

INNOVATORS, INNOVATION, AND THE U.S. PATENT SYSTEM

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Good afternoon. I am going to talk briefly about the current state of the U.S. patent system as it affects innovation and innovators, those who commercialize new products and new processes.

My presentation is abbreviated from one I made last year for the Association of General Counsel. The AGC membership had identified the "patent crisis" as one of their major concerns, and Gary VanGraafeiland, my successor at Kodak and their program co-chairman, asked me to substitute when their speaker became unavailable. The AGC presentation, which some of you heard, is in the materials that have been provided, and includes more detailed arguments, sources and citations.

Discussion of the current impact of the U.S. patent system on innovation and innovators must begin with formation of the Federal Circuit Court of Appeals in 1982. Not counting extensions to subjects that previously could not be patented, there are three major changes affecting innovation and innovators brought about by the Federal Circuit, all on its own, and

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without benefit of statutory changes or Supreme Court decisions. These are lowered standards for patentability, increased unpredictability and uncertainty as to the outcome of patent litigation, and excessive damages.

The lowered and less certain standards are a consequence of Federal Circuit decisions diminishing the person of ordinary skill in the art and narrowing the scope of prior art relevant for the obviousness-nonobviousness question, mandating consideration of the nonstatutory "secondary factors," and extending the statutory presumption of validity to issues not considered by the Patent Office and changing it to a "clear and convincing evidence" standard.

Under Graham v. John Deere, U.S. v. Adams, and subsequent Supreme Court cases the person of ordinary skill in the art was presumed to keep himself or herself aware of developments pertinent to his or her work and all relevant prior art was to be considered. The nonstatutory "secondary factors" were only of conditional relevance, to be considered only if doubt remained after consideration of the primary statutory factors. The Federal Circuit however, notwithstanding the Supreme Court, has required "motivation" for prior art to be considered together, and has not only told us that the "secondary factors" must always be considered, but that, if sufficiently present, can even overcome a determination of obviousness under the primary factors. Their test for

weighing the nonstatutory "secondary factors" against the primary factors is to "consider the evidence collectively," whatever that may mean.

Claim construction is another area of uncertainty. District court claim construction decisions have been reported to be reversed more than 40% of the time. In addition, damages rules prescribed by the Federal Circuit frequently result in windfall awards, often greatly in excess of the amounts necessary to compensate patentees and restore them to the pecuniary position they would have enjoyed had there been no infringement.

Increased uncertainty and expense for innovators are the consequence. A common, perhaps universal, strategy for innovators is to seek patents on inventions they might commercialize in an effort to preempt or block others from obtaining such patents, and thus minimize the possibility of interference from others' patents.

The lowered standards promulgated by the Federal Circuit have created more valid patents. Prior to the Federal Circuit about 2/3 of litigated patents were ruled invalid and only about 1/3 were valid. Immediately following formation of the Federal Circuit that statistic was reversed and about 2/3 of litigated patents were found valid and only about 1/3 were

invalid. Studies of more recent years have found that something like 60% of litigated patents are ruled valid.

Innovators following the preemption strategy must now file more patent applications than they otherwise would, since they can no longer rely on the courts to protect them from the patents that once would have been ruled invalid. The effect has been dramatic. This chart (Fig. 1) shows application filings from 1973 through 2000. The spectacular growth following formation of the Federal Circuit in 1982 is apparent.

And the acceptance rate at the Patent Office, when corrected for refiled applications, whether measured by Allowance Percentage or Grant Rate, has gone up just as dramatically, as shown by these two charts (Figs. 6 and 8).

The combined result of the increase in applications and decline in selectivity is an increase in the number of patents granted, from fewer than about 60,000 in 1982 to more than 165,000 in 2000 (Fig. 2). The patent thicket through which innovators must work their way to commercialize their innovations has gotten thicker.

In addition, perhaps because of the uncertainties created by the Federal Circuit, or the possible windfall nature of damages awards, or both, patent litigation has increased as well. This chart, from a 1994 study by

Jon Merz and Nicholas Pace, shows the increase in patent litigation that followed formation of the Federal Circuit. The increase has continued. There number of patent cases filed nearly doubled between 1992 and 2000 (1283 v. 2232).

Increased application filings means that innovators must employ more patent attorneys and pay more filing fees. The increase in patent grants means more infringement and validity investigations, higher fees for outside counsel, and more licensing expenses. Increased uncertainty and the possibility of excessive damages means more litigation, which means higher fees for both patentees and alleged infringers. And the increased risk resulting from the new uncertainties and possibility of suffering a premature injunction or having to pay crippling damages leads to increased cost of capital for innovation investments.

The increased costs apply to all innovators, none of whom obtain an advantage as a consequence. The increased costs must be paid for, and are borne by the innovation process, with the undoubted consequence that we have less innovation than we otherwise would, and it costs us more.

How did we get here? To answer we need to go back in time, before formation of the Federal Circuit. There has always been a symbiotic relationship between the Patent Office and those who practice before it,

and those who litigate its results. Each has depended on the other for their livelihoods. The Patent Office would issue a few more patents, which would require a few more patent applications, which would require a few more patent attorneys and patent examiners, and on and on. This persistent growth in the need for patent examiners and patent attorneys assured job security and attractive incomes for both, and also assured that neither had the slightest interest in changing the system.

The courts however, led by the Supreme Court, applied higher standards, and regularly admonished the Patent Office to adhere to those higher standards. The Supreme Court's admonition in Graham was perhaps typical:

We have observed a notorious difference between the standards applied by the Patent Office and by the courts. While many reasons can be adduced to explain this discrepancy, one may well be the free rein often exercised by Examiners in their use of the concept of "invention." In this connection we note that the Patent Office is confronted with a most difficult task. Almost 100,000 applications for patents are filed each year. Of these 50,000 are granted and the backlog now runs well over 200,000. [Citation omitted] This is itself a compelling reason for the Commissioner to strictly adhere to the 1952 Act as interpreted here. This would, we believe, not only expedite disposition but bring about a closer concurrence between administrative and judicial precedent.

Such admonitions hung like a "Sword of Damocles" over those whose jobs and incomes depended on the filing of patent applications and

granting of patents. Had the Patent Office ever followed the Supreme Court's admonitions, the number of patents granted would have been reduced, perhaps by as much as two-thirds, with the consequence that the number of patent applications would have soon been reduced as well, perhaps by a similar amount. And, with fewer patent applications and patents, the number of patent examiners and patent attorneys would also have been reduced.

But opportunity presented itself in the late 1970s with the proposal to form a new Federal court of appeals with exclusive appellate jurisdiction for patent appeals (and other areas of Federal law) by merging the Court of Customs & Patent Appeals, (CCPA) and the Court of Claims. The CCPA, which heard appeals from the Patent Office, had always managed to ignore the high standards prescribed by the Supreme Court.

The patent bar was split, to an extent. The Washington patent bar and most corporate patent attorneys (who for the most part determined the positions of their employers) were strongly in favor of the proposed new court. These were the people who made their livings practicing before the Patent Office, and whose jobs and incomes were in jeopardy if the Patent Office ever followed the Supreme Court's admonitions. But, if the new court turned out to be dominated by the CCPA, then it too might evade the Supreme Court, just as the CCPA had done, with the result that courts would no longer pressure the Patent Office to adopt higher

standards. Private patent practitioners outside of Washington were less enthusiastic. The Chair of the ABA Litigation Section at the time characterized the proposal as "a solution in search of a problem."

The debate, of course, was not conducted in such forthright terms. Proponents pointed to circuit-to-circuit variations in the outcome of patent cases, and even claimed there was one circuit that had not in living memory found a valid patent. Neither the variation in outcomes nor the absence of a valid patent in one of the circuits should have been surprising given that there were very few patent appeals in those days, and, with only about one-third of litigated patents being valid, there just weren't enough valid patents to go around among the eleven regional courts of appeals then existing.

Another claim was that forum shopping because of the variations resulted in "unseemly" races to the courthouse, and that this would be eliminated by a single appellate court for patent cases. This was most certainly untrue, and even if true and a problem, could have been alleviated by amendment of the venue statutes, and did not require a new court.

A further claim was that the Supreme Court had paid insufficient attention to patent law. This too was false. The Court had revisited and reaffirmed the nonobviousness standard of Graham and Adams on at

least three subsequent occasions. As of the debate regarding formation of the Federal Circuit, there were no significant patent law issues that had not recently been dealt with by the Supreme Court, save for one or two still percolating in the lower Federal courts and not yet ripe for Supreme Court review. The Supreme Court problem for the proponents was its decisions imposing high standards which, if ever followed by the Patent Office, would have resulted in fewer patents and patent applications, and thus less work for them.

The legislation passed, and the Federal Circuit began work on October 1, 1982. The hopes of its proponents were immediately fulfilled. The standards for patentability were promptly lowered and the threat to patent attorneys and patent examiners was removed. The Patent Office, with the blessing of the Federal Circuit, has continued to expand the scope of its activities, and job opportunities for its employees, for those who practice before it, and those who litigate its results. We now have patents on computer software and business methods solely as a result of administrative and judicial decisions, and without any legislative determination that those industries were suffering from a lack of innovation, or would benefit from having the patent system and its costs imposed upon them.

Undoubtedly the most important effect of the Federal Circuit has been creating work for lawyers. This chart, from a paper by John Barton of

Stanford shows the ratio, over time, of the number of intellectual property lawyers in the United States to R&D expenditures in the United States. These additional lawyers are required to file the additional patent applications made necessary by the lowered standards brought to us by the Federal Circuit, to evaluate the increased numbers of patents that result, and to deal with the additional licensing and litigation that results from the additional patents, uncertainty, and excessive damages.

Another consequence of the single appellate court is that patent law is deprived of the self-correcting structure that benefits other areas of American law. Under this structure a court is not constrained by a decision by a court of appeals in a different circuit, and issues which have been decided by one of the regional courts can be reconsidered on their merits when they subsequently arise in another circuit. Eventually, if the regional circuit courts disagree, the Supreme Court can take a case that presents the issue as to which the circuits have split and deal with the matter fully confident that the issue has been debated time and again, and that it will hear the most compelling arguments, and have a reasonable opportunity for reaching the right result.

Under our current patent law system, once the Federal Circuit has decided an issue there is no opportunity for other views to develop free of the constraints of stare decisis, and it is a rare district court judge who

will disagree with a prior Federal Circuit decision knowing his or her judgment may be appealed to the Federal Circuit.

In fact, I know of only one, and it was not a district court judge but rather Judge Easterbrook of the Seventh Circuit who tried the damages part of the Grain Processing v. American Maize case. Judge Easterbrook decided that the patentee was not entitled to lost profits damages, and that reasonable royalty damages should be no more than the difference between the cost to make the patented product and the cost to make a noninfringing product. The case was appealed to the Federal Circuit, which reversed on the basis that the noninfringing product and process were not commercially available to the defendant during the infringement period, and directed Judge Easterbrook on remand to determine the patentee's lost profits. Judge Easterbrook did not follow the Federal Circuit. Instead he wrote a second opinion in which he explained, in very polite judge-talk, that he was right the first time, that the Federal Circuit was wrong in reversing him and didn't even understand its own cases, and reentered his earlier judgment. The case was appealed again. The second time around the Federal Circuit, either convinced by Judge Easterbrook's logic or intimidated by his reputation, reversed itself and affirmed. Judge Easterbrook's second opinion, the one that was affirmed, is a treasure!

The important point of course is that patent law would benefit from the same self-correcting structure that governs other areas of American law, and should not have to depend on super-courageous district court judges (or Court of Appeals judges sitting by designation) for the correction of erroneous legal doctrine.

So, is there a patent crisis? That is a question you as chief legal officers will have to answer for yourselves. But if you think there is, and want it fixed, then my message to you is that you will have to attend to the fixing yourselves. Changes to restore the standards for patentability, eliminate unnecessary uncertainties, and return compensatory purpose to patent damages (such as those identified on this chart - How to "Fix" the U.S. Patent System^{*}) will almost certainly be opposed by the organized patent bar, and probably by your own patent staffs. After all, the current system was brought to us by them or their predecessors. They never had it so good, and they are not likely to want to change it.

^{*} This chart was not displayed at the presentation because of time constraints.

Fig. 1 - Applications Filed (1973 - 2000)



Fig. 5 - Allowance Percentage - 2 Year Lag

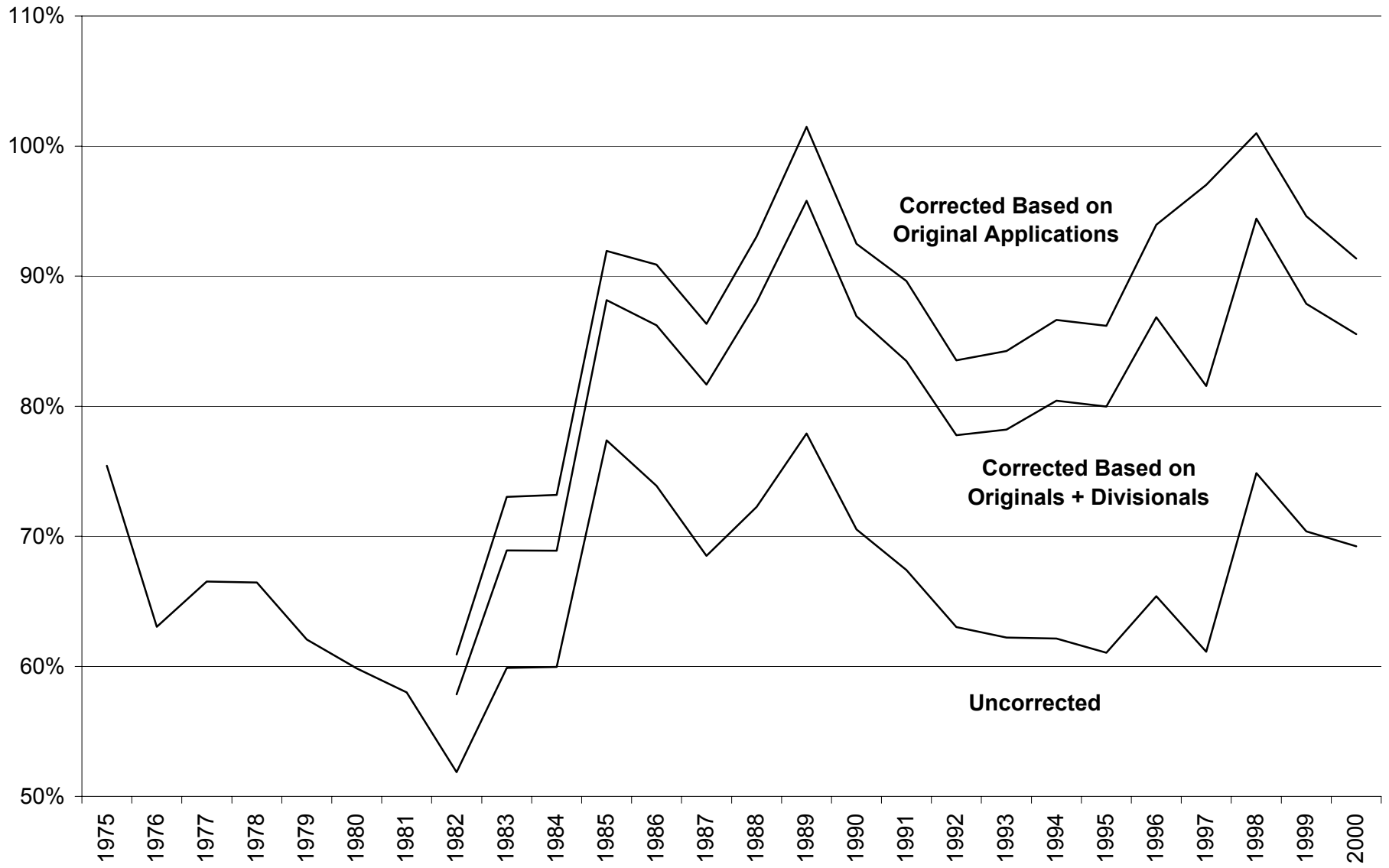
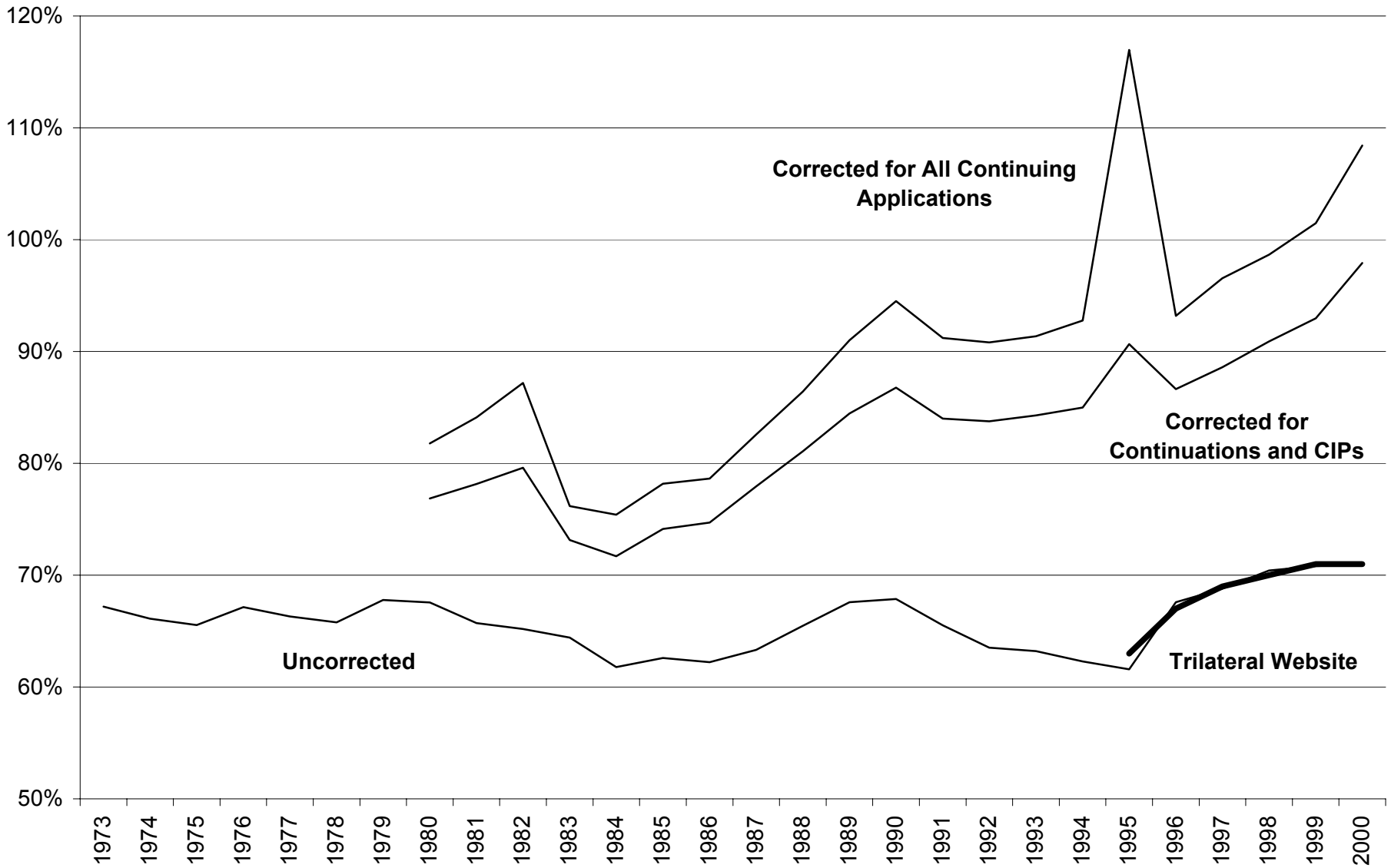


Fig. 8 - U.S. Grant Rates



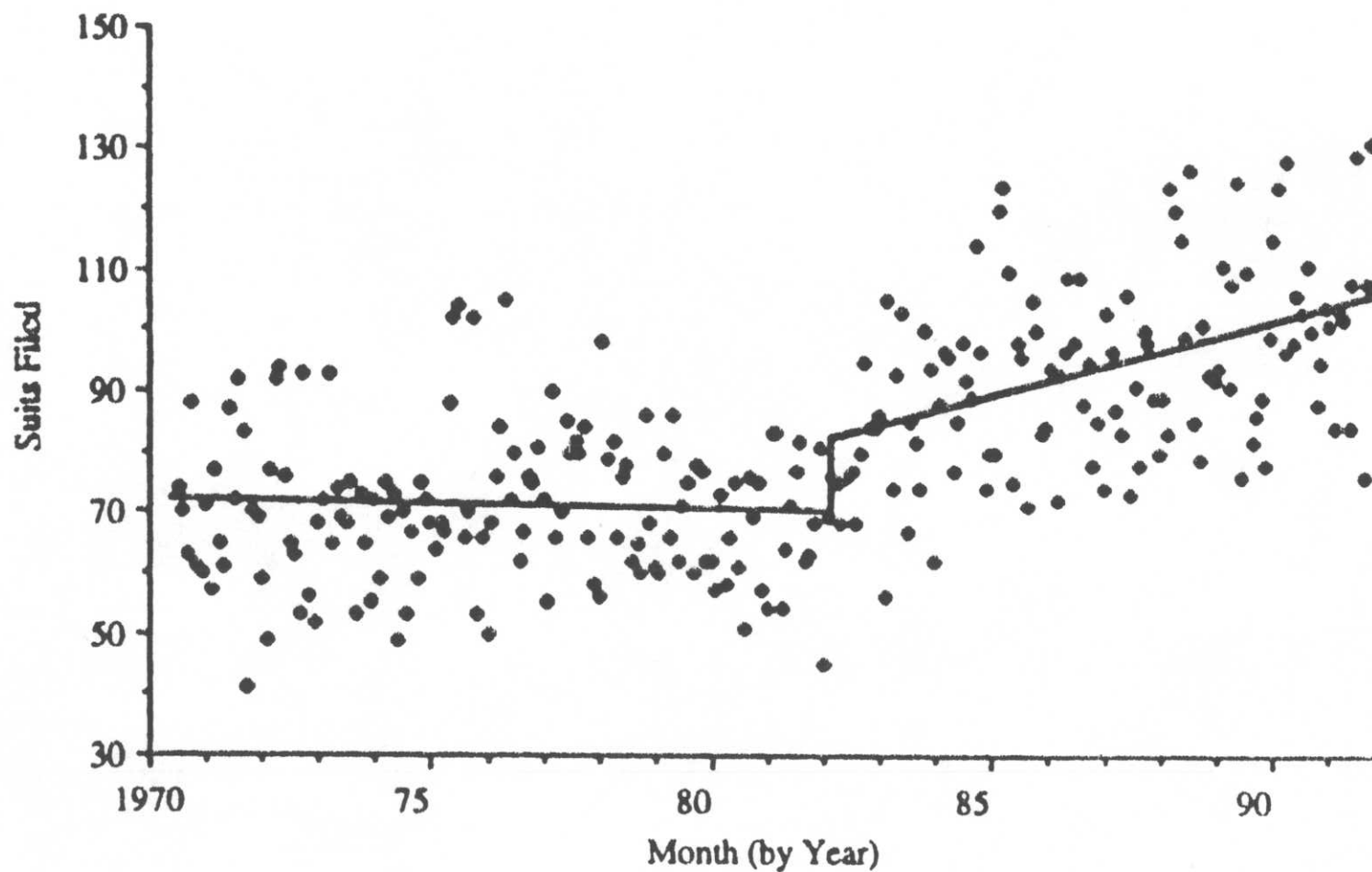
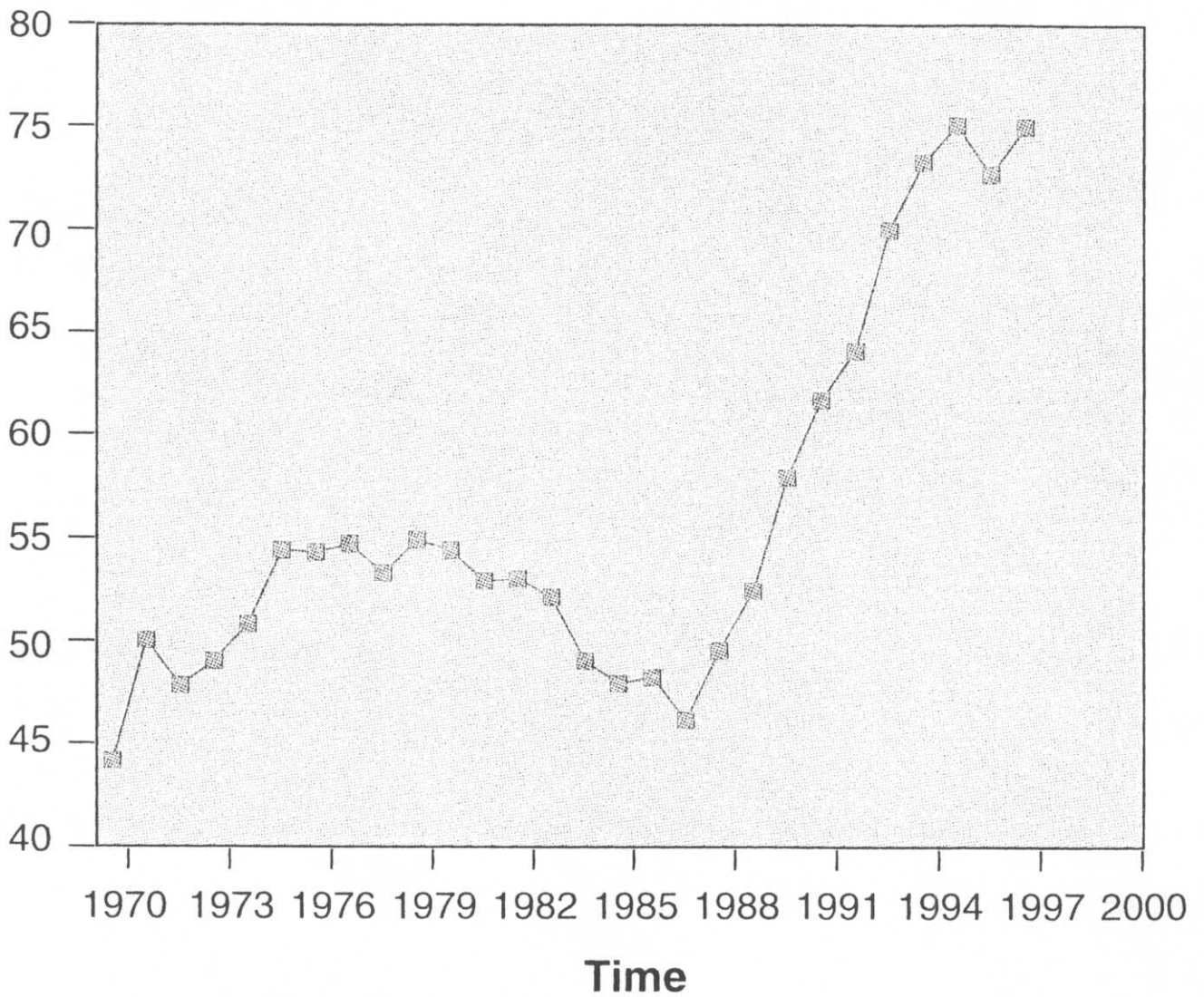


Figure 2 Monthly patent litigation, with fitted regression line.

Trend of lawyer numbers/R&D expenditure
(billions of dollars)



Numbers of intellectual property lawyers per unit of research expenditures in billions of dollars (1).

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

1. Undo the Federal Circuit's misinterpretations of Graham v. John Deere and restore the higher and more certain standards for patentability that prevailed before the advent of the Federal Circuit. Return the statutory presumption of validity to the evidentiary standard that existed prior to the Federal Circuit. Abolish entirely the nonstatutory "secondary factors" as indicators of nonobviousness.
2. 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. This should also aid restoration of the higher and more certain Supreme Court standards for patentability that prevailed prior to the Federal Circuit.
3. 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.
4. 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. Do not publish applications that are abandoned before 18 months if requested by the applicant.
 - 4). Eliminate "hidden" prior art, but provide a noninfringement defense for a prior user/inventor and for alleged infringements that are obvious from the prior art.
 - 5). Etc.
5. Eliminate excessive damages for nonwillful patent infringement.
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, e.g., 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."