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Patent Reform Arrives -- Without Congressional Action

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[Abstract]
A quarter century of strong and increasing U.S. patent protection has come to an end. That remarkable period began in the early 1980s, when the U.S. Court of Appeals for the Federal Circuit undertook to fix more than half a century of patent weakness. Recently, that same court has moved decisively in the opposite direction under pressure from the business community, scholarly studies, Supreme Court pronouncements, and threats of Congressional action. It has ratcheted-down patent protection unevenly but in a remarkably wide variety of ways. We explore the specifics of these developments and consider their consequences for intellectual property rights enforcement and U.S. producing companies.
Patent Reform Arrives -- Without Congressional Action

[Authors]

Genuine “reform” has come to the U.S. patent system. It has ended the period of strong and increasing patent protection we have known for nearly a quarter century. It was not supposed to happen as it did.

Legislative “patent reform” has been a hot topic for nearly five years. Now it’s on life support. Despite many studies, hearings, and House and Senate bills, no “reform” emerged from the 109th or 110th Congresses. A watered-down reform bill might still be enacted by the 111th, but its passage is doubtful and its effects, if enacted, would be modest. Instead, the federal courts have quickly transformed U.S. patent enforcement. This transformation has accomplished major parts of the legislative reform agenda and will dwarf in importance any changes to the patent laws that might emerge from Congress.²

Fragments of the transformation are widely known because of several high profile U.S. Supreme Court decisions that helped push it along. Most of the changes, however, have come in disparate rulings by the U.S. Court of Appeals for the Federal Circuit. Spurred by criticism of the U.S. patent system and by threats of action by Congress and the Supreme Court, these otherwise unrelated decisions show one consistent theme: reversing enhancements of patent strength and protection that, for the most part, were introduced by the same court of appeals within recent memory. The big picture -- the context and combined importance of the recent changes -- is not widely recognized.

The recent rulings have overturned a variety of pro-patentee rules in litigation, facilitated patent invalidation, reduced patent coverage and the availability of important remedies for infringement, and cut the power of juries in patent cases. The changes affect most strongly certain classes of patent holders, patent applications, and courthouse procedures. The values of many patents have declined. Many patent holders, especially small entities, are finding

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¹ [Author names, entity disclaimers, and thanks removed for submission]
² [Maybe update status of S. 515 near publication date; possibly quote Kappos re first-to-file.]
enforcement of their patents less feasible than it was very recently. A controversial category of patent holders derisively referred to as “patent trolls” has been weakened. Corporate managers face a revised set of risks and rewards from the U.S. patent laws.

Substantial U.S. patent protection, including a fraction of the enhancements achieved from 1982 to 2006, will survive the retrenchment. But the effectiveness of patent protection for many patentees has declined significantly in a period of just three years. At the same time, the big-dollar risks of infringement suits have declined significantly, though unevenly, for U.S. producers.

On balance, the recent changes may be good for the U.S. economy. Some parts of the recent retrenchment mainly affect situations where patents created little or no desirable economic incentives yet could disrupt U.S. production and commerce, impose costs, and/or put U.S. producers at a disadvantage relative to their foreign competitors. Other recent changes have re-balanced what had become very pro-patentee litigation rules. Thus, while the new regime is frustrating enforcement of some meritorious patents and leaving some inventors and investors without deserved rewards, the benefits may outweigh the costs.

The following pages briefly review the surge of U.S. patent protection in the last quarter century in its historical context. We identify some of the factors that caused that surge and some of the criticism it engendered. The body of this article then summarizes more than a dozen facets of patent protection where recent decisions have reversed that pro-patent surge. The concluding section summarizes the consequences of this transformation.

The Last Three Decades -- Strength Follows Weakness

Cycles of strength and weakness have been a recurring pattern in the long history of U.S. patent law.³ In the last century, a period of relatively weak U.S. patents lasted from the 1920s to

the early 1980s. Several factors contributed to this weak-patents regime, including judicial hostility to patents, anti-monopoly sentiment, distrust of the patent examination process, and inconsistency among the various federal appellate circuits. Patents were frequently invalidated, some important remedies for infringement were difficult to obtain, and rampant forum-shopping made patent protection even weaker in practice than it seemed in theory.

In the 1970s and ‘80s, U.S. businesses seemed to be falling behind their foreign competitors in technical and product innovation. Among other things, foreign companies seemed to be out-competing U.S. businesses in exploiting inventions originally made in the United States. For many business and political leaders, stronger U.S. patent protection promised both stimulus for U.S. technical innovation and a degree of protection against foreign competitors in the exploitation of U.S. inventions. These economic and political factors led to a series of new laws designed to iron-out the inconsistencies in patent law and enforcement and to strengthen the protection afforded to holders of U.S. patents. The importance of these changes became clear only gradually as the U.S. Court of Appeals for the Federal Circuit, created in 1982, took up its Congressional mandate in the patent arena.

Congress formed that new court out of two predecessor courts and gave it exclusive jurisdiction over appeals in patent cases from the federal trial courts across the country and from rulings by the U.S. Patent and Trademark Office (the “Patent Office” or “PTO”). No longer would appeals in infringement cases go to the twelve regional circuit courts of appeals, each with authority to interpret and apply the patent law as it chose subject only to occasional intervention by the U.S. Supreme Court. The legislative history called for this new court to bring clarity and uniformity to the inconsistent patent rulings of the various regional courts of appeals. Less express, but nevertheless widely understood, was the expectation that the Federal Circuit would strengthen patent protection by eliminating remaining hostility to patents, eliminating forum shopping, and enforcing a higher percentage of patents.

4 While treaties assured non-U.S. inventors equal treatment in obtaining U.S. patents for their inventions wherever made, the large majority of U.S. patents had long been issued to U.S. entities, and this seemed unlikely to change. For example, according to statistics from the U.S. Patent and Trademark Offices’ foreign inventors accounted for only about 20% of the U.S. patents granted in the mid-1960s. Foreign individuals and entities owned only 33% of all patents granted in 1963 through 1989.

5 The U.S. Court of Customs and Patent Appeals and the U.S. Court of Claims.
The Federal Circuit promptly began to bring order to inconsistent patent case law and to strengthen patent protection in multiple ways. In combination, its numerous pro-patent rulings made success by patent-holders substantially more and more likely in infringement suits. U.S. patents became more valuable assets -- and more potent weapons -- in business. Many of the Federal Circuit’s patent-strengthening initiatives are discussed below in connection with the many facets of the current retrenchment.

**Criticism, Complaints, and Studies**

Gradually, the broad enhancement of patent protection fostered criticism. At the same time, rapid technological advances made patents more numerous and important, and the impact of stronger patents on U.S. producers heavier, than they otherwise would have been. A range of perceived problems was widely discussed. Business executives and some scholars condemned perceived excesses. Extensive studies, numerous articles, and some entire books were to the same general effect, with many offering suggestions for changes to the patent laws to alleviate the perceived problems. The weight of the recommendations favored moderating the strong-patents environment, improving practices at the PTO, and reducing the costs of patent litigation. Criticism was also directed at a few practices that favored accused infringers while contributing to the complexity and expense of patent litigation.

**The Tide Turns**

After nearly a quarter century of high and increasing patent protection, the legal tide turned in 2006. Then and since, the Supreme Court and especially the Federal Circuit released a series of decisions limiting U.S. patent protection in a wide variety of ways, and the federal trial courts have extended those rulings. Taken together, these decisions have substantially, but unevenly, reduced the power patents afford their holders. The result is a rapid and wide-ranging retrenchment -- essentially “patent reform” without Congressional participation.

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6 See, e.g., the studies cited in note 3, above. Numerous other studies were prepared and published by, e.g., the Congressional Research Service and various private institutions. See also Adam Jaffe and Josh Lerner, *Innovation & its Discontents: How Our Broken Patent System is Endangering Innovation and Progress, and What to Do About It* (Princeton University Press, 2004).

7 These included use of the inequitable conduct doctrine and the “best mode” requirement. Depending on the intent of the patent applicant and other circumstances, each of these can create a defense to charges of infringement.
The following sections of this article identify many facets of patent protection that gained strength through rulings by the Federal Circuit after 1982 but have suffered recent dramatic reversals. We discuss them -- and briefly preview them here -- as follows:

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We then summarize -- to the extent now possible -- the consequences of these wide-ranging changes.
1. Patentable Subject Matter -- No Longer Wide-Open

Not all inventions can be patented, even if they are new, useful, and non-obvious. Patentable subject matter is limited to “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” These turn out to be broad but indefinite terms.

For its first decade-and-a-half, the Federal Circuit gradually expanded patentable subject matter. Then, in 1998 and 1999, it demolished most limitations in two explosive rulings. This instituted what could be called a “wide open” regime of patent eligibility, which lasted for a decade. Recently, however, the Federal Circuit changed course again and adopted a far more restrictive approach to patent eligibility. The Supreme Court is likely soon to endorse most of this cut-back in patent eligibility.

[Modest update to come when Supreme Court decides Bilski]

a. Patentable Subject Matter before Creation of the Federal Circuit

The current statutory definition of patentable subject matter is essentially unchanged from the definition adopted in 1793. Over the last two centuries, many decisions interpreted the language, confirmed its generally broad scope, and articulated areas where patents cannot be granted. A number of related doctrines and judicial approaches widened the zones of non-patentability considerably, but unpredictably, around these clearly forbidden subjects.

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9 See text at note 8, above. The Patent Act of 1793 and subsequent acts up to the revision of 1952 used the same wording except that the term “art” appeared instead of the word “process.” The 1952 change to “process,” however, was understood as following the courts’ interpretation of the term “art” and not as a change in the scope of patentable subject matter because “[i]n the language of the patent law, [a process] is an ‘art’.” Diamond v. Diehr, 450 U.S. 175, 182-184 (1981).
10 Subject matter traditionally deemed non-patentable has included: (i) laws, phenomena, or products of nature; (ii) fundamental or mathematical principles, including calculational procedures; (iii) other abstract ideas, human thinking and methods or systems that depend significantly on human intelligence, and (iv) processes without physical effects or machinery. Discoveries in those areas are often deemed not to be inventions of man. Instead, they are considered “pre-existing truths,” “basic tools of scientific and technological work,” and/or parts of the “storehouse of knowledge of all men . . . free to all . . . and reserved exclusively to none.” Gottschalk v. Benson, 409 U.S. 63, 67 (1972); Funk Bros. Seed Co. v. Kalo Inoculant Co., 333 U.S. 127, 130 (1948).
In the decade before creation of the Federal Circuit, the Supreme Court gave conflicting signals on patentable subject matter. Limiting patentability, the Court twice disallowed patents on formula-driven computer processes aimed at achieving specified, but broadly applicable, results. It did so mainly because computer software consists of logical or mathematical procedures or “algorithms,” which the Supreme Court deemed non-patentable as akin to abstract ideas or mental steps.\(^{11}\) But just two years later, in a 5-4 ruling, the Court allowed patenting of a genetically modified bacterial life form, and the majority opinion used strong language encouraging broad patent eligibility.\(^{12}\) And just a year later, in another 5-4 decision, the Court approved a patent for a formula-driven, computer-and-software-implemented process for determining the proper cure time for batches of synthetic rubber in a mold and opening the mold when the time was up.\(^{13}\) There again the majority opinion included expansive, pro-patentability language.\(^{14}\)

b. The Federal Circuit Expands, then Explodes, Eligible Subject Matter

Having made few changes in patentable subject matter in its first decade, the Federal Circuit gradually widened the range of patent eligibility from 1992 on.\(^{15}\) In 1995, this expansion led the Patent Office to drop its opposition to patents on common, prior art, computer-readable media -- such as floppy disks -- carrying new computer programs.\(^{16}\) Though not initially


\(^{13}\) *Diamond v. Diehr*, 450 U.S. 175 (1981).

\(^{14}\) The Court said “[I]n order to determine [the] meaning [of “process”] we may not be unmindful of the Committee Reports accompanying the 1952 Act which inform us that Congress intended statutory subject matter to ‘include anything under the sun that is made by man,’” 450 U.S. at 182. Recently, however, some judges have questioned the applicability of the statement in the committee reports to a claimed “process” under any circumstances because (i) the quotation refers not to processes or methods but only to the other main types of patentable inventions mentioned in the Patent Act, namely “machines or manufactures” and (ii) even in that context, does not fully affirm patentability. See, *e.g.*, *In re Bilski*, 545 F.3d 943, 1000 (Mayer, J, concurring as to the result).

\(^{15}\) See, *e.g.*, *Arrhythmia Research Technology, Inc. v. Corazonix Corp.*, 958 F.2d 1053 (Fed. Cir. 1992, and *In re Alappat*, 33 F. 3d 1526 (Fed. Cir. 1994 (en banc).

\(^{16}\) In *re Beauregard*, 53 F.3d 1583 (Fed.Cir. 1995) (order vacating decision of Board of Patent Appeals & Interferences and dismissing appeal for lack of a case or controversy where the Patent Commissioner, during the pendency of the appeal, “state[d] that he agrees with [the applicant-appellant’s] position that (footnote continues on next page)
approved by the courts, this change rendered large amounts of software effectively patentable. In contrast, the Federal Circuit resisted efforts to patent business methods even when claimed with computer technology.\footnote{17}{In 1998-1999, however, the Federal Circuit demolished several traditional limitations and vastly expanded patent eligibility. In\textit{ State Street Bank and Trust Co. v. Signature Financial Group, Inc.} the Federal Circuit approved patentability for a broadly claimed data-processing system for financial and tax accounting for multiple entities investing proportionately as partners in shared investments. Underlying the system was generic computer equipment and software calling for simple calculations and proportional allocations. The Court’s bold pronouncements recognized only a single new and liberal standard for patentable subject matter, namely \textit{whether the claimed invention produced a “useful, concrete and tangible result.”} The ruling approved patenting of business methods, most software inventions, and, in effect, a range of other previously non-patentable inventions. It also made clear that the \textit{“concrete and tangible”} part of the liberal new test required essentially nothing.\footnote{19}

Less than a year later, the Federal Circuit applied the new lenient standard to method patents in\textit{ AT&T Corp. v. Excel Communications, Inc.} That decision confirmed the demise of the “business methods” exclusion. Speaking more generally, the court acknowledged its efforts to expand patentability to keep up with new technologies, including the “process of manipulation

\footnote{17}{\textit{In re Schrader,} 22 F.3d 290 (Fed.Cir. 1994) (method for conducting auctions and bidding on a plurality of items); see also the court’s comments on two earlier business methods cases in \textit{In re Alappat,} 33 F.3d 1526, 1541 (Fed. Cir. 1994): “We . . . note that [\textit{In re Maucorps,} 609 F.2d 481 (CCPA 1979)] dealt with a business methodology for deciding how salesmen should best handle respective customers, and [\textit{In re Meyer,} 688 F.2d 789 (CCPA 1982)], concerned a ‘system’ for aiding a neurologist in diagnosing patients. Clearly, neither of the alleged ‘inventions’ in those cases falls within any . . . category [of patentable subject matter].”}

\footnote{18}{149 F.3d 1368 (1998).}

\footnote{19}{The decision held such \textit{abstract and intangible} things as numbers representing profit, loss, tax attributes, and share price to be sufficiently \textit{“concrete and tangible”} to satisfy its new test. This seemed to reduce the test to the single element of \textit{usefulness} in any activity, including simply making or allocating money or credits.}

\footnote{20}{172 F.3d 1352 (1999).}
of numbers, [which] is a fundamental part of computer technology.” With candor, it characterized its expansion of eligible subject matter as “a sea change” in the law.\textsuperscript{21}

The Supreme Court denied review of the Federal Circuit’s decisions in \textit{State Street} and \textit{AT&T}. Persistent criticism attended the sudden expansion of patentability but had no legal effect. The PTO tried to impose a “technological arts” requirement, demanding some significant technological aspects in process/method claims in order to render them patent-eligible. That limitation, however, seemed inconsistent with the Federal Circuit’s broad new regime for patent eligibility and was largely discarded.\textsuperscript{22} Patentable subject matter knew few if any meaningful limits.

But criticism of the new dispensation persisted. Commentators urged a return to narrower rules of patent eligibility, and many silly -- or worse -- issued patents were held up to ridicule. The growing patent backlog at the PTO and the PTO’s often deficient prior-art examinations were blamed partly on the expanded range of patentability and the PTO’s difficulties in determining what the prior art was in fields like business methods and computer software, where its records and expertise were especially limited. In two U.S. Supreme Court cases in 2006, groups of three (in one case) and four (in the other) Supreme Court Justices criticized patents on marginal subject matter, particularly business methods, and attacked the \textit{State Street} decision.\textsuperscript{23}

c. Course Reversal -- the Door Swings Part Way Shut

The Federal Circuit dramatically reversed course on patentable subject matter in 2007. Several cases raised the issue shortly after the criticism of business method patents and of the \textit{State Street} decision by groups of Supreme Court Justices mentioned just above. Two decisions

\textsuperscript{21} 172 F.3d at 1356, 1359-60. Terming \textit{State Street}’s liberal test the “the ultimate issue” as to patentable subject matter and applying it to method claims, the Federal Circuit held the software-driven preservation of rudimentary data on long distance telephone calls for possible use in consumer billing to be a sufficiently “useful, concrete, and tangible result” for patent eligibility. Its opinion also disparaged three of the Federal Circuit’s decisions from 1989-1994 that had followed the more traditional and restrictive view of patentability for computer-based inventions.

\textsuperscript{22} \textit{Ex Parte Lundgren}, 76 USPQ2d 1385 (BPAI precedential decision).

by Federal Circuit panels in 2007 announced a new, more restrictive approach to patent eligibility even though the cases could easily have been decided on narrower grounds. They rejected as not patent eligible: (i) a method and system for arranging and conducting mandatory arbitrations of business disputes\(^{24}\) and (ii) a special type of artificially created transitory propagating physical signal.\(^{25}\) Then in late 2008, the full Federal Circuit confirmed the course reversal, particularly for inventions claimed as methods, in its major *en banc* decision in *In re Bilski*.\(^{26}\)

The patent at issue there claimed a simple business method using an intermediary to hedge price risks in commodities trading. After oral argument to a panel of the court but before the panel ruling, the full Federal Circuit decided, *sua sponte*, to rehear and decide the case itself. Its order for *en banc* review invited briefing on whether the Court should overturn its earlier *State Street* and *AT&T* decisions. The resulting majority decision, reflecting the views of 9 of the 12 participating Federal Circuit judges, drastically narrowed the patent eligibility of method/process inventions. Moreover, one of the three non-concurring judges would have gone even further in limiting patent eligibility.

In its ruling, the Federal Circuit abandoned its expansive *State Street* test for patent eligibility and substituted what the majority called “the Supreme Court’s test.” That is a narrow eligibility criterion for process/method claims that had been suggested, but not adopted, by a patent-limiting Supreme Court decision in 1972.\(^{27}\) Though focused on process/method claims, *Bilski* gives impetus to tighter limitations on other types of claims as well. Its key points include:

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\(^{24}\) In *In re Comiskey*, original decision 499 F.3d 1365 (2007); revised opinion, 554 F.3d 967 (Fed. Cir. 2009), the panel reached-out to attack the patent eligibility of method and system claims, which the Patent Office had rejected as merely obvious. The panel’s initial decision significantly narrowed patent eligibility for business method claims. The subsequent revised opinion, permitted by a ruling of the full court, was yet more limiting.

\(^{25}\) In *re Nuijten*, 500 F.3d 1346 (Fed. Cir. 2007), *cert. denied sub nom. Nuijten v. Dudas*, ___ U.S. ___, 129 S. Ct. 70 (2008) (signal held not patent eligible because it was not within any of the statutory categories: process, machine, manufacture, or composition of matter; forceful dissents underscored how dramatically this ruling contrasted with the Federal Circuit’s recent expansive approach on patent eligibility).

\(^{26}\) 545 F.3d 943.

\(^{27}\) Statements noting, but not adopting, this standard, but also referring to possibly more liberal patent eligibility appeared in *Gottschalk v. Benson*, 409 U.S. 63 (1972) and in some earlier and later Supreme Court decisions, including the more patent-friendly 1981 ruling in *Diamond v. Diehr*. 
• **The new test:** To qualify as patent eligible, a claimed method/process must either (i) be “tied to a particular machine or apparatus” or (ii) operate to “transform” a particular article or articles “into a different state or thing.”

• **Additional limitations:** The “tie” to the machine or the “transformation,” whichever applies, must place meaningful limitations on the scope of the claim.  

• **Non-qualifying “articles”:** Legal obligations, commercial relationships, business risks, or the like, cannot qualify as the “articles” subject to the “transformation,” regardless of whether they are represented by documents or other tangible items.

On the *Bilski* facts, no “machine” was “tied” to the claimed process, and only legal obligations or business risks were “transformed.” Accordingly, the claims were not patent-eligible.

Important uncertainties remain as to how this stark new standard for method/process claims should be applied; and the few post-*Bilski* rulings thus far are not fully consistent. They do support, however: (i) use of the new test against business method claims not tightly tied to specific technology and (ii) combining *Bilski* with *Nuijten*, *Comiskey*, or other cases to cut-back on business method patents even when the claims are not drafted in method/process form.

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28 It must be significant in relation to the entire claim and must prevent the claim from preempting all meaningful uses of the claim’s more abstract elements. And mere field-of-use limitations are not sufficient.

29 The “transformation” apparently must take place on an actual physical object(s) or substance(s) or on signals or other data representing physical object(s) or substance(s).

30 For example, the type of “tie” required between the claimed process and a machine, as well as how specifically claimed the “particular machine” must be remain unclear. For example, a claim requiring that specified steps be performed “on a general purpose digital microprocessor” might or might not be adequately tied to an adequately “particular” machine. (See note 31, below and *cf.* text at notes ___-___, below.)

31 See, *e.g.*, *In re Furgeson*, 558 F.3d 1359 (Fed. Cir. 2009) (claims for both a “method” and a “paradigm” for profitably organizing and using a shared marketing held not patent-eligible subject matter); *CyberSource Corp v. Retail Decisions, Inc.*, ___ F.Supp.2d ___, 2009 U.S. Dist. Lexis 26056 (N.D. Cal 2009) (extensive opinion applying *Bilski*, *Nuijten*, and other cases aggressively to invalidate both “method” and “system” claims for detecting fraud in credit card transactions over the Internet, concluding that “The closing bell may be ringing for business method patents, and their patentees may find they have become bagholders”); *DealerTrack, Inc. v. Finance Express, LLC*, ___ F.Supp. 2d ___, ___ U.S. Dist. Lexis ____ (C.D. Cal., July 7, 2009) (general purpose computer without detailed programming did not qualify as a specific machine that would validate method claim). [**CHECK** for other recent decisions before publication: **consider** adding mention of (i) the *Prometheus* decision by a Fed. Cir. panel; (ii) the district court decisions in *Fort Properties* (C.D. Cal. Jan 22, 2009), *Every Penny Counts* (M.D. Fla. May 27, 2009), and *Versata Software* (E.D. Tex. March 31, 2009), the last three being described in a saved “4 cases” article.” and (iii) the BPAI’s new *Bilski*-based two-part test for inventions claimed as a machine.]
The uncertainties under *Bilski* lose much of their importance in view of the Supreme Court’s grant of *certiorari* in the case. Predicting the outcome of that review, of course, is risky, but a few observations might be made. First, a return to the recent “wide open” regime for patent eligibility is unlikely. The criticism of business method and other non-traditional patents has been too widespread and is too easy\(^{32}\) to make that likely. Disrespect for non-traditional patents is widespread -- so much so that ten of the twelve Federal Circuit judges now favor substantial cut-backs of patentable subject matter. And several of the Supreme Court Justices have already stated their opposition to the types of patents that have found acceptance under the recent “wide open” standards.

Second, at least some modification of the Federal Circuit’s stark new “machine or transformation test” seems likely. Though attributed to the Supreme Court, the Court never adopted that “test” as a governing standard. It also borders on the mechanistic, which contrasts with the more policy-based approaches the Supreme Court has usually stated on patent eligibility. Adoption of the Federal Circuit’s new test “*as is*” seems unlikely.

Third, as it has done in the past, the Supreme Court may decline to adopt any specific “test” for patent eligibility. It may merely restate general principles and use them to rule on the *Bilski* facts -- very probably against patentability. Or the Court may add some new guideposts to the analysis without adopting a definitive test. One possible candidate is a “technological arts” requirement,\(^{33}\) which might supplement the general principles of patent eligibility. In his *Bilski* “dissent,” Judge Mayer strongly supported a “technological arts” requirement, pointing out the support that can be found for it in case law and, in his view, in the patent clause of the U.S. Constitution.\(^{34}\) The PTO has favored such a requirement on several occasions. That type of guidepost would, for example, bar claims for non-technological business methods while allowing patents on technologically oriented inventions -- including some software-based inventions; biotech, genetic or diagnostic inventions; and specifically claimed new technology for business applications.

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\(^{32}\) See, *e.g.*, Judge Mayer’s listing in his *Bilski* dissent (arguing for a complete ban on “business method patents”) of a number of such patents that, in his words, “range from the somewhat ridiculous to the truly absurd.” 545 F.3d at 1004.

\(^{33}\) See note 22, above, and accompanying text and Judge Mayer’s “dissent” in *Bilski*, 545 F.3d at ___.

\(^{34}\) 545 F.3d at 1001 *et seq.*
Stepping back from the detail, the Federal Circuit’s drastic, decade-long expansion of patent eligibility produced vast numbers of non-traditional patents, had substantial economic consequences, and imposed huge operational burdens on the PTO. It now seems unsuccessful in substantial part, and the trend is running in the opposite direction. A fraction of the patent eligibility gained in recent years will probably survive while the rest will be discarded. To hazard a guess, the former category may include many software-driven inventions and inventions in the biological sciences. The second may include non-technological business methods and other “inventions” involving human interactions.

2. **Injunctions -- Permanent and Preliminary -- Now Harder to Obtain**

Injunctions against continued infringement are harsh, but traditional, remedies in patent enforcement. Two varieties are important. “**Permanent**” injunctions have usually been entered after infringement trials where the patent holder was successful in showing infringement and withstood any defenses such as challenges to the patent’s validity. Not really “permanent,” these injunctions typically last until the patent in question expires. The other variety, **preliminary injunctions**, can be entered before trial to halt the apparently infringing activities pending judgment in the case.

Both types of injunctions can have drastic effects: halting or disrupting a going business of the defendant and imposing large losses. Both varieties gained strength from Federal Circuit rulings in the recent “strong patents” era. One has recently undergone a major retrenchment. The other has been wounded and is fighting to preserve some of its strength against continuing attack.

a. **Permanent Injunctions**

The U.S. Patent Act authorizes the district courts to issue injunctions in patent infringement suits “in accordance with the principles of equity to prevent the violation of [patent rights], on such terms as the court deems reasonable.”

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U.S. while the patent remains in force\textsuperscript{36} -- seems to invite issuance of an injunction, after an infringement, to effect that exclusion. Accordingly, a permanent injunction against continued infringement has long been a traditional remedy where the patent holder is successful on the merits at trial. But this remedy was not automatic even after such success. Older case law retained a significant degree of discretion for trial judges as to whether to grant a requested injunction and what terms to include.\textsuperscript{37}

Over the last 25 years, the Federal Circuit reduced the district courts’ already narrow discretion not to enjoin continuing infringement to a theoretical sliver. While extraordinary public interest considerations might theoretically block entry of an injunction after the patent holder was successful at trial, that almost never happened. Reflecting reality, the Federal Circuit ceased applying, or even referring to, the traditional four-factor equity test that governs injunctions in most non-patent cases. It was thus irrelevant:

\begin{itemize}
  \item whether or not the patent holder was making or selling the patented product -- and therefore likely, or not, to lose business from continuing infringement;
  \item whether an award of continuing damages -- without an injunction -- would remedy the patent holder’s apparent loss(es) from any continuing infringement; and/or
  \item whether the infringer’s business had been created innocently and would be devastated by the injunction whereas failing to enter an injunction would cause no similar harm to the patentee.
\end{itemize}

Further, depending on the circumstances, the presence of a small infringing element in a large, complex product might result in an injunction effectively preventing production or sale of the entire combination product.

This rule of essentially automatic injunctions gave patent holders extraordinary leverage over accused infringers. Together with the increased difficulty of invalidating patents, discussed below, it meant that essentially any issued patent that had not expired or already been adjudicated invalid posed a genuine risk of shutting down, or at least requiring immediate modifications to, any U.S. business it might be read as reaching. A number of changes in what

\textsuperscript{36} 35 U.S.C. §154(a)(1), emphasis added.

might be called the patent enforcement “market” demonstrated the economic importance of this change in bargaining power and the very strong economic positions patent holders had attained.\(^{38}\)

All this recently changed following the Supreme Court’s May, 2006 ruling in *eBay, Inc. v. MercExchange L.L.C.*,\(^ {39}\) although lower court decisions were needed to establish the importance of that decision. The patent in *eBay* claimed a business method for Internet sales. It was held by a company not practicing the claimed invention but licensing it to others. When licensing negotiations with eBay broke down, the patent holder sued and won on validity and infringement. After further review of the facts, however, the district court declined to enjoin continued infringement. It opted instead to award continuing damages for any on-going infringement. On appeal, the Federal Circuit reversed and applied its “automatic injunctions” rule. ___ F.3d ___. The Supreme Court, however, granted review and reversed again.

The Court’s short, unanimous opinion in *eBay* rejected the “automatic injunctions” rule in favor of the traditional but vague “four-factor” test that governs injunctions in most non-patent contexts.\(^ {40}\) Cryptically, it said very little about how the four-factor test should apply in patent cases and left unclear whether the decision would significantly affect patent enforcement. Two contradictory concurring opinions revealed a big disagreement among the Justices.

One concurring opinion, subscribed by three Justices, said entry of a permanent injunction makes good sense when a patent holder prevails on infringement and validity, because the patent right is the right to “exclude others” from practicing the invention. Its implication was that permanent injunctions should continue to be entered almost routinely when patentees prevail on the merits in infringement suits.

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\(^{38}\) These include (i) the new willingness of large, established law firms to take patent infringement cases on a contingent fee basis, (ii) the development of a new category of businesses intended solely to acquire issued but dormant patents that can be read as covering activities in the marketplace and sue the arguably infringing companies for economic gain, and (iii) the willingness of venture capital funds and others to provide funding for these new entities after reviewing their business plans.

\(^{39}\) ____ U.S. ____., 126 S.Ct. 1837.

\(^{40}\) As stated by the Court, the four-factor test requires the plaintiff seeking an injunction to demonstrate: (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) the public interest “would not be disserved by a permanent injunction.” ____ U.S. at ____.
In contrast, four Justices joined in a separate concurring opinion emphasizing the changes that had taken place in the use of patents in recent years. Patents, they said, were intended to reward invention and commercialization of new technology by protecting commercial introduction and sale of that technology from infringing competition. Recently, however, entities that neither (i) invented, nor supported the invention of, the claimed technology nor (ii) commercialized or supply it, have gained prominence. They buy patents owned by others not to use them as originally intended but merely to sue companies already producing the claimed products. In this context, or when the patented item is only a small part of a much larger product, the threat of an injunction serves not the intended purpose of the patent but merely enhances the patent holder’s leverage to extract excessive licensing fees by threatening to shut-down the commercializing business. In such cases, they said, equity should often deny an injunction against continuing infringement and limit patent holder’s remedy to damages.

Experience since May, 2006 seems to follow the four-Justice concurrence in that the availability of injunctive relief seems heavily dependent on the activities of the patent holder, especially its economic vulnerability, vel non, to competition from the infringing product(s). One tabulation found trial courts had granted post-trial injunctions in 26 out of 28 cases where they had been requested by patent holders that were actually practicing the claimed inventions and were competing, or likely to compete, with the adjudicated infringers. In contrast, denials of injunctions have been relatively common where such competition did not exist and, particularly, where the patent holders were not practicing the subject inventions but were licensing them non-exclusively to multiple licensees. Based on the decisions, a hierarchy of entitlement to injunctive relief seems to exist keyed mainly to the characteristics of the patent holder and its activities and background and the market for the invention.


42 The main factors influencing the prospects for an injunction seem to be:

<table>
<thead>
<tr>
<th>Injunction Probable</th>
<th>Injunction Unlikely</th>
</tr>
</thead>
<tbody>
<tr>
<td>The patent owner is producing and/or selling the patented product (or preparing to do so), so it might well suffer from competition from the infringer, especially if, in addition:</td>
<td></td>
</tr>
<tr>
<td>The patent owner is not practicing the invention but is licensing it (or attempting to license it) non-exclusively to others.</td>
<td></td>
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(footnote continues on next page)
Given the flexibility and equitable nature of the four-factor test, other facts can be important, and unusual circumstances can produce unusual results. Nevertheless, patent owners that neither produce or sell the patented product nor conducted or funded the work that led to the patent have little chance of requiring a halt to on-going infringement. Accordingly, such patent holders generally lack the strongest lever to obtain favorable royalty payments by negotiation prior to or during infringement litigation. These and related effects of the new regime for permanent injunctions are discussed in the concluding section of this article.

b. Preliminary Injunctions

In complete contrast with permanent injunctions, pre-trial preliminary injunctions were traditionally less common and much harder to get in patent cases than in non-patent litigation. Several widely recognized factors explained this. Requests for preliminary injunctions in patent cases were subjected to “unusually stringent” standards. Many courts required that the requesting party show not just a “likelihood of success” at trial on infringement and validity -- which would correspond to a main part of the test for preliminary injunctions in non-patent cases -- but “that the patent [was] beyond question valid and infringed.” This often required either a showing that the patent had been adjudicated valid in prior litigation or that it had been widely recognized and accepted as valid by participants in the relevant industry. Further, many courts refused to find the necessary irreparable harm to the patentee, even after a strong showing of

(footnote continued from previous page)

- The infringer is competing (or will compete) directly with the patent owner or its infringement is in some other way likely to reduce the patent owner’s market share or business success.
- The patent owner is the inventor or an entity that supported the activities that led to the invention.
- The patent owner had no positive connection with, or involvement in, the inventive efforts that led to the patent.

43 Among others, two of the most important were attitudes of trial and appellate judges, particularly their “distrust of, and unfamiliarity with, patent issues” and their common “belief that the . . . examination [of patent applications] by the Patent . . . Office was inherently unreliable,” so that the patent(s) at issue might well be found invalid as the litigation proceeded. Smith International, Inc. v. Hughes Tool Co., 718 F.2d 1573, 1578 (Fed. Cir. 1983) summarizing decisions, to that date, on applications for preliminary injunctions in patent cases. See also note 60, below, discussing the estimate, made by one patent practitioner in approximately 1980, that roughly 80% of litigated patent claims were held invalid.

44 Id., emphasis added.
likely validity and infringement, if the accused infringer was solvent and would be able to pay money damages as compensation for the infringement during litigation if the patentee prevailed on the merits.\footnote{Id. See also Atlas Powder Co. v. Ireco Chemicals, 773 F.2d 1230, 1233 (Fed. Cir. 1985); H.H. Robertson Co. v. United Steel Deck, Inc., 820 F.2d 384, ____ (Fed. Cir. 1987).}

Shortly after its birth, the Federal Circuit changed these rules and made preliminary injunctions much more available to stop apparent patent infringement before and during trial. To this end it:

- revived and bolstered the statutory presumption that issued patents are valid and made that presumption operative at all stages of litigation including the early stages when preliminary injunctions can be entered\footnote{That presumption appears at 35 USC § 282. The Federal Circuit not only resurrected it but imposed the high “clear and convincing” burden of proof to overcome it.} and

- rejected the view that an award of monetary damages for infringement during the trial would preclude the showing of irreparable harm to the patentee if the alleged infringer could pay such an award\footnote{To the contrary, it ruled that the nature of patent rights and their limited duration generally made damages inadequate as compensation. See, e.g., Polymer Technologies, Inc. N. Bridwell, 103 F.3d 970, 974-75 (Fed Cir. 1996); Smith International, supra, 718 F.2d at 1577-78 and 1580-81.} and actually solidified a contrary presumption.\footnote{Polymer Technologies, Inc., supra, 103 F.3d at 974-75; Smith International, supra, 718 F. 2d at 1577-78 and 1580-81. The contrary presumption became that the irreparable harm and public interest elements of the four-factor test were satisfied, before trial, if the patent holder made a “clear showing” on likely validity and apparent infringement.}

These steps produced a far more patentee-friendly standard for preliminary injunctions.\footnote{On the important question of likely patent validity, the test became:

\textit{“whether the [patent holder seeking the injunction] had demonstrated a reasonable likelihood that the [accused infringers] would fail to meet their burden at trial of proving by clear and convincing evidence that the . . . patent claims were invalid.”} H.H. Robertson, supra, 820 F. 2d at ___, emphasis added. There the Federal Circuit emphasized that the Patent Act “immutab[il]y allocate[s] to the challenger the burden of proving invalidity.” Id.} Moreover, as discussed below, the Federal Circuit was simultaneously making it much harder to invalidate patents as obvious. This increased the impact of the new preliminary injunction standard.
Now, however, the Federal Circuit’s patentee-friendly standard is under attack. Some Federal Circuit judges have recently asserted a less pro-patentee way of assessing the patent’s likely validity in the preliminary injunction context. The facts of most of these cases made the differences in the test immaterial. But the precise standard was important in *Abbott Laboratories v. Sandoz, Inc.* There Sandoz opposed Abbott’s motion for a preliminary injunction with evidence of possible invalidity and unenforceability, and Abbott responded with contrary evidence and argument. Abbott’s pro-injunction showing seemed somewhat stronger than Sandoz’ contrary presentation, but some uncertainty remained.

In this context, Federal Circuit Judge Newman, with the concurrence of Judge Archer as to the result, affirmed the district court’s grant of preliminary injunction. She applied a slightly softened version of the Federal Circuit’s earlier pro-patentee standard on likely patent validity set forth above. Vigorously dissenting, Judge Gajarsa said the Federal Circuit, in its recent practice, has adopted a less patentee-friendly “substantial question” test. Under this standard, he said, Sandoz had raised a “substantial question as to obviousness and inequitable conduct,” which Abbott had not eliminated. Accordingly, he maintained, the injunction was improper.

Responding, Judge Newman cataloged holdings by the Federal Circuit and other appellate courts supporting her more pro-patentee test and noted the Supreme Court’s ruling in *eBay* that the

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50 See note 53, below, for one main formulation of this less-patentee-friendly standard. See also *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343 (Fed. Cir. 2001) (Preliminary injunction vacated because of closely analogous prior art; opinion supports a less patentee-friendly standard); cf. *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361 (Fed. Cir. 1997) (stating a less patentee-friendly standard). Essentially the same less-patentee-favorable test was stated in the Federal Circuit’s *en banc* decision in *In re Seagate Technology LLC*, 497 F.3d 1360, 1374 (2007), although it was not highly relevant to the decision in that case.

51 544 F.3d 1341 (Fed. Cir. 2008).


53 According to Judge Gajarsa, the actual standard in recent years has been:

“If the defendant ‘raises a substantial question concerning either infringement or validity, *i.e.*, asserts an infringement or validity defense that the patentee cannot prove “lacks substantial merit,” the preliminary injunction should not issue.’ . . . ‘In resisting a preliminary injunction, one need not make out a case of actual invalidity. Vulnerability is the issue at the preliminary injunction stage, while validity is the issue at trial. The showing of a substantial question as to the invalidity thus requires less proof than, the clear and convincing showing necessary to establish invalidity itself.’” Slip. Op. at 88-89.

54 Slip. Op. at 105-118.
same equitable standards used in non-patent cases should govern injunctive relief in the patent context. Acknowledging language in some Federal Circuit opinions apparently supporting Judge Gajarsa’s test, she said an *en banc* ruling by the full Federal Circuit would be required to validate his less-patent-friendly position.\(^{55}\)

Separately, the *eBay* decision may raise the bar for preliminary injunctive relief in a different way. As noted above, the Federal Circuit has been applying a rebuttable presumption that the irreparable harm and public interest forks of the four-factor test for preliminary injunctions are satisfied if the patentee makes a “clear showing” of likely success on validity and infringement. *eBay*, however, applied essentially the same four-factor equity test in the post-trial context of a patent holder who had actually prevailed on validity and infringement. The Supreme Court made no mention of presuming irreparable harm or a favorable public interest balance and implied that all four factors of the traditional equity test should be considered.

Accordingly, parties in several recent Federal Circuit cases have argued that *eBay* requires abandonment of the irreparable harm and public interest presumption in the preliminary injunction context. Thus far, the Federal Circuit has avoided deciding that question in a precedential ruling.\(^{56}\) Judge Newman, however, seemed to acknowledge, in *Abbott Laboratories*, supra, that this presumption might well be inappropriate, in light of *e-Bay*, if the patentee does not itself practice the patented invention but merely seeks to license its patent to others.\(^{57}\)

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\(^{55}\) Some recent decisions suggest that Judge Gajarsa’s position might again effectively require significant outside validation of the patent, such as by a prior adjudication of validity or widespread industry acceptance and licensing, in order to support entry of a preliminary injunction if the accused infringer adduced any significant evidence tending to show invalidity or unenforceability. Yet more recently, Judge Gajarsa and Judge Newman tried to reconcile their positions, restating the preliminary injunction standards in terms that seem close to what Judge Newman has often favored. See *Titan Tire Corp. v. Goodyear Tire & Rubber Co.*, 566 F.3d 1372, 1375-80 (Fed. Cir. 2009) (design patent case); *Altana Pharma AG v. Teva Pharmaceuticals USA Inc.*, 566 F.3d 999, 1005-10 and Judge Newman’s concurrence, Id. at 1011 (Fed. Cir. 2009). Whether this attempted reconciliation will help resolve the controversy remains to be seen.


\(^{57}\) 544 F.3d at 1363.
The importance of these limitations on injunctive relief varies from case to case. Overall, however, it is hard to overestimate. The new limitations have greatly reduced the harshness of the patent system in many circumstances, particularly where that harshness was not essential to what the four-Justice concurrence in *eBay* considered the core objectives of the patent system. At the same time, they undoubtedly diminish the value of many patents. The trade-offs are difficult or impossible to evaluate. It is at least possible that the overall consequences are positive.

3. **Courthouse Rules In Patent Cases -- The Federal Circuit’s “Noble Experiment”**

Patent protection depends heavily on the courthouse rules governing infringement litigation. This dependence is greatest where the patent holder is weaker financially than the accused infringer.

Here we discuss what might be called a “noble experiment” with litigation rules, which the Federal Circuit began shortly after its creation. The goal was to strengthen patent protection, particularly for smaller patent holders. The steps in the experiment were pro-patentee changes to the rules governing duty of care, willful patent infringement, treble damages, privilege and work product protection, inferences, and whether, when and where patents can be asserted or challenged. Strikingly, after tilting the litigation playing field heavily in favor of patent holders, the Federal Circuit recently abandoned these initiatives as unsuccessful. The result is a set of rules that may be even less friendly to patentees than the inconsistent case law before that court’s creation.

a. **Pro-Patentee Rules on Duty to Avoid Infringement, Willfulness, Treble Damages**

For many years before creation of the Federal Circuit in 1982, patents were weak and poorly enforced. To address this, the Federal Circuit quickly developed a set of patentee-friendly rules that made awards of increased damages for infringement easier to obtain. 58 Its first major

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58 Section 284 of the U.S. Patent Act authorizes judges to increase damages awards for infringement to “up to three times” the patentee’s actual damages.
step was in *Underwater Devices Inc. v. Morrison-Knudsen Co.*, which presented facts well suited for announcing more aggressive pro-patentee rules -- together with evidence underscoring the disrespect in which U.S. patents were held. Affirming an award of trebled damages, the Federal Circuit announced:

- Persons who know of, or should know of, a patent they might be infringing or about to infringe have an “affirmative duty” of “due care” to avoid such infringement;
- This duty includes the obligation to seek and obtain competent legal advice from counsel before beginning activities that might infringe; and
- Failure to obtain such advice, or reliance on insufficient legal advice, can support a finding that any resulting infringement was willfully committed, which could justify an award of increased damages.

This duty of “due care” created a test for willful infringement and enhanced damages akin to mere negligence. Further, the duty to obtain competent legal advice could impose significant burdens because it could extend to large numbers of patents, especially for a company that took advantage of one of the main intended objectives of patent system, dissemination of information on technological developments. Companies that regularly reviewed published patents relating to their lines of business increased their exposure to treble damages just by knowing of possibly applicable patents, and they might have to pay for legal reviews of large numbers of such patents.

b. Related Pro-Patentee Rules of Privilege, Waiver, and Inference

Further patent-strengthening steps addressed the rules of privilege, waiver, and associated doctrines. Under long established law, advice a possible infringer receives from its attorneys is usually within the attorney-client privilege and therefore can be withheld from the other side, the

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59 717 F.2d 1380 (Fed. Cir. 1983).
60 In *Underwater Devices*, the accused infringer was a construction company that bid for and won a large construction contract. It was well aware of patents that seemed to cover devices and methods it needed to use in the project. It was equally aware of the demand for royalties of about $200,000 for a license to use the claimed inventions on the project. The construction company consulted its in-house attorney in an effort to avoid paying the royalties. From him it received brief and sketchy legal advice suggesting possible invalidity plus statements reflecting the weak state of patent enforcement and compliance in the U.S. at the time: Statistics showing that courts were invalidating about 80% of U.S. patent claims asserted in infringement actions. The implication was that infringers needn’t worry much about patent compliance.
judge, and the jury in infringement litigation. In a 1986 case, the Federal Circuit established a steep price for use of the privilege. There the accused infringer was aware of a possibly applicable patent but declined to state whether it had sought or obtained an opinion of counsel on it. The Federal Circuit ruled that this use of the privilege justified an inference that the company either (i) had not obtained any advice of counsel or (ii) had obtained advice that the company was infringing, or about to infringe, the patent.\textsuperscript{61} The Federal Circuit reinforced this holding in 1988, stating that “a court must be free to infer that either no opinion was obtained or, if an opinion [was] obtained, it was contrary to the infringer’s desire to initiate or continue its use of the patentee’s invention.”\textsuperscript{62} Counsel for patent holders could request inclusion of these permissible inferences in jury instructions in infringement cases. Such instructions could be extremely damaging to accused infringers on the issue of whether any infringement they had committed was willful. They could also prejudice a jury simultaneously deciding the underlying issue of infringement.

Of course, if the accused infringer had obtained some favorable legal advice, its alternative was to waive the privilege and use that advice to contest willfulness. But this also had a cost because the waiver could not be limited to a single legal opinion or piece of advice. Under long established law, the waiver would extend to a much broader range of communications and advice concerning the subject in question in order to prevent the waiving party from giving a partial and misleading picture. Where the question was patent infringement, the waiver could extend to essentially all communications between the accused party and any patent counsel relating to the patent.\textsuperscript{63} Further, depending on the facts, the waiver could cover -- and make discoverable -- advice given long after the original legal opinion, quite possibly including documents or other communications revealing estimated litigation risks and trial strategy.

\textsuperscript{61} Kloster Speedsteel AB v. Crucible Inc., 793 F.2d 1565, 1580 (Fed. Cir. 1986).
\textsuperscript{62} Fromson v. Western Litho Plate & Supply Co., 853 F.2d 1568, 1572-73 (Fed. Cir. 1988).
\textsuperscript{63} The disclosure of the favorable advice of counsel would also normally waive the attorney work product protection, and that waiver could often extend to nearly all documents in the files of the accused infringer’s counsel relating to the matter.
These and related consequences of the Federal Circuit’s courthouse rules led to a variety of burdens and undesirable practices that were widely criticized.\textsuperscript{64}

c. Retrenchment on Treble Damages, Willfulness, Privilege, Waiver, and Inference

Recently, the Federal Circuit has abandoned these pro-patentee rules in a series of important rulings.

- In 2004, the Federal Circuit overruled its prior decisions permitting adverse inferences based on invocation of the attorney-client privilege by an accused infringer.\textsuperscript{65}

- In 2006, the Federal Circuit rejected the broad formulation of waiver to the extent it would reach attorney work product that had not been communicated to the client.\textsuperscript{66}

- Finally, in 2007, the Federal Circuit overruled several pro-patentee rules simultaneously in its \textit{en banc} decision in \textit{In re Seagate Technology}, 497 F.3d 1360.

In \textit{Seagate}, the accused party had hired an attorney to opine on the several patents that were asserted against it shortly thereafter. In the litigation, the accused party revealed that it would rely on the three opinions the attorney had produced. Taking advantage of the resulting waiver, the patentee sought broad discovery of matters otherwise covered by the attorney-client privilege, including documents and deposition testimony from both the accused party’s opinion counsel and its trial counsel. Finding that introduction of the opinions amounted to a broad

\textsuperscript{64} See, e.g., the concurrence of Judge Dyk in \textit{Knorr-Bremse System Fuer Nutzfahrzeuge GmbH v. Dana Corp}, 383 F.3d 1337, 1351-52 (Fed. Cir. 2004) identifying the following as among the adverse results of the \textit{Underwater Devices} due care requirement:

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“fostering a reluctance to review patents for fear that the mere knowledge of a patent will lead to a finding of lack of due care; promoting a cottage industry of window-dressing legal opinions by third party counsel designed to protect the real decision-making process between litigating counsel and the company’s executives; imposition of substantial legal costs on companies seeking to introduce innovative products; and enhancing the ability of holders of dubious patents to force competitors’ products off of the market through the threat of enhanced damages.”
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These concerns, Judge Dyk said, had led a Federal Trade Commission working group and a committee of the National Academies to urge the Federal Circuit to reconsider its willfulness jurisprudence.

\textsuperscript{65} \textit{Knorr-Bremse System Feuer Nutzfahrzeuge GmbH v. Dana Corp.}, 383 F.3d 1337 (recognizing the wide criticism its rule on inferences had received and the absence of a similar rule in non-patent cases).

\textsuperscript{66} \textit{In re Echostar Communications Corp.}, 448 F.3d 1294 (the waiver, from introducing evidence of advice of counsel, will be limited to privilege and work product protection for communications (or documents discussing communications) between an attorney and the client.).
waiver of both attorney-client privilege and work product protection, the district court ordered full document production and depositions of both sets of counsel on the broad issues of validity, enforceability, and infringement, with almost no protection for materials that would disclose trial strategy. The *en banc* Federal Circuit granted *mandamus* to block the mandated disclosures and proceeded to destroy several elements of patentee favoritism:

- **the affirmative duty of care** to avoid infringing a known and possibly applicable patent no longer exists, and there is no longer any obligation to obtain legal advice on a potentially applicable patent.

- findings of **willful patent infringement**, sufficient to support enhancement of damages, require clear and convincing evidence of “objective recklessness” by the accused infringer, including that it knew of, or clearly should have known of, the relevant facts.

- if an accused infringer’s trial counsel acted independently of its opinion counsel and provided advice only after suit was filed, introduction of the opinion counsel’s favorable advice normally waives attorney-client privilege and work product protection only as to that counsel and not as to documents or communications of the trial counsel.

- Further, a failure by the patentee to seek a preliminary injunction, or failure to obtain such an injunction despite trying, should usually prevent an award of enhanced damages for the continuing infringement even if the patentee is successful at the trial.

This combination of rulings was a remarkable and serious setback for patent holders. But more setbacks were still to come.

d. **Procedural Ups and Downs of Asserting and Challenging Patents -- *Whether, When, and Where***

Separate parts of the *noble experiment* addressed *whether, when, and where* patents can be asserted -- or challenged -- in court. The resulting pro-patentee precepts allowed patent holders, in nearly all cases, to choose both a favorable time and a favorable location for any litigation regarding the relevant patent(s) while precluding possible infringers from challenging the validity or scope of the patent(s) unless essentially invited to do so by the patentee. They also promoted a highly favorable method by which patent holders could safely assert their
patents while simultaneously optimizing their positions for licensing and possible litigation.\textsuperscript{67} Recently, this pro-patentee landscape has eroded greatly.

\textbf{Whether and When Patents Can be Enforced or Challenged -- The Pro-Patentee Days.} No significant restrictions limit when or whether patent holders can sue actual or likely infringers.\textsuperscript{68} In marked contrast, the Federal Circuit adopted very pro-patentee rules sharply restricting whether and when infringers can challenge the relevant patents. It did so by its interpretations of the “actual controversy” requirement for declaratory judgment suits and the discretionary aspects of such suits. Recent changes to these doctrines are our focus here.

Under the U.S. Constitution and the Declaratory Judgment Act, federal courts can hear suits for declaratory judgments only if the suits are based on an “actual controversy.”\textsuperscript{69} For suits challenging patents, the Federal Circuit developed a very restrictive definition of “actual controversy,” unique to patent litigation. That definition required the challenger to make two main showings in order for the challenge to be heard: (i) that the challenger was actually producing a product possibly covered by the patent or had at least taken meaningful, concrete steps to begin such production and (ii) that it had a reasonably based apprehension that it would soon be sued by the patent holder for infringement. In most situations, such “reasonable apprehension” would not exist unless and until the patent holder actually threatened to sue the potential infringer on the patent.\textsuperscript{70}

As a result, producing companies usually could not test the validity or reach of the patent even if, for example, they would have to make -- or had made -- a large, early investment in equipment and/or marketing to be able to produce and sell the possibly infringing product. They had to risk large losses because a later infringement action might find the patent valid and

\textsuperscript{67} See text at note 234 below.

\textsuperscript{68} As soon as a patent issues, the patentee can sue possible infringers: (i) to stop such infringement as may be occurring; (ii) to prevent threatened infringement even if the accused party is not yet infringing; (iii) to obtain damages, and perhaps enhanced damages, costs, and attorney fees for any infringement; and/or (iv) subject to some limitations, for a “reasonable royalty” award for such use or sale of products before the patent issued but after publication of the application as were within the scope of subsequently allowed claims which were included in the pre-issuance published application.

\textsuperscript{69} U.S. Const. Art. 3, §2, cl. 1; Declaratory Judgment Act, 28 U.S.C. §2201.

\textsuperscript{70} \textit{Gen-Probe Inc. v. Vysis, Inc.}, 359 F.3d 1376, 1380, 1382 (Fed. Cir. 2004) quoting \textit{BP Chem. Ltd. v. Union Carbide Corp.}, 4 F.3d 975, 978 (Fed. Cir. 1993).
applicable. Other hardships for producers also grew out of this requirement for a “reasonable apprehension of imminent suit.”

A further procedural twist also worked in the patent holder’s favor. Even where an “actual controversy” existed for declaratory judgment, the district court could refuse to hear the case in its discretion. Moreover, one recognized basis for a discretionary refusal to hear a challenge was that the parties were conducting license negotiations so that pendency of a declaratory judgment action filed by the putative infringer could interfere with the negotiations and tip the balance of power there against the patent holder. And, when a district court exercised its discretion to block the patent challenge, the Federal Circuit seldom overturned that decision.

The Infringer-Friendly Retrenchment. Recently, a number of decisions have stripped patent holders of much of the control they formerly had over assertions and challenges of their patents:

- The Supreme Court’s ruling in MedImmune, Inc. v. Genentech, Inc., 549 U.S. 118 (2007), liberalized the “actual controversy” requirement for declaratory judgment and undermined the “reasonable apprehension of imminent suit” standard, at least to the extent it depended on the constitutional “case or controversy” requirement and at least on the extreme facts in that case. The Court, however, expressly declined to address the effective limitations on declaratory judgment suits. Like its ruling in eBay, this Supreme Court decision left the lower courts considerable room to shape the new rules.

- In Sandisk Corp. v. STMicroelectronics, Inc., 480 F.3d 1372, 1383 (Fed. Cir. 2007), the Federal Circuit resisted the temptation to read MedImmune narrowly. It allowed a patent

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71 See, e.g., Microchip Technology Inc. v. Chamberlain Group, Inc., 441 F.3d 936 (Fed. Cir. 2006) and note 72, below.

72 MedImmune, a drug maker, had licensed several issued or pending patents and was required to pay royalties on those that issued. When one of the pending patents issued, the patent holder demanded increased royalties, but circumstances suggested the patent was not enforceable. MedImmune feared loss of 80% of its business as well as an award of treble damages and attorney fees against it if it should breach the license agreement and the patent was later held valid and infringed. Accordingly, it paid the increased royalties under protest but sought to challenge the patent in court. The Federal Circuit rejected the challenge, but the Supreme Court disagreed.

73 It stated in a footnote: (i) that the Federal Circuit’s “reasonable apprehension of imminent suit” requirement was inconsistent with some of the Supreme Court’s earlier holdings on declaratory judgment and (ii) that the “actual controversy” requirement for declaratory judgment jurisdiction was satisfied in the circumstances of that case. It declined, however, to address “whether the District Court [in that case] should, or must, decline to issue the requested declaratory relief.” It “[left] the equitable, prudential, and policy arguments in favor of such a discretionary dismissal for the lower courts’ consideration on remand . . . [along with] all merits-based arguments for denial of declaratory relief.” 549 U.S. at ____.
challenge to proceed based on rather extreme facts in licensing discussions but no actual threat of an infringement suit. Moreover, it barred the district court from using policy considerations or its discretion to reject the challenge. A concurring Federal Circuit Judge said the ruling would necessarily extend beyond the unusual facts and would allow infringers to institute declaratory judgment suits whenever licensing was mentioned—or very shortly thereafter. This, he said, would destroy the “safe haven” the Federal Circuit had created for patentees trying to license their patents but not willing or able to undergo expensive litigation defending them in challenges initiated by likely infringers.74

- Several subsequent Federal Circuit decisions have confirmed the substantial, though not complete, elimination of restrictions on declaratory judgment patent challenges.75 Of particular note, a recent Federal Circuit ruling carried these decisions to an extreme in large part because the patent holder there was a patent troll76 trying to pressure producing companies to pay for licenses without triggering declaratory judgment jurisdiction against it. For that context, the court essentially destroyed the “safe haven” it had created for patent holders to try to license their inventions without exposing themselves to suit.77
- The more favorable climate for patent challenges extends to the Hatch-Waxman drug regulatory context,78 where producers of brand-name drugs list the patents protecting those drugs in the FDA’s “Orange Book” and prospective makers of generic counterparts can challenge the patents’ validity and/or coverage. Changing its earlier rulings, the

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74 480 F.3d at ____ (Judge Bryson concurring).
75 Teva Pharmaceuticals, USA, Inc. v. Novartis Pharmaceuticals Corp., 482 F.3d 1330, 1339 (Fed. Cir. 2007); Sony Electronics, Inc. v. Guardian Media Technologies Ltd., 497 F.3d 1271, 1282, 1286 (Fed Cir 2007) (detailed letters describing the apparent infringement and the patent holder’s damages were sufficient affirmative action to establish declaratory judgment jurisdiction despite patent holder’s argument that the letters “were simply part of [its] efforts to license its patents” and that it was “at all times willing to negotiate a business resolution to the dispute”).
76 See note ____, below regarding the term “patent troll.”
77 In Hewlett-Packard Co. v. Acceleron LLC, ___ F.3d ___ (Fed. Cir. 2009), the patent holder “troll” used the formerly safe approach of sending Hewlett-Packard a carefully written letter identifying the patent, suggesting its “relevance” to H-P’s lines of business, and offering to provide additional information. It requested a commitment from H-P that nothing it provided would be used as a basis for a declaratory judgment suit against it. H-P indicated interest in the information and discussions, declined the requested commitment, but proposed, in its place, a mutual 120-day stand-still agreement on litigation. The patentee declined to give such an agreement. H-P then sued, in its favored venue, to invalidate the patent. The district court dismissed the suit because the patentee-troll had not used any actual threats or given other traditional indications that it was about to sue for infringement. The Federal Circuit, however, reversed and remanded the case for a declaratory judgment trial. Of particular importance, it repeatedly noted the patent holder’s status as a troll. Since their only business is enforcing patents, the court said, trolls seeking license fees are more likely than other types of patent holders to institute suit unless companies practicing the claimed invention(s) agree to pay for a license.
Federal Circuit recently identified the statutory scheme and the special delays it can impose on the introduction of generic drugs as a basis for allowing the prospective generic competitor to challenge the patent by a declaratory judgment suit even though the patent holder did little other than list the patent as covering the branded drug and even where the patent holder had forfeited normal means of enforcing the patent.  

**Where Infringement Suits and Patent Challenges Can be Brought -- Shifting Rules to Favor Patentees.** Where patent-based suits can be brought depends on rules of personal jurisdiction over patent holders or putative infringers and venue for infringement suits and declaratory judgment actions. Rules governing declaratory judgment jurisdiction and case transfer also play a role. The resulting scheme can strongly influence the practicalities of patent enforcement. Again, recent Federal Circuit rulings have reversed the strong pro-patentee tide established by the same court just a few years ago.

From its early years, the Federal Circuit developed very liberal rules for where patent holders can sue possible infringers. For example, adopting a broad view of the “stream of commerce” doctrine, it found personal jurisdiction over a U.S. or foreign manufacturer in most or all states where products of that manufacturer are delivered and sold. Further, changing the interpretation of an old statutory provision on venue, the Federal Circuit ruled that no additional venue limitations apply when a patent holder sues a corporation for infringement. In other words, venue in an infringement suit against a corporation is proper wherever personal jurisdiction exists over that corporation. Thus, a patent holder can usually sue a corporate

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80 Ability to choose the forum for litigation allows a party (i) to minimize its litigation costs but, often more important, (ii) to choose a district where jurors are likely to be favorably disposed toward its business and unlikely to be hostile to it or favorably disposed toward its opponent and (iii) likely, or not, to favor patent holders or award large amounts of damages. On the last point, see notes 83 and 84, below.

81 See, e.g., Beverly Hills Fan Co. v. Royal Sovereign Corp., 21 F.3d 1558 (Fed. Cir. 1994) (court gives broad play to the stream of commerce theory for jurisdiction, allowing a suit in federal court in against a fan manufacturer in China that).

82 In V.E. Holding Corp. v. Johnson Gas Appliance Co., 917 F.2d 1558 (Fed. Cir. 1990), the Federal Circuit made 28 U.S.C. §1400(b), which governs venue in actions for patent infringement, operate in a pro-patentee manner by changing the interpretation of §1391(c). Thus, no additional venue limitations restrict where corporate defendants can be sued for patent infringement. In contrast, venue in declaratory judgment actions challenging patents is governed by the general venue provision, §1391(b), not by §1400(b), even though it is a mirror-image of a patent infringement suit.
manufacturer of possibly infringing products -- even a foreign manufacturer not conducting any business in the U.S. or a domestic company whose presence and activities were limited to a single state -- in any judicial district in the U.S.

Further, once a patent holder sued for infringement in its chosen court, transfers of the case to a more convenient state or district at the request of the defendant were disfavored, and the decision as to whether to make a requested transfer was heavily within the discretion of the district court chosen by the plaintiff. Some district courts made a practice of attracting patent cases and refusing to transfer them away, apparently because increased local litigation would benefit local law firms and other local businesses. This made the patent holder’s choice of courts essentially final despite federal rules allowing transfers based on convenience factors and even in cases where the defendant’s location and other convenience factors clearly favored a different venue. Using this broad discretion plus a reputation for plaintiff-friendly juries and fast

83 See, e.g., Julie Creswell, “So Small a Town, So Many Patent Suits,” N.Y. Times, Business, Sept. 24, 2006. See also note 84, below. From earlier products liability litigation, the jury pool in the Eastern District of Texas had a widespread reputation of (i) hostility to corporate defendants, especially corporations located out-of-state, and (ii) a related inclination to award large damages against such non-local entities. Using this reputation and instituting fast-track scheduling in patent suits -- which is often difficult for unprepared infringement defendants to handle -- the Eastern District of Texas, and especially the Marshall Division, jumped from complete obscurity to be the number one court in the country for patent infringement suits and the court with the highest patentee win rate, at least among courts handling a substantial number of patent suits. The New York Times article cited above showed the following statistics:

In an Amicus Curiae brief filed in the Volkswagen case discussed below, the American Intellectual Property Law Association noted that the number of new patent cases filed in the Eastern District of Texas in 2000 was only 23 but that, by 2007, the number had jumped to 368, which was more than the next leading districts in 2007, Central California (308) or Northern California (148).
schedules for discovery and trial, the Eastern District of Texas, which previously handled very few patent cases, became, in just a few years, “the preeminent [U.S.] venue for patentees looking to enforce their rights.”

In sharp contrast, the rules on personal jurisdiction and venue are much less favorable for patent challengers. Unless the patent holder itself or its exclusive licensee has activities elsewhere, such suits can usually be brought only in certain courts located in the patent holder’s home state. Moreover, this limitation applies even though the patent rights are applicable nation-wide and even if, for example, the patent holder has sent “cease-and-desist” letters to the putative infringer and its customers in their separate home state(s) threatening to sue them if they continue their activities. Much of this favoritism was directly attributable to pro-patentee policy choices by the Federal Circuit. Given the practicalities and expense of patent

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84 Joseph Casino and David Boag, “Transferring Cases Out of Eastern District of Texas,” Law 360, October 15, 2008, emphasis added. See also note 83, supra, and John Gutkosk and Debra Nye, “Texas Eastern District: IP Equipoise,” Law 360, January 5, 2009 noting the reputation of the Eastern District of Texas for: (i) pro-plaintiff juries; (ii) fast, plaintiff-favorable trial scheduling; (iii) no-nonsense discovery; (iv) low likelihood of cases being transferred away; (v) extremely rare rulings of patent invalidity; (vi) disinclination to end or narrow patent cases via summary judgment rulings; and (vii) intimidation of infringement defendants into frequent, lucrative settlements. Since most patent cases are brought by patent holders for infringement rather than by putative infringers to challenge patent validity or reach, these patent-friendly attributes attracted huge numbers of patent cases to that district. Published case summaries identify a very high percentage of infringement suits brought by “patent trolls” as being filed in the Eastern District of Texas. See note ___, below, regarding the term “patent troll.”

85 See note 86, below, regarding cease-and-desist letters. The patentee-friendly rules begin with the stream-of-commerce theory, which often provides jurisdiction over the putative infringing manufacturer but does not provide jurisdiction over patent holders. Avocent Huntsville Corp v. Aten International Co, Ltd., 552 F.3d 1324 (Fed. Cir., 2008). Separately, V.E. Holding Corp, supra, does not operate on declaratory judgment challenges to patents in the same venue-promoting way it operates on infringement suits brought by patentees. See note 82, above, regarding the V.E. Holding Corp. case.

86 For example, the Federal Circuit recently stated:

“... [W]e have held that, ‘based on “policy considerations unique to the patent context, ... that letters threatening suit for patent infringement sent to the alleged infringer, by themselves, ‘do not suffice to create personal jurisdiction ...’‘ ‘Principles of fair play and substantial justice afford a patentee sufficient latitude to inform others of its patent rights without subjecting itself to jurisdiction in a foreign forum. A patentee should not subject itself to personal jurisdiction in a forum solely by informing a party who happens to be located there of suspected infringement. ... [T]here must be “other activities” directed at the forum and related to the cause of action besides the letters threatening an infringement suit.”

Avocent Huntsville Corp., supra, 552 F.3d at ___, slip op at 14-15; see also Silent Drive, Inc. v. Strong Indus., Inc, 326 F.3d 1194, 1200-02, 2006 (Fed Cir 2003); Red Wing Shoe Co. v. Hocherson-Halberstadt, Inc., 148 F.3d 1355, 1361 (Fed. Cir. 1998). In Avocent Huntsville Corp, the Federal Circuit essentially dismissed language in Viam Corp. v. Iowa Export-Import Trading Co., 84 F.3d 424 (Fed. Cir. (footnote continues on next page)
enforcement, such location considerations can be very important, especially where the patent holder has limited resources to support its enforcement efforts.

**Recent Changes -- Favoring Accused Infringers.** In recent rulings, the Federal Circuit has dialed-back somewhat the choice-of-forum advantages of patent holders. For one thing, the Federal Circuit has taken a more circumspect approach to the “stream of commerce” theory than it used in earlier years, limiting patentee choices somewhat. Conversely, while merely sending infringement letters into a putative infringer’s state will still not allow the accused infringer to sue the patentee there for a declaratory judgment, the addition of increasingly modest additional acts by the patentee or its distributor can trigger this result. Infringers are still vulnerable to suit in more locations than most patent holders, but the difference is smaller than it was a few years ago.

Further, the new, more liberal rules governing declaratory judgment jurisdiction discussed above are allowing putative infringers more opportunities to select the forum for their patent-based disputes. In 2008, the Federal Circuit said that, because of those new rules, patent holders and accused infringers will often have similar rights to initiate litigation. Accordingly, the formerly strict limits on transfers of patent cases should give way to more liberal rules based on the convenience of the parties and witnesses in the case. It also tried to limit both (i) the discretion of judges to refuse to hear declaratory judgment patent challenges and (ii) the ability of patent holders to block transfers of their suits by adding parties, patents, and/or causes of action to their complaints that could not be included in a related declaratory judgment suit in a different federal court. Applying these considerations, it ordered a patent dispute to be heard by

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1996) finding the “stream of commerce” theory applicable in declaratory judgment cases in some circumstances and indicating that the standards for personal jurisdiction and venue should be the same, as between a patent holder and a putative infringer, regardless of whether the controversy is brought as an infringement suit or as a declaratory judgment action challenging the patent. 552 F.3d ___, slip op. at 13-14, 17-18. [Slip Op. is unclear as to whether that is part of note 2 in the opinion or part of the text -- CHECK published version.]

87 See note 81 [81 ?], above, and the *Beverly Hills Fan* case discussed there. In subsequent cases, the Federal Circuit has recognized a narrower view of the scope of that doctrine. See, e.g., *Commissariat a l’Energie Atomique v. Chi Mei Optoelectronics Corp.*, 395 F.3d 1315, 13 ___, (Fed Cir. 2005); [Also cite similar recent Fed Cir case.]

88 See, e.g., the cases on “other activities” beyond merely sending infringement letters into a putative infringer’s state and watering-down the formerly more stringent requirement, cited in *Avocent Huntsville*, supra, ___ F.3d at ___, Slip Op. at 15-17; and see [RECENT EXCLUSIVE DISTRIBUTOR CASE].
the Northern District of California, where the accused infringer had challenged the patent, rather than by the Eastern District of Texas, where the patent holder had sued for infringement. More recently, the Federal Circuit applied extremely liberal declaratory judgment standards in favor of the accused infringer -- largely because the patent holder was a patent troll. Again this allowed the accused infringer to avoid suit in the Eastern District of Texas and to have the dispute decided, instead, in Delaware.

Similarly, a number of recent *mandamus* rulings have reduced the ability of patent holders and district court judges to resist motions by accused infringers to transfer infringement suits to judicial districts with which they are more closely connected. In October, 2008, the *en banc* Fifth Circuit Court of Appeals issued a writ of *mandamus* to the Eastern District of Texas, Marshall Division (Judge Ward), requiring that court to transfer a non-patent case to a different division of the same district as had been requested by the defendant. In that closely watched products liability case, ten of the Fifth Circuit’s 17 judges sharply rebuked the Marshall Division’s reasoning and rejected most of the make-weight arguments plaintiffs can make against transfer when their cases have little actual connection to their chosen forum but which the Eastern District of Texas had often held sufficient to block transfers in the past. Using this ruling by the Fifth Circuit, the Federal Circuit recently issued writs of *mandamus* to the Eastern District of Texas in several cases, requiring the transfers of patent infringement suits to other federal district courts as requested by the accused infringers. Following the Fifth Circuit’s analysis, the Federal Circuit has likewise found invalid most of the make-weight arguments against transfer that are usually made by patent holders in cases lacking substantial connections to their chosen forum.

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90 See note 230, below, regarding the term “troll” and note 77, above and accompany text regarding Hewlett-Packard Co. v. Acceleron, LLC, ___F.3d ___ (Fed. Cir. 2009).

91 In re Volkswagen of America, Inc., ___ F3d, ___ (5th Cir., 2008).

92 In re TS Tech USA Inc., 551 F.3d 1315, ___(Fed. Cir. 2008); In re Genentech, Inc., 556 F.3d 1338, ___ (Fed. Cir. 2009); In re Hoffman-LaRoche Inc., ___ F.3d ___ (Fed. Cir., December ___, 2009); In re Nintenco Co. Ltd., ___ F.3d ____ (Fed. Cir., December 17, 2009).
As we discuss in the final section of this article, the new and less patentee-friendly courthouse rules make patent licensing and enforcement more difficult and risky for many patent holders, particularly small companies and individual inventors facing established infringers. This will prevent some holders of valid and infringed patents from obtaining deserved settlements and recoveries. It may also reduce assertions of meritless patents and other economically unwarranted practices. The net of these opposing tendencies remains to be seen.

4. Obviousness -- A Moribund Statutory Requirement Revived

“Obviousness” may be the most fundamental -- and the most difficult -- issue in patent law. In addition to being “new” and “useful,” an invention must be “non-obvious” to a person skilled in the relevant prior art in order to merit a patent.

Obviousness invalidations took a horrible toll on issued patents before creation of the Federal Circuit. One of the Federal Circuit’s most important measures in strengthening patent protection was to rein-in facile application of the obviousness defense. In the view of many observers, however, the central pillar of this Federal Circuit initiative soon went way too far. It seriously weakened the non-obviousness requirement and largely de-activated it in many cases. This made it hard for patent examiners to reject non-meritorious applications and made the resulting patents more serious threats to U.S. producers. In April, 2007, the Supreme Court largely destroyed that pillar in *KSR International Co. v. Teleflex Inc.*, _____U.S. _____, [127 S. Ct. 1727].

Most inventions are combinations of previously known elements. If such a combination produces no surprising or unpredictable result, it risks being deemed “obvious” and any associated patent invalid. To counter such easy attacks, the Federal Circuit developed its “teaching, suggestion or motivation” ("TSM") test. Even for combinations of previously known elements each operating in its predictable way, that test allowed a conclusion of obviousness only if the prior art, the nature of the problem, or the knowledge of a person skilled in the art taught, suggested or motivated the combination. Often, this test was applied rigidly, requiring

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93 Careful observers noted serious questions as to the apparently excessive weakening of the non-obviousness requirement. See, e.g., FTC Study, *supra* note 3 at ____, NAS Study, *supra* note 3 at ____. More outspoken observers were much less reticent in condemning the weakening of the requirement. See, e.g., *Innovation and its Discontents*, *supra* note 3 at ____.
the patent examiner (or infringement defendant) to find prior art that suggested the likely success of the combination of old elements in the claimed new way. In addition, the Federal Circuit sometimes required that the prior art teaching must have been aimed at solving the same “problem” as motivated the subsequent patent application in order to support a finding of obviousness. Depending on the circumstances, this test could largely destroy the non-obviousness requirement.

One highly pro-patent decision along these lines was the Federal Circuit’s 2005 ruling in *Teleflex, Inc. v. KSR Int’l Co.*⁹⁴ There the court applied its TSM test to block invalidation of a patent on a simple combination of well known electro-mechanical elements in the crowded art of adjustable brake pedals. This ruling exposed the TSM test to Supreme Court review on unfavorable facts.

In *KSR*, the trial court applied a moderate version of the TSM test in ruling on the defendant’s motion for summary judgment of obviousness, and granted the motion. On appeal, the Federal Circuit reversed, holding the trial court had failed to apply the TSM test in a sufficiently rigorous manner and remanded the case for trial. The Supreme Court, however, granted review, reversed again, and reinstated the summary judgment of invalidity. It’s opinion broadly rejected the Federal Circuit’s TSM standard as a test for obviousness. While TSM reasoning can be useful, along with other considerations, in assessing obviousness in some cases, the Court said, neither TSM nor any other mechanical standard can be a requirement for a finding of obviousness where “common sense” dictates otherwise. Several additional aspects of the *KSR* decision made the ruling yet more important.

First, the Supreme Court rejected any “same problem” requirement for assessments of the prior art. Prior art ideas motivated by objectives different from those underlying the invention in question must be considered, along with any similarly motivated prior art, in assessing obviousness. Further, the Court said, business needs or market demand often lead to advances that are new and beneficial but not sufficiently innovative to merit patents -- *i.e.*, that are “obvious” for purposes of the patent laws. The suggestion was that product changes driven mainly by market needs are likely to be “obvious” and not eligible for patent protection.

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Separately, in discussing its own precedents on obviousness, the Supreme Court implied that inventions made up of known elements from the prior art, “each performing the same function it had been known to perform and yielding no more than one would expect from such an arrangement” are probably obvious and therefore non-patentable. This statement is now regularly highlighted in arguments that a claimed invention is obvious, and it comes as a sharp, anti-patent precept into the previously pro-patent environment of obviousness determinations.

The Court also rejected the Federal Circuit’s frequently stated position that a patent claim cannot be proved obvious merely by showing that the claimed combination of prior art elements was “obvious to try.” It made clear that “obvious to try” may well demonstrate obviousness where a recognized problem exists, there are a limited number of identifiable potential solutions having some predictability, and one of those proves successful. 95

Finally, the Court’s assessment of the prior art in KSR relied in part on an earlier patent that was introduced at trial but which the examiner had not seen when he evaluated the patent application and allowed the patent to issue. In these circumstances, the accused party argued, the statutory presumption of validity should not apply. The Supreme Court avoided ruling on that argument but seemed to accept much of its underlying logic. 96 Previously overlooked prior art is often discovered in trial preparation. Accordingly, application of the accused party’s logic could significantly weaken many patents. Pending an extension or limitation of the Supreme Court’s statements, infringement defendants are trying to take advantage of it in their arguments and proposed jury instructions, but they face objections from patent holders in doing so.

The Supreme Court did accept the Federal Circuit’s often repeated insistence that findings of obviousness be well explained and supported. 97 Nevertheless, KSR has shifted the

95 ____ U.S. at ____ - ____.

96 The court said “We need not reach the question . . . [but we] think it appropriate to note that the rationale underlying the presumption -- that the PTO, in its expertise, has approved the claim -- seems much diminished here.” ____ U.S. at ___, 127 S.Ct. at 1745, emphasis added.

[Recently, ________________ (mention MS Cert. Petition on this if granted or pending close to publication date).]

97 In many prior decisions, the Federal Circuit had reversed examiner rejections of patent applications and district court judgments invalidating issued patents for obviousness where the obviousness
tipping point in obviousness assessments in PTO examinations and, more strongly, in litigation over issued patents. This has weakened a large fraction of existing U.S. patents and has changed the balance of power between patent holders and putative infringers in many patent disputes. As we discuss in the final section of this article, this change is greatest as to inventions in what are termed the “predictable arts.”

KSR has not made obviousness determinations any easier. Indeed, the absence of a “test” makes such determinations more complex and less predictable. On the other hand, KSR has re-balanced the obviousness contest by reviving a requirement that performs a necessary role in any patent system but which was widely recognized as too weak in the U.S. system in recent years. Hopefully, this revitalization will both (i) promote a higher standard of merit in patent examination and issuance and (ii) reduce the negative impacts of weak patents on our economy by reducing the expectations that they can be enforced.

[Perhaps mention, here or at end, the Fed. Cir. Post-KSR inconsistency & dissents; also In re Kubin, which largely rejected In re Deuel; Article on “KSR + 2 years;” etc.]

5. **Claim Construction -- Phillips and other Patent-Narrowing Developments**

Claim construction (interpretation) is often the key to patent enforcement. Unfortunately, it has long been a focus of inconsistency. More than a decade ago, the Federal Circuit took complete charge of claim construction. It ousted juries from the process, sharply restricted expert testimony, demanded that trial judges provide explicit interpretations of any disputed meanings, set some new standards for the process, and reserved for itself the right to re-do the entire claim construction process on appeal. More recently, it rejected a high profile proposed “fix” to claim construction methodology that was intended to reduce confusion and stop unwarranted narrowing of patent coverage. In addition, the Federal Circuit cut back on means-plus-function claims and the doctrine of equivalents in ways that compounded, rather than mitigated, these claim-narrowing developments.

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determination was a conclusory assertion rather than a well explained assessment based on specific facts the Federal Circuit judged relevant. Consistent with this, the Supreme Court assessed at length, in KSR, the facts and implications relevant to obviousness of the invention claimed there.
The result is a substantial narrowing of the role of juries in patent enforcement and narrower, but not noticeably more predictable, claim interpretations. The narrower interpretations can occasionally preserve a patent’s validity by preventing it from covering prior art. Far more often, they simply reduce patent coverage and prevent findings of infringement. Thus, while the Federal Circuit initiatives on claim construction began earlier than most of its other recent initiatives discussed in this article, they have had a similar effect: limiting patent enforcement. We summarize these developments in the following paragraphs.


Until the latter part of the 20th century, the large majority of patent cases were tried to judges, not juries. If a party demanded a jury trial, however, interpretation of the key patent claims was effectively left to the jury in most cases, subject to generalized instructions given by the judge. Accordingly, in these relatively unusual cases, the jury’s power to decide infringement effectively included the power to interpret the claims. Handled this way, the actual interpretations usually remained merely implicit in the juries’ findings on infringement, and that protected them in most cases from intense scrutiny on review.

In the latter part of the 20th century, patent holders and their attorneys increasingly recognized juries as more likely than judges to be impressed by patents, sympathetic to inventors, and generous in awarding infringement damages.98 Accordingly, patent holders began to demand jury trials in the large majority of infringement suits. That pattern continues today. As a consequence, any problems associated with the jury process infected claim construction in the large majority of infringement suits. And problems did seem evident.99

In 1995, the Federal Circuit took claim construction away from juries. In Markman v. Westview Instruments, Inc.,100 it held that judges alone must construe patent claims even in cases otherwise tried to a jury. The judge must give explicit written interpretations deciding any

98 [Maybe cite Kimberly Moore articles.]
99 Most juries have little if any technical sophistication and are not experienced in interpreting stilted legal language, of which patent claims are extraordinary examples. Jury decision-making, though hidden in the deliberation process, seemed excessively influenced by the testimony of biased expert witnesses, and unpredictability was rampant. Jury verdicts of infringement could gloss-over technical issues of claim interpretation. Sympathy for one side or the other unrelated to the merits of the claims seemed to play a large role in jury verdicts, and appellate review of verdicts was limited and difficult.
100 52 F.3d 967 (Fed. Cir. 1995).
contested meanings, and those written interpretations are relied on in other parts of the case. The U.S. Supreme Court upheld this takeover despite assertions that it violated the parties’ rights to trial by jury in infringement suits.\textsuperscript{101}

Reassigning the process to judges and making all claim interpretations explicit in every case gave the interpretations themselves far more clarity and importance in patent cases. It also enhanced the role of trial judges in infringement cases and limited the power of juries to rule as they please. At the same time, it exposed the newly explicit claim interpretations to far more intense scrutiny on appeal.

Related rulings by the Federal Circuit ratcheted-up the intensity of appellate review to yet higher levels. For one thing, the Federal Circuit characterized claim construction as purely a matter of law and refused to acknowledge any factual aspects in the process. And it largely precluded reliance on expert testimony and most other forms of “extrinsic” evidence. On these bases, it subjected claim interpretations to the severe “\textit{de novo}” form of review, \textit{i.e.}, to complete redetermination of claim meanings by the Federal Circuit on appeal without giving any deference to the reasoning or determinations of the trial judge.\textsuperscript{102}

Intended to increase accuracy and predictability in claim construction, these changes made claim interpretations a frequent target in appeals, and reversal rates soared.\textsuperscript{103} Retrials of patent cases required by new claim interpretations announced on appeal became common, and

\textsuperscript{101} \textit{Markman v. Westview Instruments, Inc.}, 517 U.S. 370 (1996).

\textsuperscript{102} [Cite \textit{Vitronics, Cybor, & Phillips} and explain what’s extrinsic and what’s intrinsic. Maybe delete the rest of this fn.] While trial judges can receive expert testimony relating to claim construction (without the presence of the jury) as “background” on the relevant technology or on the invention in question, the Federal Circuit largely eliminated their ability to rely on such evidence in interpreting the claims.

\textsuperscript{103} The Federal Circuit’s reversal rate when district court claim construction rulings were appealed approximated 40\% according to Judge Rader, concurring in a 1998 opinion. \textit{Cybor Corp v. FAS Technologies, Inc.}, 138 F.3d 1448, 1476 n. 4 (Fed. Cir. 1998). That figure was approximately double the typical federal appellate reversal rate. Note, however, that the close and difficult questions and suspect trial court rulings are likely to be heavily over-represented among cases where claim construction orders are appealed. Moreover, statistics showing frequent reversals of claim construction rulings by trial judges under the new regime may reflect the greater visibility and accessibility on appeal of errors that were previously hidden within the jury verdicts and thereby shielded from scrutiny.
inefficiency and expense in litigation seemed extreme.\textsuperscript{104} Some of the Federal Circuit judges, as well as many commentators, criticized the new process and its results in strong terms.\textsuperscript{105}

We are not aware of statistics showing how strongly these changes favor accused infringers over patent holders. It seems clear, though, that, on average, they have narrowed claim scope and reduced patent holder success in infringement suits.\textsuperscript{106}

b. An Attempted Fix: Rejection of “Systematic Overbreadth”

One apparent reason for the surprisingly high reversal rates on claim construction seemed to be the nature of the “canons” -- \textit{i.e.}, precepts that guide claim interpretation. Those precepts are numerous, vague, and often contradictory in their teachings.

Long simmering, one key contradiction\textsuperscript{107} led panels of the Federal Circuit to announce a revised approach to claim construction in decisions in 2002 and thereafter. Those decisions sought to reduce the uncertainty in claim construction and stop the narrowing of patent coverage by routine reference to the patent’s potentially confusing specification. Uncertainties in the claim terms, they said, should be resolved mainly by use of the definitions of the claim terms provided by dictionaries or similar sources; and they heavily downgraded the significance of any implications from the patent’s specification.\textsuperscript{108} When dictionaries give multiple definitions for

\textsuperscript{104} The Federal Circuit consistently refuses to accept interlocutory appeals of claim construction rulings, allowing trial judges’ determinations on claim interpretation to be tested only after a full trial and judgment. Thus a reversal on claim construction often requires a full new trial.

\textsuperscript{105} For example, in his dissent in the \textit{Phillips} case discussed below, Judge Mayer, with whom Judge Newman joined, said:

“Now more than ever, I am convinced of the futility, indeed the absurdity, of this court’s persistence in adhering to the falsehood that claim construction is a matter of law devoid of any factual component. … In our quest to elevate our importance, we have . . . disregarded our role as an appellate court; the resulting mayhem has seriously undermined the legitimacy of the process, if not the integrity of the institution.” 415 F.3d at 1330.

\textsuperscript{106} The new procedures isolate in easily-challenged form, the trial courts’ claim interpretations in essentially all patent cases and limit the importance of the often patentee-friendly jury verdicts. They also provide more numerous opportunities and easier standards for challenges to claim interpretations. A noticeable shift in the defense strategy in infringement cases has taken place since the \textit{Markman} decision, increasing the use of summary judgment motions asserting non-infringement filed after, and relying on, the judge’s claim construction rulings.

\textsuperscript{107} On the one hand, a patent’s coverage is determined solely by its claims. Accordingly, characteristics of the invention described in the patent’s specification should not limit the coverage of the patent. At the same time, the claims, including the meanings of the terms they use, must be read and understood “in light of” the specification. Thus the specification can influence and limit the meaning of the claims.

\textsuperscript{108} See, \textit{e.g.}, \textit{Texas Digital Systems, Inc. v. Telegenix, Inc.}, 308 F.3d 1193, 1204-05 (Fed. Cir. 2002).
individual words, these decisions recommended acceptance of all the stated meanings and use of them all in interpreting the claims. Only if the patent’s specification or prosecution history made it really clear that some of the definitions were not applicable would those particular meanings be rejected.\textsuperscript{109}

In 2005, the full Federal Circuit rejected this dictionary-based fix in \textit{Phillips v. AWH Corp.}\textsuperscript{110} The “main problem” with it, the court said, is that dictionaries and similar references present all the possible meanings of claim terms \textit{in the abstract} but give no indication of which meaning was intended or is appropriate \textit{in the context of the invention}. Thus the fix would promote “\textit{systematic overbreadth}” in patent coverage.\textsuperscript{111} Instead, the \textit{en banc} court confirmed the special importance of the patent’s specification in guiding claim construction. Importantly, it did not confine that special importance to the limited circumstances where the specification had long been recognized as influential.\textsuperscript{112} It acknowledged the confusion and claim-narrowing tendency of reference to the specification. But addressing that confusion in the context of each patent, it said, is more likely than any “magic formula” to capture the true scope of the claimed invention.\textsuperscript{113}

This logic has genuine appeal, but we are left with a troubling result. The many traditional precepts for claim construction remain available in litigation, with all their conflicts. And those conflicts, along with the potentially confusing specification, undermine the clarity-promoting objective, and narrow the breadth, of the statutorily-mandated claims. Uncertainty is preserved and “panel roulette” can continue in claim construction.\textsuperscript{114} Accused infringers are most often the beneficiaries because specification-based limitations on claim coverage are re-

\begin{itemize}
\item \textsuperscript{109} 308 F.3d at 1203.
\item \textsuperscript{110} 415 F.3d 1303 (Fed Cir 2005) \textit{(en banc)}.
\item \textsuperscript{111} 415 F.3d at 13__.
\item \textsuperscript{112} \textit{E.g.}, where the specification (i) clearly gives a narrow definition of one or more terms used in the claims or (ii) includes a clear disavowal of coverage for a particular variant of the claimed invention.
\item \textsuperscript{113} \textit{Id}. at 1323-24.
\item \textsuperscript{114} See, \textit{e.g.}, Judge Dyk’s dissent in \textit{Kinetic Concepts, Inc. v. Blue Sky Medical Group}, 554 F.3d 1010, 1025, \textit{et seq}. (Fed. Cir. 2009), demonstrating stark and determinative disagreement over whether illustrations in the patent’s specification of only one type of wound -- without any wording contrasting or excluding other types of wounds -- should be read as limiting the meaning of “wound” as used in the claims.
\end{itemize}
established as proper without confinement to the few circumstances where they have long met
general acceptance.\footnote{See note 112, above.}

c. **Compounding, Not Mitigation**

Related developments from the Federal Circuit have compounded, rather than mitigated,
the narrowing of patent coverage described above. Two such developments are the narrowing of
means-plus-function claims and the decimation of the formerly powerful doctrine of equivalents.


“An element in a claim for a combination may be expressed as a means or a step for performing a
specified function without the recital of structure, materials, or acts in support thereof, and such
claim shall be construed to cover the corresponding structure, materials, or acts described in the
specification and equivalents thereof.”} was
very commonly used during the Federal Circuit’s first fifteen years and, to a lesser extent, since.
Consistent with the statute, patent practitioners understood that means-plus-function clauses
would cover the corresponding structure disclosed in the patent’s specification plus
“equivalents.” Most practitioners believed, however, that equivalence would extend to a range
of structures that performed the same function, in a roughly similar way, as the structure
described there. Case law on “equivalence” supported this belief.

Over the years, however, the Federal Circuit adopted a considerably narrower range of
“equivalence,” in assessing means-plus-function claims, than had applied under the well known
“doctrine of equivalents.”\footnote{The doctrine of equivalents is the subject of a later chapter of this article. See also note 118, below. As early as 1993, a Federal Circuit panel had recognized, but rejected, the common use of means-plus-function clauses to cover anything that performed the stated function more-or-less as the feature described in the specification *Valmont Industries, Inc., v Reineke Manufacturing Co., Inc.*, 983 F.2d 1039, (Fed. Cir. 1993). Over the years, most subsequent Federal Circuit decisions followed this narrowing approach, establishing a very narrow scope for means-plus-function claims.} Gradually, practitioners recognized that means-plus-function
elements are tested by a narrow and severe version of the “insubstantial changes” test.\footnote{The widely understood test of equivalence had long been the “function-way-result” test of *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605 (1950). The *Valmont* panel, however, framed the equivalents question under § 112 ¶6 as follows:

“Section 112 and the doctrine of equivalents have something in common. The word
“equivalent” in §112 invokes the familiar concept of an *insubstantial change which adds
nothing of significance*. In the context of §112, however, *an equivalent results from an
insubstantial change which adds nothing of significance to the structure, material, or acts*}

(footnote continues on next page)
development frequently prevents findings of infringement under the common means-plus-
function claim format.

A separate scope-limiting development took place in the patent-extending doctrine of
equivalents itself. That doctrine was a powerful force that frequently extended the reach of
patent claims to cover structures outside the claim language if they performed substantially the
same task as what was claimed and did it in substantially the same way to achieve substantially
the same result. Despite Supreme Court support for that doctrine, however, the Federal Circuit
gradually imposed more and more limitations on its operation, largely eliminating its
effectiveness. We discuss that development in Part 9, below.

*    *    *    *

In combination, these developments have heavy consequences. Many patentees now
have difficulty proving infringement against anyone other than a simple knock-off artist. Such a
narrowing of claim scope substantially reduces the value of the patent right.

6. Further Tightening of Patent Validity Rules

The Federal Circuit’s formerly patent-friendly environment likewise turned harsh as to
the enablement requirement and the requirements governing written description and definiteness
of claims, particularly claims using the means-plus-function format.

a. “Full Scope Enablement”

Under the Patent Act, each patent must contain a sufficiently clear and complete
description of the claimed invention as “to enable any person skilled in the art . . . to make and
use [that invention].”\(^{119}\) Recently, the Federal Circuit has been applying a stringent version of
this requirement, sometimes called the “full scope enablement” doctrine. This doctrine insists
that the patent specification, supplemented only to a very limited extent by the knowledge of a
person skilled in the art, must enable every embodiment of the invention that fits within a claim

\(^{119}\) 35 U.S.C. §112, first paragraph, emphasis added.
in order for that claim to be valid at all. If any embodiment of the invention within the claim is not enabled, the whole claim is held entirely invalid, even as to embodiments that are fully enabled. This stringent requirement threatens the validity of many broad patent claims.

In Liebel-Flarsheim v. Medrad, Liebel’s patents were for front-loading fluid injectors with replaceable syringes for injecting fluid into patients at high pressure. The claims in the application as originally filed recited use of a pressure jacket to help support the sides of the syringe against the high pressure. Those claims, however, had been broadened in prosecution to omit reference to a pressure jacket or its use. Accordingly, they could include fluid injectors with or without pressure jackets. Because the patent specification was adequate to enable only those fluid injectors used with pressure jackets, the Federal Circuit found the claims completely invalid because they were not enabled to their full scope.

The facts in Liebel-Flarsheim had the potential to limit its applicability. The opinion, however, did not suggest that, and other cases have applied the full scope enablement requirement far beyond any special circumstances. In Automotive Technologies International v. BMW, for example, the claims for a velocity-type automotive side-impact crash sensor covered the use of a mechanical or an electronic impact switch, but specification enabled only the mechanical switch. The court found the patent completely invalid even as to mechanical switches and even though nothing suggested that changing to the non-enabled electronic embodiment was beyond the skill of an ordinary practitioner of the art.

In Sitrick v. Dreamworks, the invention was technology for integrating a user’s audio signal or visual image into a pre-existing video game or movie. The patent contained enabling disclosure for use of the technology with video games but not for using it with movies, which have a fundamentally different recording format. Accordingly, a claim that covered both video games and movies was not adequately enabled. Once again, because the full scope of the claims

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120 481 F.3d 1371 (Fed. Cir. 2007).
121 ___ F.3d ___ (Fed. Cir. 2007).
122 ___ F.3d at ___, Slip Op. at 18. In the Court’s words, “…in order to fulfill the enablement requirement, the specification must enable the full scope of the claims that includes both electronic and mechanical side impact sensors, which the specification fails to do.”
123 ___ E.3d ___ (Fed. Cir. 2008).
(every embodiment) was not enabled, the entire claim was invalid. Other cases have confirmed the doctrine in a variety of circumstances.\textsuperscript{124}

The full scope doctrine led one practitioner to circulate a client newsletter article entitled “‘Full Scope’ Enablement -- An Invalidity Bonanza.”\textsuperscript{125} The doctrine certainly can invalidate many existing broad patent claims, particularly if it continues to be applied as broadly as it is being stated.\textsuperscript{126} Patent prosecutors must now take care to avoid broad claims -- or back them up with narrower claims -- or be at risk that a non-enabled and possibly unforeseen embodiment will invalidate the patent. And patent litigators must take care in seeking broad constructions of their patent claims lest a non-enabled embodiment lurk in the shadows. Some patent owners will find themselves whipsawed in the “heads I lose -- tails you win” position of \textit{Liebel}, where they must choose between a narrow claim construction not infringed by the accused product and a broad construction that now could be invalid under the full scope enablement doctrine.

b. \textit{Means-plus-Function Claims}

Having narrowed the coverage of means-plus-function claims as described above, the Federal Circuit recently subjected them to new and highly stringent validity standards. This has often invalidated such claims, further reducing patent rights.

\textsuperscript{124} \textit{E.g.}, \textit{AK Steel Corp v. Sollac}, 344 F.3d 1234 (Fed. Cir. 2003) ("as part of the \textit{quid pro quo} of the patent bargain, the applicant’s specification must enable one of ordinary skill in the art to practice the full scope of the claimed invention"); \textit{LizardTech, Inc. v. Earth Resource Mapping}, 424 F.3d 1336 (Fed. Cir 2005) ("the description of one method for creating a seamless DWT does not entitle the inventor of the ‘835 patent to claim any and all means for achieving that objective"). In his concurrence with an opinion that has been vacated and is now being reheard by the Federal Circuit \textit{en banc}, \textit{Ariad Pharmaceuticals, Inc. v. Eli Lilly & Co.}, 560 F.3d 1366, 1381 (Fed. Cir. 2009), Judge Linn suggested the full scope enablement doctrine may invalidate all “claims written broadly enough to cover any method for achieving a particular result,” since “the specification cannot enable unknown methods.”

\textsuperscript{125} “Full Scope” Enablement — An Invalidity Bonanza, Baker Donelson Intellectual Property News at 1 (Summer 2008). \textsuperscript{126} The Federal Circuit’s formulation of the doctrine raises considerable uncertainty. For example, patent claims for an apparatus that use the common transition language “comprising” generally encompass structures that include any number of possible additional elements beyond those identified in the claim, usually including many that are not enabled by the specification. Likewise, many patent claims can include versions of the claimed invention that also include later devised improvements not enabled by the specification. It seems unlikely that the Federal Circuit’s stringent statement of the full scope enablement doctrine will be held to invalidate claims of these types, where the additional elements or improvements are not referred to or otherwise stated to be important to the invention as described. But the line between invalidating insufficiency of enablement and adequate disclosure is not currently clear. Consider as an example, if the Wright brothers were to claim an airplane comprising an engine, would their claim be invalid if their disclosure enabled piston engines but not jet engines?
In one series of cases, the Federal Circuit has applied a harsher “definiteness” requirement than it used for means-plus-functions elements a few years ago -- and harsher than it currently uses for claim elements in other formats. The result is to invalidate claims in means-plus-function form where very similar claims not using that format could achieve broad but valid coverage. For example, in the area of computers and software, the court has required means-plus-function claims not only to disclose a general purpose computer processor programmed to achieve a stated result but also to disclose the software algorithm(s) used to achieve that result. And this has been true even where a person of ordinary skill in the art would know how to devise and code an appropriate algorithm.

In Aristocrat Tech. Austl. Pty Ltd. v. Int’l Gaming Tech., 521 F.3d 1328 (Fed. Cir. 2008), for example, the technology at issue was an electronic slot machine that allows a player to select winning combinations of symbols. Depicted here in Figure 1 is a pattern to be played, and Figure 2 shows a winning combination for that pattern. The claim in question was in means-plus-function form, and the patent’s specification disclosed part of the corresponding structure as “a general purpose, programmable microprocessor.” It did not disclose any step-by-step algorithm to program the microprocessor to display and operate the patterns and selections. The Federal Circuit held the patent invalid for failing to disclose such an algorithm, even though a novice software developer could have created such an algorithm without difficulty.

In Finisar Corp. v. The DirecTV Group, Inc., 523 F.3d 1323 (Fed. Cir. 2008), the patent claimed systems and methods for scheduling transmission of database tiers upon specific demand or at specific times and rates of repetition. The invention would send customers of a service like satellite television programming in database tiers meant to anticipate which programs they would choose. One of several issues on appeal was whether certain of the software claims in means-plus-function form were sufficiently definite. The Court cited and reaffirmed its Aristocrat

127 The definiteness requirement comes in large part from 35 U.S.C. § 112, second paragraph, which provides “The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.”
decision in holding seven claims invalid for indefiniteness. It referred to an earlier case also
cited in Aristocrat, stating “for computer-implemented means-plus-function claims where the
disclosed structure is a computer programmed to implement an algorithm, ‘the disclosed
structure is not the general purpose computer, but rather the special purpose computer
programmed to perform the disclosed algorithm.’ WMS Gaming, Inc. v. Int’l Game Tech.,
184 F.3d 1339, 1349 (Fed. Cir. 1999).” The Court concluded the patent must disclose “enough
of an algorithm to provide the necessary structure.”

More recent Federal Circuit decisions have extended this very stringent requirement for
software means-plus-function claims, confirming a “gotcha” infringement defense regardless of
the ease with which a person of ordinary skill in the art could have supplied the omitted
structure. 128 Other recent rulings have extended a similar result to other types of inventions as
well. 129 Along with their narrowed scope discussed in the preceding section, this recently
established weakness of the means-plus-function format may be a contributing factor to the big
decline in use of that format in recent years. 130

128 NetMoneyIn, Inc. v. Verisign, Inc., 545 F.3d 1359 (Fed. Cir. 2008) (claim entirely invalid because
specification failed to disclose an algorithm by which a general purpose bank computer “generat[es] an
authorization indicia,” as claimed); Blackboard, Inc. v. DesireToLearn, Inc., ___ F.3d ___ (Fed. Cir.
2009) (claim of course management software invalid because the description of the “access control
structure” was “essentially a black box that performs a recited function . . . [b]ut how it does so is left
undisclosed. . . .[a] patentee cannot avoid providing specificity as to structure simply because someone of
ordinary skill in the art would be able to devise a means to perform the claimed function”).

129 See Biomedico LLC v. Waters Tech Corp., 490 F.3d 946 (Fed. Cir. 2007) (the fact that known
technology is referenced as to the means-plus-function element is not enough to validate it even though a
POSITA would know what it is and even where the lack of more specific structural explication is not on a
point of novelty).

130 Dennis Crouch in his Patently-O Blog post of February 9, 2009, noted that only 12% of the patents
issued in early 2009 included a “means for” clause in the claim language compared to 24% a decade
earlier and a full 40% two decades before that. See http://www.patentlyo.com/patent/2009/02/patently-o-
bits-and-bytes.html. The graph below illustrates the decline:

(footnote continues on next page)
7. **Patent Exhaustion -- Post-Sale Restraints on Patented Products**

Sometimes called the “first sale doctrine,” patent exhaustion is a long recognized, but uncertain, limitation on patent holder rights. Subject to major exceptions, this doctrine held that the first authorized, unconditional sale of a patented product -- whether by the patentee or by its licensee -- terminates all patent restrictions on the product sold.\(^{131}\) Thereafter, the use, resale, etc. of that item are free from any patent-based restraints or obligations. Recent decisions have given this uncertain patent-limiting doctrine new power and vitality, cutting-back the rights of patent holders.

Uncertainties long limited exhaustion’s operation. For one thing, exhaustion often did not limit method claims because method inventions are not physical “products . . . sold” to purchasers. Separately, many types of products largely embody, or enable performance of, claimed inventions without duplicating or performing the invention fully or by themselves. Sale of such items might not exhaust the corresponding patent.

Equally important, beginning in 1992 if not earlier, the Federal Circuit increasingly embraced what might be called a “deregulatory” or “freedom-of-contract” view of exhaustion, further sapping its vitality. This approach emphasized both an implied contract theory as the basis for exhaustion and a requirement that the sale in question be wholly “unconditional” in order to trigger exhaustion.\(^{132}\) It allowed patent holders to put special terms in their sale or

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\(^{131}\) The termination affects only the actual items sold. Other identical items not yet sold remain subject to the patent until they are subject to their own first authorized sales.


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(footnote continues on next page)
licensing agreements and thereby block exhaustion as to the items sold by disaffirming the normal understanding that patent rights on such items end with the sale. The continuing patent protection could enforce a variety of post-sale restrictions on use or disposition of the subject items more effectively than mere contractual restraints.

In *Quanta Computer, Inc. v. LG Electronics, Inc.*, 553 U.S. ___ (2008), the Supreme Court wiped away some uncertainties that had limited the exhaustion doctrine and, without addressing them, called others into question. Subsequently, a Federal Circuit decision and an extensively reasoned district court decision have extended exhaustion’s reach substantially beyond what the Supreme Court held in *Quanta*.

In *Quanta*, the patented inventions were methods for improving computer hardware performance. LG owned the patents and licensed them to Intel subject to special limiting terms in the license. Those terms said the license would not confer any “downstream” usage rights for the patented methods in computers that combined licensed parts made by Intel with other parts not made by Intel. Related terms required Intel to advise parts purchasers of this limitation in the LG license. Unless exhaustion applied, the assembly, sale and subsequent use of the computers containing both the Intel parts and parts from different manufacturers would infringe (or induce the infringement of) LG’s patents.

Quanta and other computer manufacturers combined the Intel microprocessors with non-Intel parts (memory chips, busses, etc.) in the computers they made and sold; and LG sued them for inducing infringement of its patents. Applying its narrow view of exhaustion, the Federal Circuit held it inapplicable for several reasons: (i) the limiting statements in the license precluded any inference it was intended to benefit the computer makers or exhaust the patent rights, (ii) the same terms made the sales of the Intel parts “conditional” and therefore ineffective in triggering exhaustion, and (iii) exhaustion could not apply to method claims. The Supreme Court, however, took the case and reversed. The Court’s opinion was narrowly written but its logic suggested broader consequences.

(footnote continued from previous page)

The Court first held method claims fully subject to exhaustion by the sale of parts designed to perform the claimed methods.\textsuperscript{133} It then held that substantial, though not complete, embodiment of the patented inventions by the item(s) sold is sufficient to trigger exhaustion. The Intel products “constitute[d] a material part of the patented invention and all but completely practice[d] the patent.” This, the Court said, was enough.\textsuperscript{134}

The Court also rejected LG’s arguments that the sales by Intel to the computer makers were not “authorized.” The license agreement granted Intel the right to “sell” the subject parts and did not expressly limit that right based on how those parts would be combined. Despite several factors that LG argued negated authorization,\textsuperscript{135} this permission to “sell” was enough for exhaustion purposes.

The Court made no mention of whether the sales in question were “unconditional” or whether that is a requirement for exhaustion. This was surprising since the Federal Circuit had based its conclusion of no exhaustion partly on its characterization of the sales as “conditional.” The Court’s opinion has considerably reduced the previously stated requirement for unconditionality.\textsuperscript{136}

Likewise, \textit{Quanta} did not address the Federal Circuit’s main tool for limiting exhaustion, its implied contract theory of the doctrine. The Court’s statements, however, seemed inconsistent with that theory. For example, they characterized exhaustion as an inherent and automatic limit on patent protection that operates regardless of the intent of the patent holder or

\textsuperscript{133} ___ U.S. at ___.

\textsuperscript{134} ___ U.S. at ___. The Court repeatedly emphasized that the Intel parts “had no reasonable non-infringing use and included all the inventive aspects of the patented methods.” ___ U.S. ___, slip op. at 36.

\textsuperscript{135} The Federal Circuit had combined the license limitations and related notices to purchasers with the restrictions in federal patent law and state law provisions arguably incorporating provisions of general law into private contracts in holding the sales “conditional” for purposes of exhaustion. In the Supreme Court, LG argued the same points in asserting the sales were not “authorized.”

parties to the sale of the patented product.137 Recently, a Federal Circuit decision and a separate district court decision followed *Quanta’s implications*, rejected the implied contract theory, and largely eliminated the ability of the patent holder and licensee to limit exhaustion by terms in their agreements.

The Federal Circuit case, *TransCore LP v. Electronic Transaction Consultants Corp.*,138 followed *Quanta’s* pro-exhaustion approach and held the doctrine applicable under a covenant not to sue and contrary to the intent of the parties to the covenant. Covenants not to sue do not actually “authorize” their recipients to make, use, or sell the patented products. They merely commit the patent holder not to sue the covenant beneficiary for the infringement those acts represent. Nevertheless, following *Quanta*, the Federal Circuit held the narrow pledge not to sue sufficient to trigger exhaustion upon a sale of the patented product by the covenant beneficiary. More interesting, evidence proffered in *TransCore* showed the patent holder’s refusal, during negotiation of the covenant, to include terms requested by the covenant beneficiary that would have extended the covenant’s protection to purchasers of the patented products from the beneficiary. Recognizing *Quanta’s* implications, the Federal Circuit upheld the district court’s exclusion of all evidence on the parties’ intent as irrelevant to exhaustion and affirmed exhaustion despite the parties’ contrary intent.139

In the district court case,140 a supplier of parts for reconditioning used printer cartridges sought reconsideration, in light of *Quanta*, of an earlier ruling in the same case denying exhaustion of Lexmark’s patents on its toner cartridges. Lexmark had sold the patented cartridges under special “single-use” agreements with purchasers that allowed them to pay less than the usual price for the cartridges. In return, the purchasers agreed to return the spent cartridges to Lexmark rather than selling them to re-conditioners for service, refilling, and resale in the market. Judge Van Tatenhove reviewed *Quanta* and the Supreme Court’s earlier cases on exhaustion at length. *Quanta*, he concluded, had reasserted a broad view of exhaustion “in the face of Federal Circuit case law that had narrowed the scope of the doctrine [and had] been

137 ___ U.S. at ___, 128 S. Ct. at 2122.
138 563 F.3d 1271 (Fed. Cir. 2009).
139 563 F.3d 1271, 1275, 1277.
followed as binding precedent by the district courts.”141 Under that broad view, exhaustion applied despite the single-use-and-return provisions in the sales agreement and despite the lower price paid by purchasers who agreed to those restrictions. Patent law could not be used to enforce the restrictive commitments the purchasers had made.

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Quanta has vastly strengthened the exhaustion doctrine. Uncertainties remain at the margins, especially in the licensed manufacturer context.142 But these may not have much economic significance given the narrow zone in which they now would have to operate. Patent holders now are less able to arrange for royalties from multiple parties who make, buy, combine, modify, use, sell, and/or recondition the patented items. Likewise, it is now hard for patent holders to sell meaningful licenses without extending unlimited rights to third party purchasers of the items sold. Whether any feasible restrictions in licenses or sale agreements can preserve meaningful patent-law-based restraints as to items sold remains uncertain.

8. U.S. Damages for “Foreign Infringement” -- §271(f)

Among many patent-strengthening steps in the 1980s, the strangest was enactment of Section 271(f) of the Patent Act.143 Unlike the patent laws of any foreign country, Section 271(f) created a non-traditional type of patent infringement under the U.S. patent laws reaching foreign sales of certain types of unpatented components -- yet it could be applied only against U.S. producer-exporters. That section made it an act of U.S. patent infringement to export from the U.S. non-patented components for combination abroad with other components (wherever made and by whomever supplied) for sale and use of the combination abroad if the combination would

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141 615 F.Supp.2d at 582-83. Judge Van Tatenhove’s extensive opinion cited conflicting views of Quanta’s effects, including commentary on whether it had overruled the Federal Circuit’s 1992 Mallinckrodt decision, supra note 136, sub silentio. After analysis, he concluded it had. If so, the same result would follow as to another leading Federal Circuit decision limiting the exhaustion doctrine, B. Braun, supra note136.

142 That context, unlike sales by the patent holder itself, can raise the question of whether the sale of products to particular purchasers for particular uses was “authorized” if the license contains limiting provisions relating to the sales.

have infringed a U.S. patent if made, used, or sold here. This provision has been described, charitably, as “ill-conceived.”

Section 271(f) was little used until recent years. Then, however, its extreme effects, especially if interpreted broadly, became apparent. Panels of the Federal Circuit enthusiastically extended the section’s coverage in two major ways in 2005-2006. So extended, it was the basis for huge awards of damages against U.S. producers. Here we review those extensions and the more recent severe cut-backs of Section 271(f).

a. Expansion of Section 271(f) -- “Components . . . Supplied from the U.S.” -- Chemicals, Software, etc.; Machine vs. Method Inventions

Section 271(f) was enacted to reverse a 1972 Supreme Court decision that addressed tangible components of a machine invention. Neither the language of the provision nor its legislative history gives any clear indication of whether its reach extends beyond that context. Early decisions under Section 271(f) extended its reach to unpatented chemicals shipped abroad for combination there into compounds (i.e. into “compositions of matter” rather than “machines”) claimed in U.S. patents. In contrast, courts and scholars deemed the section incapable of application to inventions claimed as methods/processes.

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146 See Farrand, supra note 144 at 1219-31 and ____ for a discussion of the section’s background and legislative history.


148 The section’s legislative history discussed machine inventions and tangible components extensively but contains essentially no mention of intangible components or method/process inventions. More important, the “steps” or “acts” of which method inventions are made do not seem to be “components” in the ordinary sense, and it is difficult to conceptualize such “steps” being “supplied from the U.S.” for combination at a foreign location. See Standard Havens Prods. v. Gencor Indus., 953 F.2d 1360, 1374 (Fed Cir 1991) and other authorities cited in Farrand, supra note 144 at n.39.
In the 1990s and early 2000s, a number of cases sought to apply Section 271(f) to exports of unpatented computer software. In these cases, no physical object from the U.S. was included in any of the foreign-assembled programmed computers. Further, some of the patent claims asserted were method claims, with which Section 271(f) has previously been deemed inoperative.

Three panels of the Federal Circuit addressed these circumstances in 2005 - 2006. In a late stage of patent-expansive enthusiasm, they answered all the difficult questions as required to extend its coverage to exports of software, no matter how the software was sent abroad. They also reversed prior rulings and held Section 271(f) applicable with method claims, regardless of whether the “component” supplied from the U.S. was a step in the claimed method or, in instead, a physical object used in one or more of the method’s steps.

These extensions of Section 271(f) had huge financial impacts on U.S. producers, particularly Microsoft. They also increased the discriminatory impact of Section 271(f) against U.S. producers vis-à-vis their non-U.S. competitors.

b. Cutting-back Section 271(f)

Software: “Components” and “Combination.” The expansion of Section 271(f) ended in 2007 with the Supreme Court’s firm but intellectually weak decision in Microsoft Corp v. AT&T.

149 Eolas Technologies Inc. v. Microsoft Corp. 399 F.3d 1325 (Fed Cir 2004), cert denied, ___ U.S. ___, 126 S. Ct. 568 (2005) (software); AT&T Corp. v. Microsoft Corp., 414 F.3d 1366 (Fed Cir 2005) reh’g and reh’g en banc denied, ___ F.3d ___, reversed sub nom. Microsoft Corp. v. AT&T Corp., 550 U.S. 437 (2007) (software); Union Carbide Corp. v. Shell Oil Co., 425 F.3d 1366 (Fed. Cir. 2005), reh’g and reh’g en banc denied, 434 F.3d 1357 (Fed. Cir. 2006) (chemical catalysts). The Eolas and AT&T panels deliberately chose expansive, “non-technical” interpretations of Section 271(f) in order to extend its operation to areas of new technology where its wording and original intent seemed technically not to reach.

150 Union Carbide Corp, supra, 425 F.3d 1366. Several Federal Circuit judges disagreed strenuously from these determinations in their dissent from denial of rehearing and rehearing en banc in that case, 434 F.3d 1357, 1358-59.

151 In several of the cases, the foreign sales were approximately twice as large as total U.S. sales of the infringing combinations. When infringement was found both as to combinations made and sold here and, under Section 271(f), as to combinations made and sold abroad, application of that section to reach the foreign sales roughly tripled the damages award. Several awards in software cases were in the $________ range without any enhancement under 35 U.S.C. §284, which allows up to treble damages for infringement but generally applies only in cases of willful infringement.
In stark contrast to the Federal Circuit, the Supreme Court approached Section 271(f) with considerable skepticism and reluctance to extend its reach. Combining that reluctance with questionable parsing of the statute’s terms, the Court barred application of Section 271(f) with apparatus claims to reach exports of unpatented intangible software. It left open, however, the possibility of reaching such exports via Section 271(f) and method claims, and it declined to rule on the Federal Circuit’s recent extension of Section 271(f) to method claims generally.

Method Claims and Section 271(f). In 2009, by an 11-1 majority, the full Federal Circuit abandoned its three-year-old method claims extension of Section 271(f). Cardiac Pacemakers, Inc. v. St. Jude Medical, Inc. More satisfying intellectually than the Supreme Court’s reasoning in Microsoft, the decision relied on the history and context of Section 271(f) and on the logical difficulties of applying its wording to method claims generally. It was also influenced by the Supreme Court’s insistence in Microsoft on not extending U.S. patent law beyond U.S. borders any more than Congress had clearly mandated. Unstated, but surely also important, was the new climate in patent law: moderation and retrenchment, not expansion of patent rights and remedies, was the order of the day.

The en banc reversal in Cardiac Pacemakers confirms broad protection of U.S. software producers against liability for foreign sales under Section 271(f). It also gives U.S. producer-
exporters of other unpatented components a sliver of protection, but not more.¹⁵⁷ These U.S. producers are still exposed to awards of world-wide damages in U.S. courts under U.S. apparatus claims for foreign sales of their unpatented components -- a risk their foreign competitors do not face.

Equally interesting, for present purposes, is the familiar pattern at the Federal Circuit. As in other areas, that court recently broke precedent and aggressively expanded patent protection under Section 271(f). But then, after a partial rejection of its initiative, it adopted a new attitude and reversed what remained of its recent expansion. With modest variations, this has been the trend in area after area of patent enforcement in recent years.

9. **Doctrine of Equivalents**

The Doctrine of Equivalents (“DOE”) is a long-established, but peculiar, part of U.S. patent law. Repeatedly reaffirmed by the courts, the DOE unsettles the primacy of patent “claims” in determining patent coverage. Its recent evolution is another chapter in the up-and-down enforcement of patents by the U.S. courts over the last quarter century.

Since the mid-1800s, U.S. patent statutes have required every patent application to include not only a good “description” of the subject invention but also specific and precise claims stating the outer limits -- the “metes and bounds” -- of the requested patent protection.³⁵⁸ Patent examination and scope determination center on the claims. Accordingly, a patent’s coverage is what falls within these statutorily mandated claims, as finally agreed on by the applicant and the examiner, and nothing more.¹⁵⁹

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¹⁵⁷ These other U.S. companies are safe from U.S. awards of damages for foreign sales of their unpatented components as to method claims only. Under modern claiming practice, however, most inventions can be claimed both (i) as a product, machine, apparatus, or composition and (ii) as a method/process; and many U.S. patents include both types of claims for basically the same invention. Accordingly, protection limited to method/process claims reduces exposure only slightly.

³⁵⁸ 35 U.S.C. §112 requires that the description of the invention “conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.” Many patent cases have analogized the patent claims to the “metes and bounds” used in many real estate deeds to define the lines at the edges of a property owner’s right to keep others off his land -- much like claims could delimit the right of a patent owner to exclude others from making, using, or selling his invention.

¹⁵⁹ *Phillips v. AWH Corp.*, 415 F.3d 1303, ______ (Fed. Cir. 2005) (*en banc*).
The DOE upsets this logic. In infringement litigation, the DOE can extend a patent’s coverage beyond the claims to reach products or methods that differ only “insubstantially” from what was claimed. Put another way, a deviation of an accused product from what was claimed in a patent may not protect the product from infringing if it satisfies the three-way “FWR” test, i.e., if the product accomplishes substantially the same Function in substantially the same Way to achieve substantially the same Result as what was claimed.\footnote{Graver Tank & Mfg. Co. v. Linde Air Products Co., 339 U.S. 605 (1950); Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co., 520 U.S. 17 (1997), remanded 114 F.3d 1161 (Fed. Cir. 1997); Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co. Ltd., ___ U.S. ___, 122 S. Ct. 1831 (2002).}

Ignoring all details, the Federal Circuit’s treatment of the DOE has been similar to its treatment of the other patent enforcement doctrines discussed in this article: That court was \textit{patent-expansive} -- i.e., pro-DOE -- in its early years; but it then became \textit{patent-limiting} -- i.e., anti-DOE. A closer look, however, reveals much more texture to this progression:

- Even in its early pro-DOE period, the Federal Circuit was divided and ambivalent about that doctrine;
- The Federal Circuit turned against the DOE before it turned patent-limiting in the other major areas discussed in this article;
- Twice in the last 14 years, the Supreme Court upheld the DOE and its continued vitality against serious attacks and proposed limitations, although it noted some dangers in the doctrine and encouraged restraint; and
- Time after time in recent years, the Federal Circuit has ratcheted-up old limitations on the DOE or created or strengthened new ones. In combination, the many additional limitations became extremely restrictive -- so much so as to strangle the doctrine. Accordingly, what was a very important part of patent enforcement a few years ago has lost most of its strength and importance.

The fall of this recently important doctrine despite two favorable Supreme Court decisions within seven years of each other is remarkable; and the effect on patent enforcement is substantial. The following paragraphs note the major aspects of this surprising evolution.

a. The Federal Circuit’s Early Years
Soon after its creation, the Federal Circuit gave a broad and expansive application to the DOE in the first of its several decisions in *Hughes Aircraft Co. v. United States.*\(^\text{161}\) Relying on earlier case law including Supreme Court authority from 1950,\(^\text{162}\) it applied a loose and generous test for “equivalence.” The proper standard, it said, was an expansive comparison of the accused product *as a whole* with the claimed invention *as a whole.* This liberal approach de-emphasized scrutiny of the differences between the particular elements in the claim and the particular corresponding aspects of the accused product. Under this approach, the DOE was a potential alternative route for proving infringement in a large number of cases where literal infringement was lacking or uncertain.

In two decisions just three years later, however, the Federal Circuit cut-back this expansive approach. The first of these decisions rejected equivalence where it seemed present on the facts and used strong language to denounce broad applications of the DOE.\(^\text{163}\) The second was the important *en banc* decision in *Pennwalt Corp v. Durand-Wayland, Inc.*\(^\text{164}\) There a split decision by the whole Federal Circuit mandated a narrower method of applying the DOE often termed the “all elements rule.” In contrast to the *Hughes Aircraft “as-a-whole”* comparison, this method carefully examines each limitation in the relevant patent claim separately and requires a specific acceptable -- sometimes very close -- “equivalent” in the accused product for each limitation not literally satisfied by the accused product. The facts in *Pennwalt* made application of the DOE difficult in any event, and some Federal Circuit judges said the *Pennwalt* ruling was consistent with *Hughes Aircraft.* Nevertheless, depending on the type and level of equivalence required as to each non-satisfied limitation, this approach could greatly reduce the permissible

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\(^\text{162}\) By far the most recent Supreme Court authority on the DOE was the fractured but very expansive pro-DOE decision in *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605 (1950).

\(^\text{163}\) *Perkin-Elmer v. Westinghouse Electric Corp.*, 822 F.2d 1528 (Fed. Cir 1987). There a split Federal Circuit panel affirmed the trial court’s refusal to apply the DOE to the accused tuned radio-frequency impedance matching transformer and radiator that differed in what seemed to be only an immaterial way from the patented RF transformer-radiator. The panel majority said: “. . . [A] court may not, under the guise of applying the doctrine of equivalents, erase a plethora of meaningful structural and functional limitations of a claim on which the public is entitled to rely in avoiding infringement.” 822 F.2d at 1532.

range of equivalents for most patent claims. The DOE’s continuing strength hung in the balance for a number of years.

b. Hilton Davis / Warner-Jenkinson, Federal Circuit Qualms, Festo

Important further stages of DOE evolution occurred in the Hilton-Davis v. Warner-Jenkinson litigation in the mid-1990s and the Festo litigation in the late ‘90s and early 2000s. Both of those controversies led to *en banc* decisions by the Federal Circuit and then to Supreme Court decisions upholding the DOE. The Federal Circuit judges, however, were growing more wary of the doctrine. Gradually, they created or enhanced a series of limitations that sapped most of its strength.

A high-water mark for the DOE was the 1995 *en banc* decision by the Federal Circuit in *Hilton Davis Chem. Co. v. Warner-Jenkinson Co., Inc.*, 165 supplemented by the Supreme Court’s decision which essentially confirmed the Federal Circuit’s ruling.166 The Federal Circuit and Supreme Court upheld the DOE against a broad and strenuous attack, strengthening and extending the doctrine. The Supreme Court did acknowledge the doctrine’s unsettling and potentially negative effects.167 To limit these, the Court emphasized the responsibility of trial judges to apply the previously recognized limitations on the DOE (and further limitations that might be developed in the future) themselves, rather than relying on jury instructions to get juries to apply them properly.168 The Court then expressed confidence in the ability of the Federal Circuit to further refine the doctrine.

Criticism of the DOE had been mounting for years before the Hilton Davis / Warner-Jenkinson litigation. Many observers decried routine use of the DOE as a second chance to assert infringement, and they criticized the sometimes unwarranted and largely unreviewable

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165 62 F.3d 1512 (Fed. Cir. 1995) (*en banc*); *rev’d & remanded for further proceedings consistent with this opinion*, 520 U.S. 17 (1997); *remanded* 114 F.3d 1161 (Fed. Cir. 1997).
167 Thus, the Court said, when the DOE goes too far and “takes on a life of its own,” it can cause uncertainty as to the coverage of the relevant patent and threaten findings of infringement with little reference to the patent’s supposedly unambiguous claims. 520 U.S. at ___.
168 520 U.S. at ___.

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jury findings of equivalence and infringement. Critics and supporters alike recognized the DOE as a very prominent and important aspect of patent enforcement.

Encouraged by the Supreme Court’s suggestions of additional restrictions, the Federal Circuit starkly limited the DOE in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558 (Fed. Cir. 2000) (*en banc*) by extending the long recognized doctrine of prosecution history estoppel. The Supreme Court granted review and reversed the harsh aspects of the Federal Circuit’s ruling, approving only a very small additional limitation on the DOE. In so doing, the Court again endorsed the continuing vitality of the DOE and its substantial policy-based underpinnings.

c. Death by a Thousand Cuts

Nevertheless, by the time of the Supreme Court’s 2002 *Festo* ruling, accumulating “legal restrictions” were choking the DOE. And those restrictions have only increased since. Some of the restrictions date from well before the creation of the Federal Circuit but gained strength and more rigorous application in recent years as judges’ concerns about the doctrine grew. Others were new. Together they became far more limiting than the occasional findings of non-equivalence in earlier case law. The following list summarizes the main “legal limitations” now confining the DOE to a very small domain:

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169 See, e.g., Judge Bryson’s dissenting statements in *Litton Systems, Inc. v. Honeywell, Inc.*, 87 F.3d 1559, 1580 (Fed. Cir. 1996), where he approved one of the two applications of the DOE in that case, dissented from the other as extending “equivalence” to systems quite different from what was claimed, criticized the routine use of the DOE as a second theory of infringement, and emphasized that the doctrine could often be “‘a virtually uncontrolled and unreviewable license to juries to find infringement if they so choose.’”

170 In 1998, Judge Plager, dissenting from denial of rehearing *en banc* in *Litton Systems, Inc. v. Honeywell, Inc.*, 145 F.3d 1472, 1474, 1479 (Fed. Cir. 1998), stated “There is perhaps no question more important to the health of patents than the scope and application of the judicially-created doctrine of equivalents. It permeates the entire fabric of patent law, and appears in virtually every case involving patent enforcement.”

171 For many years, the courts had used a flexible version of “prosecution history estoppel” to prevent use of the DOE to recapture, in litigation, patent scope the applicant had surrendered by narrowing claim amendments during prosecution. In its *en banc Festo* ruling, the Federal Circuit turned this traditional limitation into a far more limiting “complete bar” to any equivalents for vast numbers of patent claims.

1. "All Elements Rule" -- requires (i) careful limitation-by-limitation application of the DOE and (ii) the existence in the accused product of an identifiable and acceptable equivalent for each and every claim element not literally present.

2. Prosecution History Estoppel -- long recognized in patent law, this doctrine bars patent holders from using the DOE to re-capture subject matter coverage they surrendered by amendment to the claims during patent prosecution.

3. "No Vitiation" Rule -- insists that the DOE never operate so as to "vitiate" any claim element. That term is extremely vague. Depending on its application, this rule can bar operation of the DOE in nearly any case.

4. "Express Exclusion" Rule -- a possible equivalent must not have been "expressly excluded" from coverage by strongly restrictive claim language. This vague requirement depends on an elusive distinction between claim language that only excludes the equivalent and language that more strongly excludes it.

5. "Disavowal or Disclaimer" Rule -- holds that no potential equivalent can be recognized if it was effectively "disavowed" or "disclaimed" in the patent’s specification or prosecution history.

6. "Dedication" Rule -- holds that an alternative structure or process described in the patent’s written description but not claimed in the patent is thereby "dedicated" to the public domain and therefore out of reach by the patent holder via application of the DOE even if it would otherwise qualify as an “equivalent” of what was claimed. (Largely inoperative after 1950, this limitation was reactivated by the Federal Circuit in 2002.)

7. Must Not "Ensnare" Prior Art -- grows out of a precept that the DOE should not allow a patent holder to obtain coverage in litigation that, because of prior art, he could not have obtained by claiming it directly in a patent application. This rule was easy to apply if the proposed equivalent had been exactly disclosed by prior art. In decisions since 1990, the Federal Circuit has been applying this limitation beyond that context.

8. "All Advantages Rule" -- holds that an equivalent cannot fail to achieve every advantage asserted for the claimed invention in the patent specification or, apparently, its prosecution history, whether or not the asserted advantage is real in fact.

The importance of these rules lies partly in their number and breadth but, even more, in how they are applied. They are all deemed matters of law, applicable by judges regardless of how a jury might rule on the DOE and reviewable de novo on appeal. Accordingly, they give both trial judges and the Federal Circuit on appeal an easy avenue to reject jury findings of equivalence.

Despite all these limitations, the DOE is not completely dead. Two substantial awards based on the DOE and recently affirmed by the Federal Circuit attest to that. Nevertheless, the

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173 DePuy Spine, Inc. v. Medtronic Sofamore Danek Inc., ___ F.3d ___ (Fed. Cir. 2009) (award of based on infringement under the DOE unheld on appeal); Paice LLC v. Toyota Motor Corp., (footnote continues on next page)
effect of these multiple limitations is extraordinary. They operate against the backdrop of two 
Supreme Court decisions within a recent period of seven years that reaffirmed the DOE’s 
continuing vitality and underpinnings. Yet, for the large majority of cases, these limitations have 
completely de-fanged what was a very important part of patent enforcement just a few years ago.

10. **Damages Assessment -- Reining-in Inflated Awards**

Sky-high damages awards for patent infringement have generated great controversy in 
recent years. Critics have faulted the courts for over-assessing damages, particularly where the 
patent in question covers only one feature of a large, complex device such as a computer system. 
Now, in the shadow of proposed legislative changes, the Federal Circuit is trying to rein-in 
runaway jury awards arising from lenient applications of the so-called “entire market value 
rule.” Thus far, however, it has not supplied clear guidance for determinations of “reasonable 
royalty” amounts for one patented component of a larger product; and it has left in place some 
uncertainties that seem to have contributed to excessive awards. Additional rulings limiting 
damages awards seem likely soon.

a. **Damages Generally**

Section 284 of the Patent Act sets the measure of damages for patent infringement: the 
patent holder’s actual loss from the infringement “but [not] less than a reasonable royalty 
for the use made of the invention by the infringer together with interest and costs as fixed by the court.”

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(footnote continued from previous page)

F.3d. ___ (Fed. Cir. 2007) (award of $______ plus substantial further amounts for continuing 
infringement, all based on the DOE, upheld on appeal).

174 Other methods for calculating reasonable royalties also have resulted in large awards. For example, 
the so-called “25% Rule of Thumb,” which awards patent holders 25 percent of the infringer’s profits 
from the infringement, can lead to excessive awards. Recently in *i4i Limited Partnership v. Microsoft 
Corp.*, ___ F.3d ___, 2009 WL 4911950 (Fed. Cir. Dec. 22, 2009), the Federal Circuit affirmed a $240 
million damages award based in part on the 25% Rule of Thumb. Microsoft challenged the amount but 
the Federal Circuit held Microsoft had failed to preserve the key damages issue for appeal. See also 
*Paice LLC v. Toyota Motor Corp.*, 609 F. Supp. 2d 620, 629-30 (E.D. Tx. 2009) (court applied 25% Rule 
of Thumb to Toyota’s profit margin as one part of its calculation of an on-going royalty of $98 per 
vehicle sold). As yet, these other approaches have not been the subjects of much controversy. 
Reexamination of these other approaches in the near future, however, is likely. In the *i4i* case, for 
example, the Federal Circuit panel went out of its way to indicate willingness to review the adequacy of 
evidence supporting the damages award but said that question had not been adequately preserved for 
appeal.
When supportable, awards of lost profits are often larger than awards based on a “reasonable royalty.” But lost profits awards are generally not available to patent holders who are not making or selling the claimed invention. Plaintiffs in this category seek “reasonable royalty” awards, and recent experience shows those can be very large too.

b. Calculating a Reasonable Royalty -- the Entire Market Value Rule

For over three decades the primary, though vague, guide for determining a reasonable royalty has been the 15 “Georgia-Pacific factors.”¹⁷⁵ Broad in scope, these factors allow a jury to consider a wide range of evidence, including evidence that could support an award at -- or beyond -- the bounds of reason.

One factor in particular can lead to large jury awards by enlarging the royalty base to include sales of unpatented components of a product that practices the claimed invention. That factor essentially states the “entire market value rule,” which, when applicable, permits “the recovery of damages based on the value of an entire apparatus containing multiple features, even though only one feature is patented.”¹⁷⁶ Early cases applying that rule required the patentee to show that the entire value of the whole machine, as a marketable article, was “properly and legally attributable” to the patented feature or that the patented feature “was of such paramount importance that it substantially created the value of [all of] the component parts.”¹⁷⁷

Even when faithful to these limitations, the entire market value rule can result in very large awards. Moreover, in many cases less stringent rationales have triggered inclusion of that rule in jury instructions as an available basis for calculating damages. These have included: (i) the “market demand approach,” which applies the rule only when a patented component of a larger machine is “the basis” for customer demand but can do so on a modest evidentiary showing;¹⁷⁸ (ii) the further-reaching “single function approach,” which requires only that the

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¹⁷⁶ Paper Converting Mach. Co. v. Magna-Graphics Corp., 745 F.2d 11, 22 (Fed. Cir. 1984). See also Rite-Hite Corp. v. Kelley Co., Inc., 56 F.3d 1538, 1549-50 (Fed. Cir. 1995) (entire market rule allows royalty base to include “unpatented components of a device when the unpatented and patented components are physically part of the same machine”).
¹⁷⁷ Marconi Wireless Telegraph Co. v. United States, 53 U.S.P.Q. 246, 250 (Ct. Cl. 1942), aff’d in part and vacated in part, 320 U.S. 1 (1943); see also Rite Hite, supra, 56 F.3d at 1549 (citing cases).
¹⁷⁸ See, e.g., State Indus., Inc. v. Mor-Flo Indus., Inc., 883 F.2d 1573, 1580 (Fed. Cir. 1989), cert. denied, 493 U.S. 1022 (1990); Fonar Corporation v. General Electric Company, 107 F.3d 1543, 1552-53 (1997); (footnote continues on next page)
patented and unpatented components of a product make up a single assembly, a complete
machine, or a functional unit;\textsuperscript{179} and (iii) the very broad “marketing dependence approach,”
which applies the entire market value rule to unpatented components “normally sold with”
patented components.\textsuperscript{180} (Recently though, a district court bucked the trend and required that,
for application of the entire market value rule, \textit{all three} of these tests must be satisfied.\textsuperscript{181})

The varying rationales for applying the entire market value rule together with the breadth
of the \textit{Georgia Pacific} factors left district courts with little guidance in determining an
appropriate royalty where the patentee seeks damages based on the sales of multi-featured
products. Further, some observers believe patentees have been drafting claims to take
undeserved advantage of the entire market value rule.\textsuperscript{182}

Underscoring the concerns is a recent wave of exceptionally high damages awards based
on reasonable royalty calculations. In 2004, a patentee won a $520 million jury award against
Microsoft.\textsuperscript{183} In 2007 and 2008, respectively, juries awarded Lucent Technologies over $1.5

\footnotesize{(footnote continued from previous page)}

\textit{see also} Immonex Servs., Inc. v. W.H. Munzprafer Dietmar Trenner GMBH, 408 F.3d 1374, 1380-81
(Fed. Cir. 2005); Bose Corp. v. JBL, Inc., 274 F.3d 1354, 1360 (Fed. Cir. 2001).

\textsuperscript{179} \textit{See Velo-Bind, Inc. v. Minnesota Mining & Mfg. Co.}, 647 F.2d 965 (9th Cir.), cert. denied, 454 U.S.
1093 (1981); \textit{Rite-Hite, supra}, 56 F.3d at 1550 (listing cases applying this approach.

\textsuperscript{180} \textit{See Paper Converting Machinery Co. v. Magna-Graphics Corporation}, 745 F.2d 11, 23 (Fed. Cir.
1984). In \textit{Rite-Hite}, the Federal Circuit later stated that marketing dependence is an appropriate factor to
consider only where all of the components together are considered to be a single assembly, \textit{Rite-Hite, supra}, 56 F.3d at 1550; but some decisions have approved awards based on sales of unpatented
components where it was merely reasonably foreseeable that such components would be sold and used
with the infringing product. \textit{Micro Chemical, Inc. v. Lextron, Inc.}, 318 F.3d 1119, 1125-26 (Fed. Cir.
2003); \textit{Minco, Inc. v. Combustion Eng’g, Inc.}, 95 F.3d 1109, 1118 (Fed. Cir. 1996).


\textsuperscript{182} For example, an improvement claim for one component of a computer networking system may refer
to other components of the system in such ways as later to support an argument that the royalty base
should include the other components. See, generally, Amy L. Landers, \textit{Let the Games Begin: Incentives
(2006); \textit{Eolas Technologies, Inc. v. Microsoft Corp.}, 274 F. Supp. 2d 972 (N.D. Ill. 2003), rev’d on other
grounds, 399 F.3d 1325 (Fed. Cir. 2005). The effectiveness of such attempted “gaming” of the system is
unclear.

\textsuperscript{183} \textit{Eolas Technologies, Inc. v. Microsoft Corp.}, 70 U.S.P.Q.2d 1939 (N.D. Ill. 2004), \textit{vacated in part on
other grounds}, 399 F.3d 1325 (Fed. Cir. 2005).
billion and $365 million following trials against Microsoft and Gateway.\textsuperscript{184} And, in 2009, juries awarded damages of $1.67 billion ($504 million of which was a reasonable royalty) against Abbott Laboratories\textsuperscript{185} and $338 million against Microsoft.\textsuperscript{186} While some of these awards were later reduced or reversed, observers have been left with the impression that finders-of-fact are loose cannons on damages, in need of judicial guidance and constraint. Terms like “lottery atmosphere” have been used to describe damages assessments; and infringement defendants say the awards have far exceeded any amounts that could have emerged from licensing negotiations on the actual claimed inventions.\textsuperscript{187}

c. The Future of Reasonable Royalties

To address large damages awards and associated industry complaints, “patent reform” bills in Congress since 2005 have included provisions on apportionment of damages between a patented invention and a larger product or process in which it is incorporated. They have also attempted to codify and strengthen the judge’s role as the “gatekeeper” for the types of theories and evidence that can be presented to a jury on damages. The 2005 and 2007 proposals died at the end of the respective Congressional sessions. A weakened version of the original 2009 proposal is still pending on Capitol Hill.\textsuperscript{188}

\begin{footnotesize}
\textsuperscript{186} See Uniloc USA, Inc. v. Microsoft Corp., 640 F. Supp. 2d 150 (D.R.I. 2009).
\textsuperscript{187} In a letter supporting legislative reform of the patent statutes, Secretary of Commerce Gary Locke stated that the median jury award for patent damages increased greatly from 1991 to 2005 and that a “lottery atmosphere” surrounds the calculation of reasonable royalty damages. Letter from Gary Locke to the Committee on the Judiciary re: S. 515, Oct. 5, 2009.
\textsuperscript{188} Introduced in March 2009, S. 515 originally resembled the 2007 proposals in many respects. Its damages provisions were scaled-back substantially in the Senate Judiciary Committee to follow an agreement between representatives of differing industries. As voted out of committee, the damages provisions would still require the trial judge to determine the methodologies and factors that are relevant to damages calculations, but the bill no longer defines the circumstances under which the entire market value rule may be applied. [REVISE to note the “phoenix” compromise announced in 3-2010 and/or further amendments if the bill seems to be alive near the publication date.]
\end{footnotesize}
Chief Judge Michel of the Federal Circuit has taken notice of complaints and has said that the Federal Circuit will clarify fuzzy language in its jurisprudence, if necessary.\(^{189}\) He recently got that opportunity when the Federal Circuit vacated the $358 million damages award in *Lucent Technologies, Inc. v. Gateway, Inc.*\(^{190}\) Writing for the court, Judge Michel began the heavy lifting that will be required to provide lower courts and litigants more clarity and guidance about the circumstances in which the entire market value rule is appropriate. He stopped short, however, of creating a new legal standard or specific evidentiary requirements.

Endorsing the “market demand” approach as now the sole possible basis for applying the entire market value rule, *Lucent* rejected application of that rule on the facts presented.\(^{191}\) The court faulted Lucent, as plaintiff, for failing to show that the minor user interface feature its patent claimed was “the basis -- or even a substantial basis -- of the consumer demand” for the large computer programs referenced in the damages calculations. More broadly, Judge Michel said, the parties must present evidence that truly supports their positions on damages, and trial courts must be more vigilant in ensuring (i) that the jury’s award approximates what the parties would have negotiated had they entered into a license agreement for the patented technology and (ii) that the result is “economically justified.” In *Lucent*, neither party presented evidence of the value of the claimed method to consumers, nor had they shown that the other license fee agreements they introduced addressed comparable circumstances or were otherwise relevant on the facts presented. The opinion laid most of the gatekeeping responsibility at the feet of the litigants, stating that “[t]he responsibility for objecting to evidence . . . remains firmly with the parties.” Nevertheless, on post-trial motions for judgment as a matter of law, district court judges must “scrutinize the evidence carefully” to ensure that there is substantial evidence for the calculated royalty.\(^{192}\)


\(^{190}\) 580 F.3d 1301 (Fed. Cir. 2009).

\(^{191}\) 580 F.3d at 1336. See note Error! Bookmark not defined., above, regarding the “market demand approach” and the other approaches prior decisions had approved but whose continuing validity is now in question.

\(^{192}\) Id. at 1327-39.
Lucent and other recent cases\textsuperscript{193} suggest clarification and further evolution of damages principles already underway in the courts may remedy the asserted problem with runaway damages awards, obviating the blunter remedy of legislative amendment. A separate decision in which the Federal Circuit recently refused to review the adequacy of the evidence to support a damages award of $240 million does not seem to suggest the contrary.\textsuperscript{194} As early as 1999, the Federal Circuit stressed that “sound economic proof” is necessary to support a reasonable royalty and “prevent the hypothetical from lapsing into pure speculation.”\textsuperscript{195} Recent decisions seem to be reinvigorating that pronouncement and laying the foundation for less generous and more consistent applications of the entire market value rule.

11. Inequitable Conduct -- Pro-Patent Developments Undercut

For many years, courts have denied enforcement of patents procured by “fraud” or “inequitable conduct.”\textsuperscript{196} The usual type of inequitable conduct, though not the only one, is failure to disclose information to the PTO (or misrepresentations to the PTO) regarding relevant prior art.\textsuperscript{197}

Over the last dozen years, the Federal Circuit has molded the inequitable conduct doctrine roughly as it has the doctrines discussed elsewhere in this article, but with less

\textsuperscript{193} ResQNet.com v. Lansa, Inc., ___ F.3d ___ (Fed. Cir. 2010) (court reverses damages award because license agreements covering the invention in question together with other technology were introduced as evidence and tended to increase the damages award; Judge Newman dissented, saying that, while not wholly comparable, the agreements were properly admissible); see also Uniloc USA, Inc. v. Microsoft Corporation, 640 F. Supp. 2d 150, 183-85 (D.R.I. 2009), which was decided very shortly after Lucent but presumably with knowledge of it (trial judge vacates jury damages award of $388 million for infringement of a very small software feature present in Microsoft Windows and Office because the patent holder’s witness had testified that amount was reasonable in view of Microsoft’s total sales of $19 billion for those huge software packages; judge characterized this testimony as getting the entire market value rule in “by the back door”).

\textsuperscript{194} See note 174, above, discussing the i4i case. The Federal Circuit held that the accused infringer failed, in the trial court, to preserve the key damages issue for appeal.

\textsuperscript{195} Grain Processing Corp. v. American Maize-Products Co., 185 F.3d 1341, 1350 (Fed. Cir. 1999).

\textsuperscript{196} See Digital Control Inc. v. The Charles Machine Works (a.k.a. DitchWitch), 437 F.3d 1309, 1315 (Fed. Cir. 2006) describing Supreme Court decisions from the 1930s and ‘40s, which denied enforcement of patents procured by actual “fraud” and the more recent appellate decisions that have extended the doctrine to less egregious misconduct.

\textsuperscript{197} See, e.g., Cargill, Inc. v. Canbra Foods, Ltd., 476 F.3d 1359, 1364-65 (Fed. Cir. 2007) for a more general statement of the inequitable conduct doctrine.
decisiveness. Now it may be changing its approach again, perhaps because of criticism of its recent rulings and proposals for radical legislative change.

**Background.** Findings of inequitable conduct do not automatically render the associated patent unenforceable, but that’s the usual result.\(^{198}\) And that result usually follows even if the improper conduct touched only a small part of the patent in question, or only an up-stream patent application, and even though a fair presentation of the omitted or misstated information would not have prevented issuance of the patent and would not subsequently render the patent invalid.\(^{199}\)

During the 1980s, accused infringers alleged inequitable conduct as a defense with ever-greater frequency. In 1988 and thereafter, the Federal Circuit referred to the “absolute plague” of inequitable conduct charges which, it said, were habitually asserted in major patent cases.\(^{200}\) The Federal Circuit then took one step, and the PTO took another, that held promise of cutting-back the proliferating charges of inequitable conduct and correspondingly simplifying and strengthening patent protection.

**Opportunities to Rein-in Inequitable Conduct.** First, in late 1988, the Federal Circuit addressed inequitable conduct *en banc* in *Kingsdown Medical Consultants, Ltd. v. Hollister Inc.*\(^{201}\) The resulting unanimous decision tried to discourage routine allegations of misconduct in patent prosecution by raising the level of proof an accused infringer must present in order to trigger possible unenforceability. It emphasized that clear and convincing evidence of actual intent to deceive the Patent Office regarding the subject patent must be shown, along with an omission or misrepresentation of material information, to justify a finding of inequitable conduct.

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\(^{198}\) See, *e.g.*, *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 11\(\_\) (Fed. Cir. 1995).

\(^{199}\) See, *e.g.*, *Agfa Corp. v. Creo Products, Inc.*, \(\_\_\_\_\_\_\_\) F.3d \(\_\_\_\_\_\_\) (Fed. Cir. 2006); *Li Second Family Ltd. P’ship v. Toshiba Corp.*, 231 F.3d 1373, 1380 (Fed. Cir. 2000). [RECHECK these] Dissenting in *Aventis Pharma S.A. v. Amphastar Pharms., Inc.*, 525 F.3d 1334, 13\(\_\) (Fed. Cir. 2008), Judge Rader referred to the serious consequences of inequitable conduct “with its ‘atomic bomb’ remedy of [complete] unenforceability.” See also cases cited in note 205, below.

\(^{200}\) *Burlington Indus., Inc. v. Dayco Corp.*, 849 F.2d 1418, 1422 (Fed. Cir. 1988); see also *Kingsdown Medical Consultants, Ltd. v. Hollister Inc.*, *infra* note 201 at \(\_\_\_\).

\(^{201}\) 863 F.2d 867 (Fed. Cir. 1988) (*en banc* in relevant part).
Contrary to some earlier cases, it held that gross negligence falls short of the necessary level of culpability.\(^{202}\)

Second, shortly after *Kingsdown*, the PTO instituted rulemaking proceedings “to clarify” just what information patent applicants must disclose during patent prosecution. For many years, the PTO rules had required the applicant to present all “material” information he/she had,\(^{203}\) and they defined information as “material” by the vague and liberal “reasonable examiner” test.\(^{204}\) The courts had adopted this loose PTO standard of materiality for purposes of the inequitable conduct doctrine and unenforceability. Broad and vague, it clearly did not require that information suggest unpatentability in order to be “material” and subject to mandatory disclosure.\(^{205}\)

Effective in 1992, the PTO adopted a clearer and narrower definition of materiality. Under this rule, to be “material,” information must either:

- establish, by itself or in combination with other information, a *prima facie* case of unpatentability of one or more pending claims, or
- refute or be inconsistent with a position the applicant takes in: (a) opposing an argument of unpatentability relied on by the Patent Office, or (b) asserting an argument of patentability.

The revised rule also defines a “*prima facie* case of unpatentability” in narrow terms\(^{206}\) and expressly rejects any duty to provide information not meeting the new, heightened test for materiality.\(^{207}\) These narrower standards for what the PTO wants disclosed seemed

\(^{202}\) *Id*, at 872-76.

\(^{203}\) Information that was otherwise “material” still did not need to be disclosed to the PTO if it was merely cumulative of other information provided to the PTO. This qualification remains in effect.

\(^{204}\) Information was material if there was “a substantial likelihood that a reasonable examiner would consider it important in deciding whether to allow the application to issue as a patent.” 37 CFR § 1.56(a) (1990). See also, *Rentrop v. Spectranetics Corp.*, 550 F.3d 1112 (Fed Cir 2008).

\(^{205}\) *Digital Control, Inc. v. The Charles Machine Works*, 437 F.3d 1309, 1318 (Fed. Cir. 2006); *Bristol-Myers Squibb Co. v. Rhone-Poulenc Rorer, Inc.*, 326 F. 3d 1226, 1237-38 (Fed. Cir 2003); *Hoffman-La Roche, Inc. v. Promega Corp.*, 323 F.3d 1354, 1367-68 (Fed. Cir. 2003); *PerSeptive Biosystems, Inc. v. Pharmacia Biotech, Inc.*, 225 F.3d 1315, 1322 (Fed. Cir. 2000). See also cases cited in note 199, above.

\(^{206}\) 37 CFR § 1.56(b) (2008).

\(^{207}\) The revised rule states:
correspondingly to narrow the kinds of undisclosed information that could trigger findings of inequitable conduct: How could it be improper to fail to present to the Patent Office information that office had formally determined need not be presented?

**Opportunities Squandered.** The Federal Circuit, however, squandered these opportunities to rein-in routine assertions of inequitable conduct. It rejected the apparent import of the PTO’s new definition of materiality. It also backslid on the *Kingsdown* standards.

Early Federal Circuit decisions addressing the PTO’s 1992 rule change deemed it important in assessing inequitable conduct. At least one accepted the new and narrower standard of materiality as having replaced the old “reasonable examiner” standard for that purpose. In 2006, however, a Federal Circuit panel addressed the effects of the 1992 rule change at greater length and refused to follow the PTO’s revised rule. Emphasizing the judicial origins of the inequitable conduct doctrine, it downplayed the PTO’s role in the area. Resisting any limitation on the inequitable conduct doctrine, it held that information meeting *either* the vague old “reasonable examiner” standard *or* the new, narrower PTO standard is “material” for purposes of the doctrine. Subsequent Federal Circuit decisions tend to follow this 2006 panel decision.

Separately, a number of Federal Circuit decisions have diverged from *Kingsdown’s* high standards of proof in recent years. Though occasional opinions restate *Kingsdown’s* teachings, others have accepted inconclusive evidence of materiality and/or inferred the necessary degree of

*(footnote continued from previous page)*

“There is no duty to submit information which is not material [under the new definition] to the patentability of any existing [i.e., still pending or allowed] claim.”

*Id.*, § 1.56_ ___.

208 In *Bruno Independent Living Aids, Inc. v. Acorn Stairlifts, Inc.*, 394 F.3d 1348 (Fed. Cir. 2005), the Federal Circuit applied the new rule instead of the former definition of materiality in assessing charges of inequitable conduct. It explained that approach as giving proper “deference” to the PTO rulemaking. 394 F.3d at 1352-53.


culpable intent from little more than the materiality of the information in question.\textsuperscript{211} These decisions suggest effective abandonment of high standards of proof for inequitable conduct.\textsuperscript{212}

As a result, the recent case law offers something for everyone on inequitable conduct and frequently leaves patents vulnerable to denials of enforceability.\textsuperscript{213} When that happens, all claims fall and related downstream patents are infected as well. Perhaps most important is the tendency of assertions of inequitable conduct to undermine respect for patent protection and the effectiveness of our patent system.

\textbf{New Initiatives?} Recently at least four Federal Circuit judges have criticized the court’s departure from \textit{Kingsdown’s} stringent requirements, and some have called for a new \textit{en banc} examination of inequitable conduct to reinforce stiffer standards of proof.\textsuperscript{214} Taking more radical positions, some of the recent proposals for “patent reform” legislation would have drastically curtailed the inequitable conduct doctrine as a defense to infringement claims.\textsuperscript{215}

\begin{itemize}
\item \textsuperscript{211} See, \textit{e.g.}, \textit{Praxair, Inc. v. ATMI, Inc.}, 543 F.3d 1306 (Fed. Cir. 2008); \textit{Pfizer, Inc. v. Teva Pharms. USA, Inc.}, 518 F.3d 1353, 1367 (Fed. Cir. 2008); \textit{Ferring B.V. v. Barr Labs., Inc.}, 437 F.3d 1181 (Fed. Cir. 2006) and the discussion by Judge Newman dissenting in \textit{Ferring B.V., supra}, 437 F.3d at 1195-1205. See also ________________.
\item \textsuperscript{212} For example, in \textit{Ferring B.V. v. Barr Laboratories, Inc.}, 437 F.3d 1181 (Fed. Cir. 2006), the Federal Circuit affirmed a \textit{summary judgment} of unenforceability based on inequitable conduct where the evidence of culpable intent and the evidence of a material omission were both inconclusive. See Judge Newman’s critique of the panel majority decision there, 437 F.3d at 1195-1205.
\item \textsuperscript{213} A recent article summarized the frustration of many patent practitioners who had thought the Federal Circuit was readopting relatively high standards of proof for inequitable conduct, as demonstrated by its ruling in \textit{Star Scientific Inc. v. R.J. Reynolds Tobacco Co.}, 537 F.3d 1357 (Fed. Cir 2008), when the court returned to low standards of proof just a month later in \textit{Praxair, Inc. v.ATMI Inc.}, 543 F.3d 1306 (Fed. Cir. 2008). Cameron Weiffenbach, \textit{Implications of Praxair v. ATMI}, IP Law 360, January 14, 2009.
\item \textsuperscript{214} \textit{Larson Mfg. Co. Inc. v. Aluminart Prods. Ltd.}, 559 F.3d 1317, 1342-44 (Fed. Cir. 2009) (Judge Linn, concurring); \textit{Aventis Pharma S.A. v. Amphastar Pharms., Inc.}, 525 F.3d 1334, 1350 (Fed. Cir. 2008) (Judge Rader, dissenting); \textit{Ferring B.V. v. Barr Laboratories}, 437 F.3d 1181, 1195-2005 (Fed. Cir.2006) (Judge Newman, dissenting); \textit{Praxair Inc. v. ATMI, Inc.}, 543 F.3d 1306, 1329 (Fed. Cir. 2008) (Judge Lourie, dissenting).
\item \textsuperscript{215} Some such proposals would have allowed judicial inquiry into inequitable conduct only after the patent had already been ruled invalid and, then, only to the extent based on information relating to the basis for the invalidation. Others \underline{[would have cut back substantially on the definition of materiality]} or \underline{[would have allowed only the PTO to consider charges of inequitable conduct??]} \textbf{[RECHECK & maybe cite bills]} Regarding these proposals, see the March 7, 2008 letter from Harry F. Maneck, Jr., former Commissioner of the Patents and Trademarks Office, to Senators Leahy and Specter, recommending against such changes because they would “eviscerate” the doctrine” of inequitable conduct. \textbf{[Verify & mention that these provisions are not in S. 515.]}
\end{itemize}
Perhaps in response, a Federal Circuit panel recently took a different approach to cutting-back questionable charges of inequitable conduct: sharply increasing the pleading requirements for such charges based on Federal Rule of Civil Procedure 9(b). In *Exergen Corp. v. Wal-Mart Stores, Inc.*, the panel applied that rule with unusual stringency. As a result, the inequitable conduct allegations had to include a substantial range of detailed and specific facts regarding the patent holder’s alleged misconduct -- considerably more extensive and detailed facts than most alleged infringers are likely to have early in infringement litigation even if they have a basis for thinking inequitable conduct occurred in prosecution of the patent in suit.

Conceivably, the *Exergen* approach, along with the recent criticism by Federal Circuit judges and a few recent decisions restating the stringent *Kingsdown* standards, may signal a turnaround on inequitable conduct. If *Exergen’s* tough pleading requirements are consistently applied, inequitable conduct could become substantially more difficult to assert in many cases. That, together with renewed care in applying high standards of proof, could again reduce allegations of inequitable conduct. Whether the Federal Circuit will achieve such consistency, or will continue with inconsistent and often-liberal applications of the inequitable conduct doctrine, remains to be seen.

12. **Big Changes at the Patent Office -- End of the “Customer Service” Paradigm**

In recent years, many observers criticized the Patent Office for issuing patents that never should have been allowed. In part, the Office seemed to be following a “customer service” paradigm that viewed applicants as the PTO’s customers without adequately recognizing the interests of the public. Recently that has changed: the PTO has taken a number of steps to enhance “patent quality.” Those steps have resulted in a higher bar to issuance of new patents.

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216 Federal Rule of Civil Procedure 8 sets out the easy and brief “notice pleading” generally applicable in federal civil litigation. Rule 9(b) requires much more specific factual assertions in allegations of “fraud and mistake,” although it allows “malice, intent, knowledge, and other condition of mind” to be pleaded generally.

217 575 F.3d 1312 (Fed. Cir. 2009).

218 If those requirements are consistently applied, their importance will depend largely on whether accused infringers are allowed broad discovery to learn the range of facts needed to plead inequitable conduct or whether the initial inadequacy, or absence, of such allegations will limit access to such discovery and doom the defense.
and much greater delays in the process. The Obama Administration has denied any intent to block or delay meritorious applications, but the trend in this area remains unclear.

In 2007 and since, the PTO declared patent quality a top goal.\(^\text{219}\) It hired more examiners, added more training, and instituted enhanced reviews of allowed patent applications in selected technologies. Many patent practitioners, however, saw the emphasis on patent quality as code-words for granting fewer patents. Patent examiners have taken a harder line, as evidenced by the increase in the number of appeals filed from 3,349 in Fiscal Year 2006 to 4,639 in Fiscal Year 2007 to 6,385 in Fiscal Year 2008.\(^\text{220}\) In the same time frame the percentage of allowances has plummeted, as shown in the accompanying table from a 2009 presentation by the PTO’s general counsel.\(^\text{221}\) The PTO has also increased procedural hurdles, such as the use of restriction requirements.\(^\text{222}\) The Obama Administration’s PTO Director Kappos has worked to counteract the anti-patent perception, with uncertain success.\(^\text{223}\)

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\(^{222}\) In an article he co-authored since his return to private practice, Bush Administration PTO Director Jon Dudas writes: “As the USPTO has increasingly relied upon restriction practice to reduce the workload of overtaxed examiners and to deal with increasing pendency (by reducing time spent per application), more and more divisionals are being filed, many unnecessarily.” The article cites as an example that “there has been a growth from only 1.5% of patents receiving restriction requirements to over 50% of patents receiving restriction requirements in the biotech practice group.” Shine S. “Sean” Tu, Stephen B. Maebius, and Jonathan W. Dudas, *Squeezing More Patent Protection from a Smaller Budget Without Compromising Quality*, Landslide, Volume 2, Number 2, (November/December 2009).

The PTO also proposed a number of major changes to its procedures that would further hinder inventors in achieving desired patent protection, although the new Director of the PTO appointed by the Obama Administration has recently withdrawn the proposals in response to heavy criticism and court challenge.

Should it choose to do so, the PTO could make renewed or separate changes to its rules that would limit applicant prospects in patent prosecution. Indeed the PTO has proposed significant changes to the rules about Information Disclosure Statements, the procedure whereby patent applicants inform the PTO of prior art. The additional proposed disclosure requirements lack any Congressional imprimatur but would increase the difficulty and expense of obtaining patent protection.

**OBSERVATIONS**

The current retrenchment is diverse in its specifics but broad in scope. Its elements include many adjustments to patent enforcement having independent origins and operation but a

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224 The rules included significant limits on the ability to file continuations (Final Rule 114), and would have required applicants who file more than five independent claims or twenty-five total claims to carry out substantially more work and provide the examiner with substantially more information, via an examination support document or “ESD,” than has traditionally been required for patent applications. (Final Rule 75)


226 Several of the critical rules were challenged and enjoined at the U.S. District Court for the District of Columbia, a Federal Circuit panel reversed as to all but one rule and remanded for further proceedings, Tafas v. Doll, No. 08-1352 (Fed. Cir. Mar. 20, 2009). A petition for en banc rehearing was granted July 6, 2009, before the rules were withdrawn, leading to the appeal being dismissed November 13, 2009.

227 Changes To Information Disclosure Statement Requirements and Other Related Matters, 71 Fed. Reg. 38,808 (July 10, 2006), setting forth the proposed new requirements.

228 Among other things, they would require the applicant to identify why the reference is being disclosed, point to the relevant portion of the reference and correlate the relevant portion with one or more claims or teachings in the specification. Professor Crouch notes that an average patent in a sample of about eighteen thousand recent patents issued with 31 cited references and 23% include the more than the 20 references that would trigger the proposed new requirements.
unifying theme. The adjustments have pervasively, though unevenly, ratcheted-back advances in patentee power achieved in the recent strong-patents era.

The recent changes affect, more or less strongly, most U.S. patent applications, most licensing initiatives by holders of U.S. patents, and most cases in which U.S. patents are asserted or challenged. Many licensing initiatives and disputes are reaching less patentee-favorable outcomes than they would have achieved without the retrenchment. Most U.S. producers face reduced risks from allegations of patent infringement. A core of patent protection is largely unchanged, and some large judgments and big-dollar settlements continue to be entered in infringement suits. But the practicalities in most cases have changed a lot -- in favor of accused infringers. The following paragraphs summarize the main consequences.

1. **Many Patents Weakened.** Invalidation looms as a much larger risk for several prominent categories of issued patents.\(^{229}\) For some patents this risk is so clear as to prevent their assertion entirely. More often, other factors dominate that decision, but the risk of invalidation influences licensing negotiations and litigation decisions and shapes bargaining power and settlement positions. Compounding the enhanced “down-side” risks of invalidation are harsher enforcement rules and the reduced “up-side” rewards for successful patentee plaintiffs: The litigation rules no longer substantially favor patentees, claim scope is narrower and seldom supplemented by the DOE, many patentees are unlikely to qualify for injunctive relief, and the developing limitations on damages will reduce cash jackpots for victorious patentees. In all these respects, patentees have lost power vis-à-vis their putative infringers.

2. **“Patent Trolls” Weakened; IT and Other Industries Get a Break.** The retrenchment has weakened “patent trolls,”\(^{230}\) reducing their bargaining power vis-à-vis the producing

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\(^{229}\) The most strongly affected patents are those addressed in parts ..., ..., and ..., above. [Could identify here.]

\(^{230}\) The term “patent troll” is sometimes used broadly as meaning a “non-practicing entity” or “NPE,” i.e., an entity that owns the patent in question but does not make or sell the claimed product. Significantly different equities, however, often distinguish NPEs that conducted or funded the inventive efforts that led to the patent from those NPEs that merely bought the patent years later for purposes of enforcing it against companies then using the technology. (And intermediate circumstances can give rise to intermediate equities.) Accordingly, the clearest category of “trolls,” and those for which injunctions are most clearly unavailable, are entities that neither practice the invention nor conducted nor supported the

*(footnote continues on next page)*
companies they target. Until recently, “trolls” were truly dangerous. If successful at
trial, they could shut-down the operations of a target business, or at least force immediate
changes there, by obtaining an injunction against continuing infringement. Now
injunctions are essentially unavailable to most “trolls.” Some of the other recent changes
have made litigation less friendly to trolls and are allowing their targets greater
opportunities to challenge the subject patents and to do so in more favorable venues.231
Accordingly, “trolls” have lost much of their bargaining power, and recent settlement
amounts, though confidential, are probably small on average.232 The beneficiaries of this
change are U.S. producing companies, especially those in the information technology
(computer hardware, software, and accessories – collectively, “IT”), e-commerce,
telecommunications, and general electronics industries, which have been trolls’ prime
targets.233

3. **Small Patent Holders Face Big Obstacles**. To mitigate the difficulties small patent
holders face in enforcing their rights, the Federal Circuit years ago tilted many
substantive and procedural rules in favor of patent holders. As just one example, the
Federal Circuit’s “safe haven” and related rules gave patent holders multiple tactical
enforcement advantages. By sending out appropriately worded “notice letters” patent
holders could: (i) invite licensing negotiations, (ii) trigger likely willfulness and possible
trebling of damages for further infringement, (iii) mitigate any failure on their part to
have complied with the marking statute, and (iv) weaken any possible defense of

(footnote continued from previous page)

inventive efforts that led to the patent(s) in question and that are not substantially owned by anyone that
did. See note ___, above. [Discussion of e-Bay and which patent holders cannot get permanent
injunctions.]

231 See, e.g., note __, above, and accompanying text. [Discussing H-P v. Acceleron, 12-4-2009].

232 Anecdotal information suggests that the amounts are usually small -- often significantly less, for each
defendant, than their expected costs of litigating the respective infringement suits.

233 Over the last decade, “trolls” have imposed significant costs on IT and e-commerce companies.
According to statements by in-house counsel for some companies in these industries, non-practicing
entities (possibly including some that are not within the clearest category of “trolls” under the definition
in note 230, above) accounted for well over 50% of the demand letters and threats of infringement suits
received. The same sources described their companies’ serious concerns about those threats in the recent
past and their now-reduced level of concern as a result of the recent adjustments in patent enforcement.
equitable estoppel. Yet, despite these acts, the patentee would remain safe from debilitating court challenges by putative infringers in unfavorable venues and retained the exclusive right to determine whether, when, and where any litigation regarding the patent would take place. Producing companies receiving such notice letters faced the possibility of large damages awards and injunctions but generally could not initiate proceedings to test the relevant patent(s). This patentee favoritism helped many small patent holders negotiate licensing agreements and thereby realize returns on their inventions.

The current retrenchment has wiped away most of the pro-patentee rules, both substantive and procedural. The result, particularly for small patent holders, is increased difficulty and risk in licensing and enforcing their patents. Likely infringers, with the new level playing field and reduced risks of injunctions and large monetary awards even if litigation goes badly, will more often preemptively challenge the patents that might be asserted against them (usually at a time and in a location disadvantageous to the patent holder); offer less for a license; or decide that on-going infringement, even with the possibility of being sued, is more attractive economically than patent compliance. More inventors, investors, and licensees will lose their deserved rewards, and compliance with issued patents may decline. Whether this will reduce the incentives or funding for innovation to a significant degree is hard to predict.

4. **Patent Procurement Harder, Slower, and More Expensive.** The PTO’s departure from its recent “customer service” paradigm combined with the heightened requirements for validity have made it harder, slower and more expensive to get patents issued. Despite the PTO’s recent change of direction on its rule initiatives, the delays and increased examiner rejections take a heavy toll, particularly in areas of technology where product lifecycles are short: the commercial utility of an invention may expire before the patent issues. Some patentable inventions have not been, and will not be, the subjects of

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234 The marking statute is 35 U.S.C. § 278. It limits recovery of damages for infringement of patents for items also made/sold by the patentholder or licensee if they fail to mark those items with the number of the relevant patent. For details of the equitable estoppel defense in patent litigation, see Auckerman v. __________________.

235 See note 226, above. [CHECK whether another fn should be referenced here.]
patent applications because of the added expense, delay, and difficulty of achieving patent protection.

5. **Pharmaceuticals and other “Unpredictable Arts” Less Affected.** The current retrenchment should have lesser effects on patents for pharmaceutical inventions and for some other inventions in the “unpredictable arts” than on patents in other prominent fields such as IT, telecommunications, general electronics, mechanics, etc. For one thing, the new and harsher obviousness assessments are less likely to invalidate patents in the “unpredictable arts” than in other areas.\(^ {236} \) For another, the new limitations on injunctive relief seem likely to affect a smaller percentage of patents in those areas than in IT, e-commerce, etc.\(^ {237} \) Finally, patents on pharmaceutical inventions seem to be held by relatively wealthy companies, and such inventions seem to have longer product life-cycles than products in IT, e-commerce, general electronics, etc. These factors should mitigate, for many patent holders in these industries, the less favorable substantive rules, the reduced pro-patentee slant of the litigation playing field, and the effects of the recent slow-down in patent examination and issuance, mentioned below. Thus, the heavy reliance pharmaceutical, bio-tech, and similar companies place on the U.S. patent system probably will not be seriously undercut.

6. **Mitigating Strategy for Applicants and Paten**etees -- Yet a Bigger Premium on Care. Modified techniques in patent drafting, prosecution, and enforcement can mitigate a few of the recent patent-weakening developments. *Pro se* inventor-applicants and those represented by less competent counsel may lose out. Briefly, some opportunities are:

   For Applicants:
   
   - Reduce Exposure to the “Legal Limitations” on the DOE -- by crafting the written description and prosecution history as well as the claims.

\(^ {236} \) See text at notes ___-___, *supra* and accompanying text. [MAYBE explain (i) the lesser vulnerability of inventions in the “unpredictable arts” and (ii) what those are -- CHECK *Ortho-McNeil v. Mylan Labs* (Fed. Cir. 2008). Keep in mind *In re Kubin’s* partial rejection of *In re Deuei]*

\(^ {237} \) Patents are particularly important in recouping the costs of pharmaceutical development & regulatory approval efforts. Accordingly, patent applications are made in a high percentage of development work in that area, and issued patents are more likely to be held by companies that developed the technology and/or subsequently practice it. This makes injunctive relief likely available for infringement.
• **Reduce Reliance on Means-Plus-Function Claim Elements** -- and take special care when they are used.

• **Beware of Full Scope Enablement and Inadequacy of Description** -- *e.g.*, by matching claim breadth to the extent of the enabling disclosure.

• **Craft and Supplement Method Claims** -- to help achieve patentable subject matter, expand the range of infringement, etc.\(^{238}\)

• **Craft Claims to Minimize the Need for Active Inducement and Joint Infringement** -- pro-patent doctrines recently narrowed by the Federal Circuit.\(^{239}\)

*For Patentees:*

• **Modify the Initial Steps in Patent Assertion** -- including the “notice letter” approach -- to recognize the loss of most of the “safe haven” for patent holders’ licensing efforts.\(^{240}\)

• **Develop Better Proof of Damages** -- to satisfy the increasing requirements for economically persuasive support for damages awards.

• **Use Care and Moderation in Claim Construction** -- to avoid invalidation under the “full scope enablement” doctrine.

7. **Juries’ Powers Cabined; New Approach in Trying Patent Cases.** Federal Circuit initiatives have reversed the rise of jury power in patent cases and modified the way such cases should be tried. We discussed one piece of this in connection with the ouster of juries and expert testimony from claim construction and the heavy new emphasis on interpretations made by trial and appellate judges. Other recent developments work to the same end: (i) the heavier “legal limitations” on the DOE have decimated juries’

\(^{238}\) Among other things, method claims apply more narrowly where some aspects of a claimed invention are outside the U.S., they are less amenable to application of the patent extending doctrine of “joint infringement,” they can no longer trigger application of 35 U.S.C. §271(f), and they are now fully subject to exhaustion.


\(^{240}\) See ________, above. [Cite both the discussion above in this section and the two references to this in the “Courthouse Rules” section; include the reference to *H-P v. Acceleron* case, probably don’t mention here the special rule for trolls or the currently likely range of safety for patent holders]
powers to extend claim coverage and findings of infringement; (ii) the increased scrutiny on use of the “entire market value rule” and on proof of damages generally will restrain jury power over monetary awards and necessitate more definitive evidence on damages; and (iii) the heightened evidentiary requirements and limitations of permissible inferences restrict juries’ ability to hold infringement willful. As a result, jury appeal and jury sympathy for patentees have lost some of their importance. Correspondingly, judges have greater roles but greater exposure to reversal on appeal. Parties and counsel must conduct more rigorous trial preparation and motions practice, develop more rigorous evidence on damages and other issues, and address more of their arguments to the judge as opposed to the jury.

8. “Big Dollar” Threats Addressed; “Academic” and “Small Dollar” Goals Fade. The recent judicial retrenchment has addressed some of the stated goals of legislative patent reform, but has done nothing for others. Interestingly, a pattern stands out: Judicial “reform,” thus far, has addressed most of the goals that were based on big-dollar threats to U.S. producers. In contrast, it has bypassed many of the “academic” or “small-dollar” goals.

   a. Big-Dollar Threats. The “big dollar” risks to U.S. producers from infringement suits centered on matters the recent retrenchment has alleviated or is currently addressing: (i) potentially devastating injunctions; (ii) huge domestic damages awards; (iii) low, pro-patentee standards for patent validity; and (iv) for some producers, awards of huge world-wide damages under U.S. patents in U.S. courts.” Because these issues have been substantially addressed, the intensity of support for legislative patent reform has declined greatly.

241 Different participants and commentators in the lengthy debate on patent reform have stated differing goals, but many prominent goals were articulated in two major academic studies of the U.S. patent system completed in 2002 and 2003 [RECHECK dates] and in the early reform bills introduced in Congress in 2005-2007. [RECHECK dates] See FTC Report and NAS Report, both cited in note 3, above and [Maybe cite one of the early bills]. Agreement on the goals among politically powerful industries proved difficult to achieve. Currently, the only bill with any prospect of passage is S. 515 in the 111th Congress, which contains a considerably stripped-down set of reforms, omitting some of the earlier goals of patent reform and having watered-down others substantially.
b. “Academic” and “Small-Dollar” Items. A number of other points were prominently stated as goals of legislative patent reform but did not reflect big-dollar threats for U.S. businesses. These included:

i. **First-to-File** (changing the priority between different independent inventors of the same invention from the current U.S. system, favoring the first one to invent, to the first-to-file system used by other countries).

ii. **Reducing the Costs and Uncertainties in Patent Enforcement (Litigation).**

iii. **Expanding Post-Grant Administrative Review Procedures on the Validity of Issued Patents.**

iv. **Better and more Reliable PTO Examinations of Patent Applications.**

v. **Increased PTO Rulemaking Authority.**

Some of these goals are unattainable judicially because the associated procedures are mandated by statute. Practical or political problems confronted others. In any event, the only one on which arguable progress has been made in the recent retrenchment is increasing the care and “quality” of patent examinations at the PTO. Failure, thus far, to accomplish these small-dollar goals has been insufficient to maintain enthusiastic support for legislative reform.

9. **Patent Litigation More Complex and Costly; Not More Predictable.** Not only has the retrenchment bypassed some goals of legislative reform, it has actually has worked **against** one of them, namely the goal of reducing the cost and complexity of patent litigation and making outcomes more predictable. Indeed, the retrenchment has **expanded** the issues likely to be important in patent disputes. This is likely to make trials more complex and expand discovery, motions practice, expert presentations, and appeals. This can be seen in multiple respects:

- **Injunctions:** Making injunctions dependent on the four-factor equity test and no longer automatic adds a number of often complex and debatable issues to patent infringement suits.

- **Damages:** Requiring more definitive evidence to support damages awards ratchets-up the care and expense that both sides will have to be devote to the damages aspect of infringement litigation and will expand discovery, motions *in limine*, expert preparation and costs, trial, and appeal.

- **Obviousness:** Rejection of the “TSM test” for obviousness and emphasizing careful analysis under a vague “common sense” approach tends to expand the scope of presentations and inquiry and to increase the uncertainty in litigation.
• **Claim Construction:** The exposure of interpretations in explicit form to intense review on appeal causes more frequent reversals of judgments and frequent re-adjudications of infringement and other issues, multiplying cost and delay.

• **Intent:** Initial reform proposals included de-emphasis of intent issues in patent law and litigation to make patent enforcement cheaper and more predictable.\(^{242}\) The recent retrenchment, however, has maintained intent as a key issue where it had that role before and actually increased the importance of intent in proving matters such as (i) inducement of infringement and (ii) willfulness sufficient to support enhanced damages.

• **Patentable Subject Matter:** The recent “wide-open” regime for patentable subject matter essentially eliminated that issue from infringement suits. The recent changes, however, have reintroduced this often difficult issue in a significant number of patent disputes.

One may question whether substantial simplification is a realistic goal for big-dollar litigation in a complex field such as patent law. Also, by reducing the strength of patent protection and the advantages patent holders formerly held in litigation, the retrenchment may reduce the average rewards of suing for infringement and reduce the number of cases filed. Further, some of the added complexity may be necessary for a fairer and less arbitrary system of patent protection. Still, it is unfortunate that the recent changes tend to increase, rather than decrease, the complexity and expense of patent enforcement.

10. **Impetus for Legislative “Reform” Largely Spent.** Obama Administration officials and key Senators recently stated continuing support for a watered-down reform bill, S. 515, still pending in Congress, although that support assumed further revisions yet to be formulated, negotiated, and agreed upon.\(^{243}\) Nevertheless, the ardor of most supporters of legislative “reform” has cooled substantially as the recent patent retrenchment has addressed one after another of the “big-dollar” industry concerns. Assuming the Federal Circuit’s current focus on large and poorly supported damages awards is viewed as likely

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\(^{242}\) Two proposals triggered by the desire to reduce the significance of intent in patent litigation were (i) elimination of the “best mode” defense to patent validity and (ii) de-emphasis of the inequitable conduct basis for patent unenforceability. Both those issues are heavily dependent on the subjective intent of the patent applicant, a matter that complicates infringement trials and tends to preclude summary adjudication.

\(^{243}\) [MAYBE Cite 10-9-2009 BNA article discussing S. 515 and House bill that lacks latest compromises -- and/or discussion of the further “phoenix” compromises announced in 3-2010 and/or any further developments]
to be effective, none of the strongest original motivators for legislative reform will remain outstanding. Thus while a further-revised S. 515 might yet be enacted, that now seems unlikely. And even if it is, its effects on patent strength, coverage, and enforcement will be dwarfed by the changes in those areas effected in little more than three years by the courts without Congressional action.

11. **Climate Change.** A unifying truth of recent developments is climate change: Global cooling has come to U.S. patent protection and has swept-away the recent era of exceptionally strong patents. The changes affect patent availability, validity, enforceability, coverage/scope, rules and procedure for enforcement, remedies, and the practicality of patent enforcement generally. No longer do even the Federal Circuit judges lean toward consistently stronger patent protection. Many of them seem to agree with Justices Breyer, Stevens and Souter that sometimes stronger patents can impede innovation.²⁴⁴

The recent changes originated from business clamor and complaints, scholarly studies and writing, Supreme Court pronouncements, and threats of Congressional action. But the main agent of change has been the Federal Circuit. Under fire, that court reversed its near-quarter-century patent-strengthening orientation and moved to a position of moderation and retrenchment. Overall, the common law approach of legal evolution seems to be working to fix at least some of the perceived problems in an old and important area of law. Substantial problems and challenges remain for our patent system, but there seems to be no urgent need for the broad legislative “reform” that has been pending in Congress for the last several years.