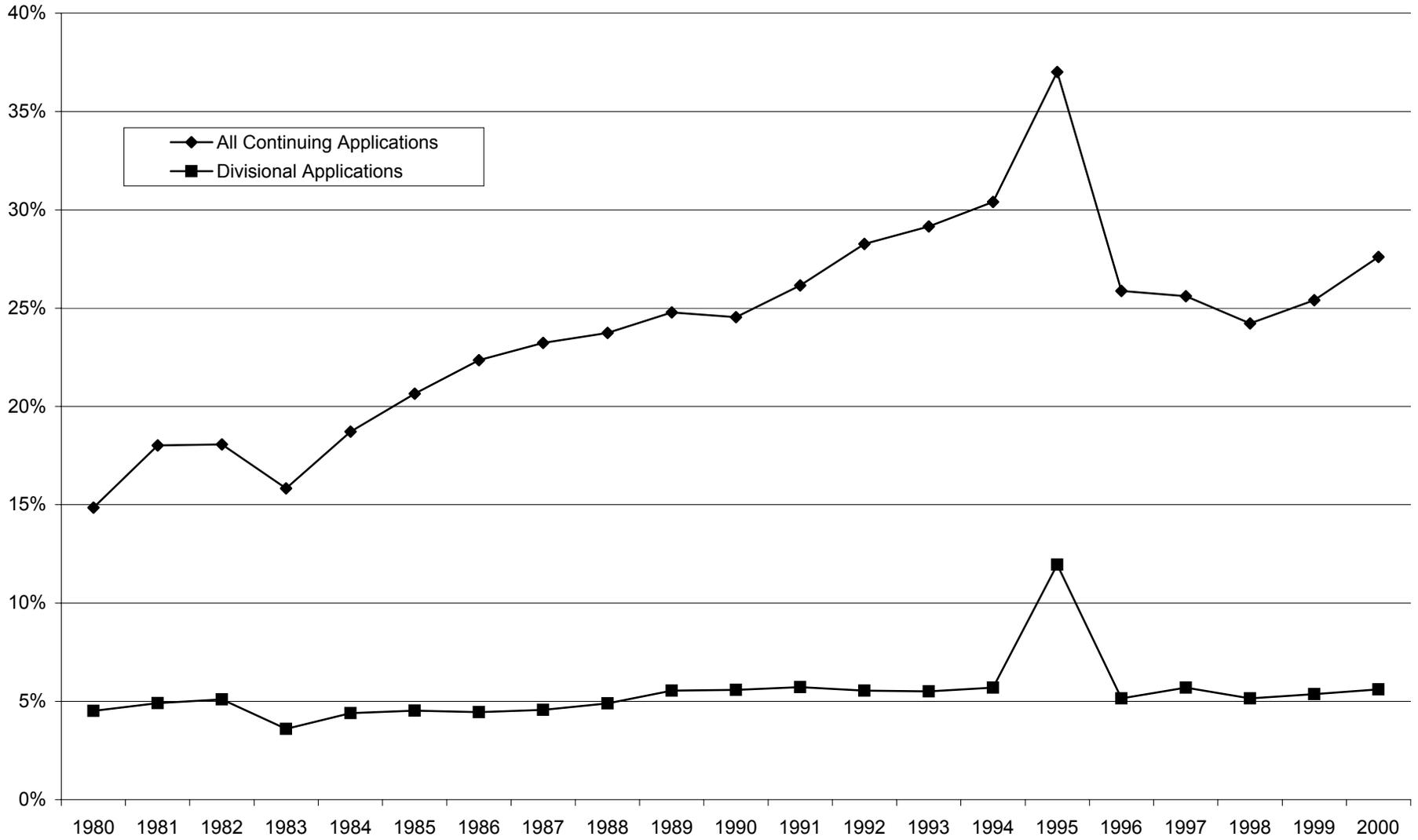




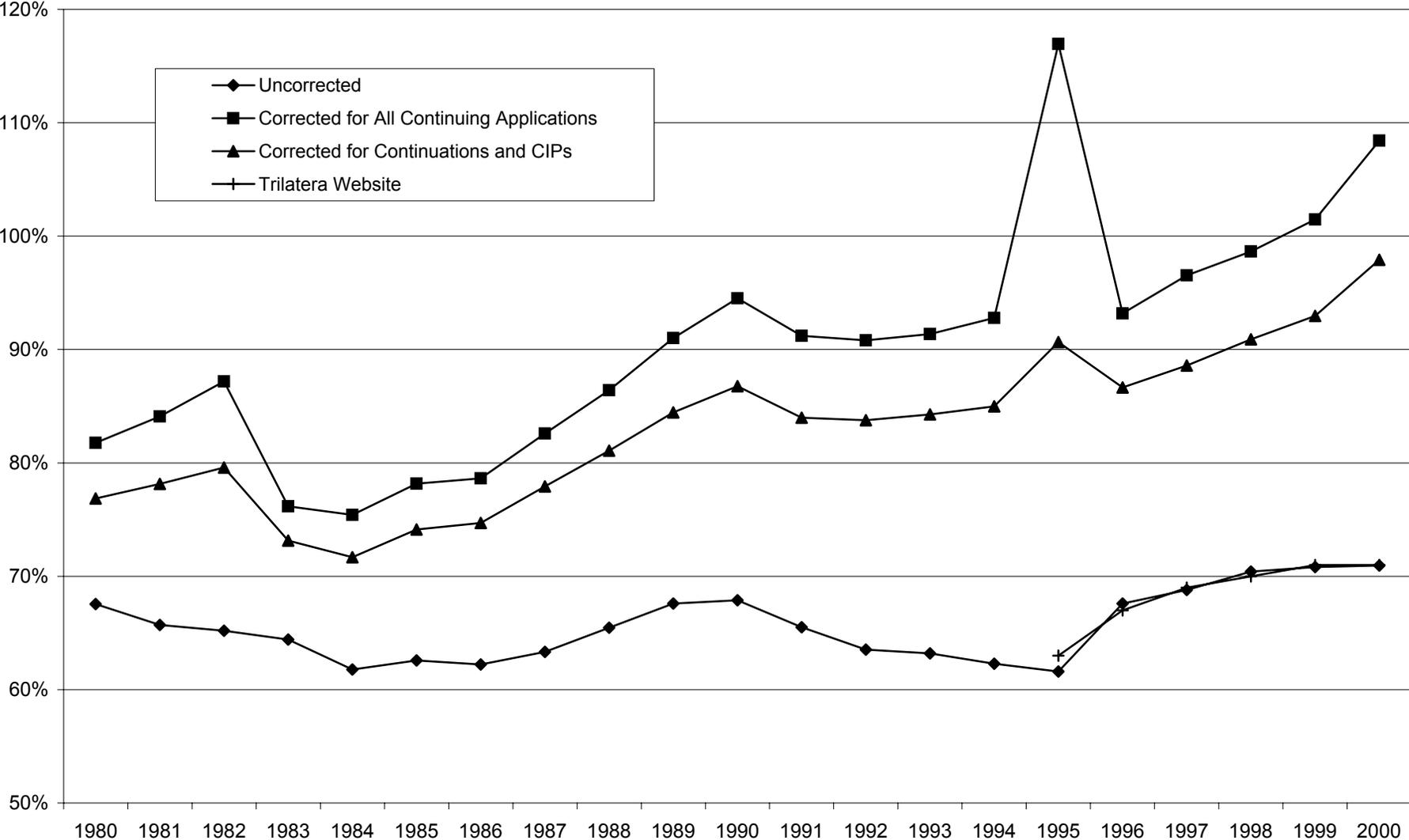
$$\text{Grant Rate} = \frac{\text{Applications Allowed}}{\text{Application Disposals}}$$

$$\text{Allowance Percentage} = \frac{\text{Applications Allowed}}{\text{Applications Filed}}$$

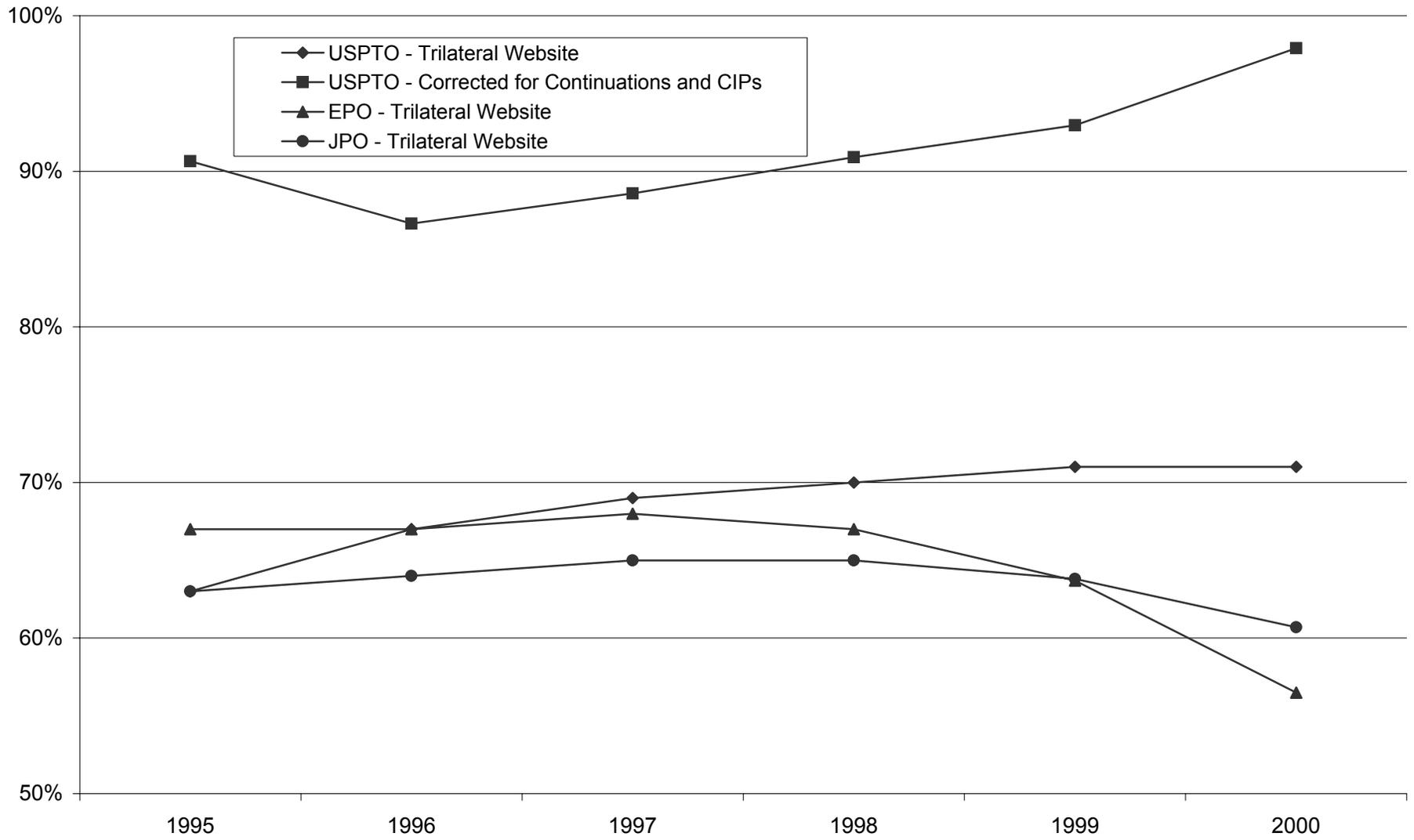
Continuing Applications as Percent of Total Applications



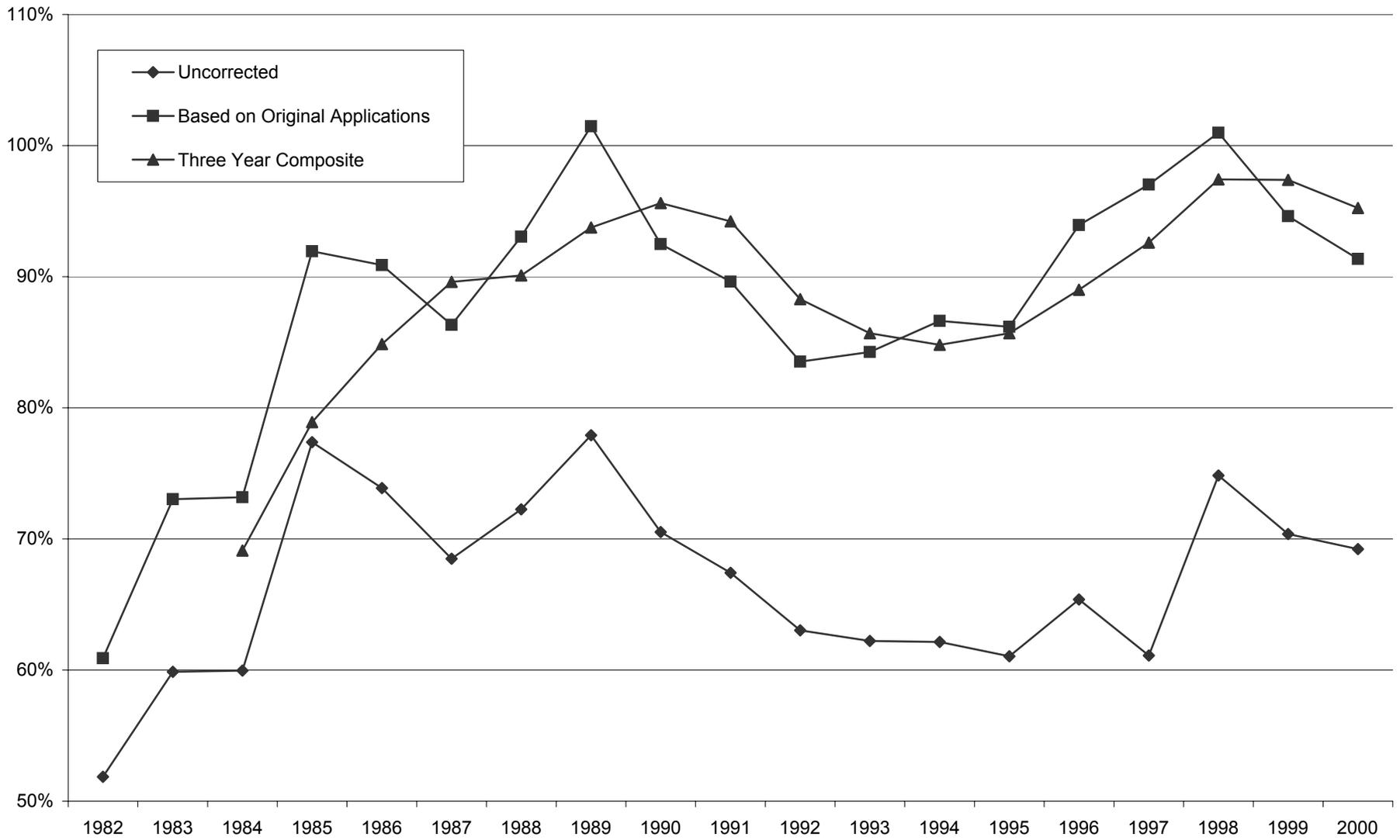
U.S. Grant Rates



Grant Rates



Allowance Percentage - 2 Year Lag



HOW TO "FIX" THE U.S. PATENT SYSTEM

1. Undo the Federal Circuit's misinterpretation of Graham v. John Deere and restore the higher and more certain standards for patentability that prevailed in the Federal Courts before the advent of the Federal Circuit. Return the statutory presumption of validity to the evidentiary standard which existed prior to the Federal Circuit. Abolish entirely the nonstatutory "secondary factors" as indicators of nonobviousness.
2. Require the U.S. Patent & Trademark Office to adhere to the restored higher standards. This will necessitate abolition of continuing applications (including voluntary divisionals and requests for continued examination) so that applicants can no longer avoid final patentability determinations and put the USPTO in the position of being able to rid itself of persistent applicants only by allowing their applications.¹ In addition, management practices and policy changes within the USPTO will also be necessary.
3. Eliminate the remaining sources of unnecessary uncertainty. Changes to do this should include:
 - 1). Abolish the doctrine of equivalents
 - 2). Change to "first-to-file" rather than "first-to-invent"
 - 3). Publish all pending U.S. patent applications 18 months after their "effective" filing dates and permit inspection and copying of the USPTO files of all published U.S. patent applications.
 - 4). Eliminate "hidden" prior art, but provide a noninfringement defense for a prior user/inventor.
 - 5). Etc.
4. Eliminate excessive damages for nonwillful patent infringement.
5. Return appellate jurisdiction in patent infringement cases to the regional courts of appeals so that the U.S. patent system has the same self-correcting judicial structure as other areas of U.S. law.
6. Undertake legislative reconsideration of the administrative/judicial decisions extending patent coverage beyond the "new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof" authorized by statute, i.e., the decisions extending patentability to intangibles such as business methods, computer software, etc.

¹ Elimination of continuing applications will also limit the ability of applicants to maintain an "inventory" of pending applications for the purpose of redrafting their claims to ensnare innovations commercialized by others after the filing date of the original application, and, along with the inspection and copying of published pending applications as contemplated in #3. 3)., should substantially diminish or eliminate the "hold-up problem."