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Kenneth R. Adamo
Gregory A. Castanias
Mark N. Reiter
Lawrence D. Rosenberg

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** Kenneth R. Adamo **

*** Gregory A. Castanias ***
Partner, Jones, Day, Reavis & Pogue, Washington, D.C. A.B. 1987, Wabash College; J.D. 1990, Indiana University (Bloomington) School of Law. Member of the Issues and Appeals practice of Jones Day’s Litigation Group. All correspondence regarding this Area Summary should be addressed to this author at gcastanias@jonesday.com.

**** Mark N. Reiter ****

***** Lawrence D. Rosenberg *****
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INTRODUCTION

The year 2000 brought some major changes for the Federal Circuit: the addition of two new judges (Richard Linn1 and Timothy Dyk2); the semi-retirement of a third judge (S. Jay Plager, who elected to take Senior Judge status in November 2000); and, for patent practitioners, the issuance en banc of a critical new opinion, now being considered by the Supreme Court, dealing with one of the most controversial aspects of patent practice, the doctrine of equivalents.3 Additionally, the court continued to wrestle with a number of other thorny but recurring issues in patent law, including questions of patentability, trial court procedure, and sanctions. In the pages that follow, we will address these and many other developments reflected in the Federal Circuit’s Y2K patent jurisprudence, concluding with an addendum that discusses the statistical output of the Federal Circuit and its judges.

I. FEDERAL COURT AND AGENCY PRACTICE

The cases decided by the Federal Circuit in the year 2000 involved numerous procedural issues. Particularly significant were cases involving sanctions,4 the use of stipulations at trial,5 questions of Federal Circuit appellate jurisdiction,6 and the standard of review for decisions of the PTO and Board of Patent Appeals.7

7. See infra Part I.C.
A. District Court Practice

1. The prevalence of summary judgment

The frequency with which district courts grant summary judgment in patent cases is remarkable. Of the Federal Circuit’s seventy-nine published opinions in cases arising from the district courts in the year 2000, forty-eight of them involved resolution of at least one substantial issue on summary judgment or dismissal. As discussed in

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Part III below, one reason for the prevalence of summary-judgment determinations may be the recent clarifications that claim construction is an issue of law, thereby making many infringement disputes amenable to summary-judgment determinations,\(^9\) and that infringement-by-equivalents claims are subject to several threshold legal limitations.\(^{10}\) One thing is certain: the Federal Circuit has authorized, even encouraged, a liberal use of summary judgment to dispose of patent claims.

2. Standing

A party has standing to bring suit only if he has a legally sufficient “personal stake” in a dispute to justify exercise of a court’s remedial powers on his behalf.\(^{11}\) The Patent Act provides that a “patentee” may
bring an action for "infringement of his patent."\textsuperscript{12} The term "patentee" includes "not only the patentee to whom the patent was issued but also the successors in title to the patentee."\textsuperscript{13} The courts have recognized that in some instances a patent licensee may have standing to sue for infringement, but in others it may not.\textsuperscript{14}

The Federal Circuit decided three cases in the year 2000 involving the issue of whether a party suing for patent infringement had a sufficient ownership interest in the patent at issue to confer standing.\textsuperscript{15} In \textit{Prima Tek II L.L.C. v. A-Roo Co.},\textsuperscript{16} the Federal Circuit held that an exclusive license that did not transfer "all substantial rights" in the patents did not confer standing on the licensee such that it could maintain a suit for patent infringement without joining the patentee as a co-plaintiff.\textsuperscript{17} Prima Tek I was granted an exclusive worldwide license to make, use and sell the products and processes covered by the patents for a two-year term that could be extended by the parties.\textsuperscript{18} The license to Prima Tek I, however, was limited to exist "only to the extent necessary to grant a license to Prima Tek II" to make, use and sell the products and processes covered by the patent.\textsuperscript{19} The license also contained provisions granting Prima Tek I the exclusive right to sue third parties for infringement of the patents at issue and providing that the patentee would be bound by any judgment regarding the validity, infringement, and enforceability of the licensed patents.\textsuperscript{20} The defendant, A-Roo, urged that standing was lacking because (1) the license agreement between the patentee and Prima Tek I was limited in duration, and (2) the agreement granted Prima Tek I only the rights to sub-license the substantive

\textsuperscript{13}. See 35 U.S.C. § 100(d) (1994).
\textsuperscript{16}. 222 F.3d 1372, 55 U.S.P.Q.2d (BNA) 1742 (Fed. Cir. 2000).
\textsuperscript{17}. \textit{Prima Tek II}, 222 F.3d at 1379-80, 55 U.S.P.Q.2d (BNA) at 1742.
\textsuperscript{18}. See id. at 1374, 55 U.S.P.Q.2d (BNA) at 1744.
\textsuperscript{19}. See id. at 1374-75, 55 U.S.P.Q.2d (BNA) at 1743-44.
\textsuperscript{20}. See id. at 1374-75, 55 U.S.P.Q.2d (BNA) at 1744.
The court rejected A-Roo’s first challenge to standing, holding that the mere presence of a termination clause did not prevent a licensee from suing in its own name. The court, however, embraced A-Roo’s second challenge, reversing the district court and holding that Prima Tek I lacked standing because—both prior and subsequent to its contemplated sub-license to Prima Tek II—it did not possess the “right to exclude others from making, using and selling the patented inventions.” Finally, the court concluded that the patentee’s agreement to be bound by any judgment regarding the patents did not preserve Prima Tek’s standing, for if it had, patent owners would be allowed to grant improper “hunting license[s]” to other parties for the purposes of litigation.

In contrast, in *Speedplay, Inc. v. Bebop, Inc.*, the court held that a licensee (Speedplay) had obtained all substantial rights to the patent at issue and thus had standing to sue for infringement. There, the court rejected the argument that a provision of the licensing agreement erroneously referring to an unrelated patent meant that Speedplay did not have a license for the patent at issue. More substantively, the court rejected the argument that Speedplay lacked standing based upon the patentees’ retention of a reversionary right to institute infringement litigation in the event that Speedplay did not bring such litigation within three months of discovering infringement. The court held that such a right to sue “would not hinder Speedplay’s enjoyment of the patent rights in any meaningful way” because Speedplay could have rendered that right “nugatory” by granting the alleged infringer a royalty-free sublicense. Furthermore, the court held Speedplay’s inability to assign its rights

23. See Prima Tek II, 222 F.3d at 1380, 55 U.S.P.Q.2d (BNA) at 1747.
24. See id. at 1381, 55 U.S.P.Q.2d (BNA) at 1748 (citing Crown Die & Tool v. Nye Tool & Mach. Works, 261 U.S. 24, 42 (1923) in emphasizing that standing is established by proprietary interests and not by agreements that bind parties to judgments or that contain “right to sue” clauses).
29. See id., 53 U.S.P.Q.2d (BNA) at 1988 (distinguishing Abbott Labs. v. Damedix Corp., 47 F.3d 1128, 33 U.S.P.Q.2d (BNA) 1771 (Fed. Cir. 1995) from the case at bar where the licensee is permitted to grant licenses, bring an action on its own behalf without including the licensor and is not bound solely to making, using and selling products reflecting the patented invention).
in the patent without the patentees’ consent (which the license agreement provided “shall not be withheld unreasonably”), its obligation to assign to the patentees all improvements that would then be licensed back to Speedplay, and its obligation to permit the patentees to dictate the markings sold abroad and to inspect its books and records, were not “substantial rights” that divested Speedplay of standing to sue for infringement in its own name. Finally, the court noted that there were few concerns about multiple suits on the same operative facts because of the close relationship of the licensee to the patentee (an employee of Speedplay); the judgment would, by operation of agency principles, have “preclusive effect with respect to any parallel claim that might be brought” by the patentee.

The court also rejected a standing challenge in Ajinomoto Co. v. Archer-Daniels-Midland Co., where the accused infringer questioned the authenticity of Ajinomoto’s rights in the patent at issue because neither of the two documents transferring the rights from the inventors to Ajinomoto were present in the record. The court rejected the challenge, holding that the lack of written documentation confirming the transfer of the foreign patent rights from the Soviet government to the inventors was unimportant in the absence of any evidence demonstrating that such a transfer had not occurred or that the transfer ran afoul of Soviet law. The court also held that the accused infringer was estopped from objecting that the assignment to Ajinomoto from the inventors was not introduced at trial because the standing challenge was commenced after the trial had concluded; thus, the accused infringer’s litigation tactics had “effectively prevented” Ajinomoto from proffering the document.

3. Personal jurisdiction

A federal district court has personal jurisdiction over a party so
long as two requirements are fulfilled: “[f]irst, a defendant must be amenable to process in the forum state. Second, the court’s exercise of personal jurisdiction must comply with the precepts of federal due process.” A party is “amenable to service of process” if it could be “subjected to the jurisdiction of a court of general jurisdiction in the state in which the district court is located,” such as under a state “long-arm” jurisdictional statute or “nonresident motorist statute.”

In *LSI Industries, Inc. v. Hubbell Lighting, Inc.*, the court examined whether an accused patent infringer, Hubbell, was subject to personal jurisdiction in Ohio. The district court held that there was no personal jurisdiction over Hubbell. According to the district court, Hubbell was not subject to Ohio’s long-arm jurisdictional statute because it did not sell its accused product in Ohio. The Federal Circuit reversed, holding that personal jurisdiction did exist, pursuant to Ohio Supreme Court precedent that permitted jurisdiction over a foreign corporation “doing business” in Ohio, even when the cause of action did not “arise” or “relate to the corporation’s business transacted” in Ohio. The Federal Circuit explained:

In essence, the Ohio Supreme Court adopted a federal due process general jurisdiction standard as a hook for prong one of the personal jurisdiction inquiry. That is, when an out-of-state defendant conducts “continuous and systematic” business in Ohio, it is “doing business” in Ohio and is amenable to process there, even if the cause of action did not arise from activity in Ohio.

The court held Hubbell was subject to general jurisdiction in Ohio under the Due Process Clause of the Fifth Amendment because Hubbell had “significant” contacts with Ohio, including “millions of dollars of sales” and “a broad distributorship network” in Ohio, and,

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42. *See id.* at 1373, 56 U.S.P.Q.2d (BNA) at 1968 (quoting *Perkins v. Benguet Consol. Mining Co.*, 107 N.E.2d 205, 205 (Ohio 1952)).
43. *Id.*, 56 U.S.P.Q.2d (BNA) at 1968.
44. *See LSI Indus., Inc. v. Hubbell Lighting, Inc.*, 232 F.3d 1369, 1375 n.5, 56 U.S.P.Q.2d (BNA) 1965, 1966 n.5 (Fed. Cir. 2000) (noting that in federal question cases, such as patent cases, the Due Process Clause of the Fifth Amendment, like the Fourteenth Amendment’s Due Process Clause, requires sufficient minimum contacts with the relevant venue as a prerequisite to personal jurisdiction).
therefore, LSI had jurisdiction under Ohio law.\textsuperscript{45} Accordingly, \textit{LSI} demonstrates that amenable to process in a forum state can be established by state common law as well as by state statute.

4. \textit{Res judicata/collateral estoppel}

The doctrines of \textit{res judicata} (or claim preclusion) and collateral estoppel (or issue preclusion) serve to prevent unnecessary multiple lawsuits on matters that parties have had a “full and fair” opportunity to litigate.\textsuperscript{46} Under the doctrine of \textit{res judicata}/claim preclusion, “a final judgment on the merits bars further claims by parties or their privies based on the same cause of action.”\textsuperscript{47} Thus, such a judgment prevents relitigation of claims that were or could have been brought in the first action.\textsuperscript{48} Under the doctrine of collateral estoppel/issue preclusion, “once an issue is actually and necessarily determined by a court of competent jurisdiction, that determination is conclusive in subsequent suits based on a different cause of action involving a party to the prior litigation.”\textsuperscript{49}

The Federal Circuit issued three rulings in the year 2000 implicating these doctrines.\textsuperscript{50} In \textit{Embrex, Inc. v. Service Engineering Corp.},\textsuperscript{51} the court determined that a challenge to Embrex’s standing was precluded for two reasons.\textsuperscript{52} First, a consent judgment in prior litigation between the parties had incorporated by reference the parties’ settlement agreement, which stated that “Embrex has standing as exclusive licensee under the ’630 patent.”\textsuperscript{53} Accordingly, the court held that, under the doctrine of \textit{res judicata}, the agreement precluded the alleged infringer’s challenge to Embrex’s status as an exclusive licensee.\textsuperscript{54} Second, the court held that the standing challenge was barred under the doctrine of collateral estoppel/issue preclusion because the alleged infringer’s attack on Embrex’s status as an exclusive licensee had been rejected on the merits in a different

\textsuperscript{45} See \textit{LSI}, 232 F.3d at 1375, 56 U.S.P.Q.2d (BNA) at 1970.
\textsuperscript{47} Id. at 153 (emphasis added).
\textsuperscript{49} \textit{Montana}, 440 U.S. at 153 (emphasis added).
\textsuperscript{51} \textit{Embrex}, 216 F.3d 1343, 55 U.S.P.Q.2d (BNA) at 1161 (Fed. Cir. 2000) (per curiam).
\textsuperscript{52} See \textit{Embrex}, 216 F.3d at 1343, 55 U.S.P.Q.2d (BNA) at 1166 (affirming district court’s decision dismissing SEC’s standing defense because of the applicability of res judicata).
\textsuperscript{53} Id. at 1351, 55 U.S.P.Q.2d (BNA) at 1166.
\textsuperscript{54} Id., 55 U.S.P.Q.2d (BNA) at 1166.
lawsuit.\textsuperscript{55} Thus, the court reasoned, the alleged infringer “has had a full and fair opportunity to litigate the standing issue at least once . . . .”\textsuperscript{56}

In \textit{Speedplay, Inc. v. Bepop, Inc.},\textsuperscript{57} the court addressed the relationship between a patentee and an exclusive licensee for purposes of preclusion.\textsuperscript{58} The court observed in \textit{dicta} that, because both patentee and licensee had been actively involved in the licensee’s infringement litigation, “the judgment in this case will have preclusive effect with respect to any parallel claim that might be brought” by the patentee.\textsuperscript{59} Presumably, the court concluded this because the patentee and licensee were in privity with one another, and thus a subsequent suit would be barred by \textit{res judicata}.\textsuperscript{60}

Finally, in \textit{Hill-Rom Co. v. Kinetic Concepts, Inc.},\textsuperscript{61} the court addressed the preclusive effect of a district court’s rejection of an invalidity defense when it ultimately rendered a judgment of non-infringement.\textsuperscript{62} The Federal Circuit ruled that because the district court had made a ruling of non-infringement, “the district court’s resolution of the issue of invalidity was not necessary to the judgment. For that reason, the court’s invalidity ruling will have no collateral estoppel effect in any possible future dispute between the parties involving the ’346 patent.”\textsuperscript{63} Thus, \textit{Hill-Rom} demonstrates that if the resolution of an issue is not “necessary” to a court’s judgment, \textit{e.g.}, the judgment is bottomed on alternative grounds, that resolution will not have a preclusive effect under the doctrine of collateral estoppel/issue preclusion.\textsuperscript{64}

5. \textit{Estoppel based on conduct}

The Federal Circuit addressed three varieties of estoppel based on conduct in the year 2000: the doctrines of “quasi-estoppel,” “judicial estoppel,” and “equitable estoppel.” In \textit{In re Baker Hughes, Inc.},\textsuperscript{65} the

\begin{itemize}
\item \textsuperscript{55} \textit{Id.} at 1352, 55 U.S.P.Q.2d (BNA) at 1166.
\item \textsuperscript{56} \textit{Id.} at 1352, 55 U.S.P.Q.2d (BNA) at 1166.
\item \textsuperscript{57} 211 F.3d 1245, 53 U.S.P.Q.2d (BNA) 1984 (Fed. Cir. 2000).
\item \textsuperscript{58} \textit{See Speedplay}, 211 F.3d at 1253-54, 53 U.S.P.Q.2d (BNA) at 1989.
\item \textsuperscript{59} \textit{Id.} at 1253, 53 U.S.P.Q.2d (BNA) at 1989.
\item \textsuperscript{60} \textit{See, e.g.}, Montana \textit{v. United States}, 440 U.S. 147, 153 (1979) (holding that parties or their privies are barred from further claims where there has been a final judgment on the same cause of action).
\item \textsuperscript{62} \textit{See Hill-Rom}, 209 F.3d at 1344, 54 U.S.P.Q.2d (BNA) at 1442.
\item \textsuperscript{63} \textit{Id.}, 54 U.S.P.Q.2d (BNA) at 1442; \textit{see also} \textit{Restatement (Second) of Judgments} § 27 cmt. h, illus. 14 (1982).
\item \textsuperscript{64} \textit{Id.}, 54 U.S.P.Q.2d (BNA) at 1442; \textit{see also} \textit{Restatement (Second) of Judgments} § 27 cmt. h, illus. 14 (1982).
\end{itemize}
court rejected the government’s position that Baker Hughes was precluded under the doctrine of quasi-estoppel from defending, in a reexamination proceeding, a patent that it had initially challenged in a third-party request for reexamination.\textsuperscript{66} In the reexamination request, Baker Hughes raised a "substantial new question concerning the patentability" of claims of the 1991 patent.\textsuperscript{67} Subsequently, however, Baker Hughes became the owner of that patent and ultimately defended it in the reexamination proceeding.\textsuperscript{68} The government argued that such an about-face was precluded under the doctrine of "quasi-estoppel," also known as the "duty of consistency."\textsuperscript{69} This is apparently different from the doctrine of judicial estoppel. The latter doctrine prohibits a party from taking a position in a legal proceeding and then taking a contrary position in the same or a subsequent legal proceeding.\textsuperscript{70} The court noted that quasi-estoppel originated in tax cases to prevent a taxpayer from taking a position in one year to his advantage and then in a future year "shifting to a contrary position touching on the same facts or transaction."\textsuperscript{71} The court then explained that the doctrine applied only (1) "when the earlier position amounts to a misstatement of fact, not of law," and (2) when the misstatement is "one on which the government reasonably relied, in the sense that it neither knew, nor ought to have known, the true nature of the transaction mischaracterized by the taxpayer."\textsuperscript{72} The court held that the doctrine did not apply in the case at bar for three reasons: (1) the government had not shown that Baker Hughes had made "any specific factual misstatements" or that the government had "relied on any such misstatements"; (2) regardless of Baker Hughes’ change in position, the PTO had a "duty to conduct the reexamination"; and (3) the government had not shown “that the PTO or the public has suffered any harm from the change in Baker Hughes’ position.”\textsuperscript{73} Accordingly, the court concluded that the public interest lies in having patents “reexamined when a substantial question of patentability is raised,” regardless of

\textsuperscript{66} See Baker Hughes, 215 F.3d at 1301, 55 U.S.P.Q.2d (BNA) at 1152.

\textsuperscript{67} See id. at 1299, 1301-02, 55 U.S.P.Q.2d (BNA) at 1149-50.

\textsuperscript{68} See id., 55 U.S.P.Q.2d (BNA) at 1150.

\textsuperscript{69} See id. at 1302, 55 U.S.P.Q.2d (BNA) at 1151-52 (citing Lewis v. Comm’r, 18 F.3d 20, 26 (1st Cir. 1994)).

\textsuperscript{70} See id. at 1302 n.2, 55 U.S.P.Q.2d (BNA) at 1152 n.2.

\textsuperscript{71} See In re Baker Hughes Inc., 215 F.3d 1297, 1301, 55 U.S.P.Q.2d (BNA) 1149, 1152 (Fed. Cir. 2000) (quoting Union Carbide Corp. v. United States, 612 F.2d 558, 566 (Ct. Cl. 1979)).

\textsuperscript{72} Baker Hughes, 215 F.3d at 1302, 55 U.S.P.Q.2d (BNA) at 1152 (citations omitted).

\textsuperscript{73} Id., 55 U.S.P.Q.2d (BNA) at 1152.
which party initiates or defends in the reexamination proceedings.\textsuperscript{74}

The Federal Circuit discussed the doctrine of judicial estoppel on three occasions in 2000.\textsuperscript{75} That doctrine generally "prevents a party from contradicting previous declarations made during the same or a later proceeding if the change in position would adversely affect the proceeding or constitute a fraud on the court."\textsuperscript{76} The Federal Circuit applies the law of judicial estoppel of the circuit from which the case arose.\textsuperscript{77} Most, but not all, courts apply judicial estoppel only "where a party [has] successfully urge[d] a particular position in a legal proceeding" and later takes "a contrary position" in the same or subsequent proceeding.\textsuperscript{78}

In \textit{Lampi Corp. v. American Power Products, Inc.},\textsuperscript{79} the court considered whether Lampi was judicially estopped from arguing that the patented invention had not been on sale prior to January 31, 1986 because Lampi had stated to the PTO that the device had been "use[d] in commerce" in July 1985.\textsuperscript{80} Lampi had submitted declarations and its attorneys had argued to the PTO in the course of an application for a trademark that the external design of the patented product, a fluorescent light, had been "use[d] in commerce" since July of 1985.\textsuperscript{81} Thus, in the district court, American Power urged that Lampi was judicially estopped from taking the position that the patented product had not been on sale before January 31, 1986, and therefore that the patent was invalid under the

\textsuperscript{74} \textit{Id.}, 55 U.S.P.Q.2d (BNA) at 1152.


\textsuperscript{76} \textit{Baker Hughes}, 215 F.3d at 1302 n.2, 55 U.S.P.Q.2d (BNA) at 1154 n.2 (quoting \textit{Black’s Law Dictionary} 571 (7th ed. 1999)).

\textsuperscript{77} See \textit{Lampi}, 228 F.3d at 1377, 56 U.S.P.Q.2d (BNA) at 1454.

\textsuperscript{78} See \textit{Baker Hughes}, 215 F.3d at 1302 n.2, 55 U.S.P.Q.2d (BNA) at 1154 (quoting Data Gen. Corp. v. Johnson, 78 F.3d 1556, 1564 (Fed. Cir. 1996)). See generally Kelly L. Morrone, \textit{Time for the Federal Circuit to Take a Judicious Approach to Judicial Estoppel}, 28 AIPLA Q.J. 159, 171-77 & nn.69-108 (2000) (noting that the Tenth and D.C. Circuits have rejected entirely application of judicial estoppel in cases presenting federal questions but also noting that, of the remaining circuits, only the Third Circuit does not have a requirement that a litigant have achieved "success" or "litigation benefit" from its original position before a change in that position can lead to judicial estoppel).

\textsuperscript{79} 228 F.3d 1365, 56 U.S.P.Q.2d (BNA) 1445 (Fed. Cir. 2000).

\textsuperscript{80} See \textit{Lampi}, 228 F.3d at 1371, 1376-77, 56 U.S.P.Q.2d (BNA) at 1454.

\textsuperscript{81} See \textit{id.}, at 1370-71, 56 U.S.P.Q.2d (BNA) at 1450.
on-sale bar of 35 U.S.C. § 102(b). The district court rejected this argument and held that Lampi should not be judicially estopped because the Lampi officer who had made the relevant statements to the PTO had “misunderstood” the meaning of “use in commerce,” and as of July 1985, Lampi had only submitted preliminary plans to a manufacturer, whereas the patented products had not gone on sale until September 1986; furthermore, after the statements were made, Lampi had amended its trademark application to assert that the products had not gone on sale until September 1986. The Federal Circuit affirmed, holding that the district court had not abused its discretion in determining that Lampi’s original statements to the PTO were mistaken, that the patented products were actually on sale as of September 1986 and that Lampi had not gained an “unfair advantage” before the PTO because trademark protection was available even if the products were not sold until September 1986.

The court did note, however, that it was “troubled by the inconsistencies between Lampi’s statements to the PTO—particularly the statements made by Lampi’s attorneys—and the position taken by Lampi in this litigation.” Thus, the court deferred to the district court’s evaluation of whether Lampi’s assertion of contradictory positions was intentional and whether it provided an unfair advantage.

In *Northern Telecom Ltd. v. Samsung Electronics Co.*, the court addressed whether the doctrine of judicial estoppel prohibits parties from challenging on appeal a claim construction it advocated in the same case at the trial level. In the district court, Samsung had urged that the terms “aluminum and aluminum oxide” meant “pure aluminum and aluminum oxide—that is, not any other metals or alloys in combination with aluminum”; on appeal, however, Samsung argued that the definition it had urged below was incomplete, and that, as properly construed, “the aluminum must be arranged in a ‘layer’ to meet the requirements of the ‘aluminum and aluminum oxide’ limitation.” The Federal Circuit decided not to rule upon the question of “whether Samsung is judicially estopped from

82. See id. at 1376-77, 56 U.S.P.Q.2d (BNA) at 1454.
83. See id. at 1370-72, 56 U.S.P.Q.2d (BNA) at 1450-51.
84. See id. at 1377, 56 U.S.P.Q.2d (BNA) at 1454.
86. See Lampi, 228 F.3d at 1377, 56 U.S.P.Q.2d (BNA) at 1454.
88. See N. Telecom, 215 F.3d at 1290, 55 U.S.P.Q.2d (BNA) at 1071.
89. Id. at 1290, 55 U.S.P.Q.2d (BNA) at 1071.
challenging its own claim construction adopted by the trial court” because it found meritless Samsung’s argument that the district court erred in adopting its original claim construction. The court noted, however, that judicial estoppel “prevent[s] a party from changing its position over the course of judicial proceedings when such positional changes have an adverse impact on the judicial process,” and that “we look with ‘extreme disfavor’ on appeals that allege error in claim constructions that were advocated below by the very party now challenging them.”

It is neither clear nor free from controversy that judicial estoppel should bar a party from articulating different claim constructions at trial and on appeal. On the one hand, the doctrine of “invited error” usually precludes a party from “complain[ing] on appeal of errors that he himself invited.” Indeed, in Key Pharmaceuticals v. Hercon Laboratories Corp., the court noted that the doctrines of “invited error” and “judicial estoppel” preclude a party from urging that “the trial court erred by adopting the position it advocated at trial.” On the other hand, because claim construction is a question of law, reviewed “without deference” to the trial court, it is entirely possible that the Federal Circuit will adopt a claim construction different from any asserted in, or adopted by, the district court. Thus, the Federal Circuit has stated that in construing patent claims the court’s role is “not to decide which of the adversaries is correct,” but to “determine the meaning of the claims, notwithstanding the views asserted by the adversary parties.” In Exxon Chemical Patents, Inc. v. Lubrizol Corp., the court purported to do just that, adopting a claim construction

90. Id., 55 U.S.P.Q.2d (BNA) at 1071.
91. Id., 55 U.S.P.Q.2d (BNA) at 1071 (quoting Yniguez v. Arizona, 939 F.2d 727, 738 (9th Cir. 1991)).
95. Key Pharms., 161 F.3d at 715, 48 U.S.P.Q.2d (BNA) at 1915. The court did not apply such preclusion doctrines in Hercon because the court had not previously publicly condemned a party from urging on appeal that the claim construction advocated in the district court was error and because Key had not objected to Hercon’s conduct or sought to invoke estoppel. Id. at 715-16, 48 U.S.P.Q.2d (BNA) at 1916.
96. See Exxon Chem. Patents, Inc. v. Lubrizol Corp., 64 F.3d 1553, 1556, 35 U.S.P.Q.2d (BNA) 1801, 1803 (Fed. Cir. 1995) (noting that the issue of claim interpretation is reviewed on appeal “without deference to the trial judge”). Two of the authors were counsel to The Lubrizol Corporation in this case.
97. Id. at 1555-56, 35 U.S.P.Q.2d (BNA) at 1803.
98. 64 F.3d 1553, 35 U.S.P.Q.2d (BNA) 1801 (Fed. Cir. 1995).
that, while virtually identical to that advocated by Lubrizol, was asserted by the court to be different from that urged by the parties as well as that adopted by the district court.\footnote{99. See Exxon, 64 F.3d at 1556-61, 35 U.S.P.Q.2d (BNA) at 1803-07 (providing independent claim construction); see also Exxon Chem. Patents, Inc. v. Lubrizol Corp., 77 F.3d 450, 451, 37 U.S.P.Q.2d (BNA) 1767, 1768 (Fed. Cir. 1996) (Mayer, J., concurring in denial of rehearing en banc) (opining that “[t]wo judges have divined an interpretation of the claim that occurred to no one else in this extensive litigation.”).}

Accordingly, while it may be appropriate in some circumstances to prohibit a party from challenging the precise claim construction it urged in the trial court, such a prohibition conflicts with the notion that the Federal Circuit itself may issue claim interpretations never proposed by either party in the course of district court litigation.

Finally, in \textit{Zacharin v. United States},\footnote{100. 213 F.3d 1366, 55 U.S.P.Q.2d (BNA) 1047 (Fed. Cir. 2000).} the court addressed whether the government could be estopped from asserting the on-sale bar as a defense although it had not raised the issue when the patent application was filed.\footnote{101. See id. at 1371-72, 55 U.S.P.Q.2d (BNA) at 1051.} The government argued that the patent at issue was invalid under the on-sale bar because the patented invention was offered for sale by a contract signed in April 1980, more than one year before Zacharin’s patent application had been filed.\footnote{102. Id., 55 U.S.P.Q.2d (BNA) at 1048.} Zacharin, an Army employee, asked Army counsel in September 1980 to file a patent application for the invention but was told by Army counsel that due to a backlog, the application might be delayed for more than a year; the application was in fact submitted to the PTO on September 24, 1981.\footnote{103. Id., 55 U.S.P.Q.2d (BNA) at 1048.} Zacharin argued that the government was estopped from asserting the on-sale bar as a defense because the government attorney who filed the patent application had not raised the on-sale bar issue at the time of the patent application.\footnote{104. See id. at 1371, 55 U.S.P.Q.2d (BNA) at 1051 (discussing Zacharin’s equitable estoppel argument).} The court rejected this argument noting that “if equitable estoppel is available at all against the government some form of affirmative misconduct must be shown . . . .”\footnote{105. Id., 55 U.S.P.Q.2d (BNA) at 1051.} The court held that “[t]here is no evidence that any representative of the government gave Mr. Zacharin incorrect legal advice or engaged in any other affirmative misconduct . . . .”; and thus, that the government could not be equitably estopped.\footnote{106. Zacharin v. United States, 213 F.3d 1366, 1371-72, 55 U.S.P.Q.2d (BNA) 1047, 1051 (Fed. Cir. 2000). In light of this holding, the court declined to address a second argument against the assertion of equitable estoppel stating that to preclude the government from asserting the on-sale bar would provide Zacharin with a money
6. Waiver and collateral attack

In *Glitsch, Inc. v. Koch Engineering Co.*, the court held that a party that had failed to timely raise a patent misuse defense in an infringement action could not later bring a declaratory judgment action seeking a declaration of patent misuse and vacatur of any damages award in the original action. In the original infringement action, Glitsch had attempted to amend its answer to assert defenses of patent and trade-secret misuse after the district court had ruled on liability but before it had ruled on damages. The district court denied Glitsch's motion to amend as untimely because the defenses at issue related to the already-determined issues of liability. Glitsch then filed a separate declaratory-judgment action seeking to have the patent and trade secrets at issue in the first action declared unenforceable because of patent and trade-secret misuse and any award of damages in first action vacated. The district court held that Glitsch had waived its right to have the patent and trade-secret misuse claims litigated by failing to raise them timely in the original action.

The Federal Circuit affirmed, but on the ground that Glitsch could not circumvent its error in the first action via a collateral attack in its second action. As the court stated,

[when a court enters an order that a party does not like, the party's recourse is to seek relief on appeal; it is not appropriate for the party to contest the court's order by filing a new action seeking a declaratory judgment challenging the court's ruling in the first case.]

The court explained that permitting Glitsch's declaratory judgment action would be tantamount to permitting “an interlocutory appeal of an adverse ruling” on the merits of the misuse defenses. The court noted that its holding was compelled by three remedy that Congress had not authorized, contrary to the Supreme Court's decision in *Office of Personnel Management v. Richmond*, 496 U.S. 414, 426 (1990). *Id.* at 1371-72, 55 U.S.P.Q.2d (BNA) at 1051.

108. See *Glitsch*, 216 F.3d at 1383-86, 55 U.S.P.Q.2d (BNA) at 1375.
109. See id. at 1383, 55 U.S.P.Q.2d (BNA) at 1375-77 (discussing the proceedings in the district court).
110. See id., 55 U.S.P.Q.2d (BNA) at 1375-77.
111. *Id.*, 55 U.S.P.Q.2d (BNA) at 1375-77.
112. See id. at 1384, 55 U.S.P.Q.2d (BNA) at 1376. The court ultimately made clear that it was taking no position on the merits of the waiver ruling which presumably can be raised on any appeal that may be taken in the original infringement action. *Id.* at 1386, 55 U.S.P.Q.2d (BNA) at 1377.
114. See *Glitsch*, 216 F.3d at 1385, 55 U.S.P.Q.2d (BNA) at 1377.
important policies of federal procedure: “(1) that litigation relating to a single matter should take place in a single action”; “(2) that a district court’s order in one action should be reviewed by the statutory method of appeal, not by a collateral proceeding for declaratory judgment”; and “(3) that, with limited exceptions, review of a district court’s ruling should take place only after a final judgment is entered in that case.”

Finally, the court rejected Glitsch’s argument that the Supreme Court had established that patent-misuse defenses cannot be waived. The Federal Circuit noted that in the *Mercoid* case, the Supreme Court ruled that failing to assert a patent-misuse defense in an infringement action against a party’s privy did not preclude that party from raising that equitable defense in a subsequent action directly against that party in which the equitable remedy of an injunction was sought. The Federal Circuit distinguished that situation, involving the balance between patent misuse and *res judicata*, from the case at bar which did not involve successive infringement actions and in which Glitsch still had the right to appeal in the original action. Consequently, the court held that “the rationale of *Mercoid* does not justify allowing a party to launch a collateral attack on a ruling in the first action, the effect of which would be to alter the judgment in that action.”

7. Order of addressing arguments

In *Hill-Rom Co. v. Kinetic Concepts, Inc.* the court made clear that a district court may decide the issue of patent validity, “even if the issue was raised only as an affirmative defense and even if the court finds that the patent was not infringed.” There, the district court’s opinion stated both that the patent was not infringed and that the affirmative defense of invalidity was meritless; however, the judgment stated only that “judgment is hereby entered in favor of Defendants Kinetic Concepts Inc. and KCI Therapeutic Services Inc.”

115. Id., 55 U.S.P.Q.2d (BNA) at 1377 (citations omitted).
116. See id. at 1385-86, 55 U.S.P.Q.2d (BNA) at 1377 (analyzing *Mercoid Corp. v. Mid-Continent Inc.* Co., 320 U.S. 661 (1944)).
117. See id. at 1385, 55 U.S.P.Q.2d (BNA) at 1377 (discussing *Mercoid*, 320 U.S. at 670).
118. See id. at 1386, 55 U.S.P.Q.2d (BNA) at 1377 (discussing *Mercoid*).
121. *Hill-Rom*, 209 F.3d at 1344, 54 U.S.P.Q.2d (BNA) at 1442 (citing MultiForm Desiccants, Inc. v. Medzam Ltd., 133 F.3d 1478, 1481, 45 U.S.P.Q.2d (BNA) 1429, 1436 (Fed. Cir. 1998)).
122. Id. at 1340, 54 U.S.P.Q.2d (BNA) at 1439.
appeal, KCI argued that, should the Federal Circuit uphold the judgment on noninfringement grounds, it should vacate the district court’s discussion of validity in its opinion.\(^{123}\) Although the Federal Circuit upheld the judgment on grounds of noninfringement, it declined to vacate any part of the district court’s judgment or opinion. First, the Federal Circuit found it unnecessary to vacate any part of the judgment because the district court’s ruling on invalidity was not mentioned anywhere in the judgment.\(^{124}\) Second, as noted in Part I.A.4, \textit{supra}, the court reasoned that because the ruling on invalidity was not necessary to the court’s judgment, it would have no binding effect in any future proceedings between the parties.\(^{125}\) Thus, the Federal Circuit had no reason to modify the district court’s judgment or opinion in any way.

8. \textit{Trial procedure/motions to dismiss and adequacy of pleading}

The Federal Circuit carefully scrutinizes dismissals under Federal Rule of Civil Procedure 12(b)(6) for failure to adequately plead a claim upon which relief could be granted. Because the question of whether a district court’s ruling on such a motion “is a purely procedural question not pertaining to patent law,” the court applies the rule of appellate review of the regional circuit in which the case arose.\(^{126}\) Thus, in \textit{Phonometrics v. Hospitality Franchise Systems},\(^{127}\) the court noted that the Eleventh Circuit “has made clear that the dismissal standard is extraordinary, and one not to be taken lightly.”\(^{128}\) Similarly, in \textit{C&F Packing Co. v. IBP, Inc.},\(^{129}\) the court emphasized that the Seventh Circuit has held that a complaint “need not specify the correct legal theory, or point to the right statute, to survive a motion to dismiss.”\(^{130}\)

In \textit{Phonometrics}, the court reversed the district court’s dismissal of an infringement complaint for pleading deficiencies.\(^{131}\) After the second remand in that case from the Federal Circuit on claim-
construction issues, the district court had dismissed the complaint under Rule 12(b)(6) and granted leave to amend the complaint requiring Phonometrics to include specific infringement allegations for each claim element, in accordance with the Federal Circuit’s claim construction.\(^{132}\) Rather than amend the complaint, Phonometrics appealed the dismissal to the Federal Circuit.\(^{133}\) The Federal Circuit held, contrary to the district court’s ruling, that “Rule 12(b)(6) pleading requirements for a complaint of infringement cannot be extended to require a plaintiff to specifically include each element of the claims of the asserted patent.”\(^{134}\) Rather, “a patentee need only plead facts sufficient to place the alleged infringer on notice. This requirement ensures that an accused infringer has sufficient knowledge of the facts alleged to enable it to answer the complaint and defend itself.”\(^{135}\) To require otherwise “would contravene the notice pleading standard, and would add needless steps to the already complex process of patent litigation.”\(^{136}\)

In C&F Packing, the Federal Circuit reversed a district court’s dismissal under Rule 12(b)(6).\(^{137}\) There, C&F had argued that Illinois law governed its claims for misappropriation of trade secrets and alleged a violation of the Illinois Trade Secrets Act. The district court disagreed, concluding that Kansas law governed C&F’s claims.\(^{138}\) The district court thus dismissed C&F’s claims under Rule 12(b)(6) because they had purportedly been brought under the wrong statute.\(^{139}\) The Federal Circuit reversed, holding that even if C&F had chosen the “law of the wrong state under which to bring its claim, such a mistake is akin to that of bringing a case under an incorrect legal theory” and, consequently, “the district court should have proceeded to try the case on its merits under the state law it found more appropriate.”\(^{140}\) The Federal Circuit also criticized the district court’s dicta that C&F’s claims should have been dismissed even under Kansas law as barred by the statute of limitations.\(^{141}\) The court noted that the parties disputed when C&F knew or should have

\(^{132}\) See id. at 792, 53 U.S.P.Q.2d (BNA) at 1763-64.

\(^{133}\) See id., 53 U.S.P.Q.2d (BNA) at 1763-64.

\(^{134}\) See id. at 794, 53 U.S.P.Q.2d (BNA) at 1765.

\(^{135}\) Id., 53 U.S.P.Q.2d (BNA) at 1765.

\(^{136}\) Id., 53 U.S.P.Q.2d (BNA) at 1765.


\(^{138}\) See C&F Packing, 224 F.3d at 1306, 55 U.S.P.Q.2d (BNA) at 1871 (discussing the district court’s holding).

\(^{139}\) Id., 55 U.S.P.Q.2d (BNA) at 1871.

\(^{140}\) Id., 55 U.S.P.Q.2d (BNA) at 1871.

\(^{141}\) See id. at 1306-07, 55 U.S.P.Q.2d (BNA) at 1872 (noting that the district court’s dicta “foreshadows a possible verdict on remand”).
known that its trade secrets had been misappropriated and explained that Kansas law requires such a dispute to be resolved by “the trier of fact.”

Accordingly, the court remanded for further fact-finding on those limitation issues.

9. Trial procedure/motions for judgment as a matter of law

In 2000, the Federal Circuit addressed a few important procedural issues regarding motions for judgment as a matter of law (“JMOL”). A JMOL is appropriate if “during a trial by jury a party has been fully heard on an issue and there is no legally sufficient evidentiary basis for a reasonable jury to find for that party on that issue.” Such a motion must be made before submitting the case to the jury. In reviewing district court judgments in patent cases, the Federal Circuit applies Federal Circuit law to patent law issues, which include procedural issues relating to patent law, but applies “the law of the circuit in which the district court sits” to nonpatent issues. Consequently, the court applies Federal Circuit procedural law to JMOL decisions on patent issues, and regional circuit procedural law to JMOL decisions on nonpatent issues.

With regard to patent law issues, the Federal Circuit reviews district court decisions on motions for JMOL by applying the same standard used by the district court. Thus, the court determines ‘viewing the evidence in the light most favorable to the non-moving party,’ and giving the non-movant ‘the benefit of all reasonable inferences,’ there is sufficient evidence of record to support a jury verdict in favor of the non-movant.” In doing so, the court does “not weigh the evidence, consider the credibility of witnesses, or

142. See id. at 1307, 55 U.S.P.Q.2d (BNA) at 1872 (citing McCaffree Fin. Corp. v. Nunnink, 847 F.2d 1321, 1331 (Kan. App. 1993)).
decide disputed facts,” but rather determines whether “there can be but one conclusion as to the verdict that reasonable jurors could have reached.”

The Federal Circuit, however, cannot determine that a district court should have granted a JMOL on a ground not properly advanced in the district court. Thus, in **Southwest Software, Inc. v. Harlequin, Inc.**, the court held that Harlequin had waived its right to challenge the sufficiency of the evidence on a particular infringement claim because it had failed to move for JMOL on that claim at the close of evidence. Similarly, in **Advanced Display Systems, Inc. v. Kent State University**, the court held that Kent had waived its right to challenge the sufficiency of the evidence on the claim that its patent was invalid as anticipated under 35 U.S.C. § 102(b) because it had not moved for JMOL at the close of evidence. Kent was not foreclosed, however, from challenging the verdict and seeking a new trial on the ground that the judge had given the jury a legally erroneous jury instruction relating to the anticipation claim because Kent had properly objected to the jury instruction.

The court does not hold parties to particularly severe standards of form in complying with the requirement that a JMOL motion be made at the close of evidence. Thus, in **Zodiac Pool Care, Inc. v. Hoffinger Industries, Inc.**, the court held that Hoffinger had not waived its right to renew its JMOL on infringement, even though it had not presented argument on that element of its JMOL motion after the close of evidence. The district court, in granting JMOL, noted that it “understood [Hoffinger] to be renewing its Rule 50 motion in its entirety, but only rearguing the point relating to the issue of lost profits.” The court characterized the question of “what constitutes a directed verdict” as a purely procedural issue governed

150.  **Id.** at 1289-90, 56 U.S.P.Q.2d (BNA) at 1168 (quoting **Allied Colloids**, 64 F.3d at 1573, 35 U.S.P.Q.2d (BNA) at 1841).
151.  **See id.** at 1290, 56 U.S.P.Q.2d (BNA) at 1168.
152.  **Id.**, 56 U.S.P.Q.2d (BNA) at 1168.
156.  **See id.** at 1281-82, 54 U.S.P.Q.2d (BNA) at 1679.
159.  **See Zodiac Pool Care**, 206 F.3d at 1412, 54 U.S.P.Q.2d (BNA) at 1144.
160.  **Id.** at 1412-13, 54 U.S.P.Q.2d (BNA) at 1144.
by regional circuit law and noted that the Eleventh Circuit took a “liberal view” on that issue. The court then held that “in light of the trial judge’s declaration of this understanding, we find no compelling reason why counsel for Hoffinger should have emphasized issues that have already been ruled upon by the trial court”; accordingly, the Court affirmed the grant of JMOL. Thus, the court largely deferred to the district court’s determination in light of the “wide discretion” given a trial judge in characterizing the arguments of counsel.

10. Trial procedure/post-judgment motions to amend

District court rulings on motions to amend complaints or judgments are generally governed by the law of the regional circuit from which the case originated and are reviewed for “abuse of discretion.” In reviewing a denial of a motion to amend a complaint following summary judgment, a party must at least present a “colorable argument of possible success” on other claims; a district court need not allow a proposed amendment if it would be futile to do so. Thus, in Cultor Corp. v. A.E. Staley Manufacturing Co., the court affirmed the district court’s denial of such a motion, even though the district court had denied the motion “without comment.” The court acknowledged that Federal Rule of Civil Procedure 15(a) permits a complaint to be amended “when justice so requires,” and stated that “[o]rdinarily, courts of appeals frown on unexplained exercises of discretion by trial judges. However, the court held that any amendment of the complaint at issue to assert infringement of additional claims of the patent would have been “futile,” since under the “district court’s claim construction,” none of

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161. See id. at 1416, 54 U.S.P.Q.2d (BNA) at 1147.
162. See id. at 1417, 54 U.S.P.Q.2d (BNA) at 1148.
165. See Cultor, 224 F.3d at 1333, 56 U.S.P.Q.2d (BNA) at 1212.
167. See Cultor, 224 F.3d at 1332-33, 56 U.S.P.Q.2d (BNA) at 1211-12 (rejecting Cultor’s argument that the court’s lack of explanation was antithetical to the Federal Rules).
168. See id. at 1332, 56 U.S.P.Q.2d (BNA) at 1211 (quoting Fed. R. Civ. P. 15(a)).
169. Id. at 1333, 56 U.S.P.Q.2d (BNA) at 1212.
the claims could have been infringed.\textsuperscript{170} Accordingly, the court affirmed the district court’s “terse ruling.”\textsuperscript{171}

In \textit{Ajinomoto Co. v. Archer-Daniels Midland Co.},\textsuperscript{172} the court affirmed the district court’s denial of a motion to amend the judgment.\textsuperscript{173} The court noted that under Federal Rule of Civil Procedure 59(e), as interpreted by the Third Circuit:

\begin{quote}
A proper motion to alter or amend the judgment “must rely on one of three major grounds: ‘(1) an intervening change in controlling law; (2) the availability of new evidence [not available previously]; [or] (3) the need to correct clear error [of law] or prevent manifest injustice.’”\textsuperscript{174}
\end{quote}

The court reasoned that there had been no change in the law and that the evidence the defendant had wished to submit after the judgment—that it had changed to a non-infringing product—had been available to it and within its control prior to the entry of judgment on damages, and that the defendant made numerous strategic choices during the pendency of the litigation not to introduce that evidence.\textsuperscript{175} Therefore, the court concluded that the district court had not abused its discretion in refusing to “re-open” the case to permit an additional evidentiary hearing on that issue.\textsuperscript{176}

11. \textit{Trial procedure/motion to transfer venue}

Pursuant to statute, a district court may transfer an action to another district court for “the convenience of parties and witnesses, in the interest of justice.”\textsuperscript{177} The Federal Circuit reviews a decision on such a procedural motion under the law of the regional circuit from which the case arose.\textsuperscript{178} Thus, in \textit{Winner International Royalty Corp. v. Wang},\textsuperscript{179} the court applied the law of the District of Columbia Circuit to determine whether the district court had abused its discretion in denying Wang’s motion to transfer to the Central District of California.\textsuperscript{180} The court affirmed the district court’s decision,

\begin{enumerate}
\item 170. \textit{See id.}, 56 U.S.P.Q.2d (BNA) at 1212.
\item 172. 228 F.3d 1338, 56 U.S.P.Q.2d (BNA) 1332 (Fed. Cir. 2000).
\item 173. \textit{See Ajinomoto}, 228 F.3d at 1349-51, 56 U.S.P.Q.2d (BNA) at 1341-42.
\item 175. \textit{See id.}, 56 U.S.P.Q.2d (BNA) at 1341-42 (holding the defendant’s silence justified the lower court’s decision).
\item 176. \textit{Id.} at 1351, 56 U.S.P.Q.2d (BNA) at 1342.
\item 178. \textit{See Winner Int’l}, 202 F.3d at 1352, 53 U.S.P.Q.2d (BNA) at 1589.
\item 179. 202 F.3d 1340, 53 U.S.P.Q.2d (BNA) 1580 (Fed. Cir. 2000).
\end{enumerate}
reasoning: (1) that with numerous witnesses close to either the District of Columbia or California, it was just as convenient to litigate in the District of Columbia; and (2) that the case was tried and resolved in just six months after the motion for transfer was denied, “presumably much more quickly than would have been the case if the action were transferred.”

12. Trial practice/challenge to jury instructions

A party may challenge a jury verdict on the ground that an instruction to the jury was legally erroneous. To make such a challenge, a party must establish that “(1) it made a proper and timely objection to the jury instructions, (2) those instructions were legally erroneous, (3) the errors had prejudicial effect, and (4) it requested alternative instructions that would have remedied the error.” (It is questionable whether the fourth requirement, of correct alternative instructions, should apply in all cases in light of Rule 51’s prescription that a party need only “stat[e] distinctly the matter objected to and the grounds of the objection,” and Rule 46’s command that “formal exceptions” to district court actions are unnecessary so long as a party expresses its “objection to the action of the court and the grounds therefor.” Indeed, in many circumstances, a party will request that no instruction at all be given rather than propose an alternative instruction.)

In Advanced Display Systems v. Kent State University, the court reversed a jury finding of patent invalidity by anticipation because of an erroneous jury instruction. The court first sought to determine whether Kent had objected timely to the relevant jury instruction, a procedural issue determined by the law of the regional circuit from which the case arose. Applying Fifth Circuit law, the court ruled that, by objecting to the relevant jury instruction before the jury had been charged and explaining the basis for the objection, Kent had properly objected. The court next examined whether the

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182. See, e.g., Advanced Display Sys., Inc. v. Kent State Univ., 212 F.3d 1272, 1281, 54 U.S.P.Q.2d (BNA) 1673, 1678 (Fed. Cir. 2000) (noting that a “jury verdict may be altered if the instructions ‘were incorrect or incomplete as given’”) (quoting Biodex Corp. v. Loredan Biomed. Inc., 946 F.2d 850, 854, 20 U.S.P.Q.2d (BNA) 1252, 1255 (Fed. Cir. 1991)).
183. Id., 54 U.S.P.Q.2d (BNA) at 1679 (citations omitted).
187. See Advanced Display, 212 F.3d at 1281-84, 54 U.S.P.Q.2d (BNA) at 1678-80.
188. See id. at 1281-82, 54 U.S.P.Q.2d (BNA) at 1679.
189. See id. at 1282, 54 U.S.P.Q.2d (BNA) at 1679 (citing A.B. Baumstimler v.
instruction, which required the jury to determine whether a prior-art document had incorporated by reference other material such that the substance of both could be considered to evaluate whether the patent at issue had been anticipated, was legally erroneous. The court held that the instruction was erroneous because "whether and to what extent material has been incorporated by reference into a host document is a question of law" that the court below should have determined, rather than leaving it to the jury. Further, the court held that the error was "prejudicial" because "determining what material was incorporated by reference into the Haas patent was a critical question of law for the [court] to resolve before submitting the factual issue of anticipation to the jury." Finally, the court held that Kent had properly demonstrated that its objection would cure the defect because "the proper jury instruction on incorporation by reference would have been no instruction at all." Consequently, the court remanded for a new trial on anticipation.

In Environ Products, Inc. v. Furon Co., the court examined whether a jury instruction contained the correct burden of proof—"clear and convincing evidence"—for a party claiming inventorship. The court first concluded that the proper burden of proof would have been the "preponderance of the evidence" standard applicable in a patent interference proceeding because both parties had patent applications that were "co-pending," and thus the higher burden of proof usually placed upon a challenger to a presumptively valid patent should not have been applied. The court next examined whether the district court's error was prejudicial; it concluded that there was no prejudice because, regardless of the burden of proof,
the jury’s determination of the identity of the inventor would have been the same—the jury found that the named inventor was the actual inventor, by a preponderance of the evidence, which negated the possibility that the challenger could have been the inventor, regardless of what burden the challenger had to shoulder. Thus, the court held that the error was “harmless” and that Furon was not entitled to a new trial.

A variation on the problem of an erroneous burden of proof was at issue in *Embrex, Inc. v. Service Engineering Corp.* There the district court had improperly instructed the jury that “willfulness” of infringement (for which enhanced damages can be awarded) could be proven by “a preponderance of the evidence” instead of the correct and more exacting “clear and convincing evidence” standard. The jury found, based on this improper statement of the burden of proof, that the defendant’s infringement had been willful. The defendant, however, had not timely objected to the erroneous jury instruction. Under Fourth Circuit law, applicable to this procedural issue, appeal would still be permitted if the error were “plain,” if it affected the aggrieved party’s “substantial rights,” and if failure to correct the error “would result in a miscarriage of justice.”

The court concluded that the error was plain, but it held that failure to correct it would not result in a miscarriage of justice because in the court’s evaluation of the evidence presented at trial, “the jury would have reached the same conclusion under either” evidentiary standard. The accuracy of this court’s holding, where a “willfulness” finding required the jury to determine its certainty of willful infringement (a determination which required the jury to evaluate the evidence through the prism of the burden of proof—i.e., if the jury were only fifty-one percent convinced of willfulness, it could not render a willfulness verdict under the “clear and convincing evidence” standard), is less clear than the court’s holding in *Environ*, where the jury’s answer to other interrogatories gave the

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199. See id., 55 U.S.P.Q.2d (BNA) at 1042-43.

200. See id. at 1266-67, 55 U.S.P.Q.2d (BNA) at 1043 (noting that “[e]rrors in instructions routinely are ignored if . . . the error could not have changed the result”) (quoting 11 CHARLES ALAN WRIGHT & ARTHUR R. MILLER, FEDERAL PRACTICE AND PROCEDURE § 2886 (2d ed. 1995)).


203. See id. at 1351, 55 U.S.P.Q.2d (BNA) at 1166.

204. See id. at 1350-51, 55 U.S.P.Q.2d (BNA) at 1165.

205. See id. at 1351, 55 U.S.P.Q.2d (BNA) at 1165 (quoting United States v. Jennings, 160 F.3d 1006, 1008 (4th Cir. 1998)).

court more assurance that any error assigning burdens of proof was in fact harmless.\textsuperscript{207}

Lastly, in \textit{C\&F Packing Co. v. IBP, Inc.},\textsuperscript{208} the court found that the jury instruction on the definition of trade secret misappropriation was not erroneous.\textsuperscript{209} The court, in applying Seventh Circuit law to the procedural issue of the “correctness of jury instructions,” noted that the instruction needed only to “convey the correct message to the jury reasonably well.”\textsuperscript{210} Based upon that standard, the court concluded that the instruction did not mislead the jury because it conveyed the critical message that it may be relevant to, but cannot be dispositive of, the question of trade secret misappropriation that the alleged wrongdoer had hired a former employee of the complaining party.\textsuperscript{211}

13. Trial practice/use of stipulations

The use of stipulations between the parties either before or during trial is an increasingly common litigation practice.\textsuperscript{212} As a handful of Federal Circuit cases from year 2000 demonstrate, the use of such stipulations can have significant consequences for the parties. In \textit{Watts v. XL Systems, Inc.},\textsuperscript{213} the parties agreed to the following stipulations prior to a determination on summary judgment: “that XL (1) does not infringe any of the three claims [at issue in the litigation] when [two] functional statements [in the claims] are construed as means-plus-function limitations; (2) does not use differing taper angles between connecting pipe ends; and (3) does not use any structure that is insubstantially different from the use of differing taper angles.”\textsuperscript{214} Based upon its claim construction and

\textsuperscript{207} Compare Environ Prods., Inc. v. Furon Co., 215 F.3d 1261, 55 U.S.P.Q.2d (BNA) 1038 (Fed. Cir. 2000), with Embrex, Inc. v. Serv. Eng'g Corp., 216 F.3d 1343, 55 U.S.P.Q.2d (BNA) 1161 (Fed. Cir. 2000) (illustrating the difficulty in determining whether an erroneous jury instruction regarding the assignment of burden of proof was harmless or prejudicial).

\textsuperscript{208} 224 F.3d 1296, 55 U.S.P.Q.2d (BNA) 1865 (Fed. Cir. 2000).

\textsuperscript{209} See \textit{C\&F Packing}, 224 F.3d at 1303, 55 U.S.P.Q.2d (BNA) at 1869-70.

\textsuperscript{210} See id., 55 U.S.P.Q.2d (BNA) at 1869 (citing Dawson v. New York Life Ins. Co., 135 F.2d 1158, 1165 (7th Cir. 1998)).

\textsuperscript{211} See id., 55 U.S.P.Q.2d (BNA) at 1869-70.


\textsuperscript{213} 292 F.3d 877, 56 U.S.P.Q.2d (BNA) 1836 (Fed. Cir. 2000).

\textsuperscript{214} Watts, 292 F.3d at 879-81, 56 U.S.P.Q.2d (BNA) at 1838. Pursuant to 35 U.S.C. § 112, para. 6, “an element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material or acts, in support thereof,” and “such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” Such claims are generally referred to as “means-plus-function” or “step-plus-function” claims.
these stipulations, the district court concluded that the claims had not been infringed. 215 On appeal, the Federal Circuit concluded that the “functional statements” in the claims were not means-plus-function claims. 216 Watts had argued on appeal that noninfringement was not conceded by the stipulations. 217 However, the Federal Circuit disagreed, holding that the second and third stipulations, which do not refer to means-plus-function restrictions, precluded Watts’s infringement arguments regardless of the resolution of the means-plus-function claims. 218 The court reasoned that the claims at issue, regardless of whether the claim elements were in means-plus-function format, required “differing taper angles,” but that the second stipulation “unequivocally concedes” that XL did not use such angles; 219 moreover, the third stipulation disclaimed any possible basis for infringement under the doctrine of equivalents. 220 Therefore, the stipulations Watts had agreed to in the district court ended up foreclosing its arguments on appeal. 221

Similarly in Ajinomoto Co. v. Archer-Daniels-Midland Co., 222 the court held that ADM’s pre-trial admissions foreclosed one of its arguments on appeal. ADM argued that it should be permitted to have an evidentiary hearing before the district court to present evidence regarding damages—that it had allegedly begun to use a non-infringing product—never previously proffered to the district court. 223 However, ADM’s pre-trial admissions and the parties’ joint pre-trial statement of stipulated facts both contained statements that ADM was using only the product found to be infringing. 224 Thus, the court held that ADM was bound by those admissions, at least until it expressly informed the district court that they were incorrect, something it did not attempt to do until after trial. 225 Ultimately, the court ruled that the district court had not abused its discretion in refusing to grant ADM a hearing to present its desired evidence. 226

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215. See id. at 879-80, 56 U.S.P.Q.2d (BNA) at 1838.
216. See id. at 884-85, 56 U.S.P.Q.2d (BNA) at 1841-42.
217. See id. at 884, 56 U.S.P.Q.2d (BNA) at 1841.
218. See id. at 884-85, 56 U.S.P.Q.2d (BNA) at 1841-42.
221. See id., 56 U.S.P.Q.2d (BNA) at 1838.
222. 228 F.3d 1338, 1350-51, 56 U.S.P.Q.2d (BNA) 1332, 1342 (Fed. Cir. 2000).
223. See Ajinomoto, 228 F.3d at 1350, 56 U.S.P.Q.2d (BNA) at 1341.
224. See id. at 1351, 56 U.S.P.Q.2d (BNA) at 1342.
225. See id., 56 U.S.P.Q.2d (BNA) at 1342 (noting that "[a]ny matter admitted under this rule is conclusively established unless the court on motion permits withdrawal or amendment of the admission") (quoting Fed. R. Civ. P. 36(b)).
226. See id., 56 U.S.P.Q.2d (BNA) at 1342.
While the court did refer to other factors, such as ADM’s resistance to
discovery on the issue and the actual testimony at trial in upholding
the district court’s ruling, ADM’s admissions plainly played an
important role in the court’s rejection of its arguments on appeal.\footnote{227}{See id., 56 U.S.P.Q.2d (BNA) at 1342.}

In *Interactive Gift Express, Inc. v. Compuserve, Inc.*,\footnote{228}{See Ajinomoto Co. v. Archer-Daniels-Midland Co., 228 F.3d 1338, 1351, 56 U.S.P.Q.2d (BNA) 1332, 1342 (Fed. Cir. 2000).} the parties’
stipulations had the effect of advancing, rather than hampering,
Interactive Gift Express’s (IGE) appeal. There, after the district court
had completed its claim construction of five disputed claim
limitations, the parties entered into a Stipulated Order and Judgment
providing that there was no infringement of any of the five claims as
construed by the district court.\footnote{230}{See Interactive Gift Express, 231 F.3d at 864, 56 U.S.P.Q.2d (BNA) at 1651.} Based upon this stipulation, which
permitted a rapid appeal, counsel for IGE acknowledged at oral
argument that “IGE must show that the district court was wrong in its
construction of all five of the disputed claim limitations to prevail in
[its] appeal.”\footnote{231}{Id.} Hence, IGE’s stipulations required it to sustain a
heavy burden on appeal. Nonetheless, it was able to do so, as the
court held that the district court had erred “in at least one aspect of
its construction of each of the five claim limitations”; consequently,
the court vacated the judgment and remanded the case for further
proceedings.\footnote{232}{Id. at 877, 56 U.S.P.Q.2d (BNA) at 1662.}

These cases demonstrate the advantages and disadvantages of the
use of stipulations in the trial court. They are very likely to bind the
parties even on appeal, and may therefore preclude certain
arguments a party may wish to pursue in the Federal Circuit. On the
other hand, such stipulations can be used to narrow the issues in a
case and/or facilitate a rapid appeal. The use of stipulations may be
especially helpful in light of the court’s ruling in *Markman v. Westview
Instruments, Inc.*,\footnote{233}{52 F.3d 967, 34 U.S.P.Q.2d (BNA) at 1662 (Fed. Cir. 1995) (en banc), aff’d, 517 U.S. 370 (1996).} that claim construction is an issue of law
determined exclusively by the court.\footnote{234}{See Markman, 52 F.3d at 979, 34 U.S.P.Q.2d (BNA) at 1329.} As we discuss in Part III.A, *infra*, in most infringement cases, the real (indeed, the only) dispute
is over claim construction.\footnote{235}{See *infra* notes 1192-1311 and accompanying text.} Thus, it may be increasingly
advantageous for parties to stipulate to factual issues such as literal
infringement—if there is no real dispute about the resolution of the

issue should a particular claim construction be adopted—to expedite review of an adverse claim-construction ruling.

14. Trial practice/admissibility of evidence

District court decisions regarding the admission or rejection of evidence at trial are reviewed under the deferential “abuse of discretion” standard. Moreover, the Federal Circuit has noted that, under Federal Rule of Civil Procedure 52(c), “the right to be ‘fully heard’ does not amount to a right to introduce every shred of evidence that a party wishes, without regard to the probative value of that evidence.” Thus, in Yamanouchi Pharmaceutical v. Danbury Pharmacal, Inc., the court held that the district court had not abused its discretion in refusing Danbury’s request to present testimony of the inventor of the patent alleged to be invalid. The Federal Circuit embraced the district court’s reasoning that the inventor’s testimony would be offered only to contradict the testimony of Danbury’s own expert and that Danbury could have previously deposed the inventor but chose not to do so. Hence, the court agreed that Danbury had been “fully heard” at trial. In a similar vein, the court upheld the district court’s exclusion of hearsay evidence in Rotec Indus. v. Mitsubishi Corp. There, Rotec wished to introduce a declaration from its President recounting the statements of others regarding the activities of a competitor. The district court held that the plainly hearsay statement could not properly be characterized as a statement furthering a conspiracy or as describing

237. Fed. R. Civ. P. 52(c) states:

Judgment of Partial Findings. If during a trial without a jury a party has been fully heard on an issue and the court finds against the party on that issue, the court may either enter judgment as a matter of law against the party with respect to a claim or defense that cannot under the controlling law be maintained or defeated without a favorable finding on that issue, or the court may decline to render any judgment until the close of all the evidence. Such a judgment shall be supported by findings of fact and conclusions of law as required by subdivision (a) of this rule.

238. See Yamanouchi, 231 F.3d at 1345, 56 U.S.P.Q.2d (BNA) at 1645 (quoting First Va. Banks, Inc. v. BP Exploration & Oil, Inc., 206 F.3d 404, 407 (4th Cir. 2000)).
239. 231 F.3d 1339, 56 U.S.P.Q.2d (BNA) 1641 (Fed. Cir. 2000).
240. See Yamanouchi, 231 F.3d at 1345, 56 U.S.P.Q.2d (BNA) at 1645 (holding that the right to be fully heard at trial does not indicate that the district court lacks discretion in excluding testimony).
241. See id. at 1346, 56 U.S.P.Q.2d (BNA) at 1646.
244. See Rotec Indus., 215 F.3d at 1256, 55 U.S.P.Q.2d (BNA) at 1007-08.
the statement of an agent of Mitsubishi, since the statement recounted information provided by innocent third parties.\textsuperscript{245} Thus, the Federal Circuit held that the district court had not abused its discretion in excluding the declaration.\textsuperscript{246}

Likewise, the court deferentially reviews decisions by district courts to admit evidence of questionable probative value. In \textit{Winner International Royalty Corp. v. Wang},\textsuperscript{247} the court found that the district court had not abused its discretion in allowing Winner to introduce evidence from allegedly late-disclosed witnesses and a survey regarding the commercial success of the patented invention.\textsuperscript{248} The Federal Circuit held that Wang’s failure to identify precisely which witnesses were purportedly disclosed late\textsuperscript{249} and its incorrect argument that the survey was relevant demonstrated that the district court’s decision was within its sound discretion.\textsuperscript{250} Similarly, in \textit{Fiskars, Inc. v. Hunt Manufacturing Co.},\textsuperscript{251} the court upheld the district court’s refusal to strike Fiskars’ damages case for failure to disclose certain sales information.\textsuperscript{252} The district court ruled that Hunt’s argument was suspicious because Hunt had declined the court’s offer to exclude the same sales information prior to trial and could not after trial “attack an evidentiary ruling it requested.”\textsuperscript{253} The Federal Circuit held that such a ruling was within the district court’s discretion.\textsuperscript{254}

\textbf{15. Trial practice/expert testimony}

Expert testimony is admissible in patent cases for a variety of purposes.\textsuperscript{255} It is particularly common with regard to issues of patent infringement and is frequently offered to oppose summary judgment.\textsuperscript{256} In \textit{Arthur A. Collins, Inc. v. Northern Telecom Ltd.},\textsuperscript{257} the court held that an expert’s unsupported conclusion of infringement

\footnotesize{245. See \textit{id.}, 55 U.S.P.Q.2d (BNA) at 1008.  
246. \textit{Id.}, 55 U.S.P.Q.2d (BNA) at 1008.  
249. See \textit{id.} at 1351, 53 U.S.P.Q.2d (BNA) at 1589.  
250. See \textit{id.} at 1351-52, 53 U.S.P.Q.2d (BNA) at 1589.  
252. See \textit{Fiskars}, 221 F.3d at 1325, 55 U.S.P.Q.2d (BNA) at 1575.  
255. See \textit{Aqua-Aerobic Sys., Inc. v. Aerators, Inc.}, 211 F.3d 1241, 1244 n.3, 54 U.S.P.Q.2d (BNA) 1567, 1568 n.3 (Fed. Cir. 2000) (“If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.”) (quoting \textit{Fed. R. Evid.} 702).  
256. For a detailed discussion of the role of extrinsic evidence in claim construction, see \textit{infra} Part IIIA.  
257. 216 F.3d 1042, 55 U.S.P.Q.2d (BNA) 1143 (Fed. Cir. 2000).}
did not defeat summary judgment of noninfringement.\textsuperscript{258} There, Collins proffered an expert declaration that purported to generate genuine issues of material fact regarding the structures of the accused products: the patent required “TST switches” and the expert declared that the accused products were TST switches.\textsuperscript{259} The court noted that this was an unsupported declaration and explained that “an expert’s unsupported conclusion on the ultimate issue of infringement is insufficient to raise a genuine issue of material fact.”\textsuperscript{260} Hence, the court affirmed the district court’s summary judgment of noninfringement.\textsuperscript{261}  

In the proper circumstances, however, expert testimony can preclude summary judgment. In \textit{Optical Disc Corp. v. Del Mar Avionics}, the court relied upon an expert declaration and report to vacate and remand the district court’s determination of noninfringement under the doctrine of equivalents.\textsuperscript{262} The expert’s submissions there contained a “detailed” factual analysis of the patent claims and the accused device and concluded that there was infringement.\textsuperscript{263} The Federal Circuit noted that “[n]o evidence was offered by Del Mar in rebuttal,” and concluded that a reasonable factfinder could find infringement under the doctrine of equivalents based on Optical Disc’s expert submissions.\textsuperscript{264}  

These cases demonstrate that expert testimony can, in the proper circumstances, defeat motions for summary judgment. If the testimony is factually specific, it can, as in \textit{Optical Disc}, demonstrate a genuine issue for trial. If, however, the testimony is conclusory, it will fail to prevent summary judgment.

\textbf{16. Trial practice/management of discovery}  

In \textit{Moore U.S.A., Inc. v. Standard Register Co.}, the Federal Circuit noted that “[i]nterruptions into a district court’s trial management are rarely appropriate on appeal.”\textsuperscript{265} There, the court affirmed the

\textsuperscript{258} See Arthur A. Collins, 216 F.3d at 1046, 55 U.S.P.Q.2d (BNA) at 1146 (maintaining that Collins relied on an unsupported expert declaration in opposing summary judgment and failed to set forth specific facts sufficient to demonstrate a basis for the claim).

\textsuperscript{259} Id. at 1045-46, 55 U.S.P.Q.2d (BNA) at 1146.


\textsuperscript{261} See id. at 1047-48, 55 U.S.P.Q.2d (BNA) at 1147-48.

\textsuperscript{262} 208 F.3d 1324, 54 U.S.P.Q.2d (BNA) at 1289 (Fed. Cir. 2000).

\textsuperscript{263} See Optical Disc, 208 F.3d at 1396, 54 U.S.P.Q.2d (BNA) at 1296-99.

\textsuperscript{264} See id., 54 U.S.P.Q.2d (BNA) at 1296.

\textsuperscript{265} Id., 54 U.S.P.Q.2d (BNA) at 1296-97.

\textsuperscript{266} 229 F.3d 1091, 56 U.S.P.Q.2d (BNA) at 1225 (Fed. Cir. 2000).

\textsuperscript{267} Moore U.S.A., 229 F.3d at 1116, 56 U.S.P.Q.2d (BNA) at 1243.
district court’s grant of summary judgment of noninfringement and refusal to permit Moore to conduct additional discovery in the hopes of averting summary judgment. In response to Standard’s motions for summary judgment, Moore had filed declarations under Federal Rule of Civil Procedure 56(f), stating that it required additional discovery to respond adequately to those motions. The district court had refused Moore’s request, stating that it would not permit Moore “to conduct ‘fishing expeditions in hopes of finding products that might be infringing’ to oppose summary judgment.” The Federal Circuit affirmed, reasoning that Moore’s Rule 56(f) declarations did not indicate how additional discovery would create a genuine issue of material fact regarding infringement and did not contest Standard’s claim that Moore had been allowed to inspect all the accused products at Standard’s headquarters. The court concluded that the “district court here should be applauded for his expedient handling of this case” and rejected Moore’s claim that the district court’s grant of summary judgment should be overturned.

17. Trial practice/privilege issues

In 2000, the Federal Circuit addressed important issues regarding the attorney-client privilege and its application to patent documents. In In re Spalding Sports Worldwide, Inc., the court analyzed a petition for mandamus to hold that the attorney-client privilege applied to protect from discovery an “invention record prepared and submitted to house counsel relating to a litigated patent.” The court began by holding that Federal Circuit law would apply because the decision “whether particular written or other materials are discoverable in a patent case . . . relate[s] to an issue of substantive patent law.” Next, the court noted that the attorney-client privilege “exists to

268. See id. at 1115-16, 56 U.S.P.Q.2d (BNA) at 1242-43.
269. Fed. R. Civ. P. 56(f) provides:

WHEN AFFIDAVITS ARE UNAVAILABLE. Should it appear from the affidavits of a party opposing the motion [for summary judgment] that the party cannot for reasons stated present by affidavit facts essential to justify the party’s opposition, the court may refuse the application for judgment or may order a continuance to permit affidavits to be obtained or depositions to be taken or discovery to be had or may make such other order as is just.

270. See Moore U.S.A., 229 F.3d at 1115, 56 U.S.P.Q.2d (BNA) at 1242.
271. Id. at 1116, 56 U.S.P.Q.2d (BNA) at 1242 (internal citation omitted).
272. Id. at 1116, 56 U.S.P.Q.2d (BNA) at 1243.
276. Id., 53 U.S.P.Q.2d (BNA) at 1750 (citing Midwest Indus., Inc. v. Karavan, 175 F.3d 1356, 1359, 50 U.S.P.Q.2d (BNA) 1672, 1675 (Fed. Cir. 1999) (en banc in relevant part)).
protect not only the giving of professional advice to those who can act on it, but also the giving of information to the lawyer to enable him to give sound and informed advice. Because the “invention record” at issue was compiled for and submitted to Spalding’s patent counsel “for the purpose of making patentability determinations,” the court held that the record “constitute[d] a privileged communication.” In response to Wilson’s contention that the technical portions of the invention record should be disclosed in redacted form, the court also held that:

to the extent that Spalding’s invention record may contain technical information, or refer to prior art, the inclusion of such information does not render the document discoverable, because requests for legal advice on patentability or for legal services in preparing a patent application necessarily require the evaluation of technical information such as prior art.

Having ruled that the attorney-client privilege applied, the court subsequently determined that the “crime-fraud exception” to the privilege did not apply. The court explained that “[t]o invoke the crime-fraud exception, a party challenging the attorney-client privilege must make a prima facie showing that the communication was made ‘in furtherance of’ a crime or fraud.” Wilson argued that its allegations of “inequitable conduct”—that Spalding had purportedly made a misrepresentation to the Patent and Trademark Office by failing to cite a relevant prior art reference—satisfied this standard for invocation of the crime-fraud exception. The court disagreed, holding that Spalding’s alleged misrepresentation, while it might demonstrate inequitable conduct, did not rise to the higher level of fraud necessary to invoke the crime-fraud exception because Wilson had failed to provide any evidence of “fraudulent intent.” Accordingly, the court granted a writ of mandamus vacating the order directing the invention record to be produced.

277. Id. at 805, 53 U.S.P.Q.2d (BNA) at 1751 (quoting Upjohn v. United States, 449 U.S. 383, 390 (1981)).
278. Id., 53 U.S.P.Q.2d (BNA) at 1751.
279. Id. at 806, 53 U.S.P.Q.2d (BNA) at 1752.
282. Id. at 807-08, 53 U.S.P.Q.2d (BNA) at 1753.
283. See id. at 808, 53 U.S.P.Q.2d (BNA) at 1753.
284. Id., 53 U.S.P.Q.2d (BNA) at 1753.
18. Sanctions

The year 2000 produced several notable sanctions rulings from the Federal Circuit. In most circumstances, the court is highly deferential to sanctions determinations by district courts and has maintained that “in matters of trial management and attorney discipline, marked deference is owed to the discretionary rulings of the judge conducting the trial.” The court will not disturb such rulings “absent a clear abuse of the trial judge’s discretion.” Thus, in Fiskars, Inc. v. Hunt Manufacturing Co., the court affirmed the district court’s award of attorneys’ fees as a sanction against Hunt for advancing a frivolous inequitable conduct claim. The district court had awarded the sanction pursuant to 28 U.S.C. § 1927 for “multiply[ing] the [trial] proceedings . . . unreasonably and vexatiously” because Hunt had charged Fiskars with intentional withholding from the PTO of a prior art citation that Fiskars, in fact, had disclosed “in accordance with the rules of the PTO.”

The Federal Circuit noted that Section 1927 does not require a showing that “the actions were taken in bad faith,” and upheld the district court’s ruling as a legitimate exercise of discretion in light of Hunt’s plain failure to “make out a prima facie case” of inequitable conduct.

In Hoffmann-La Roche, Inc. v. Invamed Inc., the court upheld the district court’s denial of Rule 11 sanctions for an allegedly insufficient pre-filing investigation of a patent infringement claim. In Hoffmann-La Roche, defendants moved for sanctions after a settlement of the case, which had included the dismissal of plaintiffs’ complaint. Defendants urged that Hoffman’s pre-filing inquiry was

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286. Id. at 1328, 55 U.S.P.Q.2d (BNA) at 1577-78 (citing Abbott Labs. v. Brennan, 952 F.2d 1346, 1351, 21 U.S.P.Q.2d (BNA) 1192, 1196 (Fed. Cir. 1991)).
288. See Fiskars, 221 F.3d at 1328, 55 U.S.P.Q.2d (BNA) at 1577-78.
289. 28 U.S.C. § 1927 provides:
Counsel’s liability for excessive costs.
Any attorney or other person admitted to conduct cases in any court of the United States or any Territory thereof who so multiplies the proceedings in any case unreasonably and vexatiously may be required by the court to satisfy personally the excess costs, expenses, and attorneys’ fees reasonably incurred because of such conduct.
290. Fiskars, 221 F.3d at 1328, 55 U.S.P.Q.2d (BNA) at 1577.
293. See Invamed, 213 F.3d at 1363, 54 U.S.P.Q.2d (BNA) at 1849.
294. See id. at 1360-61, 54 U.S.P.Q.2d (BNA) at 1847.
inadequate under Rule 11 because the inquiry did not confirm that defendants had infringed any of Hoffman’s patents. 295 The district court had denied any sanctions, reasoning that, since plaintiffs’ pre-suit investigation resulted in “neither evidence of infringement nor non-infringement,” plaintiffs were permitted, consistent with Rule 11, to “file suit and engage in discovery.” 296 The Federal Circuit affirmed the district court’s ruling, explaining that plaintiffs’ pre-filing inquiry was “extensive,” including chemical analysis of the allegedly infringing drugs, and that “[i]t is difficult to imagine what else” plaintiffs could have done as part of their investigation. 297 Accordingly, the court concluded that the district court had not abused its discretion. 298

But parties will not be able to escape sanctions when they bring infringement claims without performing any claim-construction or written infringement analysis prior to filing suit. In View Engineering, Inc. v. Robotic Vision Systems, Inc., 299 the court upheld a district court’s imposition of Rule 11 sanctions. There, the district court held that Robotic had failed to investigate counterclaims of infringement for six of eight patents at issue in violation of Rule 11 and the court awarded almost one hundred thousand dollars in fees as a “future deterrent” to other attorneys who might consider filing claims without first investigating their merits. 300 The Federal Circuit affirmed, reasoning that Robotic had done very little to investigate its infringement counterclaims. 301 The court noted that Robotic admitted it had no factual basis for those claims, 302 that its attorneys had not performed any claim-construction or written infringement analysis prior to filing suit, 303 and that it had four months after View filed suit to conduct a reasonable inquiry before it filed its counterclaims. 304 The court also rejected Robotic’s primary argument that View’s lack of pre-suit cooperation prevented Robotic from gaining access to the accused devices to make a full infringement assessment, reasoning that View had no duty to permit pre-litigation discovery and had not conducted itself improperly during the

296. Invamed, 213 F.3d at 1362, 54 U.S.P.Q.2d (BNA) at 1848.
297. Id. at 1363-64, 54 U.S.P.Q.2d (BNA) at 1849.
300. See View Eng’g, 208 F.3d at 984, 54 U.S.P.Q.2d (BNA) at 1181.
301. See id. at 984-85, 54 U.S.P.Q.2d (BNA) at 1181-82.
302. See id. at 984, 54 U.S.P.Q.2d (BNA) at 1182.
303. Id., 54 U.S.P.Q.2d (BNA) at 1182.
304. See id. at 986, 54 U.S.P.Q.2d (BNA) at 1183.
The Federal Circuit also analyzed the amount of the sanctions and held that they were reasonable. View had documented over $240,000 in fees and costs incurred in defending against Robotic’s counterclaims. The district court then reduced that amount by roughly $4000 to account for the rates charged by View’s attorneys, which were slightly higher than normal. Because only six of the eight counterclaims were completely baseless, and because a substantial amount of the work was focused on the two non-baseless counterclaims, the district court reduced the sanctions by a further forty percent. Finally, the district court looked at Robotic’s counsel’s ability to pay and reduced the sanctions by another twenty-five percent. The court arrived at a figure just under $100,000. The Federal Circuit concluded that the district court’s analysis had been thorough and proper and affirmed the sanctions amount.

The Federal Circuit’s decision in Advanced Display Systems v. Kent State University, stands as a rare exception to the court’s general deference to sanction determinations by district courts. It also is a truly exceptional case. There, the court reversed a magistrate judge’s denial of a new trial as a sanction for discovery abuse. During discovery in a different (but related) case, counsel for Advanced Display attempted to terminate a deposition that would have been damaging in the Kent case, instructed the court reporter not to make a transcript of the damaging deposition, and ultimately failed to disclose the deposition’s existence during discovery in the Kent case. Counsel also failed to list the deponent in the Kent litigation as a person with knowledge even though he had been

306. See View Eng’g, 208 F.3d at 987-88, 54 U.S.P.Q.2d (BNA) at 1183-85.
307. See id. at 987, 54 U.S.P.Q.2d (BNA) at 1184.
308. See id. at 987-88, 54 U.S.P.Q.2d (BNA) at 1184 (noting the trial court utilized an economic survey published by the American Intellectual Property Law Association to determine what the normal rate for each attorney who worked on the case should have been in reaching its decision to lower the sanctions by $4000).
309. See id. at 988, 54 U.S.P.Q.2d (BNA) at 1184.
310. See id. at 988, 54 U.S.P.Q.2d (BNA) at 1184-85.
311. See View Eng’g, Inc. v. Robotic Vision Sys., Inc., 208 F.3d 981, 988, 54 U.S.P.Q.2d (BNA) 1179, 1184 (Fed. Cir. 2000) (noting the final sanction amount was $97,825.48).
312. See id., 54 U.S.P.Q.2d (BNA) at 1185.
316. See id. at 1288, 54 U.S.P.Q.2d (BNA) at 1684.
317. See id., 54 U.S.P.Q.2d (BNA) at 1684.
318. See id., 54 U.S.P.Q.2d (BNA) at 1684.
directly involved in developing the accused product at issue in Kent.\textsuperscript{319} Moreover, counsel had withheld a damaging photograph as “Attorney Work Product” on the sole basis that an attorney had photocopied the original copy of the photograph.\textsuperscript{320} The magistrate judge had been “deeply concerned” by this conduct, but refused to award the extraordinary remedy of a new trial as a sanction.\textsuperscript{321} The Federal Circuit, however, determined that the conduct “evinced a brazen disregard for the legal process” and constituted “bad faith conduct on the part of [Advanced Display’s] counsel.”\textsuperscript{322} Therefore, the Federal Circuit held:

\begin{quote}
[T]he acts of [Advanced Display’s] counsel strike at the heart of the discovery process, and they deprived Kent of its full measure of a right to a fair trial based upon all the relevant evidence. Accordingly, we reverse the magistrate judge’s denial of a motion for sanctions by granting a new trial.\textsuperscript{325}
\end{quote}

Finally, the court “strongly encourage[d] the magistrate judge to follow through on his desire to review very carefully the conduct of ADS’s counsel and to consider, within his discretion, imposing disciplinary actions and additional sanctions beyond the granting of a new trial.”\textsuperscript{324}

\section*{B. Federal Circuit Practice and Procedure}

While there were many notable decisions in year 2000 concerning Federal Circuit practice and procedure, one significant appellate practice development involving unpublished opinions took place in the Eighth Circuit. In 2000, the Federal Circuit decided several hundred appeals dealing with issues of patent law; of that number, the court issued—by our count—only ninety-two published, “precedential” patent or patent-related opinions.\textsuperscript{325} The remainder were decided by unpublished, “nonprecedential” opinion\textsuperscript{326} or by

\begin{itemize}
\item \textsuperscript{319} Advanced Display Sys. v. Kent State Univ., 212 F.3d 1272, 1288, 54 U.S.P.Q.2d (BNA) 1673, 1684 (Fed. Cir. 2000).
\item \textsuperscript{320} See Advanced Display, 212 F.3d at 1288-89, 54 U.S.P.Q.2d (BNA) at 1684.
\item \textsuperscript{321} See id. at 1288, 54 U.S.P.Q.2d (BNA) at 1684.
\item \textsuperscript{322} Id. at 1289, 54 U.S.P.Q.2d (BNA) at 1684.
\item \textsuperscript{323} Id., 54 U.S.P.Q.2d (BNA) at 1684.
\item \textsuperscript{324} Id., 54 U.S.P.Q.2d (BNA) at 1684.
\item \textsuperscript{325} See Fed. Cir. R. 47.6(a) (“A disposition may be cited as precedent of the court unless it is issued bearing a legend specifically stating that the disposition may not be cited as precedent.”).
\item \textsuperscript{326} See Fed. Cir. R. 47.6(b):
\end{itemize}

\textbf{NONPRECEDENTIAL OPINION OR ORDER.} An opinion or order which is designated as not to be cited as precedent is one unanimously determined by the panel issuing it as not adding significantly to the body of law. Any opinion or order so designated must not be employed or cited as precedent. This rule does not preclude assertion of claim preclusion, issue preclusion,
summary affirmance. In a highly publicized but now vacated opinion, a panel of the United States Court of Appeals for the Eighth Circuit in United States v. Anastasoff declared that court’s rule regarding reliance on not-for-publication opinions to be unconstitutional, based on a historical evaluation of Article III and the original understanding of what “precedent” is: “8th Circuit Rule 28A(i), insofar as it would allow us to avoid the precedential effect of our prior decisions, purports to expand the judicial power beyond the bounds of Article III, and is therefore unconstitutional.” What is potentially remarkable for purposes of future Federal Circuit practice is the fact that the Federal Circuit’s rule on not-for-publication opinions is mandatory and thus even more restrictive than the Eighth Circuit’s formerly unconstitutional rule, which was merely hortatory. While the panel opinion in Anastasoff was later vacated by the Eighth Circuit en banc without consideration of that issue, a panel of the Ninth Circuit nonetheless took a recent opportunity to attack that panel decision, and the Anastasoff panel

judicial estoppel, law of the case, or the like based on a decision of the court designated as nonprecedential.

327. See Fed. Cir. R. 36 (stating that the Court of Appeals may issue a summary affirmance when the case has no precedential value and one of the following conditions applies: the judgment, order, or decision below was not clearly erroneous; there is sufficient evidence to support the jury’s findings; summary judgment, judgment on the pleadings, or directed verdict is supported by the record; the statute authorizing a review of an agency decision supports affirmance; or there has been no error of law in entering the judgment or decision).

328. 223 F.3d 898 (8th Cir.), vacated, 235 F.3d 1054 (8th Cir. 2000) (en banc).

329. Anastasoff, 223 F.3d at 900.

330. Compare Fed. Cir. R. 47.6(b) (“Any opinion or order so designated must not be employed or cited as precedent.”) (emphasis added), with 8th Cir. R. 27A(i) (“Unpublished opinions are not precedent and parties generally should not cite them.”) (emphasis added).

331. See Hart v. Massanari, ___ F.3d ___, 2001 WL 1111647, *15 (9th Cir. Sept. 24, 2001). Writing for a unanimous panel in Massanari, Judge Kozinski stated:

Unlike the Anastasoff court, we are unable to find within Article III of the Constitution a requirement that all case dispositions and orders issued by appellate courts be binding authority. On the contrary, we believe that an inherent aspect of our function as Article III judges is managing precedent to develop a coherent body of circuit law to govern litigation in our court and the other courts of this circuit. We agree with Anastasoff that we—and all courts—must follow the law. But we do not think that this means we must also make binding law every time we issue a merits decision. The common law has long recognized that certain types of cases do not deserve to be authorities, and that one important aspect of the judicial function is separating the cases that should be precedent from those that should not. Without clearer guidance than that offered in Anastasoff, we see no constitutional basis for abdicating this important aspect of our judicial responsibility.

Id. at *15.
decision has already been the subject of scholarly criticism. Nevertheless, the first Anastasoff opinion and its reasoning remain available for whatever persuasive value they might have in future cases. Given the Federal Circuit’s extensive reliance on unpublished dispositions, we would not be at all surprised to discover that the issue is already percolating in a case now pending in the Federal Circuit. Indeed, already in year 2001, the Federal Circuit has made the very important determination—that the court’s en banc holdings in Festo Corp. v. Shoketsu Kinzoku Kabushiki Co., Ltd. regarding patent infringement under the doctrine of equivalents apply retroactively—in the guise of an unpublished opinion.

Other areas in which the Federal Circuit issued significant decisions in the year 2000 regarding appellate practice and procedure are discussed below.

1. Federal Circuit appellate jurisdiction

One of the more complex areas of Federal Circuit procedure is that of the court’s appellate jurisdiction. In the year 2000, the court helped to clarify its jurisdiction to hear patent appeals. Pursuant to statute, the court has jurisdiction to hear appeals “arising under patent law in a district court.” The Supreme Court has made clear that such patent-law jurisdiction extends only to those cases in which a well-pleaded complaint establishes either that federal patent law creates the cause of action or that the plaintiff’s right to relief necessarily depends on resolution of a substantial question of federal patent law, in that patent law is a necessary element of one of the well-pleaded claims.

332. See, e.g., Constitutional Law—Article III Judicial Power—Eighth Circuit Holds that Unpublished Opinions Must Be Accorded Precedential Effect—Anastasoff v. United States, 223 F.3d 898 (8th Cir. 2000), 114 HARV. L. REV. 940, 940-41 (2001) (“Although the policies implemented in Anastasoff are sound—courts should not be able to ignore the body of law they have created—the Eighth Circuit jeopardized the viability of its decision by basing its interpretation of the Constitution on an inadequate historical inquiry.”); Alex Kozinski & Stephen Reinhardt, Please Don’t Cite This! Why We Don’t Allow Citation to Unpublished Dispositions, CAL. LAW, June 2000, at 43 (contending that policy considerations argue against giving unpublished decisions precedential effect).


337. U.S. Valves, 212 F.3d at 1372, 54 U.S.P.Q.2d (BNA) at 1837 (quoting
In *U.S. Valves, Inc. v. Dray*, the Federal Circuit described this standard as a "lenient" one. There, the court held that it had jurisdiction over a patent-licensing dispute because "[t]o show that Dray sold valves in contravention of U.S. Valves’ exclusive rights to such sales, U.S. Valves must show that Dray sold valves that were covered by the licensed patents," a determination which, in turn, required an “interpret[ation]” of the patents and an “[infringe]ment” analysis—obviously issues of patent law. Hence, the court determined that "patent law is a necessary element of U.S. Valves’ breach of contract action." Similarly, in *Helfgott & Karas v. Dickenson*, the court held that it had jurisdiction over an appeal of a challenge to the actions of the Commissioner of the PTO. The court reasoned that the “performance (or lack thereof) of the Commissioner’s duties under the provisions of” the Patent Cooperation Treaty "clearly raise[d] substantial questions under the patent laws.”

A somewhat different question arose in *Nilssen v. Motorola, Inc.* There, the Federal Circuit addressed whether it had jurisdiction over an appeal from an action in which the patent-law claims had been dismissed without prejudice before the district court had rendered its judgment on non-patent claims. In *Nilssen*, Judge Lourie, writing for the majority, held that the dismissal of the patent claims without prejudice had divested the Federal Circuit of jurisdiction. Judge Lourie noted that the complaint “originally contained a well-pleaded


340. *Id.*, 54 U.S.P.Q.2d (BNA) at 1837.

341. *Id.*, 54 U.S.P.Q.2d (BNA) at 1837.


343. *See Helfgott*, 209 F.3d at 1333-35, 54 U.S.P.Q.2d (BNA) at 1428-29 (holding that while the claims raised in this case involved the Administrative Procedure Act, the conduct of the officials involved in the case is ultimately governed by patent law and must be judged by those standards).

344. *Id.* at 1334, 54 U.S.P.Q.2d (BNA) at 1429.


346. *See Nilssen*, 203 F.3d at 783-84, 53 U.S.P.Q.2d (BNA) at 1765-68.

347. *Id.* at 784-85, 53 U.S.P.Q.2d (BNA) at 1767.
claim for patent infringement and that the court’s jurisdiction at that point was based on 28 U.S.C. § 1338.” He also noted that “[j]urisdiction normally attaches at the time of filing based on pleadings.” However, Judge Lourie reasoned, “when the patent claims were dismissed without prejudice under Rule 41(b), the district court’s jurisdiction over the remaining state law claims ceased to be based, either in whole or in part, on § 1338.” Judge Lourie followed the court’s prior ruling in *Gronholz v. Sears, Roebuck & Co.*, in which the court had held that the plaintiff’s voluntary dismissal of his patent claim under Rule 41(a) divested the Federal Circuit of appellate jurisdiction over the case. He concluded that, in the somewhat different context of an involuntary dismissal of a patent claim under Rule 41(b) present in *Nilssen, Gronholz* nonetheless compelled the conclusion that the Federal Circuit had been divested of appellate jurisdiction.

Judge Rader dissented in *Nilssen*. He believed that the “overriding and compelling logic” of *Atari, Inc. v. JS & A Group, Inc.*, should have governed the case. In *Atari*, the court had held as a general matter that “jurisdiction is governed by 28 U.S.C. § 1338 according to the terms of the complaint as originally filed.” Judge Rader argued that *Atari* should have controlled over *Gronholz* for three reasons: (1) *Atari* was an *en banc* pronouncement; (2) *Atari* had dealt more thoroughly with the statutory language and jurisdictional policies at stake such as forum shopping; and (3) *Atari* was procedurally more apposite than *Gronholz* because the latter case involved a voluntary dismissal of claims, whereas *Atari* had involved a separation of claims.
for trial.  

While, as Judge Rader conceded, neither Atari nor Gronholz directly controls the issue, it would appear that Judge Lourie’s position—the court’s holding—is slightly more persuasive. For one, while the court in Atari disclaimed application to circumstances such as those in Nilssen, to the extent it were applicable as Judge Rader contends, the court in Atari emphasized that “[t]he controlling fact here is that the district court’s jurisdiction of the case was and still is based in part on § 1338.” Of course, in Nilssen the district court’s jurisdiction ceased to be based on § 1338 once the patent claims were voluntarily dismissed. For another, forum-shopping concerns would tend to favor the court’s view over Judge Rader’s. Under Judge Rader’s view, a procedurally defective or facially implausible patent claim could be intentionally added to non-patent claims to gain appellate access to the Federal Circuit, for even when such a claim were dismissed without prejudice the appeal would—under Judge Rader’s analysis—be within the Federal Circuit’s jurisdiction. By contrast, under the court’s holding in Nilssen, such a tactic would be foreclosed. Finally, contrary to Judge Rader’s position, the procedural posture of Nilssen would seem to be much closer to that in Gronholz than to that in Atari. The only difference between the disposition of the patent claims in Nilssen and Gronholz is that in Nilssen the district court suggested a dismissal without prejudice to which the plaintiff did not object, whereas in Gronholz, the plaintiff himself moved for voluntary dismissal. In Atari, however, the patent and non-patent claims remained in the same case at all times; while they were separated for trial, the patent claims were never removed from the case entirely—hence the court’s observation there that the district court had retained jurisdiction under Section 1338.

359. See Nilssen, 203 F.3d at 795, 53 U.S.P.Q.2d (BNA) at 1768 (Rader, J., dissenting).
360. Id., 53 U.S.P.Q.2d (BNA) at 1768 (Rader, J., dissenting).
361. See Atari, Inc. v. JS & A Group, Inc., 747 F.2d 1422, 1428, 223 U.S.P.Q. (BNA) 1074, 1077-78 (Fed. Cir. 1984) (en banc) (stating that the court explicitly does not “explore” in its opinion any questions regarding jurisdiction not currently before it).
362. Id. at 1429, 223 U.S.P.Q. (BNA) at 1079 (emphasis added).
363. See Nilssen, 203 F.3d at 784, 53 U.S.P.Q.2d (BNA) at 1767 (noting that the plaintiff’s voluntary dismissal left only a single claim that did not concern patent law).
365. See id. at 784, 53 U.S.P.Q.2d (BNA) at 1767.
366. See id. at 783, 53 U.S.P.Q.2d (BNA) at 1766.
2. Appealable orders

Another type of jurisdictional quandary—the question of when a district court order is sufficiently final to permit appeal—was addressed in *Phonometrics v. Hospitality Franchise Systems*. There, *Phonometrics* filed its notice of appeal after the district court dismissed its complaint for failure to state a claim, but before the period to amend expired. The court determined that the dismissal was sufficiently final to permit the appeal. The court first held that the “finality of [a] dismissal” is a “procedural issue not related to patent law” such that regional circuit law applied to that issue. Under Eleventh Circuit law, a party may appeal a dismissal of a complaint in such circumstances after the amendment period has expired, or before the period has expired, “provided the plaintiff stands on his complaint as dismissed.” Consequently, the court held that, based upon that rule, and since the appellee had not identified any prejudice from the filing of the premature notice of appeal, the court did have jurisdiction over the appeal.

The question of whether a district court order was sufficiently final to permit appeal was also addressed, albeit in a somewhat different context, in *CAE Screenplates, Inc. v. Heinrich Fiedler GmbH & Co. KG*. The district court granted partial summary judgment to Fiedler on noninfringement but denied partial summary judgment on patent invalidity. Subsequently, the parties jointly moved for the entry of final judgment by the district court and invited the district court to “make its judgment of non-infringement final and certified under Rule 54(b).” The district court granted the parties’ motion but did not

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370. See *Phonometrics*, 203 F.3d at 792-93, 53 U.S.P.Q.2d (BNA) at 1763-64.
371. See id. at 793, 53 U.S.P.Q.2d (BNA) at 1764.
372. See id., 53 U.S.P.Q.2d (BNA) at 1764.
373. Id., 53 U.S.P.Q.2d (BNA) at 1764 (citing Briehler v. City of Miami, 926 F.2d 1001, 1003 (11th Cir. 1991)).
374. See id., 53 U.S.P.Q.2d (BNA) at 1764.
376. See *CAE Screenplates*, 224 F.3d at 1313, 55 U.S.P.Q.2d (BNA) at 1807-08.
377. Id. at 1313, 55 U.S.P.Q.2d (BNA) at 1807 (noting the district court left one issue remaining for trial). FED. R. CIV. P. 54(b) provides:

When more than one claim for relief is presented in an action, whether as a claim, counterclaim, cross-claim, or third-party claim, or when multiple parties are involved, the court may direct the entry of a final judgment as to one or more but fewer than all of the claims or parties only upon an express determination that there is no just reason for delay and upon an express direction for the entry of judgment. In the absence of such determination and direction, any order or other form of decision, however designated, which adjudicates fewer than all the claims or the rights and liabilities of fewer than all the parties shall not terminate the action as to any of the claims or parties, and the order or other form of decision is subject to
not certify it under Rule 54(b), after which CAE appealed. The Federal Circuit addressed whether it had jurisdiction over the appeal, noting that ordinarily, “[a]n order granting partial summary judgment is not a final appealable order under [the final judgment rule of] section 1291, because it does not dispose of all claims raised,” but that a partial summary judgment ruling can be appealed if the district court makes a proper Rule 54(b) certification. The court then looked to the law of the regional circuit, the Eleventh Circuit, to determine whether the order of judgment, even though not certified under Rule 54(b), was sufficiently final to permit appeal. The court noted that the Eleventh Circuit has held that “there is some flexibility in this [finality] rule in order that justice and the economic termination of litigation may not suffer from an overly strict adherence to formalism.” The court then examined CAE’s statement regarding infringement, which implied that it was conceding infringement of the accused products under the district court’s claim construction, but used contingent language and stated expressly that it was “not an admission that there is no infringement.” The court noted that the statement itself was not sufficiently clear or definite as to concede infringement based on the challenged claim construction, and would itself not have rendered the district court’s judgment appealable. The court stated, however, that “[a]t oral argument, counsel for CAE conceded under questioning that the district court’s claim construction resolved the issue of non-infringement” for all of the accused products. The court held that, because that “concession, although more appropriate had it been made before the district court, appears to satisfy the general purpose of the finality requirement,” the Federal Circuit exercised jurisdiction over the appeal.

The court’s resolution of the jurisdictional issue in CAE is notable. As the court recognized, it is extremely unusual for a partial summary judgment ruling to be held appealable in the absence of a Rule 54(b)
Indeed, Rule 54(b) allows for an appeal from a partial judgment "only upon an express determination" of finality by the district court, which was not made in this case. Thus, CAE cannot be understood as allowing a Rule 54(b) appeal, but instead must be viewed as an application of the final judgment rule on the particular facts of the case. Even so, CAE’s concession at oral argument should have been made much earlier, for example, by stipulation in the district court. Indeed, the court criticized CAE for its use of "non-committal language" in its stipulation in the district court, stating that it is "loath to sanction this type of appellate practice." It is thus most likely that in future cases CAE will be viewed as an application of the final judgment rule under unique circumstances. Nonetheless, CAE could have the perverse effect of encouraging gamesmanship in drafting district court stipulations by providing hope that, should a crafty stipulation ultimately be rejected by the Federal Circuit, the drafter could simply concede the relevant point in the stipulation and suffer no adverse consequence. CAE might also encourage litigants—wrongly—to seek appeals of partial summary judgment rulings without the benefit of a Rule 54(b) certification.

3. Mandamus

“A writ of mandamus may be granted to overturn a district court order ‘only when there has been a clear abuse of discretion or usurpation of judicial authority in the grant or denial of the order.’” To obtain the writ, a petitioner must establish “that its right to issuance of the writ is clear and indisputable, . . . and that it lacks adequate alternative means to obtain the relief sought.” In re Spalding Sports Worldwide, Inc., the court addressed whether mandamus was an appropriate form of relief for a trial court order compelling discovery of an allegedly privileged document. The

386. See id. at 1314, 55 U.S.P.Q.2d (BNA) at 1809.
389. See CAE Screenplates, 224 F.3d at 1316, 55 U.S.P.Q.2d (BNA) at 1809.
390. Id. at 1315, 55 U.S.P.Q.2d (BNA) at 1809 ("The demands placed on the dockets of both this court and those of the federal district courts are severe enough without the added burden created by uncertain concessions made by parties eager for appellate review.").
392. Id. at 804, 53 U.S.P.Q.2d (BNA) at 1750 (quoting In re Regents of the Univ. of Cal., 101 F.3d 1386, 1387, 40 U.S.P.Q.2d (BNA) 1784, 1785 (Fed. Cir. 1996)).
394. See id. at 802, 804-05, 53 U.S.P.Q.2d (BNA) at 1749-51.
court held in *Spalding* that mandamus was an appropriate remedy to prevent the disclosure of a privileged communication, explaining that:

> When a writ of mandamus is sought to prevent the wrongful exposure of privileged communications, the remedy of mandamus is appropriate “because maintenance of the attorney-client privilege up to its proper limits has substantial importance to the administration of justice, and because an appeal after disclosure of the privileged communication is an inadequate remedy.”

Other factors favoring mandamus noted by the court were that the substantive privilege question was an “important issue of first impression” and that “immediate resolution” of the question would avoid the development of discovery practices that could undermine the attorney-client privilege.

4. *Pendent appellate jurisdiction*

In *Helifix Ltd. v. Blok-Lok, Ltd.*, the court addressed the doctrine of pendent appellate jurisdiction. The district court denied Helifix’s request for a preliminary injunction after it granted Blok-Lok’s motion for summary judgment of patent invalidity. While it was undisputed that the Federal Circuit had jurisdiction pursuant to 28 U.S.C. § 1292(c)(1) over the denial of Helifix’s request for a preliminary injunction, Helifix also appealed the adverse summary judgment determination. The court noted that it could exercise “pendent appellate jurisdiction” over the summary judgment determination if the determination were “inextricably intertwined” with the denial of the preliminary injunction. The court held that, because the district court “based its denial of the preliminary injunction request on its summary judgment ruling,” the two decision

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396. *Id.* at 804, 53 U.S.P.Q.2d (BNA) at 1750. For a discussion of the substantive privilege question at issue in *Spalding*, see *supra* notes 274-284 and accompanying text.


399. *See id.* at 1345, 54 U.S.P.Q.2d (BNA) at 1302.

400. *Id.* at 1345, 54 U.S.P.Q.2d (BNA) at 1302-03 (quoting *Clinton v. Jones*, 520 U.S. 681, 707 n.41 (1997)) (finding that review of the cross-appeal was “inextricably intertwined” with Clinton’s appeal and necessary to ensure meaningful review). The court also articulated the standard for pendent appellate jurisdiction as whether the grant of summary judgment was “closely interrelated factually” to the preliminary injunction. *See id.* at 1345, 54 U.S.P.Q.2d (BNA) at 1302-03 (quoting *Gerber Garment Tech., Inc. v. Lectra Sys., Inc.*, 916 F.2d 683, 686, 16 U.S.P.Q.2d (BNA) 1436, 1439 (Fed. Cir. 1990)). The court did not state which of the standards articulated would govern but, through its silence, indicated that meeting the less exacting standard of *Gerber* would be sufficient. *See id.*, 54 U.S.P.Q.2d (BNA) at 1302-03.
were “inextricably intertwined.” Accordingly, the court did exercise pendent appellate jurisdiction over the summary judgment determination.

5. Joinder of parties to appeal

In 2000, the Federal Circuit also addressed the issue of the circumstances under which a party can be joined to an appeal. In Prima Tek II L.L.C. v. A-Roo Co., the court held that Prima Tek II, a licensee that did not possess all substantial rights under certain patents, lacked standing to bring its patent infringement action absent the participation of the patents’ owner. Prima Tek II urged that it should be permitted, under Federal Rule of Appellate Procedure 27 (the general motions rule), to join the owner as an indispensable party to correct standing. The court rejected Prima Tek II’s argument and refused to join the owner to cure the standing deficiency. The court noted that its “authority to join or dismiss a party on appeal ‘should be exercised sparingly.’” The court then reasoned that A-Roo had specifically challenged Prima Tek II’s standing in the district court and that A-Roo would likely be “prejudiced” by the joinder of the owner on appeal because it had been deprived the opportunity to conduct discovery on the patent owner in the district court. Consequently, the court held that “the facts of this case do not warrant exercise of [the] power” to join the owner on appeal.

6. Choice of controlling appellate law

A fairly common, albeit thorny issue of Federal Circuit practice is the choice of controlling appellate law in cases involving procedural and/or non-patent issues. The general rule is that, in reviewing district court judgments in patent cases, the Federal Circuit applies

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401. Id. at 1345, 54 U.S.P.Q.2d (BNA) at 1303.
404. See Prima Tek II, 222 F.3d at 1379-80, 55 U.S.P.Q.2d (BNA) 1746.
405. See id. at 1381, 55 U.S.P.Q.2d (BNA) at 1749 (noting that the licensing agreement did not convey the right to sue and therefore subsequent licencees can possess only what the original licensee had to transfer).
408. Id. at 1381-82, 55 U.S.P.Q.2d (BNA) at 1749 (noting that A-Roo was unable to conduct discovery on the patent owner, Southpac, because Southpac was beyond the reach of the district court).
Federal Circuit law to “patent law issues,” which include “procedural issue[s]” that “pertain to patent law,” but applies “the law of the circuit in which the district court sits” to “nonpatent issues.”

The distinction between patent law and non-patent issues can sometimes be easily drawn. Thus, in *U.S. Valves, Inc. v. Dray*, the court applied Illinois state law to a state breach-of-contract action. But the line between patent and non-patent issues is not always so clear. In *In re Independent Service Organizations Antitrust Litigation*, the court noted that “when reviewing a district court’s judgment involving federal antitrust law,” a non-patent issue, the court applies the law of “the regional circuit in which that district court sits.” However, the court also explained that, for questions such as “whether and to what extent patent law preempts or conflicts with other causes of action,” the court applies Federal Circuit law to fulfill the court’s “obligation of promoting uniformity in the field of patent law.” Thus the court in *Independent Service* held that:

The district court’s grant of summary judgment as to [the] antitrust claims arising from Xerox’s refusal to sell its patented parts is therefore reviewed as a matter of Federal Circuit law, while consideration of the antitrust claim based on Xerox’s refusal to sell or license its copyrighted manuals and software is under Tenth Circuit law.

The line between procedural issues that pertain to patent law and those that do not can also be very difficult to discern. In *In re Spalding Sports Worldwide, Inc.*, the court held that Federal Circuit law

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412. See id. at 1373, 53 U.S.P.Q.2d (BNA) at 1838.


414. *Indep. Serv. Orgs.*, 203 F.3d at 1325, 53 U.S.P.Q.2d (BNA) at 1854 (noting that intellectual property does not confer a privilege to violate antitrust laws, nor do antitrust laws negate a patentee’s right to exclude).


416. *Id.*, 53 U.S.P.Q.2d (BNA) at 1854.
applied to the question of whether the attorney-client privilege applied to an “invention record prepared and submitted to house counsel relating to a litigated patent.” The court reasoned that “a determination of the applicability of the attorney-client privilege to Spalding’s invention record clearly implicates, at the very least, the substantive patent issue of inequitable conduct” because the record “relates to an invention submitted for consideration for possible patent protection.” The court went to great lengths, however, to distinguish a prior ruling which held that regional circuit law did apply to determine whether “communications between a licensor and the attorneys of its licensee were protected by the attorney-client privilege.” Apparently, the key distinction for the court was that the relationship at issue in Spalding was between a patent applicant and the PTO, whereas the relationships at issue in the prior case were merely between “parties to a contract.” While such a distinction may have theoretical merit, as a practical matter, it must have been extremely difficult for the parties to foresee.

7. Waiver of appellate argument

Parties that do not carefully preserve their appellate arguments may be found to have waived those arguments. As a general matter, “absent exceptional circumstances, a party cannot raise on appeal legal issues not raised and considered in the trial forum.” In Southwest Software, Inc. v. Harlequin, Inc., the court found that Harlequin had waived two arguments on appeal for failure to raise them in the district court. First, the court held that Harlequin had “waived” its argument that the patent at issue was invalid due to an on-sale bar under 35 U.S.C. § 102(b) because it had “failed to adequately raise this issue before the district court.” Second, the court concluded that, because Harlequin “did not properly move for [judgment as a matter of law] concerning infringement under [35 U.S.C.] § 271,” it could not challenge the “sufficiency of the

417. In re Spalding Sports Worldwide, Inc., 203 F.3d 800, 803, 53 U.S.P.Q.2d (BNA) 1747, 1749 (Fed. Cir. 2000) (recounting that the district court had held that a showing of inequitable conduct was enough to pierce the attorney-client privilege).
418. Id. at 803-04, 53 U.S.P.Q.2d (BNA) at 1750.
419. Id. at 804, 53 U.S.P.Q.2d (BNA) at 1750.
422. See Southwest Software, 226 F.3d at 1289 n.7, 1290, 56 U.S.P.Q.2d (BNA) at 1167 n.7.
423. See id., 56 U.S.P.Q.2d (BNA) at 1167 n.7.
evidence” underlying the jury’s verdict on that issue. Thus, in both
instances, failure to raise the argument in the district court precluded
assertion of the argument on appeal.

In a somewhat different context, the court in In re Hyatt ruled
that the appellant had failed to preserve an appellate argument in
the trial forum. There, Hyatt argued that the Board of Patent
Appeals and Interferences had erred in its ruling that certain claims
of his patent were invalid as having been anticipated by the prior art.
Hyatt had raised his specific argument with the Board, but only in
a “second request for rehearing on that issue.” The court
examined the regulations applicable to the Board and discerned that
a party is normally entitled only to one request for rehearing on an
issue. Indeed, the Board had rejected Hyatt’s second request for
rehearing on that basis. Therefore, the Federal Circuit held that
Hyatt had not “properly” raised his argument before the Board and,
“[a]s such, he is not entitled to rely on it as a basis for overturning the
Board’s decision.” Thus, Hyatt had waived his argument by failing
to raise it earlier at the required phase of the litigation.

Shortly before publication of this Area Summary, the Federal
Circuit explained how the doctrine of waiver applies in the context of
claim construction. In Interactive Gift Express, Inc. v. Compuserve Inc.,
Compuserve argued that Interactive Gift (“IGE”) had waived any
claim-construction arguments based on portions of the specification
of the patent at issue that were not pointed out to the district court.
The Federal Circuit disagreed, holding that, because IGE’s
arguments did not “change[] the scope” of any of its prior claim-
construction position; rather, the court held, IGE “is not barred . . .
from proffering additional arguments from the specification in
support of its existing claim construction.” The Federal Circuit
explained that the doctrine of waive has been held to “preclude a

424. Id. at 1290, 56 U.S.P.Q.2d (BNA) at 1167.
426. See Hyatt, 211 F.3d at 1373, 54 U.S.P.Q.2d (BNA) at 1667.
427. Id., 54 U.S.P.Q.2d (BNA) at 1667.
428. Id., 54 U.S.P.Q.2d (BNA) at 1667.
429. Id., 54 U.S.P.Q.2d (BNA) at 1667 (stating the appellant may file one request
for rehearing “unless the original decision is so modified by the decision on rehearing
as to become, in effect, a new decision, and the Board of Patent Appeals and
Interferences so states.”) (quoting 37 C.F.R. § 1.197(b) (1997)).
430. See id., 54 U.S.P.Q.2d (BNA) at 1667.
431. In re Hyatt, 211 F.3d 1367, 1373, 54 U.S.P.Q.2d (BNA) 1664, 1667 (Fed. Cir.
2000).
432. See Interactive Gift Express, Inc. v. Compuserve Inc., 256 F.3d 1323, 1346-49,
433. See id. at 1348, 59 U.S.P.Q.2d (BNA) at ___.
434. Id., 59 U.S.P.Q.2d (BNA) at __.
party from adopting a new claim construction on appeal” only when its “new” construction “changed the scope of the claim construction.”

435 The court explained the concerns relating to waiver as:

(1) whether the claim construction and arguments on appeal are consistent with those tendered at trial; (2) whether there is a clear presentation of the issue to be resolved; (3) whether there was an adequate opportunity for response and evidentiary development by the opposing party at trial; and (4) whether there is a record reviewable by the appellate court that is properly crystallized around and responsive to the asserted argument.

436 The court found, however, that “a party’s proffer of additional support from a specification, for an existing claim construction, will not violate these concerns.” 437 Accordingly, the court held that “arguments that are based on a specification in evidence and that are in support of an existing claim construction are not barred by the doctrine of waiver for the sole reason that they were not first presented to the trial court.”

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8. Appellate review/need for clear district court ruling

In the year 2000, the Federal Circuit twice addressed unexplained district court rulings and how the court was to review them. In Southwest Software, Inc. v. Harlequin Inc., the Federal Circuit reversed the district court’s grant of judgment as a matter of law (“JMOL”) on noninfringement of certain claims of the patents at issue because the district court had not adequately justified its ruling. 439 The court explained:

The district court ruled from the bench when it granted Harlequin’s motion for JMOL and did not provide any written opinion, so it is not entirely clear under what reasoning the court granted the motion. In addition, the court did not state at any time its construction of the disputed “mapping means” claim limitation. In short, the record does not reflect any claim construction or analysis by the district court as to the “mapping means” limitation. Under these circumstances, we are unable to

435. Id. at 1346, 59 U.S.P.Q.2d (BNA) at ___.
436. Id. at 1357, 59 U.S.P.Q.2d (BNA) at ___ (citing Finnegan Corp. v. Int’l Trade Comm’n, 180 F.3d 1354, 51 U.S.P.Q.2d (BNA) 1001 (Fed. Cir. 1999) and Sage Prods., Inc. v. Devon Indus., Inc., 126 F.3d 1420, 44 U.S.P.Q.2d (BNA) 1103 (Fed. Cir. 1997)).
437. Interactive Gift Express, 256 F.3d at 1347, 59 U.S.P.Q.2d (BNA) at ___.
438. Id., 59 U.S.P.Q.2d (BNA) at ___.
review the decision of the court on this issue.\textsuperscript{440} Accordingly, the court vacated the district court’s ruling.\textsuperscript{441}

But a district court’s failure to explain its ruling is not always fatal. In\textsuperscript{442}Cultor Corp. v. A.E. Staley Manufacturing Co., the court affirmed the district court’s denial without explanation of Cultor’s motion to amend its complaint.\textsuperscript{445} The court noted that “[o]rdinarily, courts of appeals frown on unexplained exercises of discretion by trial judges.”\textsuperscript{444} However, in Cultor the reason for the trial court’s decision was “apparent”—based on the district court’s claim construction, the proposed amendments to the complaint would have been “futile.”\textsuperscript{445} Therefore, the Federal Circuit held that the district court’s decision would be sustained based upon the “[f]utility” of the requested relief.\textsuperscript{446} Accordingly, the reasoning and outcomes of\textit{Southwest Software} and\textit{Cultor} imply that unexplained district court rulings will not be upheld by the Federal Circuit unless their bases are readily apparent.

9. The record on appeal

Parties are generally not permitted to supplement the record on appeal.\textsuperscript{447} In\textit{Moore U.S.A., Inc. v. Standard Register Co.},\textsuperscript{448} the Federal Circuit refused to permit a party to supplement the record on appeal.\textsuperscript{449} The court noted that the evidence at issue (allegedly showing patent infringement) “had been made available to” Moore during the district court litigation and that Moore had possession of the evidence even before it filed its lawsuit.\textsuperscript{450} Consequently, the court concluded that Moore had offered “no reasonable basis for its failure to produce the preferred evidence at an earlier time,” and held that Moore would not be permitted to supplement the record on appeal with that evidence.\textsuperscript{451}

The ruling in\textit{Moore} stands in contrast to the panel opinion on

\textsuperscript{440} Id., 56 U.S.P.Q.2d (BNA) at 1175.
\textsuperscript{441} See id. at 1298-99, 56 U.S.P.Q.2d (BNA) at 1175 (remanding on the issue of infringement).
\textsuperscript{442} 224 F.3d 1328, 56 U.S.P.Q.2d (BNA) 1208 (Fed. Cir. 2000).
\textsuperscript{443} See Cultor, 224 F.3d at 1332-33, 56 U.S.P.Q.2d (BNA) at 1212.
\textsuperscript{444} Id. at 1333, 56 U.S.P.Q.2d (BNA) at 1212.
\textsuperscript{445} Id., 56 U.S.P.Q.2d (BNA) at 1212.
\textsuperscript{446} Id., 56 U.S.P.Q.2d (BNA) at 1212 (finding no abuse of discretion in a “terse ruling”).
\textsuperscript{448} 229 F.3d 1091, 56 U.S.P.Q.2d (BNA) 1225 (Fed. Cir. 2000).
\textsuperscript{449} See Moore U.S.A., 229 F.3d at 1116, 56 U.S.P.Q.2d (BNA) at 1243.
\textsuperscript{450} Id., 56 U.S.P.Q.2d (BNA) at 1243.
\textsuperscript{451} See id., 56 U.S.P.Q.2d (BNA) at 1243.
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remand from the Supreme Court in Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co. 452 There, the court did permit supplementation of the record on appeal, but only in the rather unusual circumstances of a “GVR” decision by the Supreme Court. 453 As the Festo panel noted, “[a] GVR occurs when intervening developments, or recent developments that [one] ha[s] reason to believe the court below did not fully consider, reveal a reasonable probability that the decision below rests upon a premise that the lower court would reject if given the opportunity for further consideration, and where it appears that such a redetermination may determine the ultimate outcome of the litigation.” 454 Thus, the court explained that, in those unique circumstances, it was appropriate to permit the supplementation of the record on appeal to “improv[e] the fairness and accuracy of judicial outcomes and to full[ly] implemen[t] the GVR.” 455

10. Sanctions for frivolous appeals

In Sparks v. Eastman Kodak Co., 456 the Federal Circuit decided to “comment on the concept of frivolous appeals.” 457 Kodak urged that the court’s disposition of the appeal “without a written opinion” under Federal Circuit Rule 36 justified an award of sanctions. 458 The court emphatically rejected the notion that a summary affirmance is either a necessary or sufficient condition for the imposition of sanctions for a frivolous appeal, stating that “[o]ur legal system is . . . currently biased toward maintaining open courts rather than deterring appeals. It favors the allowance of appeals, even in cases having little chance for success, without subjecting appellants to an undue risk of damages for a frivolous appeal.” 459 Therefore, the court identified two categories of appeals that would be considered frivolous:

First, an appeal is considered “frivolous as filed” when an appellant has raised issues that are beyond the reasonable contemplation of fair-minded people, and “no basis for reversal in law or fact can be or is even arguably shown” . . . [s]econd, an appeal is considered

453. A U.S. Supreme Court order that certiorari is granted, the judgment vacated, and the case remanded. See generally Lawrence v. Chater, 516 U.S. 163 (1996).
454. Festo, 172 F.3d at 1365, 50 U.S.P.Q.2d (BNA) at 1387.
455. See id. at 1374, 50 U.S.P.Q.2d (BNA) at 1387 (quoting Lawrence, 516 U.S. at 167).
457. See Sparks, 230 F.3d at 1345-46, 57 U.S.P.Q.2d (BNA) at 1159.
458. See id. at 1345, 57 U.S.P.Q.2d (BNA) at 1160.
459. Id., 57 U.S.P.Q.2d (BNA) at 1159.
“frivolous as argued” when an appellant has not dealt fairly with the court, has significantly misrepresented the law or facts, or has abused the judicial process by repeatedly litigating the same issue in the same court.\textsuperscript{460} The court held that Sparks’s appeal fell into neither category, explaining that so long as a party identifies what it sees as the district court’s error, it may raise the same claims on appeal that it raised below.\textsuperscript{461} Consequently, the court denied Kodak’s motion for sanctions, explaining that “the doors of the courthouse must remain open for losing appeals as well as winning appeals.”\textsuperscript{462}

C. Review of Decisions of the Board of Patent Appeals and Interferences

The Federal Circuit reviews legal conclusions of the Board “without formal deference,”\textsuperscript{463} and reviews the Board’s findings of fact “for substantial evidence because they are ‘on the record of an agency hearing provided by statute.’”\textsuperscript{464} To review the Board’s rulings, however, the Federal Circuit must have “a clear understanding of the grounds for the decision being reviewed.”\textsuperscript{465} Therefore, in a Board decision, the “[n]ecessary findings must be expressed with sufficient particularity to enable [the] court, without resort to speculation, to understand the reasoning of the Board, and to determine whether it applied the law correctly and whether the evidence supported the underlying and ultimate fact findings.”\textsuperscript{466} Thus, in \textit{In re Hyatt}, the court held that the Board had adequately articulated its ruling that certain claims of Hyatt’s patent were invalid as anticipated by the prior art.\textsuperscript{467} There, the Board “addressed the limitations of each claim,” and while “the Board could have been more expansive,” its analysis was “sufficient to apprize [the Federal Circuit] of the basis on

\begin{footnotesize}
\begin{enumerate}
\item \textit{Id.}, 57 U.S.P.Q.2d (BNA) at 1159-60 (quoting State Indus., Inc. v. Mor-Flo Indus., Inc., 948 F.2d 1573, 1578, 20 U.S.P.Q.2d (BNA) 1758, 1742 (Fed. Cir. 1991)) (internal citations omitted).
\item \textit{Sparks v. Eastman Kodak Co.}, 230 F.3d 1344, 1346, 57 U.S.P.Q.2d (BNA) 1158, 1160 (Fed. Cir. 2000).
\item \textit{In re Baker Hughes}, 215 F.3d at 1300, 55 U.S.P.Q.2d (BNA) at 1151 (quoting \textit{In re Gartside}, 203 F.3d 1305, 1315, 53 U.S.P.Q.2d (BNA) 1769, 1775 (Fed. Cir. 2000)).
\item \textit{In re Hyatt}, 211 F.3d 1367, 1371, 54 U.S.P.Q.2d (BNA) 1664, 1666 (Fed. Cir. 2000) (quoting \textit{Gechter v. Davidson}, 116 F.3d 1454, 1457, 43 U.S.P.Q.2d (BNA) 1030, 1033 (Fed. Cir. 1997)) (explaining that the “central threat of \textit{Gechter} is that the Patent Board must explain sufficiently its rulings in order to facilitate meaningful judicial review”).
\item \textit{Hyatt}, 211 F.3d at 1371, 54 U.S.P.Q.2d (BNA) at 1666 (brackets in original) (quoting \textit{Gechter}, 116 F.3d at 1457, 43 U.S.P.Q.2d (BNA) at 1033).
\item \textit{See id.} at 1371, 54 U.S.P.Q.2d (BNA) at 1667.
\end{enumerate}
\end{footnotesize}
which [it] rejected each of the disputed claims. Accordingly, the court refused to vacate the Board’s decision on the grounds that its ruling had been insufficiently explained. 

Another procedural issue was addressed in Winner International Royalty Corp. v. Wang. There, Wu, a party to an interference proceeding, brought a complaint in district court pursuant to 35 U.S.C. § 146. The court noted that in such appeals, unlike in direct appeals to the Federal Circuit pursuant to 35 U.S.C. § 141, “the parties before the district court are not limited to the evidentiary record before the Board.” On appeal to the Federal Circuit, Wang argued that the district court was not permitted to hear live testimony from witnesses who had already testified before the Board. The Federal Circuit rejected this argument, holding that “[t]he fact that the district court heard live testimony, gave more weight to some witnesses than to others, and came to a different conclusion than that reached by the Board, was not improper.” The court explained that “the admission of live testimony on all matters before the Board in a section 146 action, as in this case, makes a factfinder of the district court and requires a de novo trial.” Consequently, because the district court had conducted a de novo trial and made de novo factual findings, the Federal Circuit held that the district court’s actions had been proper.

468. See id., 54 U.S.P.Q.2d (BNA) at 1666-69 (rejecting the appellant’s argument that the Board failed to address his claims on “an element-by-element and claim-by-claim basis”).
469. See id., 54 U.S.P.Q.2d (BNA) at 1667.
471. Any party . . . dissatisfied with the decision of the Board . . . may have remedy by civil action . . . [i]f there be adverse parties residing in a plurality of districts not embraced within the same state, or . . . residing in a foreign country, the United States District Court for the District of Columbia shall have jurisdiction. Winner Int’l, 202 F.3d at 1345, 53 U.S.P.Q.2d (BNA) at 1584.
472. Id., 53 U.S.P.Q.2d (BNA) at 1584 (quoting 35 U.S.C. § 146 (1994), which states that “the record in the Patent and Trademark Office shall be admitted on motion of either party . . . without prejudice of the right of the parties to take further testimony.”).
473. See id. at 1346, 53 U.S.P.Q.2d (BNA) at 1584 (arguing that the testimony was not dissimilar enough to prior testimony to be allowed).
474. Id., 53 U.S.P.Q.2d (BNA) at 1585.
475. Id. at 1347, 53 U.S.P.Q.2d (BNA) at 1585 (explaining that such review presents the district court with a profound advantage over the patent examiner and the Board).
476. See Winner Int’l Royalty Corp. v. Wang, 202 F.3d 1340, 1347-48, 53 U.S.P.Q.2d (BNA) 1580, 1585 (Fed. Cir. 2000) (noting as well that the district court should “trea[t] the record before the Board when offered by a party ‘as if it was] originally taken and produced in the district court.’”) (quoting 35 U.S.C. § 146). The Federal Circuit’s holding that a de novo trial was appropriate also means, of course, that when it functions as a factfinder, the district court does not apply the “substantial evidence”
D. International Trade Commission Practice and Procedure

The Federal Circuit has jurisdiction over appeals from final determinations of the International Trade Commission ("ITC") and may rule on issues of ITC practice in cases originating in the district courts. In *Texas Instruments, Inc. v. Tessera, Inc.*, the court held that proceedings before the ITC are properly characterized as "litigation." There, the parties had been engaged in a patent licensing dispute involving a license agreement with a "Governing Law" clause providing that "any litigation between the parties relating to this Agreement shall take place in California." Tessera initiated an ITC investigation, charging that Texas Instruments' ("TI") importation of certain devices arguably covered by the license agreement infringed Tessera's patents. Texas Instruments, citing the governing law clause, brought suit in district court in California seeking an injunction to prevent Tessera from participating in the ITC proceeding. The district court denied TI's application for injunctive relief, holding that TI was not likely to succeed on the merits of its claim because "the agreement's governing law clause is limited to "litigation" and that [TI] has not established a likelihood standard of review usually accorded the PTO's findings of fact. See *In re Gartside*, 203 F.3d 1305, 53 U.S.P.Q.2d (BNA) 1769 (Fed. Cir. 2000). For a discussion of the "substantial evidence" standard and its application, see generally infra notes 555-567 and accompanying text.

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478. 231 F.3d 1325, 56 U.S.P.Q.2d (BNA) 1674 (Fed. Cir. 2000). All four of the authors were counsel to Texas Instruments in this case.

479. *See* *Texas Instruments*, 231 F.3d at 1329-32, 56 U.S.P.Q.2d (BNA) at 1678-79.

480. *Id.* at 1327, 56 U.S.P.Q.2d (BNA) at 1675. The clause stated in its entirety is as follows:

**Governing Law.** The Agreement shall be governed, interpreted and construed in accordance with the laws of the State of California as if without regard to its provisions with respect to conflicts of Laws. Both parties shall use their best efforts to resolve by mutual agreement any disputes, controversies, claims or differences which may arise from, under, out of or in connection with this Agreement. If such disputes, controversies, claims or differences cannot be settled between the parties, any litigation relating to this Agreement shall take place in California. The parties hereby consent to personal jurisdiction and venue in the state and federal courts of California.

*Id.* at 1327, 56 U.S.P.Q.2d (BNA) at 1675.

481. *See id.*, 56 U.S.P.Q.2d (BNA) at 1675 (regarding TI's exportation of microchip technology for which negotiation proved fruitless).

482. *See id.*, 56 U.S.P.Q.2d (BNA) at 1675-76 (seeking to enjoin Tessera "from pursuing any disputes, controversies, claims or differences" outside of California).
of proving that [Tessera’s] action before the ITC is litigation. 888

The Federal Circuit reversed, holding that the term “litigation” in
the governing law clause did encompass the ITC proceeding.884 Judge
Rader, writing for the majority, first noted that Federal Circuit
procedural law governed review of the district court’s denial of the
requested preliminary injunction.885 The court then held that
interpretation of the license agreement, pursuant to the governing
law clause, would be governed by California state law.886 Turning to
the merits, the court stated that both Tessera and TI are
“sophisticated corporations with experience in patent licensing,” and
would have been “well aware” of the remedies for alleged patent
infringement, including proceedings in the ITC.887 Judge Rader then
stated that in the relevant field of “patent law . . . ‘litigation’ does not
exclude ITC proceedings under section 337:

Section 337 proceedings are inter partes actions initiated by the
filing of a complaint and including discovery, filing of briefs and
motions, and testimony and arguments at a hearing before an
administrative law judge. See 19 U.S.C. § 337(c). In section 1337
proceedings relevant to patent infringement, the ITC follows Title
35 of the United States Code and the case law of this Court. See 19
U.S.C. § 337(c). In sum, this court has consistently treated section
337 patent infringement proceedings as litigation.888

Judge Rader next explained that, under California law, “[i]n
interpreting contracts, words are given their ‘clear and explicit’
meaning in the field of agreement unless it is clearly shown that the
parties intended a different meaning.”889 The court concluded that
“[t]he governing law clause, therefore requires any litigation between
the parties, including ITC proceedings, to take place in California.
Because ITC actions cannot be brought in California, it follows that

883. See Texas Instruments, 231 F.3d at 1328, 56 U.S.P.Q.2d (BNA) at 1676 (relying
on the definition of “litigation” in Section 391(a) of the California Code of Civil
Procedure, the district court found that the licensing agreement did not extend to
Federal administrative proceedings) (brackets in original).
884. See Texas Instruments, Inc. v. Tessera, Inc., 231 F.3d 1325, 1328-32, 56
U.S.P.Q.2d (BNA) 1674, 1678-79 (Fed. Cir. 2000) (holding that “this court has
consistently treated section 337 patent infringement proceedings as litigation.”).
885. See id. at 1328, 56 U.S.P.Q.2d (BNA) at 1676 (stating that the court “generally
views the grant or denial of a preliminary injunction as a procedural issue not unique
to the exclusive jurisdiction of the Federal Circuit”).
of Tr. of Leland Stanford Jr. Univ., 489 U.S. 468, 474 (1988) as stating, “the
interpretation of private contracts is ordinarily a question of state law”).
887. Id. at 1329-30, 56 U.S.P.Q.2d (BNA) at 1677.
(BNA) 1674, 1678 (Fed. Cir. 2000).
889. Texas Instruments, 231 F.3d at 1331, 56 U.S.P.Q.2d (BNA) at 1679 (citing Cal.
the parties did not agree to the ITC as a forum for litigation. The court also emphasized that the injunction TI sought would not enjoin the ITC proceeding *per se*, but would merely enjoin Tessera’s participation in that proceeding. Accordingly, the court reversed the district court’s ruling and remanded for a determination of whether the other preliminary injunction factors (irreparable harm, balance of hardships, and the public interest) support granting an injunction.

Judge Lourie dissented, conceding that while “[e]veryone familiar with patent litigation knows that ITC proceedings are considered ‘litigation,’” the parties to this license agreement did not intend ITC proceedings to be covered by the governing law clause. Judge Lourie reasoned that the limitation in the clause to “California” referred only to the location of litigation and not to the “type of forum.” Judge Lourie also stated that the injunction, while not enjoining the ITC, “would potentially impede and complicate the Commission’s opportunity to pursue its own statutory duty to investigate possible violations of the Tariff Act” because Tessera could not participate to vigorously advance its case. Finally, Judge Lourie noted that, although contract interpretation is a matter of law, the Federal Circuit should be reluctant to overturn a district court’s denial of an injunction.

In *Nutrinova Nutrition v. International Trade Commission*, the court addressed the standard of review over ITC determinations. The

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490. *See id.*, 56 U.S.P.Q.2d (BNA) at 1679 (re-emphasizing that the court “attributes knowledge of patent law and its language and usages” to both contracting parties).

491. *See id.* at 1332, 56 U.S.P.Q.2d (BNA) at 1680 (explaining that the ITC action could continue with Sharp Corporation and Sharp Electronics Corporation as respondents, but that litigation between TI and Tessera would have to take place in a California court).

492. *See id.*, 56 U.S.P.Q.2d (BNA) at 1680.

493. *See id.* at 1333, 56 U.S.P.Q.2d (BNA) at 1680 (Lourie, J., dissenting) (arguing that as sophisticated parties, had they intended to exclude the ITC as a forum, the parties would have explicitly said so).

494. Texas Instruments, Inc. v. Tessera, Inc., 231 F.3d 1325, 1333, 56 U.S.P.Q.2d (BNA) 1674, 1680 (Fed. Cir. 2000) (Lourie, J., dissenting) (reasoning that the governing law clause was a geographical limitation, i.e., Texas or Delaware, and did not apply to the type of court).

495. Texas Instruments, 231 F.3d at 1333, 56 U.S.P.Q.2d (BNA) at 1681 (Lourie, J., dissenting) (asserting that while TI could assist Sharp in ITC proceedings, Tessera would have effectively “one hand tied behind its back”).

496. *See id.*, 56 U.S.P.Q.2d (BNA) at 1681 (Lourie, J., dissenting) (implying that the majority had not adhered to the standard that denials of injunction be reviewed for “abuse[s] of discretion”).


court rejected Nutrinova’s invitation to overturn the ITC’s fact findings, noting that the standard of review is “whether substantial evidence in the record supports the agency’s findings”; thus, the court will not “reweigh the evidence and reexamine the credibility of the witnesses.”

Accordingly, because substantial evidence supported the ALJ’s determination that the burden-shifting provisions of 35 U.S.C. § 295 did not apply, the Federal Circuit affirmed that determination.

The substantial evidence standard is marginally different from the “clearly erroneous” standard that governs appellate review of district court factual findings: the substantial evidence standard is “highly deferential” and can be satisfied by showing “a rational connection exists between an agency’s factfindings and its ultimate action,” while the clearly erroneous standard has been described by the Supreme Court as “somewhat” less deferential, requiring the reviewing judge to have a “definite and firm conviction” that an error has been committed. However, in practice, the difference between the two standards is “subtle” and highly unlikely to be outcome dispositive. That is because of the “similarity of the reviewing task, which requires judges to apply logic and experience to an evidentiary record, whether that record was made in a court or by an agency.

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499. Id. at 1359, 55 U.S.P.Q.2d (BNA) at 1953 (declining to extend appellate review even where the appellate body “might have found some of the facts differently... or drawn some inferences... differently”).


In actions alleging infringement of a process patent by virtue of the importation, sale, offer for sale or use of a product made from that process (so-called “product by process” infringement), the product shall be “presumed” to have been made by that process if the court finds (1) “that a substantial likelihood exists that the product was made by the patented process,” and (2) “that the plaintiff has made a reasonable effort to determine the process actually used in the production of the product and was unable so to determine.


502. In re Gartside, 203 F.3d 1305, 1312-13, 53 U.S.P.Q.2d (BNA) 1769 (Fed. Cir. 2000); see also Dickinson v. Zurko, 527 U.S. 150, 162 (1999) (describing the substantial evidence standard “as requiring a court to ask whether a ‘reasonable mind might accept’ a particular evidentiary record as ‘adequate to support a conclusion.’”) (citation omitted).


504. Id. at 162-63 (asserting that the difference is one “so fine that... we have failed to uncover a single instance” where the application of the other standard would have been outcome determinative).

505. Id. at 163 (opining that this subtle difference also may reflect the difficulties of capturing intangible factors in judicial decision-making, or the weight accorded to agency expertise, or other more influential factors than the standard of review).
Accordingly, it is quite unlikely that the somewhat more deferential standard by which the Federal Circuit reviews ITC factual findings than by which it reviews district court factual findings would be outcome determinative in any given case.

E. Interference Proceedings

An interference is a proceeding in the PTO or a district court to determine the priority of inventorship when two or more parties have claimed the same patentable invention. The Federal Circuit has jurisdiction over appeals from interference proceedings. In the year 2000, the Federal Circuit addressed both jurisdictional issues regarding interference proceedings and substantive issues of priority of inventorship.

In In re Gartside, the court examined whether the Board of Patent Appeals and Interferences has jurisdiction to continue an interference proceeding to determine whether the patentability of a party’s claims after the other party asserting priority has withdrawn from the proceeding. Initially, Gartside provoked an interference proceeding by copying claims from an existing patent held by Forgac, and arguing that its application should be granted priority over Forgac’s patent. After substantial proceedings before an Administrative Patent Judge (“APJ”), Forgac withdrew from the proceeding and authorized the APJ to cancel certain claims from his

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506. See, e.g., 35 U.S.C. § 291 (1988) (stating that “[t]he owner of an interfering patent may have relief against the owner of another by civil action”); id. § 135(a) (providing that “[w]henever an application is made for a patent which, in the opinion of the Commissioner, would interfere with any pending application, or with any unexpired patent, an interference may be declared”); In re Gartside, 203 F.3d 1305, 1308 n.1, 53 U.S.P.Q.2d (BNA) 1769, 1770 n.1 (Fed. Cir. 2000) (“An interference is a proceeding instituted in the Patent and Trademark Office before the Board to determine any question of patentability and priority of invention between two or more parties claiming the same patentable invention . . . . An interference may be declared between one or more unexpired patents naming different inventors when, in the opinion of an examiner, any application and any unexpired patent contain claims for the same patentable invention.”) (quoting 37 C.F.R. § 1.601(i) (1999)).


509. See Gartside, 203 F.3d at 1316-18, 53 U.S.P.Q.2d (BNA) at 1776-78.

510. See id. at 1308-09, 53 U.S.P.Q.2d (BNA) at 1770-71 (noting that the claims that Gartside copied all pertained to catalytic cracking processes, whereby low-weight, purified hydrocarbons are created through the breaking down of feed oil). Even though Gartside copied the claims, the judge designated Gartside the “senior party” in the interference proceedings since Gartside filed the patent application prior to Forgac. See id., 53 U.S.P.Q.2d (BNA) at 1770-71.
The APJ held that despite Forgac’s withdrawal, the interference should proceed to determine the patentability of Gartside’s claims, and ultimately held that many of those claims were unpatentable. On appeal, the Board held that the APJ had properly retained jurisdiction over the patentability issues raised in the interference because those issues had been fairly raised and fully developed in the earlier proceedings.

On appeal to the Federal Circuit, the court affirmed the Board’s conclusion that the APJ had properly retained jurisdiction. The court first noted that it reviewed de novo the Board’s jurisdiction. The court then emphasized that, pursuant to statute, when an interference is declared, it is imperative that the Board of Patent Appeals and Interferences decide issues of priority, but that the panel must resolve questions of patentability. The court has interpreted this language to mean that “the Board should decide issues relating to priority and patentability that are fairly raised and fully developed during the interference . . . .” The court then explained that in a prior case, Guinn v. Kofy, it had held that the Board should decide priority issues that have been fairly raised and fully developed, even when a party attempts to terminate the interference and disclaim priority of inventorship. Based on this precedent, the Federal Circuit held in Gartside that “Forgac’s withdrawal did not divest the

511. See id. at 1309-10, 53 U.S.P.Q.2d (BNA) at 1771-72 (indicating that prior to Forgac’s withdrawal, both parties requested a final hearing after the APJ ruled that certain claims were unpatentable, and the parties’ responses to the judge’s reconsideration were unpersuasive).

512. See id. at 1310-11, 53 U.S.P.Q.2d (BNA) at 1772 (determining that Gartside’s claims had been fairly developed and should be resolved in the name of public interest) (citing Perkins v. Kwon, 886 F.2d 325, 12 U.S.P.Q.2d (BNA) 1308 (Fed. Cir. 1989)).

513. See id., 53 U.S.P.Q.2d (BNA) at 1772 (holding that the APJ did not abuse his discretion in declaring that Gartside had failed to demonstrate certain claims were patentably distinct from other claims in dispute).

514. See In re Gartside, 203 F.3d 1305, 1318, 53 U.S.P.Q.2d (BNA) 1769, 1778 (Fed. Cir. 2000) (agreeing that Forgac’s withdrawal did not preclude the APJ from adjudicating the case since the interference had been declared properly prior to the submission of the withdrawal request).

515. See id. at 1315, 53 U.S.P.Q.2d (BNA) at 1775 (noting also, on a related but distinct issue, that the court reviews for an abuse of discretion “the Board’s decision to resolve issues of patentability that were not placed in issue by the parties during the interference . . . .”).

516. Id. at 1316, 53 U.S.P.Q.2d (BNA) at 1776 (“The Board of Patent Appeals and Interferences shall determine questions of priority and may determine questions of patentability.”) (quoting 35 U.S.C. § 135(a)).

517. Id. at 1316-17, 53 U.S.P.Q.2d (BNA) at 1776 (citing Perkins, 886 F.2d at 328-30, 12 U.S.P.Q.2d (BNA) at 1310-11) (emphasis in original).


Board of jurisdiction over the interference, and that the Board did not abuse its discretion in deciding the patentability of Gartside’s claims.\(^\text{520}\) The Board then explained that the resolution of patentability issues serves the public interest by settling the rights of concern to the public.\(^\text{521}\)

The Federal Circuit also addressed substantive issues relating to the criteria for determining priority of inventorship in the year 2000. To determine priority, the PTO or district court primarily evaluates the parties’ dates of conception\(^\text{522}\) and reduction to practice of the invention.\(^\text{523}\) “A conception must encompass all limitations of the claimed invention, and ‘is complete only when the idea is so clearly defined in the inventor’s mind that only ordinary skill would be necessary to reduce the invention to practice, without extensive research or experimentation.’”\(^\text{524}\) To establish a reduction to practice, a party “must satisfy a two-prong test: (1) the party constructed an embodiment or performed a process that met every element of the interference count, and (2) the embodiment or process operated for its intended purpose.”\(^\text{525}\)

In *Singh v. Brake*, the court examined whether Singh had conceived of the invention at issue—a DNA construct—before January 12, 1983, the date of Brake’s patent application.\(^\text{526}\) The Board held that Singh had failed to prove that he “had formulated a clear and complete picture in his mind” of the invention prior to January 12, 1983, thereby awarding priority to Brake.\(^\text{527}\) However, the Federal Circuit vacated the Board’s decision and remanded for further

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\(^\text{520}\) *Gartside*, 203 F.3d at 1317, 53 U.S.P.Q.2d (BNA) at 1777 (concluding that Forgac’s withdrawal and consequent cancellation of claims were analogous to Guinn’s disclaiming of a claim corresponding to the patent’s count and that the patentability issues in *Forgac* were similar to the priority issues raised in *Guinn*).

\(^\text{521}\) *Id.* at 1318, 53 U.S.P.Q.2d (BNA) at 1777.

\(^\text{522}\) See *Singh v. Brake*, 222 F.3d 1362, 1367, 55 U.S.P.Q.2d (BNA) 1673, 1676 (Fed. Cir. 2000) (“Conception is ‘the formulation in the mind of the inventor[] of a definite and permanent idea of the complete and operative invention, as it is thereafter to be applied in practice.’”) (brackets in original) (quoting Kridl v. McCormick, 105 F.3d 1446, 1449, 41 U.S.P.Q.2d (BNA) 1686, 1689 (Fed. Cir. 1997)).

\(^\text{523}\) *Eaton v. Evans*, 204 F.3d 1094, 1097, 53 U.S.P.Q.2d (BNA) 1696, 1698 (Fed. Cir. 2000) (noting that in a priority determination, the court also may consider “the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other [party]”) (quoting 35 U.S.C. § 102(g) (1994)).

\(^\text{524}\) *Singh*, 222 F.3d at 1367, 55 U.S.P.Q.2d (BNA) at 1676 (quoting Burroughs Wellcome Co. v. Barr Lab., Inc., 40 F.3d 1225, 1228, 32 U.S.P.Q.2d (BNA) 1915, 1919 (Fed. Cir. 1994)).

\(^\text{525}\) *Eaton*, 204 F.3d at 1097, 53 U.S.P.Q.2d (BNA) at 1698.

\(^\text{526}\) *Singh*, 222 F.3d at 1365-66, 55 U.S.P.Q.2d (BNA) at 1674-76.

\(^\text{527}\) *Id.* at 1366, 55 U.S.P.Q.2d (BNA) at 1676 (explaining why the court awarded priority to Blake) (quoting *Singh*, Paper No. 164, 29 (BPAI May 11, 1998)).
In its review of the case, the court focused on a key piece of evidence: Singh’s notebook entry of December 21, 1982, which noted a DNA construct of the same precise length and complementarity needed to complete the experiment to create the construct at issue in the interference. The court concluded that the Board should have considered this notebook entry in determining whether Singh had, in fact, conceived the invention prior to January 12, 1983. Accordingly, the court remanded for consideration of that evidence and a reevaluation of the conception issue.

In *Genentech, Inc. v. Chiron Corp.*, the court examined whether Genentech had reduced its invention—a genetically engineered protein—to practice prior to Chiron’s patent application. The critical issue presented was whether the “fusion protein” created by Genentech scientists had been properly recognized as operating for its intended purpose. The Board held that the tests performed on the protein did not confirm that it functioned for its intended purpose and ruled that Genentech had not reduced the invention to practice before Chiron’s application date. When Genentech challenged the Board’s decision in district court, they submitted new?

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529. See Singh, 222 F.3d at 1368-69, 55 U.S.P.Q.2d (BNA) at 1677-78 (noting that the Board disregarded the case notebook entry contained in a “synthetic DNA” request form as well as a notation next to the order explaining Singh’s intended use for the special DNA despite the fact that they served as important corroborating evidence).
530. See id. at 1369-70, 55 U.S.P.Q.2d (BNA) at 1678 (clarifying the use of notebook entries to corroborate conception and emphasizing that a failure to witness such entries in prompt fashion does not automatically reduce its corroborative value) (citing Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1378, 231 U.S.P.Q. (BNA) 81, 89 (Fed. Cir. 1986)); Mikus v. Wachtel, 542 F.2d 1157, 1161, 191 U.S.P.Q. (BNA) 571, 575 (C.C.P.A. 1976) (holding that notebook entries not witnessed until several months to a year after entry were not incredible nor of little corroborative value).
531. See id., 55 U.S.P.Q.2d (BNA) at 1678.
532. See id. at 1370, 55 U.S.P.Q.2d (BNA) at 1679.
533. See id. at 1345, 55 U.S.P.Q.2d (BNA) 1636 (Fed. Cir. 2000).
534. See *Genentech*, 220 F.3d at 1348-49, 55 U.S.P.Q.2d (BNA) at 1638-39 (noting that since Chiron was the senior party in the proceeding, it was Genentech’s burden to establish that the invention had been reduced to practice before the filing date of Chiron’s application).
535. See id. at 1349-50, 55 U.S.P.Q.2d (BNA) at 1639-40 (explaining that, in general, Genentech must prove a reduction to practice by showing “(1) its inventors had made an embodiment of the count prior to the critical date; (2) that sufficient tests had been conducted prior to the critical date . . .; and (3) that the inventors recognized, prior to the critical date, that the invention worked for its intended purpose.”).
The new evidence included testimony that the test performed on the protein would have indicated to one skilled in the art that the protein worked for its intended purpose. Based upon that evidence, the district court ruled that Genentech had reduced the invention to practice before Chiron’s date of conception, and awarded priority to Genentech.

On appeal, the Federal Circuit reversed, holding that Genentech had not properly reduced the invention to practice before Chiron’s date of conception. The court first noted that the district court had properly considered the reduction to practice issue de novo and heard live testimony on the issue of whether Genentech had established a practical use for the fusion protein. The court explained that it had previously held that reduction to practice does not occur unless testing conducted to prove practical utility is deemed successful by the appropriate parties and emphasized that the record established that the Genentech scientists who had created the fusion protein did not contemporaneously understand that the tests they had performed would have established that the protein worked for its intended purpose. Therefore, the court considered whether the contemporaneous recognition of the significance of the tests performed for Genentech by an outside scientist, Dr. Hintz, would “inure” to Genentech’s benefit. The court held that the findings would not inure to the benefit of Genentech because the Genentech scientists had not known that the tests they had asked Hintz to perform could have established that the protein worked for its

536. See id. at 1349-50, 55 U.S.P.Q.2d (BNA) at 1639.
537. See id. at 1350, 55 U.S.P.Q.2d (BNA) at 1640 (indicating that Genentech’s intended purpose for the fusion protein, use as a growth-promoting therapeutic agent, did relate to the results gleaned from the radioreceptor assay test).
538. See Genentech, Inc. v. Chiron Corp., 220 F.3d 1345, 1350, 55 U.S.P.Q.2d (BNA) 1636, 1640 (Fed. Cir. 2000) (amending its initial judgment, and noting that despite the inventor’s failure to recognize the practical utility of the invention prior to the critical date, the scientist who ran the radioreceptor assay test actually appreciated the results of the test and thereby, through association, the inventors could be held to have reduced the invention to practice).
539. See id. at 1352-54, 55 U.S.P.Q.2d (BNA) at 1640-43.
540. See id. at 1351, 55 U.S.P.Q.2d (BNA) at 1640 (stating that the court heard live testimony from seven experts on whether Genentech had established a practical utility for the fusion protein).
541. See id. at 1352, 55 U.S.P.Q.2d (BNA) at 1642 (“When testing is necessary to establish utility, there must be recognition and appreciation that the tests were successful for reduction to practice to occur.”) (quoting Estee Lauder Inc. v. L’Oreal, S.A., 129 F.3d 588, 594-95, 44 U.S.P.Q.2d (BNA) 1610, 1615 (Fed. Cir. 1997)).
542. See id. at 1352-54, 55 U.S.P.Q.2d (BNA) at 1641-43 (affirming the Board’s initial decision).
543. See id. at 1353, 55 U.S.P.Q.2d (BNA) at 1642 (defining “inurement” as a situation where the inventor benefits from the actions of another individual).
intended purpose. Accordingly, the court concluded that Genentech should not be awarded priority of the invention.

In a similar vein, the court in *Eaton v. Evans* evaluated whether Evans had reduced to practice his invention—an electric memory cell—before Eaton had filed his patent application. The Board held that Evans had reduced the invention to practice because he had performed tests that reasonably established that the invention would operate for its intended purpose. The Federal Circuit, however, reversed, holding that the tests relied upon by the Board might have satisfied the second prong of the test for reduction to practice, which requires that an invention work for its intended purpose. However, Evans failed to satisfy the first prong, which requires the party to have constructed an embodiment, to include each element listed in the interference count. While Evans argued that the device he used was the equivalent of the “sense amplifier” required by the interference count, the court emphasized that “the doctrine of equivalents does not pertain to an interference.” Thus, Evans must have used an actual “sense amplifier” to fulfill the first prong of the test. Consequently, the court vacated the Board’s priority decision and remanded for further analysis.

All three Federal Circuit rulings in the year 2000 addressing the substantive issues of priority in interference proceedings reversed the decisions of the lower tribunals (the Board or the district court).

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544. *See* Genentech, Inc. v. Chiron Corp., 220 F.3d 1345, 1354, 55 U.S.P.Q.2d (BNA) 1636, 1643 (Fed. Cir. 2000) (“Because the inventors did not submit the fusion protein samples to Dr. Hintz for testing for growth-promoting activity, his uncommunicated recognition that the fusion protein has that activity does not inure to their benefit.”).

545. *See id.*, 55 U.S.P.Q.2d (BNA) at 1643 (asserting that the district court erred, and that the Board’s determination should be reinstated).


548. *See id.* at 1098, 53 U.S.P.Q.2d (BNA) at 1698 (concluding that Evans had reduced the invention to practice from testimony given by Evans’ colleague and notes taken in his laboratory notebook).

549. *See id.*, 53 U.S.P.Q.2d (BNA) at 1698 (recognizing that proof of the second prong does not automatically satisfy the first prong).

550. *See id.*, 53 U.S.P.Q.2d (BNA) at 1698 (indicating that Evans did not use a sense amplifier, one of the elements in the count, as part of his single-cell memory circuit).

551. *Id.*, 53 U.S.P.Q.2d (BNA) at 1698.

552. *See id.*, 53 U.S.P.Q.2d (BNA) at 1698 (noting that an oscilloscope or other similar tool could not have been used in place of the amplifier).


554. *See Genentech, Inc. v. Chiron Corp.*, 220 F.3d 1345, 1354, 55 U.S.P.Q.2d (BNA) 1636, 1643 (Fed. Cir. 2000) (finding the district court erred in its holding); Singh v. Brake, 222 F.3d 1362, 1371, 55 U.S.P.Q.2d (BNA) 1673, 1680 (Fed. Cir. 2000) (concluding that the Board erred in denying priority to Singh by failing to address important issues); *Evans*, 204 F.3d at 1096, 53 U.S.P.Q.2d at 1697 (reversing the Board’s holding that the inventor had reduced the invention to practice).
While such a small sample may merely reflect happenstance, one could also conclude that the rules for priority are sufficiently unclear that they have created problems for the lower tribunals on these difficult issues.

F. PTO Practice & Procedure

The Federal Circuit resolved an important issue of PTO practice in In re Gartside. The court held that the “substantial evidence” standard applies to the court’s review of PTO’s findings of fact. The Federal Circuit had previously reviewed factual findings under the “clearly erroneous” standard of review. However, in Dickinson v. Zurko, the Supreme Court held that the Federal Circuit could no longer use that standard and directed the Federal Circuit to select one of the standards of review set forth in the Administrative Procedure Act (“APA”). Thus, the court considered whether the extremely deferential “arbitrary and capricious” standard or the somewhat less deferential “substantial evidence” standard would apply. The Zurko Court noted that the arbitrary and capricious standard is “highly deferential,” can be satisfied by demonstrating a rational connection exists between the agency’s fact findings and the actual result, and becomes the default standard when the substantial evidence standard does not apply. In contrast, the substantial evidence standard reviews the agency’s record as a whole and takes into account the evidence that supports as well as negates an agency’s determination.

556. See Gartside, 203 F.3d at 1315, 53 U.S.P.Q.2d (BNA) at 1775.
557. See id. at 1311, 53 U.S.P.Q.2d (BNA) at 1772-73.
559. See Gartside, 203 F.3d at 1311, 53 U.S.P.Q.2d (BNA) at 1772-73 (quoting 5 U.S.C. § 706 (1994)). The relevant part of the APA is found at 5 U.S.C. § 706, providing that “the reviewing court shall . . . (2) hold unlawful and set aside agency action, findings, and conclusions found to be . . . (A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law, . . . (E) unsupported by substantial evidence in a case subject to Sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided by statute.” Id. at 1311-12, 53 U.S.P.Q.2d (BNA) at 1772-73 (quoting 5 U.S.C. § 706).
560. See id. at 1312, 53 U.S.P.Q.2d (BNA) at 1773 (recognizing that the Supreme Court did not decide which standard is the correct one for PTO findings in Zurko).
561. Id. at 1313-14, 53 U.S.P.Q.2d (BNA) at 1773-74 (citing Hyundai Elec. Indus. Co. v. ITC, 899 F.2d 1204, 1209, 14 U.S.P.Q.2d (BNA) 1396, 1400 (Fed. Cir. 1990) (noting that rationality is the basis for the arbitrary and capricious standard); Assoc. of Data Processing Serv. Orgs., Inc. v. Bd. of Governors of Fed. Reserve Sys., 745 F.2d 677, 683 (D.C. Cir. 1984) (noting the arbitrary and capricious standard applies when all else fails)).
562. See In re Gartside, 203 F.3d 1305, 1312, 53 U.S.P.Q.2d (BNA) 1769, 1773 (Fed. Cir. 2000) (explaining that the substantial evidence standard “involves examination of the [agency’s] record as a whole, taking into account evidence that both justifies and
evidence is more than a mere scintilla. It means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion... Mere uncorroborated hearsay or rumor does not constitute substantial evidence.\footnote{Gartside, 203 F.3d at 1312, 53 U.S.P.Q.2d (BNA) at 1773 (quoting Consol. Edison Co. v. NLRB, 305 U.S. 197, 229-30 (1938)).}

The court found the substantial evidence standard was more appropriate than the arbitrary and capricious standard.\footnote{Id. at 1315, 53 U.S.P.Q.2d (BNA) at 1775.} It noted that the substantial evidence standard usually applies under the APA to review “on the record of an agency hearing provided by statute.”\footnote{Id. at 1313, 53 U.S.P.Q.2d (BNA) at 1774 (quoting 5 U.S.C. § 706(2)(E) (1994)).}

The court then determined that the Federal Circuit plainly reviews PTO factual decisions on the record developed by the Board.\footnote{Id., 53 U.S.P.Q.2d (BNA) at 1774 (“The United States Court of Appeals for the Federal Circuit shall review the decision from which an appeal is taken on the record before the Patent and Trademark Office.”) (quoting 35 U.S.C. § 144 (1994)).}

Accordingly, the court concluded that the substantial evidence standard governs review of PTO factfindings.\footnote{See id., 54 U.S.P.Q.2d (BNA) at 1426-28.}

Another Federal Circuit decision in the year 2000 implicating PTO practice and procedure is Helfgott \& Karas, P.C. v. Dickenson.\footnote{209 F.3d 1328, 54 U.S.P.Q.2d (BNA) 1425 (Fed. Cir. 2000) (addressing questions of jurisdiction and abuse of discretion on part of the PTO).} In Helfgott, the issue was whether the Commissioner had abused his discretion in refusing to grant Helfgott relief from a series of mistakes that had led to the rejection of an international patent application.\footnote{See id., 54 U.S.P.Q.2d (BNA) at 1426.}

In March 1996, Helfgott filed two international patent applications with the PTO—the ‘856 and ‘218 applications.\footnote{See id., 54 U.S.P.Q.2d (BNA) at 1426 (explaining that the Demand is a request for international examination of patentability that must be filed with an international authority such as the PTO in accordance with the provisions of the Patent Cooperation Treaty, which is an international agreement enabling inventors to obtain patents more efficiently).}

Applicants for such a patent have a right to file a “Demand for International Preliminary Examination” to gain an initial evaluation of the patentability of the claimed invention.\footnote{See id., 54 U.S.P.Q.2d (BNA) at 1426.} Thus, in October 1996, Helfgott filed such a Demand for the ‘856 application, but had mistakenly included the application number, filing date, and priority date for the ‘218 application.\footnote{See id., 54 U.S.P.Q.2d (BNA) at 1426.}

The PTO treated the Demand as applying to the ‘218 application and sent an “Invitation to Correct Defects in the Demand,” which contained the reference number for the ‘218 application.
application. Since the ‘218 application had been abandoned, a Helfgott employee deposited the Invitation into the “dead file” of the ‘218 application. Subsequently, the Commissioner sent Helfgott other documents pertaining to the ‘218 application. In September 1997, when Helfgott had still not received documentation regarding the ‘856 application and having discovered the errors on the original Demand, he filed a “Petition for Expedited Action,” requesting that the errors be corrected. The Commissioner dismissed this petition as untimely, so Helfgott requested an examination of the circumstances and a suspension of nonstatutory rules under 37 C.F.R. § 1.183, which permits suspension when justice requires. The Commissioner rejected this request and two other requests for reconsideration. Helfgott then filed suit in district court, challenging the Commissioner’s decision as arbitrary and capricious, and the district court sustained the Commissioner’s positions.

The Federal Circuit reversed, holding that the PTO had contributed to the series of errors and that the Commissioner should have exercised his discretion to rectify the situation. The court emphasized that under the applicable regulations, the Commissioner had discretion to suspend or waive the PTO’s non-statutory requirements, including the time limits it imposed to Helfgott’s detriment. The court further explained that the Commissioner’s position was “wooden,” that the changes to its application requested by Helfgott were “obvious,” and that the PTO had amplified

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573. See id. at 1331, 54 U.S.P.Q.2d (BNA) at 1426-27.
576. See id., 54 U.S.P.Q.2d (BNA) at 1427.
577. See id., 54 U.S.P.Q.2d (BNA) at 1427-28 (noting that Section 1.183 permits the PTO Commissioner to suspend nonstatutory rules when justice requires and the circumstances are extraordinary).
578. See id. at 1332-33, 54 U.S.P.Q.2d (BNA) at 1428 (noting that the Commissioner maintained that it would be inappropriate to correct the errors not only because the preliminary examination had already taken place for the ‘218 application, but also because the errors did not constitute the type of obvious mistakes that are characterized as correctable under the PCT).
579. See id., 54 U.S.P.Q.2d (BNA) at 1428 (upholding the Commissioner’s decisions regarding the untimeliness of Helfgott’s application under 36 C.F.R. § 1.181 as well as the inappropriateness of allowing Helfgott to correct his errors under PCT Rule 91.1).
Helfgott’s errors. Ultimately, the court, noting that substance is more important than form, but attention to detail in all aspects of the patent application process is vital to insure success, held that the Commissioner acted unreasonably by refusing to correct the Demand.

II. PATENTABILITY AND VALIDITY

A. Preliminary Injunction—Validity

For a moving party to obtain a preliminary injunction, that party must establish that “(1) it has a reasonable likelihood of succeeding on the merits; (2) it will suffer irreparable harm if the injunction is not granted; (3) the balance of hardships tips in its favor; and (4) an injunction would be consistent with the public interest.” In Helifix, Ltd. v. Blok-Lok, Ltd., the Federal Circuit considered the patentee’s request to overturn the district court’s denial of a preliminary injunction. The court explained that for the patentee to be successful in overturning the denial, the patentee must demonstrate (1) clear error by the district court on one or more factors, and (2) an abuse of discretion in denying preliminary relief. The Federal Circuit affirmed the denial of the preliminary injunction despite reversing the district court’s summary judgment decision of invalidity, which formed the basis for the district court’s denial of the preliminary injunction. The court held that the patentee had not sufficiently demonstrated a clearly erroneous finding and an abuse of discretion.

The patent holder bears the burden of establishing a likelihood of success on the merits to the patent’s validity when seeking a preliminary injunction. The court in Helifix explained that the presumption of validity created by 35 U.S.C. § 282 does not relieve the patentee of the burden of proving that it will likely succeed at

582. See id. at 1336-37, 54 U.S.P.Q.2d (BNA) at 1430-31 (holding that Helfgott’s errors were synonymous with those described in the PCT and were correctable).
583. See id. at 1330, 54 U.S.P.Q.2d (BNA) at 1426.
584. Id. at 1337, 54 U.S.P.Q.2d (BNA) at 1431.
586. See Helifix, 208 F.3d at 1351, 54 U.S.P.Q.2d (BNA) at 1307.
588. See id. at 1351, 54 U.S.P.Q.2d (BNA) at 1307.
589. See id., 54 U.S.P.Q.2d (BNA) at 1307 (citing Nutrition 21 v. United States, 930 F.2d 867, 869, 18 U.S.P.Q.2d (BNA) 1347, 1349 (Fed. Cir. 1991)).
trial on all matters of disputed liability regardless of whether the issue is patent validity. Where the alleged infringer raises a substantial question concerning validity through an invalidity defense, and the patentee cannot prove the defense lacks substantial merit, the court should not issue a preliminary injunction. Although the Federal Circuit reversed the district court’s summary judgment of invalidity, the court nonetheless stated it could not conclude, based on the record, that the district court abused its discretion in denying the preliminary injunction. Recognizing the summary judgment requirement that the accused infringer must prove by clear and convincing evidence the absence of a genuine issue of material fact, the court still refused to equate that standard with the patentee’s burden at the preliminary injunction stage to show that the invalidity defense lacks substantial merit. The court concluded that the record raised a significant question of patent invalidity even though the district court did not substantiate a granting of summary judgment. Furthermore, in view of the substantial question regarding likelihood of success on the merits of validity, the court did not find error in the district court’s failure to consider the other preliminary injunction factors.

B. Standard of Review—Generic Validity

In Eli Lilly & Co. v. Barr Laboratories, Inc., the Federal Circuit reviewed the district court’s decision on cross-motions for summary judgment that claims of the patent in suit were not invalid for either a failure to comply with the best mode requirement or for double patenting. In its decision, the Federal Circuit repeated the well-known standard under 35 U.S.C. § 282 that patents enjoy a presumption of validity that can be overcome only through clear and

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590. See id., 54 U.S.P.Q.2d (BNA) at 1307 (explaining that the presumption of validity “does not relieve a patentee who moves for a preliminary injunction from carrying the normal burden of demonstrating that it will likely succeed on all disputed liability issues at trial, even when the issue concerns the patent’s validity.”) (quoting New England Braiding 970 F.2d at 882, 23 U.S.P.Q.2d (BNA) at 1625)).


592. See Helix, 208 F.3d at 1351, 54 U.S.P.Q.2d (BNA) at 1307.

593. See id., 54 U.S.P.Q.2d (BNA) at 1307.

594. See id. at 1352, 54 U.S.P.Q.2d (BNA) at 1308.


597. See Eli Lilly, 222 F.3d at 976, 55 U.S.P.Q.2d (BNA) at 1610.
convincing evidence. To invalidate a patent on summary judgment, therefore, the moving party must submit clear and convincing evidence of invalidity to the extent that no reasonable jury could find otherwise. On the other hand, a party seeking to have a patent held not invalid through summary judgment must show that the non-moving party, who bears the burden of proof at trial to show invalidity, "failed to produce clear and convincing evidence on an essential element of a defense upon which a reasonable jury could invalidate the patent." In the context of summary judgment motions, the panel noted that the evidence must be viewed in the light most favorable to the non-moving party.

C. Anticipation

Each of the Federal Circuit's year 2000 cases that addressed anticipation to any significant degree began by stating that anticipation is a question of fact, even when considered on appeal from a rejection in the PTO. Therefore, the Federal Circuit will affirm a trial court's finding regarding anticipation if substantial evidence supports the jury's verdict. When considering an anticipation decision from a bench trial, the Federal Circuit stated it reviews the district court's decision for clear error.

598. See id. at 980, 55 U.S.P.Q.2d (BNA) at 1613 (citing United States Surgical Corp. v. Ethicon, Inc., 105 F.3d 1554, 1563, 41 U.S.P.Q.2d (BNA) 1225, 1232 (Fed. Cir. 1997)).
599. See id., 55 U.S.P.Q.2d (BNA) at 1613.
600. Id. at 980, 55 U.S.P.Q.2d (BNA) at 1613-14.
604. Union Oil, 208 F.3d at 995, 54 U.S.P.Q.2d (BNA) at 1230 ("[T]his court must affirm the district court's denial of judgment as a matter of law."); Advanced Display, 212 F.3d at 1281, 54 U.S.P.Q.2d (BNA) at 1678 (holding that an appellate court may reverse a judgment as a matter of law motion only if substantial evidence does not support the jury's factual findings) (citing Baxter Int'l, Inc. v. McGaw, Inc., 149 F.3d 1321, 1332, 47 U.S.P.Q.2d (BNA) 1225, 1233 (Fed. Cir. 1998)).
however, reviews a district court’s grant of summary judgment of anticipation de novo. 606

Whereas the first step of an anticipation analysis is claim construction, 607 the second step involves a comparison of the construed claim to the prior art. 608 Furthermore, “to be anticipating, a prior art reference must disclose ‘each and every limitation of the claimed invention[,] . . . must be enabling[,] and [must] describe . . . [the] claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention.” 609

The panel in Advanced Display Systems v. Kent State University defined invalidity by anticipation in a slightly different fashion, requiring the prior art document to be so precise in its description of the invention that anyone with average skill in the art can construct the invention without difficulty. 610 True to their word, a great number of the anticipation cases decided by the Federal Circuit expend many pages considering construction of the claims and applying those claim constructions to the facts presented. 611 A recitation of each case and its facts, thus, provides minimal insight into the overall state of the Federal Circuit law. 612 Nevertheless, the decisions warrant an examination of the relevant legal issues and facts.

607. See Helifix, 208 F.3d at 1346, 54 U.S.P.Q.2d (BNA) at 1303; see also Union Oil, 208 F.3d at 995, 54 U.S.P.Q.2d (BNA) at 1251 (“The first step in any invalidity . . . analysis is claim construction.”) (quoting Rockwell Int’l Corp. v. United States, 147 F.3d 1358, 1362, 47 U.S.P.Q.2d (BNA) 1027, 1029 (Fed. Cir. 1998)).
610. See Advanced Display Sys. v. Kent State Univ., 121 F.3d 1272, 1282, 54 U.S.P.Q.2d (BNA) 1678, 1679 (Fed. Cir. 2000) (noting that anticipation requires “that the four corners of a single, prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation.”) (citing Atlas Powder Co. v. Ireco Inc., 190 F.3d 1342, 1347, 51 U.S.P.Q.2d (BNA) 1943, 1947 (Fed. Cir. 1999)); see also In re Paulsen, 30 F.3d 1475, 1479, 31 U.S.P.Q.2d (BNA) 1671, 1673 (Fed. Cir. 1994) (“[T]he reference must be enabling and describe the applicant’s claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention.”).
611. See supra note 607.
612. See generally Union Oil Co. of Cal. v. Atl. Richfield Co., 208 F.3d 989, 994-96, 54 U.S.P.Q.2d (BNA) 1227, 1230-32 (Fed. Cir. 2000) (observing that the Federal Circuit simply reviewed the claim construction as well as the facts applied by the district court to conclude that the alleged references did not anticipate).
In *Helifix*, for example, the Federal Circuit considered whether a brochure anticipated the claims at issue. The parties agreed that the alleged anticipatory reference did not expressly disclose (in words) elements eight through ten of the claim at issue. However, the court acknowledged the possibility of the brochure being anticipatory in the event someone would understand elements eight through ten, as being otherwise disclosed by the brochure, and could construct the invention on his own. The court reversed the district court’s determination of invalidity on this basis because it concluded the district court applied an incorrect standard to determine what constituted a person of ordinary skill in the art. The district court did so by determining which persons working in the field of the invention were likely to be familiar with the relevant literature; the Federal Circuit, however, held that the district court should have also considered other relevant factors in reaching its conclusion. The court held that neither party presented evidence of how such a person of ordinary skill would consider the brochure, which raised a genuine issue of material fact sufficient to overturn the trial court’s summary judgment decision.

Additionally, in *Helifix*, the court explained that a disclosure that is not enabling will not suffice as prior art, despite the claimed

613. *Helifix*, 208 F.3d at 1346-49, 54 U.S.P.Q.2d (BNA) at 1303-05 (stating that the district court did not find error in the claim construction but did find that Blok-Lok failed to provide clear and convincing evidence that the brochure enables a person of ordinary skill in the art to practice the claimed method).

614. See *Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 1346, 54 U.S.P.Q.2d (BNA) 1299, 1304 (Fed. Cir. 2000) (instructing that elements eight through ten refer to the description in the patent for a tool that “impactingly drives the tie and rotably permits the same to rotate”) (quoting U.S. Patent No. 5,687,801 (issued Sept. 27, 1996)).

615. See id., 54 U.S.P.Q.2d (BNA) at 1304 (“The brochure might nevertheless be anticipating if a person of ordinary skill in the art would understand the brochure as disclosing elements (8)-(10) and if such a person could have combined the brochure’s description of the invention with his own knowledge to make the claimed invention.”) (citing *In re Donohue*, 766 F.2d 531, 533, 226 U.S.P.Q. (BNA) 619, 621 (Fed. Cir. 1985)).

616. See id., at 1347, 54 U.S.P.Q.2d (BNA) at 1304 (noting the district court’s assumption that because a person of ordinary skill in the art is aware of relevant prior art, he or she is familiar with the pertinent literature and is likely to attend trade shows).

617. See id., 54 U.S.P.Q.2d (BNA) at 1304 (noting other such relevant factors as “the educational level of the inventor; the type of problems encountered in the art; the prior art solutions to those problems; the rapidity with which innovations are made; the sophistication of the technology; and the educational level of workers in the field.”).

618. See id., 54 U.S.P.Q.2d (BNA) at 1304 (stating that the only evidence relating to the brochure’s meaning is the testimony of an author of the brochure, who is also an inventor of the claimed invention).
invention being disclosed in a printed publication. The court concluded that the accused infringer had failed to provide clear and convincing evidence that the brochure would have enabled a person of ordinary skill to practice the claimed method. The Federal Circuit explained that the accused infringer failed to present any evidence to meet the standard. On the enablement issue, the court concluded that the accused infringer did not present sufficient evidence to demonstrate that the brochure enabled the claimed method; therefore, clear and convincing evidence did not exist to show that the brochure anticipated the patent in suit.

In *Ecolochem*, the court considered whether two articles and a related presentation anticipated the claims at issue. The Federal Circuit reversed the district court’s determination that the articles anticipated, holding that the trial judge had clearly erred by misconstruing the relationship between a figure in the article and the text of the article. Despite its holding that the articles did not anticipate, the court affirmed the district court’s holding of anticipation under 35 U.S.C. § 102(a), based upon the presentation. In affirming this portion of the district court’s decision, the Federal Circuit disagreed with the patentee’s argument that the presentation alone cannot anticipate the asserted patent claims. The court quoted Section 102(a) and explained that “[a] presentation indicative of the state of knowledge and use in this country . . . qualifies as prior art for anticipation purposes under § 102.” In response to the patentee’s argument that the presentation could not qualify as anticipatory prior art because Dr. Martinola, the presenter, could not remember what he had said twelve years earlier, the Federal Circuit said that whether Dr. Martinola remembered correctly was an issue of credibility, and it would review the lower court’s factual determination with

619. See id., 54 U.S.P.Q.2d (BNA) at 1304.
621. See Helifix, 208 F.3d at 1348, 54 U.S.P.Q.2d (BNA) at 1304 (citing *In re Sheppard*, 339 F.2d 238, 242, 144 U.S.P.Q. (BNA) 42, 45 (C.C.P.A. 1964)).
622. See id., at 1349, 54 U.S.P.Q.2d (BNA) at 1305.
624. See *Ecolochem*, 227 F.3d at 1363, 56 U.S.P.Q.2d (BNA) at 1066.
625. See id., 56 U.S.P.Q.2d (BNA) at 1066 (remanding the case for a damages determination because the district court’s findings of willful infringement were unchallenged).
626. See id., at 1369, 56 U.S.P.Q.2d (BNA) at 1071.
627. Id., 56 U.S.P.Q.2d (BNA) at 1071.
deference. The Federal Circuit, however, did not agree that the presentation anticipated all of the claims at issue and reversed the district court’s finding that certain claims were invalid based on the presentation. The Federal Circuit reversed because the evidence regarding the presentation did not demonstrate all claim elements had been discussed at the presentation.

In Advanced Display Sys. v. Kent State Univ., the court considered whether a document, together with a second document that the first one incorporated by reference, could anticipate the claimed invention. The court held that it could, and explained that “[m]aterial not explicitly contained in the single, prior art document may still be considered for purposes of anticipation if that material is incorporated by reference into the document.” The court went on to describe incorporation by reference as a method for integrating material from documents into a host document, and citing such material so as to make clear that the material is effectively part of the host document.

The court stated that the degree and extent of incorporation by reference is a matter of law. Additionally, the Federal Circuit noted that “one reasonably skilled in the art should be used to determine whether the host document describes the material to be incorporated by reference with sufficient particularity.” The court summarized the analysis by stating that a factfinder’s role is to determine whether the claimed invention is described by the single reference while the court is to determine “what material in addition to the host document constitutes the single reference.” The factfinder should “determine whether that single reference describes the claimed invention.” Because the trial judge gave the entire determination

628. *Id.* at 1369-70, 56 U.S.P.Q.2d (BNA) at 1071.
630. See *Id.* at 1370, 56 U.S.P.Q.2d (BNA) at 1071.
632. Advanced Display, 212 F.3d at 1282, 54 U.S.P.Q.2d (BNA) at 1679 (citing Ultradent Prods., Inc. v. Life-Like Cosmetics, Inc., 127 F.3d 1065, 1069, 44 U.S.P.Q.2d (BNA) 1336, 1339-40 (Fed. Cir. 1997)).
633. *Id.*, 54 U.S.P.Q.2d (BNA) at 1679 (explaining that in order to incorporate material by reference, the host document must be specific regarding what material it incorporates and where that material is found in the various documents) (citations omitted).
634. See *id.* at 1283, 54 U.S.P.Q.2d (BNA) at 1680 (citing Quaker City Gear Works, Inc. v. Skil Corp., 747 F.2d 1446, 1453-54, 223 U.S.P.Q. (BNA) 1161, 1166 (Fed. Cir. 1984)).
635. *Id.*, 54 U.S.P.Q.2d (BNA) at 1680.
636. *Id.*, 54 U.S.P.Q.2d (BNA) at 1680.
637. See *id.*, 54 U.S.P.Q.2d (BNA) at 1680 (explaining that anticipation is a
to the jury and did not answer the first question, the Federal Circuit concluded that the trial judge had committed legal error and remanded for a new trial on anticipation.638

In *Apple Computer, Inc. v. Articulate Sys., Inc.*, the court clarified and corrected several aspects of the trial court’s holding that each of the asserted claims was anticipated.640 The patentee argued that the district court’s claim construction caused the patent in suit to read on prior art considered by the examiner during prosecution, and, as a result, the court should interpret the patent more narrowly to avoid that art.641 Although the Federal Circuit agreed that the district court’s interpretation caused the claims to read on the art considered by the examiner, it nevertheless rejected the patentee’s argument aimed at narrowing the construction.642 The court explained that the fact the district court’s construction reads on the prior art of record did not negate the district court’s claim construction or its finding of anticipation; rather, the court held that it provides further evidence that the claimed invention was not novel.643 The *Apple* panel also acknowledged the axiom that a court should ordinarily avoid reading claims such that they would ensnare prior art.644 The court, however, countered with the often-stated response: “[w]here ‘the only claim construction that is consistent with the claim’s language and the written description renders the claim invalid, then the axiom does not apply and the claim is simply invalid.’”645 Finally, the court noted the district court failed to review each claim independently and noted that a patent claim is presumed valid independent of other claims: therefore, a claim dependent on an invalid claim is still valid.646

638. *See* Advanced Display Sys. v. Kent State Univ., 212 F.3d 1272, 1283, 54 U.S.P.Q.2d (BNA) 1678, 1680 (Fed. Cir. 2000) (stating that the district court had a duty to determine whether and to what extent the material was incorporated by reference).


641. *See id.* at 23, 57 U.S.P.Q.2d (BNA) at 1064.


644. *Id.* at 24, 57 U.S.P.Q.2d (BNA) at 1064 (“[C]laims should be read in a way that avoids ensnaring prior art if it is possible to do so.”) (quoting Eastman Kodak Co. v. Goodyear Tire & Rubber Co., 114 F.3d 1547, 1556, 42 U.S.P.Q.2d (BNA) 1737, 1743 (Fed. Cir. 1997)).


646. *Apple Computer*, 234 F.3d at 24, 57 U.S.P.Q.2d (BNA) at 1065.
In *In re Hyatt*, a patent applicant appealed an anticipation rejection of certain claims by the Patent Office. Because this appeal originated from the Patent Office’s Board of Patent Appeals and Interferences, the Federal Circuit undertook an analysis somewhat different than the anticipation analysis arising in enforcement litigation. The court described the analysis in three parts. First, the court reiterated that anticipation is a question of fact. Second, the court explained that it upholds decisions of the Board on factual matters if there is substantial evidence in the record to support the Board’s findings. Third, so long as they are consistent with the specification, claims are given their broadest reasonable interpretation during the examination proceedings. This proposition, the court noted, “serves the public interest by reducing the possibility that claims, finally allowed, will be given broader scope than is justified.”

Relying on the notion that it must apply the claims in their broadest possible way, the court concluded that the Board had correctly rejected the claims on the basis of anticipation and affirmed the decision.

### D. On-Sale Bar

The on-sale bar of 35 U.S.C. § 102(b) is properly considered as a specific subset of anticipation. In *STX, Inc. v. Brine, Inc.*, the court explained the burden of proving an on-sale bar as follows:

[The party challenging validity] must demonstrate by clear and convincing evidence that there was a definite sale or offer to sell more than one year before the application for the subject patent, and that the subject matter of the sale or offer to sell fully anticipated the claimed invention or would have rendered the

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648. *Hyatt*, 211 F.3d at 1369, 54 U.S.P.Q.2d (BNA) at 1665 (stating that the patent office upheld the rejection of several of Mr. Hyatt’s patent application claims).
649. *Id.*, 54 U.S.P.Q.2d (BNA) at 1665.
650. *Id.* at 1371, 54 U.S.P.Q.2d (BNA) at 1667 (citing Bischoff v. Wethered, 76 U.S. (9 Wall.) 812, 814-15, (1869); *In re Schriber*, 128 F.3d 1473, 1477, 44 U.S.P.Q.2d (BNA) 1429, 1451 (Fed. Cir. 1997)).
652. *Id.* at 1372, 54 U.S.P.Q.2d (BNA) at 1667 (citing *In re Graves*, 69 F.3d 1147, 1152, 56 U.S.P.Q.2d (BNA) 1697, 1701 (Fed. Cir. 1995); *In re Etter*, 756 F.2d 852, 858, 225 U.S.P.Q. (BNA) 1, 5 (Fed. Cir. 1985) (*en banc*).
654. *See Hyatt*, 211 F.3d at 1372-3, 54 U.S.P.Q.2d (BNA) at 1668 (noting that although the Board’s interpretation was broad, it was not unreasonable).
claimed invention obvious by its addition to the prior art.\textsuperscript{656}

The Supreme Court recently revised the test to determine whether a patent is invalid based on an on-sale bar in \textit{Pfaff v. Wells Electronics, Inc.}\textsuperscript{657} Under the \textit{Pfaff} test, a claimed invention is considered to be "on sale" within the meaning of Section 102(b) if, more than one year before the filing date to which the claim is entitled (the critical date), two conditions are satisfied.\textsuperscript{658} First, the product must be the subject of a commercial offer for sale more than one year before the subject patent application was filed.\textsuperscript{659} Second, the invention must have also been ready for patenting more than one year prior to the filing of the subject patent application.\textsuperscript{660} This second prong can be satisfied by (1) proof of reduction to practice prior to the critical date, or (2) by proof prior to the critical date, that the inventor had prepared drawings or other descriptions of the invention, and the drawings were sufficiently specific to enable a person skilled in the art to practice the invention.\textsuperscript{661} The overriding concern of the on-sale bar is to protect against an inventor’s “attempt to commercialize his invention beyond the statutory term.”\textsuperscript{662} In \textit{Vanmoor}, the court stated that the determination of whether a product was placed on sale is a question of law, based on underlying facts.\textsuperscript{663}

In \textit{Vanmoor}, the Federal Circuit affirmed the district court’s summary judgment that the invention was on sale prior to the critical date.\textsuperscript{664} The court explained that the facts were not typical of most on-sale bar cases, wherein a “patentee has placed some device on sale prior to the critical date and the accused infringer must demonstrate

\textsuperscript{656} \textit{STX}, 211 F.3d at 590, 54 U.S.P.Q.2d at 1349.

\textsuperscript{657} \textit{525 U.S. 55 (1998)}.


\textsuperscript{660} \textit{See} \textit{Zacharin}, 213 F.3d at 1369, 55 U.S.P.Q.2d (BNA) at 1049; \textit{Vanmoor}, 201 F.3d at 1366, 53 U.S.P.Q.2d (BNA) at 1379 (explaining that the second prong of the \textit{Pfaff} test is a departure from the previous "totality of the circumstances" test).

\textsuperscript{661} \textit{Helifix}, 208 F.3d at 1349, 54 U.S.P.Q.2d (BNA) at 1305; \textit{Vanmoor}, 201 F.3d at 1366, 53 U.S.P.Q.2d (BNA) at 1379; \textit{see also Pfaff}, 525 U.S. at 67-68.


\textsuperscript{663} \textit{See} \textit{Vanmoor}, 201 F.3d at 1366, 53 U.S.P.Q.2d (BNA) at 1379 (explaining that the ultimate determination is reviewed by the court without deference, and subsidiary fact-finding is reviewed for clear error) (citing Ferag AG, 45 F.3d at 1562, 33 U.S.P.Q.2d (BNA) at 1514-15); \textit{see also STX}, 211 F.3d at 590, 54 U.S.P.Q.2d (BNA) at 1349.

\textsuperscript{664} \textit{See} \textit{Vanmoor}, 201 F.3d at 1367, 53 U.S.P.Q.2d (BNA) at 1379-80 (concluding that \textit{Vanmoor} failed to establish a genuine issue of material fact because he proffered no evidence in support of his trade secret misappropriation allegations).
that this device actually embodied or rendered obvious the patented invention.\footnote{665} Rather, in \textit{Vanmoor}, Wal-Mart and the other defendants asserted that they had been selling the actual devices in dispute prior to the critical date.\footnote{666} While the court acknowledged that the defendants bore the burden of proving the products that were the subject of the pre-critical date sales anticipated, the court also noted that the defendants were able to carry that burden based on the patentee’s allegation that the very same products infringed the patent in suit.\footnote{667} The court rejected the patentee’s argument that no evidence had been presented to show the accused products were ready for patenting by noting that the products had been actually reduced to practice, which itself satisfied the second prong of the \textit{Pfaff} test.

In \textit{Zacharin v. United States}, the Federal Circuit also affirmed a finding of invalidity based on an on-sale bar.\footnote{669} The issue in \textit{Zacharin} boiled down to whether the alleged on-sale activity actually constituted a sale; the court held that it did.\footnote{670} Zacharin, the patentee, asserted that the alleged invalidating contract did not constitute a commercial offer to sell because the contract was not a commercial supply contract with fixed unit prices and a definite supply schedule.\footnote{671} Additionally, the patentee asserted the contract was simply an extension of joint work between the inventor and the United States Army for the evaluation of the patented invention.\footnote{672} The court rejected Zacharin’s arguments.

First, the court defined a sale as “a contract between parties to give and pass rights of property for consideration which the buyer pays or promises to pay the seller for the thing bought or sold.”\footnote{674} The facts showed that the contract required a manufacturer to produce 6000 units of the invention, deliver them to the Army and that Mr. Zacharin inspected and accepted the devices for the Army. The court

\footnotesize{\begin{itemize}
\item[666] See id., 53 U.S.P.Q.2d (BNA) at 1379.
\item[667] See id., 53 U.S.P.Q.2d (BNA) at 1379.
\item[668] See id. at 1366-67, 53 U.S.P.Q.2d (BNA) at 1379 (finding that the specification drawings were used to produce the accused cartridges).
\item[669] 213 F.3d 1366, 1372, 55 U.S.P.Q.2d (BNA) 1047, 1051 (Fed. Cir. 2000).
\item[670] See \textit{Zacharin}, 213 F.3d at 1369, 55 U.S.P.Q.2d (BNA) at 1049-50.
\item[671] See id. at 1370, 55 U.S.P.Q.2d (BNA) at 1050.
\item[672] See id., 55 U.S.P.Q.2d (BNA) at 1050.
\item[673] See id., 55 U.S.P.Q.2d (BNA) at 1050.
\item[674] Id., 55 U.S.P.Q.2d (BNA) at 1050 (quoting \textit{In re Caveney}, 761 F.3d 671, 676, 226 U.S.P.Q. (BNA) 1, 4 (Fed. Cir. 1985)).
\end{itemize}
held that this constituted a sale.\textsuperscript{675} The court further noted that Zacharin had disclosed his invention to a third party, the Army, with the hope and expectation that his design would be used; moreover, he placed no restriction on this disclosure.\textsuperscript{676} Finally, the court held that the “fact that the sale in question was made in the context of a research and development contract and that there was no fixed price set for the [invention products] does not suffice to avoid the on-sale bar.”\textsuperscript{677} The fact that the Army used the devices for testing, rather than routine production units also did not avoid the effect of the on-sale bar.\textsuperscript{678} Ultimately, the court concluded that “[a] contract to supply goods is a sales contract, regardless of the means used to calculate payment and regardless of whether the goods are to be used for testing in a laboratory or for deployment in the field.”\textsuperscript{679}

In \textit{STX}, the court also affirmed a district court’s grant of summary judgment of invalidity based on an on-sale bar.\textsuperscript{680} The court succinctly addressed and dismissed each of the patentee’s arguments against invalidity.\textsuperscript{681} First, the court explained that the fact that delivery of the invalidating articles was set for a time after the critical date was of no consequence.\textsuperscript{682} Next, the court rejected the patentee’s assertion that the pre-critical date product did not embody all of the claim limitations because the purposes and objectives stated in the claim’s preamble had not been shown to be present in the early device.\textsuperscript{683} The court responded by explaining that “where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation.”\textsuperscript{684} In this case, the court held, the preamble did not state a limitation, and therefore the patentee could not rely on it to avoid the on-sale bar.\textsuperscript{685} Finally, after reviewing the facts, the court confirmed that the device was ready for

\begin{itemize}
\item \textsuperscript{675} See Zacharin v. United States, 213 F.3d 1366, 1370, 55 U.S.P.Q.2d (BNA) 1047, 1050 (Fed. Cir. 2000).
\item \textsuperscript{676} See \textit{Zacharin}, 213 F.3d at 1370, 55 U.S.P.Q.2d (BNA) at 1050.
\item \textsuperscript{677} \textit{Id.}, 55 U.S.P.Q.2d (BNA) at 1050 (citing \textit{RCA Corp. v. Data Gen. Corp.}, 887 F.2d 1056, 1062-63, 12 U.S.P.Q.2d (BNA) 1449, 1454-55 (Fed. Cir. 1989)).
\item \textsuperscript{678} \textit{Id.}, 55 U.S.P.Q.2d (BNA) at 1050 (citing \textit{Gen. Elec. Co. v. United States}, 634 F.2d 55, 59 & n.6, 211 U.S.P.Q. (BNA) 867, 871 & n.6 (Ct. Cl. 1981)).
\item \textsuperscript{679} \textit{Zacharin}, 213 F.3d at 1370, 55 U.S.P.Q.2d (BNA) at 1050-51.
\item \textsuperscript{680} See \textit{STX, Inc. v. Brine, Inc.}, 211 F.3d 588, 589-90, 54 U.S.P.Q.2d (BNA) 1347, 1348 (Fed. Cir. 2000).
\item \textsuperscript{681} See \textit{STX}, 211 F.3d at 589-90, 54 U.S.P.Q.2d (BNA) at 1348.
\item \textsuperscript{682} See \textit{Id.}, at 590, 54 U.S.P.Q.2d (BNA) at 1349.
\item \textsuperscript{683} \textit{Id.}, 54 U.S.P.Q.2d (BNA) at 1349.
\item \textsuperscript{684} \textit{Id.} at 591, 54 U.S.P.Q.2d (BNA) at 1349 (quoting \textit{Rowe v. Dror}, 112 F.3d 473, 478, 42 U.S.P.Q.2d (BNA) 1550, 1553 (Fed. Cir. 1997)).
\item \textsuperscript{685} See \textit{Id.}, 54 U.S.P.Q.2d (BNA) at 1349 (concluding that the first prong of the \textit{Pfaff} test requiring an offer to sell was satisfied).
\end{itemize}
patenting prior to the critical date, and reiterated that the patentee could not rely on the preamble’s subjective product quality recitations, such as “improved playing and handling,” as an escape hatch to circumvent the bar.\footnote{686}

In the other two year 2000 cases in which the court considered the on-sale issue, the court held that the patents were not invalid by reason of pre-critical date sales. In *Helifix*, the court reversed the trial court’s summary judgment ruling and held that material issues of fact existed relating to both of the *Pfaff* conditions because the evidence of record was not shown to disclose or enable each element of the claimed method.\footnote{687}  And, finally, in *Lampi Corp. v. American Power Products, Inc.*,\footnote{688} the court refused to overturn the trial court’s decision regarding Section 102(b).\footnote{689}  In *Lampi*, the patentee had made statements during the course of trademark prosecution that indicated the claimed product was on-sale prior to the critical date.\footnote{690} The defendant sought to use those statements as admissions of pre-critical date commercial activity.\footnote{691} The district court refused to apply the doctrine of judicial estoppel to those statements based on testimony and other evidence presented at trial.\footnote{692} The Federal Circuit noted that it applies the law of the regional circuit when considering the issue of judicial estoppel,\footnote{693} and in this case the Seventh Circuit provided the trial court with discretion in the application of the doctrine. The Federal Circuit concluded that the record did not support a holding that the district court abused its discretion.\footnote{694}

### E. Obviousness

The Patent Act defines obviousness in Section 103(a):

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been made obvious at the time the invention was

\begin{footnotes}
\footnotetext[688]{See Lampi, 228 F.3d 1365, 56 U.S.P.Q.2d (BNA) 1445 (Fed. Cir. 2000).}
\footnotetext[689]{See id. at 1376, 56 U.S.P.Q.2d (BNA) at 1454.}
\footnotetext[690]{See id. at 1377, 56 U.S.P.Q.2d (BNA) at 1454.}
\footnotetext[691]{See id., 56 U.S.P.Q.2d (BNA) at 1454.}
\footnotetext[692]{See id., at 1376, 56 U.S.P.Q.2d (BNA) at 1454.}
\footnotetext[693]{See id., at 1376, 56 U.S.P.Q.2d (BNA) at 1454.}
\footnotetext[694]{See id., 56 U.S.P.Q.2d (BNA) at 1454 (noting that although the court was troubled by Lampi’s inconsistent statements, the inconsistency alone did not warrant a holding that the district court abused its discretion).}
\end{footnotes}
made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The Federal Circuit has uniformly defined this issue as a question of law based on underlying factual questions. The Federal Circuit reviews obviousness de novo but reviews the underlying factual issues for clear error because the ultimate conclusion of obviousness is a legal conclusion. Furthermore, the court has clarified that, with respect to decisions originating from the patent office, like jury decisions, it reviews the factual record for the presence or absence of substantial evidence. In *In re Baker Hughes, Inc.*, the court also explained that it reviews claim construction decisions made by the patent office de novo, like it reviews district court claim construction decisions. The PTO, however, does not apply the same rules of claim construction as does the district court. Unlike the district court, the PTO reviews claims with the broadest reasonable interpretation consistent with the written description.

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697. See *Winner Int’l*, 202 F.3d at 1348, 53 U.S.P.Q.2d (BNA) at 1586 (observing that this court renews a district court’s determination of obviousness de novo while reviewing the underlying factual inquiries for clear error); *Yamanouchi Pharm. Co. v. Danbury Pharmacal, Inc.*, 231 F.3d 1339, 1343, 56 U.S.P.Q.2d (BNA) 1641, 1643 (Fed. Cir. 2000) (“This court reviews the conclusion on obviousness, a question of law, without deference, and the underlying findings of fact for clear error.”); *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124, 56 U.S.P.Q.2d (BNA) 1456, 1459 (Fed. Cir. 2000) (“This ultimate determination of obviousness is reviewed without deference, while any factual findings are reviewed for clear error.”).
698. See *Upjohn Co. v. MOVA Pharm. Corp.*, 225 F.3d 1306, 1310, 56 U.S.P.Q.2d (BNA) 1286, 1289 (Fed. Cir. 2000) (stating that the underlying factual findings made by a jury on the issue of obviousness are reviewed merely to ascertain whether they are supported by substantial evidence).
699. See *In re Gartside*, 203 F.3d 1305, 1316, 53 U.S.P.Q.2d (BNA) 1769, 1776 (Fed. Cir. 2000) (explaining that the court now reviews the Board’s factual determinations for substantial evidence); *In re Kotzab*, 217 F.3d 1365, 1369, 55 U.S.P.Q.2d (BNA) 1313, 1316 (Fed. Cir. 2000) (recognizing that the Board’s underlying factual findings are reviewed for substantial evidentiary support).
700. See *Baker Hughes*, 215 F.3d at 1301, 55 U.S.P.Q.2d (BNA) at 1152 (comparing the standard of review for claim construction used for reviewing decisions made by the patent office and the district court).
701. See id., 55 U.S.P.Q.2d (BNA) at 1152 (citing *In re Cortright*, 165 F.3d 1459, 1464, 49 U.S.P.Q.2d (BNA) 1464, 1467 (Fed. Cir. 1999)).
The Supreme Court defined the underlying factual questions in *Graham v. John Deere Co.*, to include the following: “(1) the scope and content of the prior art; (2) the level of ordinary skill in the prior art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness.” In *Brown & Williamson*, the court expounded on the statutory standard for a determination of obviousness as “whether the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have a reasonable likelihood of success, viewed in light of the prior art.” The *Brown & Williamson* panel went on to divide the obviousness criterion into two requirements. First, the court emphasized that there must be a showing of a suggestion, teaching, or motivation to combine the prior art references. Second, there must be a “reasonable expectation of success.” Additionally, in *Ruiz*, the court stressed that a district court must make *Graham* findings before invalidating a patent for obviousness and that failure to do so may result in a judgment that

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702. 383 U.S. 1, 17-18 (1966) (stating that several factual inquiries must be satisfied to determine patent validity).

703. *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124, 56 U.S.P.Q.2d (BNA) 1456, 1459 (Fed. Cir. 2000); *see also Upjohn*, 225 F.3d at 1310, 56 U.S.P.Q.2d (BNA) at 1289 (stating that these facts must support a jury verdict of obviousness); *Sibia Neurosciences, Inc. v. Cadus Pharm. Corp.*, 225 F.3d 1339, 1343, 56 U.S.P.Q.2d (BNA) 1641, 1643-44 (Fed. Cir. 2000) (“These [factual] inquiries include the scope and content of the prior art, the level of ordinary skill in the field of the invention, the differences between the claimed invention and the prior art, and any objective evidence of non-obviousness such as long-felt need, and commercial success.”); *Yamanouchi Pharm. Co. v. Danbury Pharmacal, Inc.*, 231 F.3d 1339, 1345, 56 U.S.P.Q.2d (BNA) 1641, 1648-49 (Fed. Cir. 2000) (discussing the several critical factual underpinnings used to determine obviousness); *Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 662-63, 57 U.S.P.Q.2d (BNA) 1161, 1165 (Fed. Cir. 2000) (setting forth the four factual inquiries that need to be made to determine obviousness).


705. *See id.*, 56 U.S.P.Q.2d (BNA) at 1459.

706. *See id.* at 1124-25, 56 U.S.P.Q.2d (BNA) at 1459 (noting that a showing of the motivation to combine is an “essential evidentiary component of an obviousness holding”) (citing *C.R. Bard, Inc. v. M3 Sys. Inc.*, 157 F.3d 1340, 1352, 48 U.S.P.Q.2d (BNA) 1225, 1229 (Fed. Cir. 1998)).

707. *Id.* at 1125, 56 U.S.P.Q.2d (BNA) at 1459 (noting the second requirement of obviousness “does not require absolute predictability of success”) (quoting *In re O’Farrell*, 853 F.2d 894, 903-04, 7 U.S.P.Q.2d (BNA) 1673, 1681 (Fed. Cir. 1988)).

708. *See Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 663, 57 U.S.P.Q.2d (BNA) 1161, 1166 (Fed. Cir. 2000) (citing *Jones v. Hardy*, 727 F.2d 1524, 1529, 220 U.S.P.Q. (BNA) 1021, 1025 (Fed. Cir. 1984)) (“*Graham* was cited but its guidance was not applied, resulting in the application of hindsight and speculation.”); *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 961, 1 U.S.P.Q.2d (BNA) 1196, 1200 (Fed. Cir. 1986) (“When significant legal errors are reflected in the opinion . . . which themselves shed doubt on the district court’s use of *Graham*, the need for findings becomes greater and their absence rises to the level of error.”).
must be vacated, remanded, or reversed.\textsuperscript{709}

Of all the factors recited by the Federal Circuit regarding obviousness, the court focused most on the issue of “motivation to combine.”\textsuperscript{710} Because inventions almost always result from the combination of old elements,\textsuperscript{711} the court has stressed the need to find a motivation to combine these old elements into one new invention.

In \textit{In re Kotzab}, the court explained, “every element of a claimed invention may often be found in the prior art. However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention.”\textsuperscript{712}

The court went on to state that in order to establish obviousness based on a combination of elements in the prior art, there must be a showing of “some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant.”\textsuperscript{713} Indeed, the court repeated the point that combination claims need not be declared invalid based solely upon finding similar elements in separate prior patents because such a practice would negate nearly all patents.\textsuperscript{714}

In \textit{Ecolochem}, the court explained that the need for finding a motivation to combine helps to guard against an illegitimate hindsight reconstruction of the claimed invention.\textsuperscript{715}

\textsuperscript{709} See \textit{Ruiz}, 234 F.3d at 664, 57 U.S.P.Q.2d (BNA) at 1166 (reasoning that the district court’s failure to apply the \textit{Graham} factors can require that the previous judgment be vacated and the case remanded).

\textsuperscript{710} See \textit{Sibia Neurosciences, Inc. v. Cadus Pharm. Corp.}, 225 F.3d 1349, 1356, 55 U.S.P.Q.2d (BNA) 1927, 1931 (Fed. Cir. 2000) (stating that a factual question subsidiary to the ultimate conclusion of obviousness is determining whether there is a motivation to combine a prior art reference); \textit{In re Kotzab}, 217 F.3d at 1369, 1370, 55 U.S.P.Q.2d (BNA) 1313, 1316 (Fed. Cir. 2000) (reiterating the standard that to establish obviousness based on a combination of references, there must be a showing of some motivation or suggestion to make the specific combination that was made); \textit{Ecolochem, Inc. v. S. Cal. Edison Co.}, 227 F.3d 1361, 1371, 56 U.S.P.Q.2d (BNA) 1065, 1073 (Fed. Cir. 2000) (explaining that the best defense against hindsight-based obviousness is application of the requirement for a showing of a motivation or suggestion to combine the prior art references), \textit{cert. denied}, 121 S. Ct. 1607 (2001); \textit{Yamanouchi Pharm. Co. v. Danbury Pharmacal, Inc.}, 231 F.3d 1339, 1343, 56 U.S.P.Q.2d (BNA) 1641, 1644 (Fed. Cir. 2000) (indicating that the court has recently re-emphasized the importance of the motivation to combine).

\textsuperscript{711} \textit{In re Kotzab}, 217 F.3d 1365, 1369, 55 U.S.P.Q.2d (BNA) at 1313, 1316 (Fed. Cir. 2000) (acknowledging that most inventions arise from a combination of old elements).

\textsuperscript{712} \textit{Kotzab}, 217 F.3d at 1370, 55 U.S.P.Q.2d (BNA) at 1316.

\textsuperscript{713} \textit{Id.}, 55 U.S.P.Q.2d (BNA) at 1316 (citations omitted).


The court stressed this point in *Yamanouchi* as well, repeating its previous warning from *In re Rouffet*,\(^\text{716}\) where the court explained that the counter to the fact that virtually all inventions are combinations of old elements is “the suggestion to combine requirement[, which] stands as a critical safeguard against hindsight analysis and rote application of the legal test for obviousness.”\(^\text{717}\)

In several of its decisions from the year 2000, the court described the motivation–to-combine analysis in detail. In *Ecolochem*, for instance, the court explained that in matters of rejection or invalidation on a combination of art references, “[o]bviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination.”\(^\text{718}\)

The court further stated that the teaching or suggestion to combine may flow from the nature of the problem but cannot define the problem in terms of its solution.\(^\text{719}\) To do so, the court explained, would impermissibly allow one to rely on hindsight in selecting prior art for purposes of determining obviousness.\(^\text{720}\) In examining a patent application where two known elements have been combined, the issue is whether the prior art contains something to motivate the combination, thereby creating obviousness.\(^\text{721}\)

In *Ruiz*, the court stated that the motivation to combine may be found:

1. in the prior art references themselves;
2. in the knowledge of those of ordinary skill in the art that certain references, or clear that the best defense against hindsight-based obviousness analysis is the rigorous application of the requirement for a showing of a teaching or motivation to combine the prior art references. ‘Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability—the essence of hindsight.’”) (citations omitted).

\(^\text{716}\) 149 F.3d 1350, 1357-58, 47 U.S.P.Q.2d (BNA) 1453, 1457 (Fed. Cir. 1998).


\(^\text{719}\) *See id.*, 56 U.S.P.Q.2d (BNA) at 1073.


\(^\text{721}\) *Ecolochem, Inc. v. S. Cal. Edison Co.*, 227 F.3d 1361, 1372, 56 U.S.P.Q.2d (BNA) 1065, 1073 (Fed. Cir. 2000) (“[W]hen determining the patentability of a claimed invention which combines two known elements, the question is whether there is something in the prior art as a whole to suggest the desirability, and thus obviousness, of making the combination.”) (internal citations omitted).
disclosures in those references, are of special interest or importance in the field; or (3) from the nature of the problem to be solved, leading inventors to look to references relating to possible solutions to that problem. 722

Additionally, the court explained that neither the parties, the district court, nor the patent office may satisfy this requirement with conclusory statements and must produce specific evidence of motivation to combine. 723

With this background, the following section specifically explores the obviousness decisions issued by the Federal Circuit during 2000.

In Winner International Royalty Corp. v. Wang, the Federal Circuit affirmed a district court decision holding that a patent was not obvious. 724 The Federal Circuit found no clear error in either the trial court’s factual findings relating to obviousness or its ultimate determination of non-obviousness. 725 The Federal Circuit agreed with the district court’s finding of no motivation to combine the alleged invalidating references because: (1) there was no perceived disadvantage in the cited reference that would motivate one of ordinary skill to combine references, and (2) the primary reference relied upon taught away from the patent’s claimed invention. 726 The court also noted that a “teaching away” from the claimed invention alone can defeat an obviousness claim. 727 After reviewing the first three Graham factors, and holding in favor of patentability, 728 the court explained that if the party asserting obviousness had succeeded on these issues, the burden would have shifted to the patentee to

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722. Ruiz v. A.B. Chance Co., 234 F.3d 654, 665, 57 U.S.P.Q.2d (BNA) 1161, 1167 (Fed. Cir. 2000) (“While the references need not expressly teach that the disclosure contained therein should be combined with another, the showing of combinability must be clear and particular”) (quoting Pro-Mold & Tool Co. v. Great Lake Plastics, Inc., 75 F.3d 1568, 1572, 37 U.S.P.Q.2d (BNA) 1626, 1630 (Fed. Cir. 1996)) (internal citations omitted).


726. See id. at 1349, 53 U.S.P.Q.2d (BNA) at 1587 (describing the district court’s reasoning in concluding that no motivation to combine existed). The court also explained that “[w]hat a reference teaches and whether it teaches toward or away from the claimed invention are questions of fact.” Id. at 1349, 53 U.S.P.Q.2d (BNA) at 1587.

727. See id. at 1349-50, 53 U.S.P.Q.2d (BNA) at 1587 (noting that a reference teaches away “if it suggests that the line of development flowing from the reference’s disclosure is unlikely to be productive of the result sought by the applicant”) (quoting In re Gurley, 27 F.3d 551, 553, 31 U.S.P.Q.2d (BNA) 1130, 1131 (Fed. Cir. 1994)).

728. See id. at 1350, 53 U.S.P.Q.2d (BNA) at 1588.
show objective indicia of non-obviousness such as commercial success. Because the patent challenger failed to satisfy its burden, the court held the burden did not shift, and that the patentee had shown commercial success attributable to the patent.

In In re Gartside, the court faced an appeal from the Board of Patent Appeals and Interferences, wherein the Board found certain claims of a patent were unpatentable as obvious. In a brief opinion, the court reviewed and accepted the Board’s explanation and evidence showing a motivation to combine the cited references. With respect to other claims, the court agreed that a motivation to combine the references existed based upon the teachings of the references themselves and the problem to be solved. The court also agreed with the Board’s decision not to rely on a declaration submitted by the patentee regarding “unexpected results.” The court held that the examples in the declaration did “not correspond to any process within the scope of the claims” and, therefore, was “not probative of non-obviousness.”

In Ultra-Tex Surfaces, Inc. v. Hill Bros. Chem. Co., the court affirmed the trial court’s conclusion that the claim at issue was not obvious. The patent challenger asserted invalidity based on the same references that were before the examiner during prosecution, and the Federal Circuit identified the added burden placed on the party attacking validity. The court quickly dismissed the challenge, concluding that the party had offered no serious argument.

In Advanced Display Systems, the court remanded the case for a new trial on the obviousness issue. The court focused on the objective considerations of non-obviousness in its decision. The court first explained that the patent challenger’s repeated failures to design the

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729. See id., 53 U.S.P.Q.2d (BNA) at 1588.
731. See Gartside, 203 F.3d at 1319-20, 53 U.S.P.Q.2d (BNA) at 1780 (concluding that the Board’s factual findings were supported by substantial evidence, and the Board did not err in finding the claim invalid as obvious).
732. Id. at 1320-21, 53 U.S.P.Q.2d (BNA) at 1779 (agreeing with the Commissioner that substantial evidence existed to support the Board’s finding that a motivation to combine the claims arose from the teachings and references and from the nature of the problem to be solved).
733. See id. at 1321, 53 U.S.P.Q.2d (BNA) at 1780.
734. Id., 53 U.S.P.Q.2d (BNA) at 1780.
735. 204 F.3d 1360, 53 U.S.P.Q.2d (BNA) 1892 (Fed. Cir. 2000).
736. See Ultra-Tex, 204 F.3d at 1367-68, 53 U.S.P.Q.2d (BNA) at 1898.
737. See id. at 1367, 53 U.S.P.Q.2d (BNA) at 1898.
739. See Advanced Display, 212 F.3d at 1285, 54 U.S.P.Q.2d (BNA) at 1681.
claimed invention supported non-obviousness.\textsuperscript{740} “[E]vidence of failed attempts by others could be determinative on the issue of obviousness.”\textsuperscript{741} Next, the court wrote that the evidence showed the patent challenger had “wholesale” copied the claimed invention and replicated the claimed invention, rather than copying one in the public domain. This evidence is demonstrative of indicia of non-obviousness.\textsuperscript{742} As discussed in Section I, \textit{supra}, the overall decision in \textit{Advanced Display Systems} seems geared toward giving the patentee a second trial because of severe discovery abuses committed by the patent challenger’s counsel.\textsuperscript{743} Indeed, much of the objective evidence of non-obviousness was improperly withheld from the patentee until very late in the proceedings.

In \textit{Riverwood International Corp. v. Mead Corp.},\textsuperscript{745} the court reversed the district court’s conclusion that the patent claims were not invalid for obviousness.\textsuperscript{746} The art primarily relied upon indisputably showed three of the four elements of claim one.\textsuperscript{747} The court agreed with a special master’s decision, (rejected by the district court) regarding a person’s level of skill in the art.\textsuperscript{748} With respect to objective factors of non-obviousness, the court also sided with the special master’s finding that the success of the product was attributable to factors outside the scope of the claims at issue.\textsuperscript{749} The patentee also failed to prove copying, a long-felt need for improvement in the field of the invention, and failures of others.\textsuperscript{750} In view of these findings, the objective factors lacked sufficient weight to reverse the court’s

\textsuperscript{740}. \textit{See id.} at 1285, 54 U.S.P.Q.2d (BNA) at 1681-82 (recognizing that the court has previously held that an infringer’s inability to develop a product made possible by the claimed invention supports a finding of non-obviousness).

\textsuperscript{741}. \textit{Id.}, 54 U.S.P.Q.2d (BNA) at 1681.

\textsuperscript{742}. \textit{See id.}, 54 U.S.P.Q.2d (BNA) at 1682 (citing Specialty Composites v. Cabot Corp., 845 F.2d 981, 991, 6 U.S.P.Q.2d (BNA) 1601, 1608 (Fed. Cir. 1988)).

\textsuperscript{743}. \textit{See id.} at 1287, 54 U.S.P.Q.2d (BNA) at 1683 (reasoning that the earlier trial was “manifestly unjust” due to all the discovery abuses).

\textsuperscript{744}. \textit{See Advanced Display Sys. v. Kent State Univ.}, 212 F.3d 1272, 1286, 54 U.S.P.Q.2d (BNA) 1678, 1685 (Fed. Cir. 2000) (noting that the patentee did not receive important evidence until after the jury went into deliberations).


\textsuperscript{746}. \textit{See Riverwood}, 212 F.3d at 1367, 54 U.S.P.Q.2d (BNA) at 1766.

\textsuperscript{747}. \textit{See id.} at 1366-67, 54 U.S.P.Q.2d (BNA) at 1765 (agreeing with the special master that the first three limitations were admitted).

\textsuperscript{748}. \textit{See id.} at 1367, 54 U.S.P.Q.2d (BNA) at 1765 (concluding that the claimed invention would have been obvious to someone of ordinary skill in the art at the time of the invention).

\textsuperscript{749}. \textit{Id.} at 1367, 54 U.S.P.Q.2d (BNA) at 1765.

\textsuperscript{750}. \textit{See id.}, 54 U.S.P.Q.2d (BNA) at 1765 (stating that much of the patent challenger’s evidence of commercial success was attributable to factors outside the scope of the claims).
determination of obviousness.\textsuperscript{751}

In \textit{In re Baker Hughes},\textsuperscript{752} the Federal Circuit reversed the patent office’s decision that the claims at issue were unpatentable as obvious.\textsuperscript{753} The court based its decision primarily on its holding that the PTO had erred in construing the term “hydrocarbon.”\textsuperscript{754} After construing “hydrocarbon” correctly, the court concluded that readily apparent differences existed between the claims and the cited art.\textsuperscript{755}

In \textit{In re Kotzab},\textsuperscript{756} the court similarly reversed the patent office’s determination that the claims were unpatentable as obvious.\textsuperscript{757} The invention at issue involved “an injection molding method for forming plastic articles,” and the claims at issue required the use of a single temperature sensor to control a plurality of flow control valves.\textsuperscript{758} The patent applicant argued, and the court agreed, that the reference did not teach or suggest this limitation.\textsuperscript{759} The court held that “[n]one of the Board’s comments relate to the issue of . . . teaching or suggesting the use of one sensor to control” the plurality of valves.\textsuperscript{760} The court explained that the PTO’s decision lacked substantial evidence to show the one sensor element, and thus rejected the PTO’s argument that the reference teaches that a single sensor may be used.

Ultimately, the court found that the evidence failed to show the necessary motivation to combine the references cited.\textsuperscript{762} The court

\begin{footnotesize}
\begin{enumerate}
\item 215 F.3d 1297, 55 U.S.P.Q.2d (BNA) 1149 (Fed. Cir. 2000).
\item See Baker Hughes, 215 F.3d at 1304, 55 U.S.P.Q.2d (BNA) at 1154 (concluding that because the Board misconstrued the claims, it erred in finding that the claims would have been obvious to one of ordinary skill in the art).
\item Id. at 1302, 55 U.S.P.Q.2d (BNA) at 1153 (agreeing with Baker Hughes that the Board of Patent Appeals and Interferences erred in constructing the term “hydrocarbon” as including gases).
\item Id. at 1303, 55 U.S.P.Q.2d (BNA) at 1153 (explaining the differences in the processes).
\item 217 F.3d 1365, 55 U.S.P.Q.2d (BNA) 1313 (Fed. Cir. 2000).
\item See Kotzab, 217 F.3d at 1372, 55 U.S.P.Q.2d (BNA) at 1318.
\item Id. at 1367, 55 U.S.P.Q.2d (BNA) at 1314.
\item Id. at 1370, 55 U.S.P.Q.2d (BNA) at 1317 (agreeing with the applicant that the reference at issue in view of secondary references does not teach or suggest the use of a single temperature sensor to control a plurality of flow control valves).
\item Id. at 1370, 55 U.S.P.Q.2d (BNA) at 1317.
\item Id. at 1371, 55 U.S.P.Q.2d (BNA) at 1317 (“While the test for establishing an implicit teaching, motivation, or suggestion is what the combination of these two statements of [the reference] would have suggested to those of ordinary skill in the art, . . . they must be considered in the context of the teaching of the entire reference.”). The court went on to note that “particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed.” Id., 55 U.S.P.Q.2d (BNA) at 1317.
\item See In re Kotzab, 217 F.3d 1365, 1372, 55 U.S.P.Q.2d (BNA) 1313, 1318 (Fed.
\end{enumerate}
\end{footnotesize}
wrote that the examiner had fallen into "the hindsight trap." The court warned that in cases with relatively simple concepts, finding prior art statements that appeared in the abstract to suggest the solution was not difficult; the court must nevertheless still make a determination of the specific principle that motivated the inventor to make the combination. There being no such evidence, the Federal Circuit reversed.

In Upjohn Co. v. MOVA Pharmaceutical Corp., the court reversed a jury's finding that the patent in suit was invalid on the ground of obviousness. With respect to the first combination of references, the court held that the record lacked substantial evidence in support of the challenger's conclusion that it would have been obvious to realize the claimed invention. The court emphasized the requirement for factual support for an expert's conclusory opinion of obviousness, and the challenger's lack of factual support gave the expert's testimony little probative value. The court also dismissed the second combination, holding that the challenger's expert had failed to provide documentary support for his statements, and that recollections about what "general scientific knowledge" was widely known required "support by documentary evidence in order to receive probative weight." On the final piece of art, the Federal Circuit repeated its conclusion that the patent challenger had failed to present evidentiary support for the jury's obviousness verdict.

In Sibia Neurosciences v. Cadus Pharmaceutical, the court considered whether the trial court erred in denying the accused infringer's...
judgment as a matter of law motion that sought to overturn a jury verdict in favor of the patentee. The jury found the patent was not invalid for obviousness. The Federal Circuit reversed the district court’s denial and held the patent invalid for obviousness. The accused infringer asserted that a single prior-art reference was sufficient to invalidate the patent under 35 U.S.C. § 103, and the court recognized that in “appropriate circumstances, a single prior art reference can render a claim obvious.” As with any other obviousness attack, even with a single reference, there must be evidence of a motivation to modify the teachings of the single reference. Contrary to the jury’s conclusion, the Federal Circuit found that there was a motivation to modify the single reference such that it covered the claimed invention. The court held that undisputed evidence (in the form of an article and a patent) provided the motivation to modify the single reference. The court continued that the undisputed teachings, “as filtered through the knowledge of one skilled in the art,’ as well as the nature of the problem to be solved, provide a suggestion and motivation” to modify the reference to cover the claimed invention. The patentee tried to rebut this “undisputed evidence” by pointing out that the article itself does not teach the modification, yet the court rejected the argument. The court explained that such a claim fails to provide substantial evidence of no motivation to modify, and that the patentee ignored the possibility that the motivation to modify can be found outside the reference. Additionally, the court disregarded persuasive the testimony from the author of the reference because the court found

773. See id. at 1359, 55 U.S.P.Q.2d (BNA) at 1933 (holding that the “district court’s denial of Cadus’s motion for JMOL on the issue of invalidity must be reversed”). Chief Judge Mayer dissented, arguing that the majority was making “an end-run around the requirement that there must be a motivation to modify.” Id. at 1360, 55 U.S.P.Q.2d (BNA) at 1934 (Mayer, C.J., dissenting).
774. Id. at 1356, 55 U.S.P.Q.2d (BNA) at 1931.
775. See id., 55 U.S.P.Q.2d (BNA) at 1931 (setting forth the standard that to support a claim of obviousness, there must be a showing of a suggestion or motivation to modify the teachings of that reference to the claimed invention).
777. See id. at 1357, 55 U.S.P.Q.2d (BNA) at 1932 (stating that the motion to modify the reference stemmed from the nature of the problem to be solved).
778. See id. at 1357-58, 55 U.S.P.Q.2d (BNA) at 1932 (quoting Motorola, Inc. v. Interdigital Tech. Corp., 121 F.3d 1461, 1472, 45 U.S.P.Q.2d (BNA) 1481, 1489 (Fed. Cir. 1997)).
779. See id. at 1358, 55 U.S.P.Q.2d (BNA) at 1932-33.
his testimony irrelevant to the fundamental issue of whether the hypothetical person of ordinary skill in the art, when confronted with the relevant problem, would have been motivated to use the reference.\footnote{780}{See id., 55 U.S.P.Q.2d (BNA) at 1933.}

The \textit{Sibia} panel also rejected the patentee’s arguments regarding secondary considerations.\footnote{781}{See id., 55 U.S.P.Q.2d (BNA) at 1933.} The court noted that the licenses relied upon to show commercial success were part of larger licensing packages, and did not exclusively encompass the patent in suit.\footnote{782}{See \textit{Sibia Neurosciences v. Cadus Pharm.}, 225 F.3d 1349, 1358, 55 U.S.P.Q.2d (BNA) 1927, 1933 (stating that “the mere existence of these licenses is insufficient to overcome the conclusion of obviousness, as based on the express teachings in the prior art that would have motivated one of ordinary skill to modify [the reference’s teachings].”).}

Finally, based on its holding of invalidity of independent claim one, the court also held the dependent claims invalid.\footnote{783}{See \textit{Sibia}, 225 F.3d at 1359, 55 U.S.P.Q.2d (BNA) at 1933.} The court explained that the patentee had failed to argue validity of the dependent claims separately from the independent claim.\footnote{784}{Id., 55 U.S.P.Q.2d (BNA) at 1933 ("[T]hese claims do not stand on their own, and given our determination that claim 1 is invalid, the remaining dependent claims must fall as well.") (citing MEHL/Biophile Int’l Corp. v. Milgram, 192 F.3d 1362, 1367, 52 U.S.P.Q.2d (BNA) 1303, 1307 (Fed. Cir. 1999)); Gardner v. TEC Sys. Inc., 725 F.2d 1338, 1350, 220 U.S.P.Q. (BNA) 777, 786 (Fed. Cir. 1984) (\textit{en banc}).} In \textit{Ecolochem}, the court sustained the trial court’s summary judgment decision of invalidity based on obviousness for one claim but reversed the decision of invalidity for the remaining claims.\footnote{785}{See \textit{Ecolochem, Inc. v. S. Cal. Edison Co.}, 227 F.3d 1361, 1381, 56 U.S.P.Q.2d (BNA) 1065, 1080 (Fed. Cir. 2000).} In its reversal, the court opined that the trial judge had used the patent in suit as a “blueprint” for determining obviousness and by doing so violated the rule against using hindsight.\footnote{786}{See \textit{Ecolochem}, 227 F.3d at 1372, 56 U.S.P.Q.2d (BNA) at 1073 (reasoning that the district court used the claimed invention as a blueprint and looked to other prior art for the elements present in the claimed invention but missing from the prior art reference).} The court also held that the district court had provided no support for its conclusory statements of obviousness or any evidence that suggested, taught or motivated one of ordinary skill to combine the recited art.\footnote{787}{See id., 56 U.S.P.Q.2d (BNA) at 1073 (explaining that the district court did not discuss any specific evidence of motivation to combine, but only made broad conclusory statements, which did not constitute evidence).} The Federal Circuit went on to explain that the primary reference actually taught away from the necessary combination.\footnote{788}{See id. at 1373, 56 U.S.P.Q.2d (BNA) at 1074 (establishing that the district court erred in finding that the claimed reference implicitly suggests the combination of the two elements).}
the lack of a convincing discussion regarding motivation to combine as a “critical omission” in the district judge’s decision and rebuked the judge for a “reference-by-reference, limitation-by-limitation analysis” that used hindsight and an erroneous “obvious to try” standard.\textsuperscript{789}

In its decision sustaining the invalidity of claim 20, the \textit{Ecolochem} panel carefully reviewed secondary considerations of non-obviousness.\textsuperscript{790} First, the court reviewed whether a long-felt, but unresolved need existed in the field of the invention.\textsuperscript{791} The court agreed with the district judge that no such need existed, and pointed out that guidelines urging the use of what became a part of the patented invention were issued in 1982, and the patentee filed its patent application approximately one year later, in December, 1983.\textsuperscript{792} Second, the court considered alleged commercial success of the invention.\textsuperscript{793} The court explained that “a presumption arises that the patented invention is commercially successful ‘when a patentee can demonstrate commercial success, usually shown by significant sales in a relevant market, and that the successful product is the invention disclosed and claimed in the patent.’”\textsuperscript{794} The court also explained that once a patentee makes this showing, the burden shifts to the patent challenger to show that the commercial success resulted from factors extraneous to the patented invention.\textsuperscript{795} The Federal Circuit disagreed with the district court’s conclusion that the patent challenger had met its burden, holding that the patentee had instead met its burden of showing that the success resulted from the patented invention.\textsuperscript{796} Third, the court reviewed whether others had tried, but failed, to make the claimed invention.\textsuperscript{797} The Federal Circuit determined that this question, in this case, rested on credibility.

\begin{thebibliography}{9}
\bibitem{789} Id. at 1374, 56 U.S.P.Q.2d (BNA) at 1075.
\bibitem{790} See id. at 1376, 56 U.S.P.Q.2d (BNA) at 1076 (stating that it is necessary to review the district court’s findings on the evidence of secondary consideration).
\bibitem{792} See \textit{Ecolochem}, 227 F.3d at 1377, 56 U.S.P.Q.2d (BNA) at 1077 (finding no clear error in the district court’s decision that no long-felt need existed).
\bibitem{793} See id., 56 U.S.P.Q.2d (BNA) at 1077.
\bibitem{794} Id., 56 U.S.P.Q.2d (BNA) at 1077 (quoting J.T. Eaton & Co. v. Atl. Paste & Glue Co., 106 F.3d 1563, 1571, 41 U.S.P.Q.2d (BNA) 1641, 1647 (Fed. Cir. 1997)).
\bibitem{795} See id. at 1377, 56 U.S.P.Q.2d (BNA) at 1077 (explaining that “[o]nce [the patentee] made the requisite showing of nexus between commercial success and the patented invention, the burden shifted to the [patent challenger] to prove the commercial success . . . due to other factors”).
\bibitem{796} See id. at 1378, 56 U.S.P.Q.2d (BNA) at 1078 (holding that the district court clearly erred in finding that the patent challenger met its burden).
\end{thebibliography}
issues, and deferred to the district court’s decision on that basis.\footnote{798} Fourth, the court acknowledged that the “fact of near-simultaneous invention, though not determinative of statutory obviousness, is strong evidence of what constitutes the level of ordinary skill in the art.”\footnote{799} The district court found that the facts in the case favored obviousness, and the Federal Circuit agreed.\footnote{800} Fifth, the court disagreed with the district court and held that the prior art did teach away from combining the references relied upon.\footnote{801} Finally, the Ecolochem panel held that the district court had clearly erred when it discounted evidence of copying simply because it did not believe the claimed process to be novel.\footnote{802} Nonetheless, the court held that the error did not carry substantial weight because evidence of copying is only “equivocal evidence of non-obviousness in the absence of more compelling objective indicia of other secondary considerations.”\footnote{803}

After weighing all of the factors together, the Federal Circuit held that the district court’s obviousness conclusion as to claim 20 was not clearly in error.\footnote{804} In Yamanouchi Pharmaceutical v. Danbury Pharmacal,\footnote{805} the court affirmed the trial court’s decision that the patent was not invalid as obvious.\footnote{806} This case focused on whether a chemical compound was obvious, and the court explained that for a chemical compound, “a prima facie case of obviousness requires ‘structural similarity between claimed and prior art subject matter . . . where the prior art gives a

\footnote{798. See Ecolochem, 227 F.3d at 1378-79, 56 U.S.P.Q.2d (BNA) at 1078-79 (acknowledging that the district court’s decision was based on the credibility of a witness and because the court “gives great deference” to such decisions, there was no clear error in finding no evidence of failure by others).}

\footnote{799. Id. at 1378-79, 56 U.S.P.Q.2d (BNA) at 1079 (quoting Int’l Glass Co. v. United States, 408 F.2d 395, 405, 159 U.S.P.Q. (BNA) 434, 442 (Ct. Cl. 1968)).}

\footnote{800. See id. at 1379, 56 U.S.P.Q.2d (BNA) at 1079 (reasoning that the district court found the expert’s testimony credible on the issue of obviousness, and there was no clear error in that decision).}

\footnote{801. See id. at 1379-80, 56 U.S.P.Q.2d (BNA) at 1079 (holding that the body of available evidence clearly shows that the prior art taught away from the claimed reference).}

\footnote{802. See id. at 1380, 56 U.S.P.Q.2d (BNA) at 1080 (stating that it was clearly erroneous that the district court gave little credit to the copying argument and found only that the process was novel).}


\footnote{804. See Ecolochem, 227 F.3d at 1381, 56 U.S.P.Q.2d (BNA) at 1080 (holding that the secondary considerations, taken as a whole, do not overcome the other evidence of obviousness).}

\footnote{805. 231 F.3d 1339, 56 U.S.P.Q.2d (BNA) 1641, 1645 (Fed. Cir. 2000).}

\footnote{806. See Yamanouchi, 231 F.3d at 1345, 56 U.S.P.Q.2d (BNA) at 1645 (“Because Danbury did not show even a prima facie case for obviousness, this court has considered, but need not separately address, the strong objective of non-obviousness.”).}
reason or motivation to make the claimed compositions.\textsuperscript{807} The court defined the issue of validity as whether one of skill in the art would have found the motivation to combine pieces from compounds found in prior art patents.\textsuperscript{808} The Federal Circuit held that the district court correctly rejected the patent challenger’s arguments because it had failed to show sufficient motivation to combine by one of ordinary skill in the art.\textsuperscript{809} In its decision, the court noted that there must be a reasonable expectation of success through the combination, and that no such expectation existed, particularly given the large numbers of possible compounds that exhibit the desired activity, without the unwanted side effects.\textsuperscript{810}

In Brown & Williamson Tobacco Corp. v. Philip Morris,\textsuperscript{811} the Federal Circuit affirmed the lower court’s decision of invalidity based on obviousness.\textsuperscript{812} The court examined the facts relating to each reference relied upon by the accused infringer and held that the district court did not commit clear error when it concluded that there was a motivation to combine these references.\textsuperscript{815} Furthermore, the court closely examined the issue of commercial success.\textsuperscript{811} Like the Ecolochem panel, the Brown & Williamson panel also recognized that a nexus between commercial success and the patent is presumed if the marketed product embodies the claimed features.\textsuperscript{815} If the presumption stands, the burden shifts to the party asserting obviousness to show the contrary.\textsuperscript{816} The court found ample evidence to rebut the nexus.\textsuperscript{817} The Federal Circuit, however, went on to hold that the district court erred when it did not consider the commercial success of the accused product, which had been found to infringe.\textsuperscript{818}

\begin{footnotes}
808. \textit{Id.}, 56 U.S.P.Q.2d (BNA) at 1644.
810. \textit{See id.} at 1345, 56 U.S.P.Q.2d (BNA) at 1645 (“If activity alone was the sole motivation, other more active compounds would have been the obvious choices . . . .”).
814. \textit{See id.} at 1130-31, 56 U.S.P.Q.2d (BNA) at 1464 (stating that the district court’s error in not considering the success of the product is harmless “because the modest level of commercial activity and limited market share achieved by the VSSS cannot overcome the strong evidence of obviousness.”).
815. \textit{See id.} at 1130, 56 U.S.P.Q.2d (BNA) at 1463.
816. \textit{See id.}, 56 U.S.P.Q.2d (BNA) at 1463 (“In this case, a nexus should be presumed because the Capri encompasses the claimed features.”).
818. \textit{See Brown & Williamson}, 229 F.3d at 1130, 56 U.S.P.Q.2d (BNA) at 1464 (“considering the commercial success of the infringing product as evidence of the
The court also noted (1) the absence of evidence relating to attempts and failures of others to create the claimed invention, long-felt need, and no unexpected results; and (2) that there was evidence that the defendant was skeptical, and had praised the invention as well as copied it. In the end, the court held that the patentee had not shown the district court’s decision was clearly erroneous.

Finally, in Ruiz v. A.B. Chance Co., the Federal Circuit vacated the district court’s judgment of obviousness and remanded the case to the district court to make Graham findings. Essentially, the district court simply found the invention obvious because the necessary combination was apparent. According to the Federal Circuit, this conclusion did not constitute specific findings that proved why such combinations were apparent, and the court could not determine what evidence the district court considered in its obviousness analysis. The court also remanded for a more specific finding of the level of ordinary skill in the art although the court acknowledged that the uncertainty in this aspect of the district court’s decision did not alone warrant reversal or vacating the decision. Ultimately, the Ruiz panel explained that it could not determine whether the district court considered the secondary considerations of non-obviousness, and remanded with instructions for the judge to make findings regarding secondary considerations and whether a nexus between the claimed invention and commercial success existed.

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commercial success of the claimed invention”) (citing Gambro Lundia AB v. Baxter Healthcare Corp., 110 F.3d 1573, 1579, 42 U.S.P.Q.2d (BNA) 1378, 1384. (Fed. Cir. 1997)).

819. See id. at 1130-31, 56 U.S.P.Q.2d (BNA) at 1463-64 (describing the secondary indicators of non-obviousness).

820. See id. at 1131, 56 U.S.P.Q.2d (BNA) at 1465 (“The district court’s errors in not considering various secondary indicators are, therefore, harmless.”).


822. See id. at 663-64, 57 U.S.P.Q.2d (BNA) at 1166 (discussing the necessity of making the Graham findings).

823. See id. at 665, 57 U.S.P.Q.2d (BNA) at 1167 (“The district court concluded that it would have been obvious to combine screw anchors and metal brackets, because the need for a bracket ‘was apparent.’”).

824. See id. at 666, 57 U.S.P.Q.2d (BNA) at 1167 (reviewing the district court’s analysis).

825. See id. at 666-67, 57 U.S.P.Q.2d (BNA) at 1169 (stating that the district court’s failure to make this and other Graham findings shows that Graham was not likely applied by the court).

826. See id. at 667-68, 57 U.S.P.Q.2d (BNA) at 1169 (“Our precedents clearly hold that secondary considerations, when present, must be considered in determining obviousness.”).
F. Enablement

Section 112, paragraph one, requires a patent application to “adequately disclose the claimed invention so as to enable a person skilled in the art to practice the invention at the time the application was filed without undue experimentation.” In Ajinomoto Co., Inc. v. Archer-Daniels-Midland Co., the court faced an enablement question, and wrote that enablement is determined from the viewpoint of individuals skilled in the art. The court in In re Swartz, classified the enablement inquiry as “a legal conclusion based on underlying factual inquiries.”

In In re Swartz, Swartz appealed a holding of the Board of Patent Appeals and Interferences that a patent application for cold fusion neither enabled nor satisfied the utility requirement of 35 U.S.C. § 101. The Board found that Swartz had failed to provide a disclosure of an operative embodiment. In addressing this issue, the court explained that “to practice the claimed invention, a person of ordinary skill in the art would have had to rely on the art known at the filing date, September 19, 1991.” The court affirmed the Board’s finding that no evidence showed that one of skill in the art would have been able to rely on the known art at the time, and ultimately concluded lack of enablement.

In Ajinomoto, the court affirmed the district court’s finding that the patent at issue fulfilled the enablement requirement. While reviewing the evidence considered by the district court, the Federal Circuit reaffirmed that the enablement requirement did not reach subject matter well known in the art. The Federal Circuit agreed

830. See id. at 863-64, 56 U.S.P.Q.2d (BNA) at 1703-04 (discussing the “utility” holding in the case).
831. See id. at 864, 56 U.S.P.Q.2d (BNA) at 1704 (“[T]he PTO found that the written description in Mr. Swartz’s application contains no disclosure of any operation embodiment.”).
832. Id., 56 U.S.P.Q.2d (BNA) at 1704.
835. See Ajinomoto, 228 F.3d at 1345, 56 U.S.P.Q.2d (BNA) at 1337 (asserting that
with the district court that the evidence of record showed that the process at issue applied conventional genetic engineering techniques. Finally, the court recognized the validity of depositing biological products pursuant to 35 U.S.C. § 122 to satisfy the enablement requirement.

In such cases, the court explained that PTO and international treaty procedures require a deposit of physical samples that are available to the public before granting a patent.

The Federal Circuit faced another enablement issue in Singh v. Brake, which also reached the court from the Board of Patent Appeals and Interferences. The court, however, did not resolve the enablement issue and decided instead to remand to the Board. The court based its decision on the determination that the Board did not explicitly reach any of the parties’ Section 112, paragraph one arguments and that the Board should decide such arguments first.

G. Utility

According to the utility requirement of Section 101, an invention must be operable to achieve useful results. While considering an appeal from the Board of Patent Appeals and Interferences, the Federal Circuit explained that the issues of utility and enablement are closely related. The court elaborated further that application

“[a] patent need not teach, and preferably omits, what is well known in the art”) (quoting Hybritech, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1384, 231 U.S.P.Q. (BNA) 81, 94. (Fed. Cir. 1986)).

836. See id. at 1345, 56 U.S.P.Q.2d (BNA) at 1337 (“ADM has not shown clear error in the district court’s findings and in the conclusion that invalidity on the ground of enablement has not been shown.”).

837. See id. at 1345-46, 56 U.S.P.Q.2d (BNA) at 1337-38 (“The deposit of biological organisms for public availability satisfies the enablement requirement for materials that are not amenable to written description or that constitute unique biological materials which cannot be duplicated.”).

838. See id. at 1346, 56 U.S.P.Q.2d (BNA) at 1338 (noting it is “a condition of the patent grant that physical samples of such materials be deposited and made available to the public, under procedures established by the PTO and by international treaty.”).


841. See id. at 1371, 55 U.S.P.Q.2d (BNA) at 1678-79 (finding the Board’s analysis inconclusive).

842. See id., 55 U.S.P.Q.2d (BNA) at 1679 (“We remand to the Board for a determination of those issues that were properly raised during the earlier proceedings.”).

843. In re Swartz, 232 F.3d 862, 863, 56 U.S.P.Q.2d (BNA) 1703, 1703-04 (Fed. Cir. 2000) (“The utility requirement of § 101 mandates that the invention be operable to achieve useful results.”).

844. See Swartz, 232 F.3d at 863, 56 U.S.P.Q.2d (BNA) at 1703 (“The questions of whether a specification provides an enabling disclosure under Section 112, paragraph 1, and whether an application satisfies the utility requirement of Section 101 are closely
claims that do not meet the utility requirement because the invention cannot be operated also fail to meet the enablement requirement.\textsuperscript{845} The court held, moreover, that the issue of utility is a question of fact.\textsuperscript{846}

When issues of utility arise at the patent office, the court explained that the PTO bears the initial burden of challenging the patent’s utility.\textsuperscript{847} To sustain this burden, the PTO should provide evidence showing that one of ordinary skill in the art would reasonably doubt the asserted utility.\textsuperscript{848} If the PTO presents such evidence, then the burden shifts to the applicant to submit sufficient evidence that would convince a person of ordinary skill of the invention’s alleged utility.\textsuperscript{849} In \textit{In re Swartz}, the PTO shifted the burden to the applicant when it provided several references showing that cold fusion (the subject of the application) results were irreproducible; the PTO resolved that the applicant had failed to submit sufficient evidence of operability to overcome the PTO’s evidence.\textsuperscript{850} On appeal, the applicant invited the court to review the voluminous record submitted to the PTO, but apparently failed to cite to any specific evidence.\textsuperscript{851} The Federal Circuit refused this invitation, stating that the applicant’s use of “conclusory allegations” was insufficient to prove the Board erred on the issue of utility.\textsuperscript{852} The court affirmed related.”).

\textsuperscript{845} See id. at 863, 56 U.S.P.Q.2d (BNA) at 1704 (“[I]f the claims in an application fail to meet the utility requirement because the invention is inoperative, they also fail to meet the enablement requirement because a person skilled in the art cannot practice the invention.”) (citing Process Control Corp. v. HydReclaim Corp., 190 F.3d 1350, 1358, 52 U.S.P.Q.2d (BNA) 1029, 1034 (Fed. Cir. 1999)); see also \textit{In re Ziegler}, 992 F.2d 1197, 1200, 26 U.S.P.Q.2d (BNA) 1600, 1603 (Fed. Cir. 1993) (“The how to use prong of section 112 incorporates as a matter of law the requirement of 35 U.S.C. § 101 that the specification disclose as a matter of fact a practical utility for the invention.”).

\textsuperscript{846} See id. at 863, 56 U.S.P.Q.2d (BNA) at 1704.

\textsuperscript{847} See id. at 864, 56 U.S.P.Q.2d (BNA) at 1704 (asserting that “[t]he PTO has the initial burden of challenging a patent applicant’s presumptively correct assertion of utility.”) (citing \textit{In re Brana}, 51 F.3d 1560, 1566, 34 U.S.P.Q.2d (BNA) 1436, 1441 (Fed. Cir. 1995)).

\textsuperscript{848} See id., 56 U.S.P.Q.2d (BNA) at 1704.

\textsuperscript{849} See \textit{In re Swartz}, 232 F.3d 862, 864, 56 U.S.P.Q.2d (BNA) 1703, 1704 (Fed. Cir. 2000) (describing the shift of burden from the PTO to the applicant).

\textsuperscript{850} See \textit{Swartz}, 232 F.3d at 864, 56 U.S.P.Q.2d (BNA) at 1704 (“The examiner found that Mr. Swartz had not submitted evidence of operability that would be sufficient to overcome reasonable doubt.”).

\textsuperscript{851} See id., 56 U.S.P.Q.2d (BNA) at 1704 (stating that Mr. Swartz invited the court to review record material that he claimed supported his position on the utility issue).

\textsuperscript{852} Id., 56 U.S.P.Q.2d (BNA) at 1704 (“Such conclusory allegations in an appeal brief are quite insufficient to establish that the Board’s decision on the issue of utility is not supported by substantial evidence or to establish that the Board’s ultimate conclusion of a lack of enablement is incorrect as a matter of law.”).
Paragraph one of 35 U.S.C. § 112 states:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same.\(^{854}\)

The provision’s purpose is to ensure that the scope of the exclusion right does not exceed the ambit of the inventor’s contribution to the field of art.\(^{855}\) The primary consideration in written description cases depends on the invention’s nature and the knowledge provided by the disclosure.\(^{856}\)

To comply with the written-description requirement, the patentee need not describe precisely the subject matter claimed; rather, the description must be clear to individuals of ordinary skill in the art.\(^{857}\) Stated another way, by a different panel, a patentee need not “provide in haec verba support for the claimed subject matter at issue.”\(^{858}\) Nevertheless, the Purdue panel explained that “the disclosure must... convey with reasonable clarity to those skilled in the art that... [the inventor] was in possession of the invention.”\(^{859}\)

In other words, the court wrote that one skilled in the art must be

\(^{853}\) See id., 56 U.S.P.Q.2d (BNA) at 1704 (holding that “the Board did not err in concluding that the utility of Mr. Swartz’s claimed process had not been established and that his application did not satisfy the enablement requirement”).


\(^{855}\) See Reiffin v. Microsoft Corp., 214 F.3d 1342, 1345-46, 54 U.S.P.Q.2d (BNA) 1915, 1917 (Fed. Cir. 2000) (“The purpose of this provision is to ensure that the scope of the right to exclude, as set forth in the claims, does not overreach the scope of the inventor’s contribution to the field of art as described in the patent specification.”); see also Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 1561, 19 U.S.P.Q.2d (BNA) 1111, 1115 (Fed. Cir. 1991) (“Adequate description of the invention guards against the inventor’s overreaching by insisting that he recount his invention in such detail that his future claims can be determined to be encompassed within his original creation.”) (quoting Rengo Co. v. Molins Mach. Co., 657 F.2d 535, 551, 211 U.S.P.Q.2d (BNA) 303, 321 (3d Cir. 1981)).


\(^{857}\) See Union Oil, 208 F.3d at 997, 54 U.S.P.Q.2d (BNA) at 1232 (stating that “the description must clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed” (quoting In re Gosteli, 872 F.2d 1008, 1012, 10 U.S.P.Q.2d (BNA) 1614, 1618 (Fed. Cir. 1989)) (citations omitted).


\(^{859}\) Purdue Pharma, 230 F.3d at 1323, 56 U.S.P.Q.2d (BNA) at 1483.
able to understand the limitation of the claims. Furthermore, the disclosure may convey the information either explicitly or inherently. Because the written-description analysis is a factual one, the Federal Circuit reviews the district court’s decision for clear error.

In Union Oil Co. of California v. Atlantic Richfield Co., the Federal Circuit reviewed and affirmed the trial court’s denial of a judgment as a matter of law motion, after a jury verdict, that the patent complied with the written-description requirement. The patent at issue claimed its “inventive products in terms of ranges of chemical properties, which work in combination with ranges of other chemical properties to produce a gasoline that reduces emissions.”

The appellee, Union Oil, argued that the specification failed to satisfy Section 112, paragraph one, because it did not describe the exact chemical component of each combination that falls within the range of claims of the patent. The court held that the Patent Act does not require such specificity. To the contrary, the court explained that describing an invention in terms of ranges does not offend Section 112, paragraph one. The court noted, before it undertook its analysis, that the focus was not whether the ranges found in the claims corresponded exactly to those found in the specification, but whether those skilled in the art could derive the claimed ranges from

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860. See id., 56 U.S.P.Q.2d (BNA) at 1483 (stating that “one skilled in the art, reading the original disclosure, must immediately discern the limitation at issue in the claims”) (citing Waldemar Link GmbH & Co. v. Osteonics Corp., 32 F.3d 556, 558, 31 U.S.P.Q.2d (BNA) 1855, 1857 (Fed. Cir. 1994)).

861. See Reiffin v. Microsoft Corp., 214 F.3d 1342, 1346, 54 U.S.P.Q.2d (BNA) 1915, 1917 (Fed. Cir. 2000) (citing Cont'l Can Co. USA v. Monsanto Co., 948 F.2d 1264, 1268, 20 U.S.P.Q.2d (BNA) 1746, 1749 (Fed. Cir. 1991) (descriptive matter may be inherently present in a specification if one skilled in the art would necessarily recognize such a disclosure)).

862. See Purdue Pharma, 230 F.3d at 1325, 56 U.S.P.Q.2d (BNA) at 1483 (“When the question whether a patent satisfies the written description requirement is resolved by a district court’s sitting as the trier of fact, we review the court’s decision for clear error.”).

863. See Union Oil Co. of Cal., 208 F.3d 989, 997, 1001-02, 54 U.S.P.Q.2d (BNA) 1232, 1235 (Fed. Cir. 2000) (noting that the court went out of its way to recognize and repeat that the trial judge required the jury to answer special verdicts, and by doing so the jury answered forty-one times that the patent satisfied the written description requirement of § 112).

864. Union Oil, 208 F.3d at 997, 54 U.S.P.Q.2d (BNA) at 1233.

865. See id. at 997, 54 U.S.P.Q.2d (BNA) at 1232 (describing the written description requirement).

866. See id., 54 U.S.P.Q.2d (BNA) at 1232 (noting that the written description requirement does not demand that the applicant describe the exact subject matter claimed).

867. Id., 54 U.S.P.Q.2d (BNA) at 1232 (stating that Section 112, ¶ 1 “ensures that, as of the filing date, the inventor conveyed with reasonable clarity to those of skill in the art that he was in possession of the subject matter of the claims.”).
Indeed, to emphasize this point, the court quoted from its predecessor court’s decision in In re Wertheim:

If lack of literal support alone were enough to support a rejection under § 112, the statement of In re Lukach . . . that “the invention claimed does not have to be described in ipsis verbis in order to satisfy the description requirement of § 112,” is empty verbiage. The court also cited to Ralston Purina Co. v. Far-Mar-Co., Inc., to reiterate that the same component proportion ranges in an applicant’s claims are not required to correspond with what is shown in the patent application. The court indicated that it would “let form triumph over substance” if it allowed the written description requirement to supercede claims that are narrowed during prosecution. Ultimately, the court held that the written description requirement does not demand that the applicant provide an identical description of claimed compounds; rather, that the inventor provide adequate disclosure in the patent to show one skilled in the art that the applicant actually invented the claim at issue. After reviewing the evidence, including testimony presented at trial, the court found that substantial evidence existed in the record regarding written description to support the verdict that the inventors had possession of the claimed subject matter.

In Purdue Pharma L.P. v. Faulding Inc., the Federal Circuit reached an opposite holding and found that the patent at issue failed to satisfy the written-description requirement. In Purdue, the patent claimed methods of treating pain in patients by administering an

868. See id., 54 U.S.P.Q.2d (BNA) at 1233 (“The Patent Act and this court’s case law require only sufficient description to show one of skill in the refining art that the inventor possessed the claimed invention at the time of filing.”).
869. 541 F.2d 257, 265, 191 U.S.P.Q.2d (BNA) 90, 98 (C.C.P.A. 1976). The court explained that, “[i]n Wertheim, the circuit court held that the specification supported the claimed range, even though the precise range of the claim was not repeated verbatim in the specification . . . .” Union Oil, 208 F.3d at 1000, 54 U.S.P.Q.2d (BNA) at 1235. The majority asserted that Judge Lourie, by his dissent, would require just such a verbatim repeat. See id., 54 U.S.P.Q.2d (BNA) at 1235 (stating “as the dissent in this case would appear to require”). Furthermore, the Union Oil majority stressed, again by reference to Wertheim, that written description questions are intensely factual and should be dealt with on a case-by-case basis. See id. at 1000, 54 U.S.P.Q.2d (BNA) at 1235.
870. 772 F.2d 1570, 1575, 227 U.S.P.Q. (BNA) 177, 179 (Fed. Cir. 1985).
872. Union Oil, 208 F.3d at 1001, 54 U.S.P.Q.2d (BNA) at 1235.
873. Id., 54 U.S.P.Q.2d (BNA) at 1231.
874. See id., 54 U.S.P.Q.2d (BNA) at 1231 (“Because the record shows substantial evidence of adequate written description for each claim as the jury found, this court affirms.”).
opioid, such as morphine, once a day. The claim included a limitation that the maximum plasma concentration ("C_max") is more than twice the plasma level of the opioid at about twenty-four hours ("C_24") after administration of the dosage. At issue was whether this limitation requiring C_max/C_24 to be greater than two was adequately described in the disclosure of the application as originally filed.

The district court found that the specification of the patent failed to convey that the C_max/C_24 limitation fell within the original application, and the Federal Circuit held that the district court did not commit clear error in its finding.

Recognizing that written-description inquiries are intensely factual, the Federal Circuit painstakingly reviewed the evidence, including a detailed study of the patent’s specification and other evidence including publications and expert testimony presented at trial. The court addressed at length the patentee’s argument that two examples within the patent disclose the C_max/C_24 ratio. The Federal Circuit, however, agreed with the district court’s finding that the patent included examples that also disclose a C_max/C_24 ratio of less than two. The Federal Circuit, like the district court, explained that while the examples showed the various ratios, nothing in the specification emphasized the C_max/C_24 ratio; therefore, "one of ordinary skill in the art would not be directed to the C_max/C_24 ratio as an aspect of the invention." Nothing in the written description indicated that the particular ratio was an important element of the formulation. Seemingly scolding the patentee, the court went on to say:

What the ‘360 patentees have done is to pick a characteristic possessed by two of their formulations, a characteristic that is not discussed even in passing in the disclosure, and then make it the

876. See Purdue Pharma, 230 F.3d at 1322, 56 U.S.P.Q.2d (BNA) at 1482 (stating that the patent disclosed “a once-a-day formulation exhibiting a rapid initial rise in the opioid in the patient’s blood.”).
877. See id. at 1322-23, 56 U.S.P.Q.2d (BNA) at 1482-83 (describing the claims at issue in the case).
878. See id. at 1323, 56 U.S.P.Q.2d (BNA) at 1483-84.
879. See id. at 1324, 56 U.S.P.Q.2d (BNA) at 1484.
880. See id. at 1324-28, 56 U.S.P.Q.2d (BNA) at 1484-88.
882. See id. at 1325-26, 56 U.S.P.Q.2d (BNA) at 1485-86.
883. Id. at 1326, 56 U.S.P.Q.2d (BNA) at 1485-86.
884. See id. at 1327, 56 U.S.P.Q.2d (BNA) at 1486 (“[T]here is nothing in the written description of [the examples] that would suggest to one skilled in the art that the C_max/C_24 ratio is an important defining quality of the formulation, nor does the disclosure even motivate one to calculate the ratio.”).
basis of claims that cover not just those two formulations, but any formulation that has that characteristic. This is exactly the type of overreaching the written description requirement was designed to guard against.\textsuperscript{885}

The court also rejected the patentee’s arguments that the trial court had committed errors of law.\textsuperscript{886} During this review, the court stated one of the written description legal rules, namely, that the amended claims must define and provide support for the invention. The patentee must also include the support in the specification as filed without the aid of amended claims.\textsuperscript{887} In other words, the amended claims cannot be used to support claims themselves. Finally, the patentee argued that during prosecution the examiner stated in an interview summary that the claims are supported by the patent’s specification, and that this statement is binding on the district court.\textsuperscript{888} The Federal Circuit rejected this argument, explaining that (1) even if the examiner’s statement was directed to the issue at hand, the district court properly concluded that any deference due the examiner had been overcome by clear and convincing evidence, and (2) that the substantial evidence standard enunciated in \textit{Dickinson v. Zurko}\textsuperscript{889} did not apply because this was not a review of an administrative decision.\textsuperscript{890} After reviewing this evidence and the legal arguments, the court held that the trial court had reached the proper conclusion and affirmed the decision invalidating

\textsuperscript{885} \textit{Id.}, 56 U.S.P.Q.2d (BNA) at 1487 (“What the ‘360 patentees have done is to pick a characteristic possessed by two of their formulations, a characteristic that is not discussed even in passing in the disclosure, and then make it the basis of claims that cover not just those two formulations, but any formulation that has that characteristic.”). “This is exactly the type of overreaching the written description requirement was designed to guard against.” \textit{Id.}, 56 U.S.P.Q.2d (BNA) at 1487.

\textsuperscript{886} \textit{See id.} at 1328, 56 U.S.P.Q.2d (BNA) at 1487 (stating that the court “examined each of the claimed legal errors and conclude[d] that the district court did not commit any error of law that had a material effect on the court’s judgment”).


\textsuperscript{888} \textit{See Purdue Pharma}, 230 F.3d at 1329, 56 U.S.P.Q.2d (BNA) at 1488 (“Purdue argue[d] that the district court should have deferred to the examiner’s finding on that issue and that the district court failed to do so because the court improperly regarded the written description issue to be an issue of law rather than an issue of fact.”).

\textsuperscript{889} \textit{527 U.S. 150}, 164 (1999) (“A reviewing court reviews an agency’s reasoning to determine whether it is ‘arbitrary or capricious,’ or, if bound up with a record-based factual conclusion, to determine whether it is supported by ‘substantial evidence.’”).

\textsuperscript{890} \textit{See Purdue Pharma}, 230 F.3d at 1329, 56 U.S.P.Q.2d (BNA) at 1488 (noting, with respect to \textit{Dickinson}, that decisions of the PTO are accorded “deference that takes the form of the presumption of validity provided under 35 U.S.C. § 282”). The court, however, clarified that it is “not bound by the examiner’s finding in the \textit{ex parte} application proceeding that the new claims were supported by the specification,” particularly in view of the extensive evidence heard by the trial court. \textit{Id.} at 1329, 56 U.S.P.Q.2d (BNA) at 1488.
the claims for failure to satisfy the written-description requirement.\textsuperscript{891}

The respective panels in \textit{Union Oil} and \textit{Purdue Pharma} both addressed \textit{In re Ruschig},\textsuperscript{892} where the Federal Circuit’s predecessor court, the Court of Customs and Patent Appeals, found that the claim at issue violated the written-description requirement.\textsuperscript{893} The way in which \textit{Ruschig} was handled by the different panels is noteworthy. In \textit{Union Oil}, where the Federal Circuit found that the patent complied with the written-description requirement, the panel distinguished \textit{Ruschig}.\textsuperscript{894} The court seemed to rely heavily on the fact that the claim in \textit{Ruschig} was copied from another patent to provoke an interference.\textsuperscript{895} The \textit{Union Oil} panel therefore explained that “[b]ecause another inventor, not Ruschig, drafted the claim at issue to fit another specification, it is not surprising that the disputed claim did not find support in Ruschig’s specification, even though the inventions were similar.”\textsuperscript{896} Additionally, the \textit{Union Oil} panel wrote that the \textit{Ruschig} court was concerned over the extent to which the patentee had relied on variables to describe structures.\textsuperscript{897} Such concern apparently did not exist for the \textit{Union Oil} panel because the court determined that “[a]rtisans skilled in petroleum refining, in contrast, are aware of the properties of raw petroleum sources and know how to mix streams of such sources to achieve a final product with desired characteristics.”\textsuperscript{898}

In \textit{Purdue Pharma}, however, the court did not look so favorably upon the level of skill in the relevant art.\textsuperscript{899} The Federal Circuit quoted a passage from \textit{Ruschig}, where the court analogized the importance of documenting the steps taken in inventing a product to

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\textsuperscript{891} See \textit{id.} at 1329-30, 56 U.S.P.Q.2d (BNA) at 1488.  \\
\textsuperscript{892} 379 F.2d 990, 154 U.S.P.Q. (BNA) 118 (C.C.P.A. 1967).  \\
\textsuperscript{893} The \textit{Purdue Pharma} panel described \textit{Ruschig} as a case where the claim at issue was directed to a single compound, and “[t]he applicants argued that, although the compound itself was not disclosed, one skilled in the art would find support for the claimed compound in the general disclosure of the genus of compounds to which the claimed compound belonged.” \textit{Purdue Pharma L.P. v. Faulding Inc.}, 230 F.3d 1320, 1326, 56 U.S.P.Q.2d (BNA) 1481, 1486 (Fed. Cir. 2000).  \\
\textsuperscript{894} See \textit{Union Oil Co. of Cal. v. Atl. Richfield Co.}, 208 F.3d 989, 1000, 54 U.S.P.Q.2d (BNA) 1227, 1234-35 (Fed. Cir. 2000) (discussing the various reasons why \textit{Ruschig} is different than the case at bar).  \\
\textsuperscript{895} See \textit{Union Oil}, 208 F.3d at 1000, 54 U.S.P.Q.2d (BNA) at 1234 (stating that “the \textit{Ruschig} case involved a copied claim (another inventor’s claim copied into Ruschig’s application), which did not find support in Ruschig’s application because Ruschig had invented and disclosed a broad set of the compounds that was similar, but not entirely within the scope of the claim.”).  \\
\textsuperscript{896} \textit{Id.}, 54 U.S.P.Q.2d (BNA) at 1234.  \\
\textsuperscript{897} \textit{Id.}, 54 U.S.P.Q.2d (BNA) at 1234.  \\
\textsuperscript{898} \textit{Id.} at 1000-01, 54 U.S.P.Q.2d (BNA) at 1234.  \\
\textsuperscript{899} \textit{See \textit{Purdue Pharma L.P. v. Faulding Inc.}}, 230 F.3d 1320, 1326, 56 U.S.P.Q.2d (BNA) 1481, 1486 (Fed. Cir. 2000).  \\
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the marking of a trail by making blaze marks on trees. The Purdue Pharma panel noted that its case differed from Ruschig, which involved a genus encompassing potentially half a million compounds. Nevertheless, the Ruschig rationale applied equally because the patent in Purdue Pharma disclosed many pharmacokinetic parameters without any evidence of the process followed to explain the $C_{\text{max}}/C_{24}$ ratio or what value that ratio should exceed. The Purdue Pharma panel applied Ruschig, therefore, to state that the patentee must demonstrate in its original disclosure the steps taken to achieve its result to meet the written-description requirement.

Two of the Federal Circuit’s decisions dealing with the written-description requirement—Reiffin v. Microsoft Corp. and Lampi Corp. v. American Power Prods., Inc.—did so in the context of 35 U.S.C. § 120, the provision of the Patent Act that permits continuation applications. First, in Reiffin v. Microsoft Corp., the court held that the district court erred when it looked to an original 1982 patent application to determine if the patents at issue, filed in 1990 and 1994, complied with the written description requirement. The Federal Circuit reasoned that the district court should only rely on the earlier application for relevant specifications when a patentee seeks the benefit of the earlier date under 35 U.S.C. § 120. Indeed, the Federal Circuit noted that Microsoft did not dispute that the 1990 and 1994 patents met the written description requirement as to their claims. Instead, Microsoft had the district court look at the 1982 grandparent application for compliance with the written-description requirement, in apparent reliance on Gentry Gallery, Inc. v. Berkline

900. See Purdue Pharma, 230 F.3d at 1326, 56 U.S.P.Q.2d (BNA) at 1486 (“It is an old custom in the woods to mark trails by making blaze marks on the trees. It is of no help in finding a trail or in finding one’s way through the woods where the trails have disappeared—or have not yet been made, which is more like the case here—to be confronted simply by a large number of unmarked trees.”) (quoting In re Ruschig, 379 F.2d 990, 994-95, 154 U.S.P.Q. (BNA) 118, 122 (C.C.P.A. 1967)). The court went on to say that “[w]e are looking for blaze marks which single out particular trees. We see none.” Id., 56 U.S.P.Q.2d (BNA) at 1486.

901. See id. 56 U.S.P.Q.2d (BNA) at 1486.

902. Id., 56 U.S.P.Q.2d (BNA) at 1486.

903. See id. at 1326-27, 56 U.S.P.Q.2d (BNA) at 1486 (“In order to satisfy the written description requirement, the blaze marks directing skilled artisans to that tree must be in the originally filed disclosure.”).


905. 228 F.3d 1365, 56 U.S.P.Q.2d (BNA) 1445 (Fed. Cir. 2000).

906. See Reiffin, 214 F.3d at 1345, 54 U.S.P.Q.2d (BNA) at 1917. (For purposes of § 112, ¶ 1, the relevant specifications are those of the [1990 and 1994] patents; earlier specifications are relevant only when the benefit of an earlier filing date is sought under 35 U.S.C. § 120.”).

907. See id., 54 U.S.P.Q.2d (BNA) at 1917.

908. See id. at 1346, 54 U.S.P.Q.2d (BNA) at 1917.
The court explained, however, that this reliance was misplaced because *Gentry* did not invoke prior applications, and the original disclosure belonged with the issued patent. Furthermore, Reiffin, the patentee, stated that he did not need the benefit of the 1982 filing date. The Federal Circuit explained that analysis of ancestor applications is appropriate when the benefit of the earlier filing date is sought under Section 120. The court, therefore, held that the district court had erred when it invalidated the claims of the patents, and at worst, those claims would not receive the benefit of the 1982 application’s filing date.

In the second case, *Lampi*, the Federal Circuit reiterated that in order for a claim in a subsequently filed application to receive the filing date of a previously filed application, the earlier application must describe the invention. The accused infringer in *Lampi* asserted that the claims of the patent at issue, a continuation application, were not entitled to the filing date of the parent application due to its failure to meet the written description requirement. Specifically, the claims at issue encompassed “non-identical half-shells,” and the defendant argued the original application did not support claims for “non-identical half-shells,” only “identical half-shells.” The district court held, and the Federal Circuit affirmed, that the patent satisfied the written description requirement.

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909. 134 F.3d 1473, 1479, 45 U.S.P.Q.2d (BNA) 1498, 1503 (Fed. Cir. 1998) (“[The inventor’s] original disclosure serves to limit the permissible breadth of his later-drafted claims.”).

910. Reiffin v. Microsoft Corp., 214 F.3d 1342, 1346, 54 U.S.P.Q.2d (BNA) 1915, 1917-18 (Fed. Cir. 2000) (“[T]here were no prior applications and the original disclosure was that of the issued patent . . . [this] ‘original disclosure’ reference simply recognized that ‘the sufficiency [of a disclosure] under § 112, first paragraph must be judged as of its filing date.’”) (quoting Application of Glass, 492 F.2d 1228, 1232, 181 U.S.P.Q. (BNA) 31, 34 (C.C.P.A. 1974)).

911. See *Reiffin*, 214 F.3d at 1346, 54 U.S.P.Q.2d (BNA) at 1918.

912. See id., 54 U.S.P.Q.2d (BNA) at 1918 (“In accordance with § 120, claims to subject matter in a later-filed application not supported by an ancestor application in terms of § 112 ¶ 1 are not invalidated; they simply do not receive the benefit of the earlier application’s filing date.”).

913. See id., 54 U.S.P.Q.2d (BNA) at 1918 (“The district court erred in holding the ‘603 and ‘604 claims invalid for failure to comply with the written description requirement.”).

914. Lampi Corp. v. Am. Power Prods., 228 F.3d 1365, 1377, 56 U.S.P.Q.2d (BNA) 1445, 1455 (Fed. Cir. 2000) (“For a claim in a later-filed application to be entitled to the filing date of an earlier-filed application under 35 U.S.C. § 120, the earlier application must comply with the requirement of 35 U.S.C. § 112, ¶ 1, that the specification ‘contain a written description of the invention.’”).

915. See id. at 1377-78, 56 U.S.P.Q.2d (BNA) at 1454-55.

916. See id., 56 U.S.P.Q.2d (BNA) at 1455 (“APP argues that the specification of the 875 patent describes only identical half-shells and thus does not provide sufficient support for claims . . . which encompass non-identical half-shells.”).
requirement. In so holding, the Federal Circuit relied on the principle that claims need to be limited to a preferred embodiment. Using this statement of law, the fact that non-identical half-shells were not specifically disclosed in the original application did not bother the court. Indeed, the panel pointed to references in the specification where half-shells appeared without the modifier “identical,” which the court stated were not critical to the invention. The fact, moreover, that the drawings only disclosed identical half-shells also did not trouble the court because “drawings in the patent are merely a ‘practical example’ of the invention.”

Finally, the Federal Circuit made passing reference to the written-description requirement in three additional cases. In *KCJ Corp. v. Kinetic Concepts, Inc.*, the court used the written-description requirement in the context of performing its claim-construction analysis, not surprisingly, to determine whether the article “a” received a singular or plural interpretation. The *KCJ* decision, however, does not provide an analysis of the patent to determine compliance with Section 112, paragraph 1. Also, in *Hockerson-Halberstadt v. Avia Group International, Inc.*, the court addressed the issue of whether patent drawings appear to scale. The court cited to *In re Wright*, to explain that the established rule of law is that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue. The court stated in *Wright* that the drawings offer little guidance unless accompanied by quantitative measures. This decision, like *KCJ*, does not analyze the patent at

917. See id., 56 U.S.P.Q.2d (BNA) at 1455 (describing how the district court was correct in its finding on the written description issue).
918. Id. at 1378, 56 U.S.P.Q.2d (BNA) at 1455.
919. See id., 56 U.S.P.Q.2d (BNA) at 1455 (“Although the patent drawings show only identical half-shells . . . that does not compel the conclusion that the written description of the ‘875 patent is so narrowly tailored as to preclude Lampi from claiming non-identical half-shells in the ‘227 patent.”).
921. Lampi, 228 F.3d at 1378, 56 U.S.P.Q.2d (BNA) at 1455.
923. See *KCJ*, 228 F.3d at 1356, 55 U.S.P.Q.2d (BNA) at 1839 (“The written description supplies additional context for understanding whether the claim language limits the patent scope to a single unitary [element] or extends to encompass a device with multiple [elements].”) (citing Abtox, Inc. v. Exitron Corp., 122 F.3d 1019, 1024, 45 U.S.P.Q.2d (BNA) 1545, 1548 (Fed. Cir. 1997)).
926. See *Hockerson-Halberstadt*, 222 F.3d at 956, 55 U.S.P.Q.2d (BNA) at 1491 (“Absent any written description in the specification of quantitative values, arguments based on measurement of a drawing are of little value.”).
issue for compliance with the written description requirement. Finally, in *Singh v. Brake*, the court remanded the case to the Board of Patent Appeals and Interferences for a determination of the written-description requirement because the Federal Circuit refused to undertake the analysis in the first instance.

I. Best Mode

Pursuant to Section 112, paragraph 1, a patent specification must set forth the “best mode contemplated by the inventor of carrying out his invention.” In *Eli Lilly & Co. v. Barr Laboratories, Inc.*, the Federal Circuit wrote that this requirement “creates a statutory bargained-for-exchange by which a patentee obtains the right to exclude others from practicing the claimed invention for a certain time period, and the public receives knowledge of the preferred embodiments for practicing the claimed invention.” The court reiterated case law that focuses on a two-prong inquiry: “First, the factfinder must determine whether, at the time of filing the application, the inventor possessed a best mode for practicing the invention.” Second, the court wrote, “if the inventor possessed a best mode, the factfinder must determine whether the written description disclosed the best mode such that one reasonably skilled in the art could practice it.” The first prong focuses on the inventor’s state of mind at the time of filing and is a subjective inquiry, while the second prong comprises an objective inquiry that focuses on the scope of the claimed invention and the level of skill in the art. In view of these factual inquiries, the Federal Circuit considers the best mode requirement to be an issue of fact.

In both *Eli Lilly* and *Northern Telecom*, the panels began their respective analyses with the second prong of the test and clarified that the requisite amount of information that an inventor must

932. *Eli Lilly*, 222 F.3d at 981, 55 U.S.P.Q.2d (BNA) at 1614 (setting forth the second prong of the inquiry into the best mode requirement); see also United States Gypsum, 74 F.3d at 1212, 37 U.S.P.Q.2d (BNA) at 1390.
934. See *N. Telecom*, 215 F.3d at 1286, 55 U.S.P.Q.2d (BNA) at 1068 (stating that the determination of compliance with the best mode requirement is a matter of fact).
disclose is contingent upon the scope of the claimed invention.\textsuperscript{935} Accordingly, the court explained that an inventor need only disclose the subject matter that is novel and critical to carrying out the best mode of the invention.\textsuperscript{936} The court explained further that the best-mode requirement does not cover production details or routine details, reasoning that such details do not refer to the quality or nature of the claimed invention or to commercial and manufacturing considerations.\textsuperscript{937} Furthermore, while routine details may implicate the quality and nature of the invention, they are readily apparent to one of ordinary skill in the art.\textsuperscript{938} The court reiterated these boundaries on the best-mode requirement in \textit{Ajinomoto Co., Inc. v. Archer-Daniels-Midland Co.}, writing:

Requiring inclusion in the patent of known scientific/technological information would add an imprecise and open-ended criterion to the content of patent specifications, could greatly enlarge the content of patent specifications and unnecessarily increase the cost of preparing and prosecuting patent applications, and could tend to obfuscate rather than highlight the contribution to which the patent is directed. A patent is not a scientific treatise, but a document that presumes a readership skilled in the field of the invention.\textsuperscript{939}

In \textit{Ajinomoto}, the Federal Circuit affirmed the district court’s finding that the patent complied with the best-mode requirement.\textsuperscript{940} In so doing, the court pointed to the district court’s finding that the alleged omitted information was information that one skilled in the art would have recognized.\textsuperscript{941}

\textsuperscript{935} See Eli Lilly & Co. v. Barr Labs., Inc., 222 F.3d 973, 981, 55 U.S.P.Q.2d (BNA) 1609, 1614 (Fed. Cir. 2000) (elaborating on the second prong of the best mode test); see also \textit{N. Telecom}, 215 F.3d at 1286, 55 U.S.P.Q.2d (BNA) at 1068 (applying the best mode requirements).

\textsuperscript{936} See \textit{Eli Lilly}, 222 F.3d at 981, 55 U.S.P.Q.2d (BNA) at 1614.

\textsuperscript{937} See \textit{id.}, 56 U.S.P.Q.2d (BNA) at 1614 (stating the “step or source or technique considered ‘best’ in a manufacturing circumstance may have been selected for a non-‘best mode’ reason.”) (citing Wahl Instruments, Inc. v. Acvious, Inc., 950 F.2d 1575, 1581, 21 U.S.P.Q.2d (BNA) 1123, 1128 (Fed. Cir. 1991)).

\textsuperscript{938} See \textit{Eli Lilly}, 222 F.3d at 981, 55 U.S.P.Q.2d (BNA) at 1614 (explaining why routine details need not be disclosed under the best mode test).

\textsuperscript{939} \textit{Ajinomoto Co. v. Archer-Daniels-Midland Co.}, 228 F.3d 1332, 1346-47, 56 U.S.P.Q.2d (BNA) 1332, 1338 (Fed. Cir. 2000) (stating that disclosure is addressed to those skilled in the art, not to the general public); see also W.L. Gore & Assoc., Inc. v. Garlock, Inc., 721 F.2d 1540, 1556, 220 U.S.P.Q. (BNA) 303, 315 (Fed. Cir. 1983) (reiterating that patents are written in order to enable those skilled in the art to practice the invention); \textit{In re Storrs}, 245 F.2d 474, 478, 114 U.S.P.Q. (BNA) 293, 296-97 (C.C.P.A. 1957).

\textsuperscript{940} See \textit{Ajinomoto}, 228 F.3d at 1347, 56 U.S.P.Q.2d (BNA) at 1339 (Fed. Cir. 2000) (finding that the patent could not be invalidated for violating the best mode requirement).

\textsuperscript{941} See \textit{id.}, 56 U.S.P.Q.2d (BNA) at 1339 (explaining that the investor disclosed
Similarly, in *Eli Lilly*, the court rejected the defendant’s two best-mode attacks on the patent’s validity. First, the court addressed the defendant’s assertion that the patentee had failed to disclose its preferred method for synthesizing p-trifluoromethylphenol. The court began its analysis by reiterating that it must examine the scope of the claimed inventions. According to the court, neither of the disputed covered p-trifluoromethylphenol or a method for synthesizing it. The fact that the claimed inventions involved the use of p-trifluoromethylphenol did not raise a best-mode issue since the claims did not provide the patentee with the right to exclude others from practicing the alleged best mode method for synthesizing p-trifluoromethylphenol. The *Eli Lilly* panel distinguished its facts from *Dana Corp. v. IPC Ltd., Partnership*, and *Northern Telecom, Inc. v. Datapoint Corp.*, where it was held that the inventors failed to disclose unclaimed subject matter that was necessary for carrying out the invention. In the present case, the inventor disclosed his preference for using p-trifluoromethylphenol to make the claimed invention but was not required to disclose the unclaimed method for synthesizing p-trifluoromethylphenol. The court clarified its holding by explaining that the best mode for carrying out the claimed invention involves novel subject matter, and a method for obtaining that subject matter regardless of whether it is claimed. Because p-trifluoromethylphenol was commercially available at the time the patentee filed its application, he did not need to disclose a method for synthesizing p-trifluoromethylphenol.

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942. See *Eli Lilly & Co. v. Barr Labs., Inc.*, 222 F.3d 973, 984, 55 U.S.P.Q.2d (BNA) 1609, 1617 (Fed. Cir. 2000) (holding that no facts existed upon which a jury could find that the investor had failed to meet the best mode requirement).

943. See *Eli Lilly*, 222 F.3d at 981, 55 U.S.P.Q.2d (BNA) at 1614.

944. See id., 55 U.S.P.Q.2d (BNA) at 1614.

945. See id., 55 U.S.P.Q.2d (BNA) at 1614.

946. See id., 55 U.S.P.Q.2d (BNA) at 1614 (explaining why the best mode requirement did not mandate disclosure in the case).


949. See *N. Telecom*, 908 F.2d at 940-41, 15 U.S.P.Q.2d (BNA) at 1321 (agreeing that the inventor knew that the best mode set forth in the application was not, in fact, the best mode).

950. See *Eli Lilly & Co. v. Barr Labs., Inc.*, 922 F.3d 973, 982, 55 U.S.P.Q.2d (BNA) 1609, 1615 (Fed. Cir. 2000) (discussing why there was no disclosure violation).


The *Eli Lilly* panel addressed the defendant’s second argument regarding violation of the best-mode requirement, namely, that the patentee had failed to disclose its preferred solvent for recrystallizing the fluoxetine hydrochloride compound. The court again began its inquiry with a review of the scope of the claimed invention stating that the two claims at issue respectively covered the compound fluoxetine hydrochloride and a method for administering it. The court found no genuine issue that one of ordinary skill in the art possessed the requisite knowledge to select a solvent for recrystallizing fluoxetine hydrochloride, thus recrystallization served as a routine detail that fell outside the scope of the best mode disclosure. The court interpreted the defendant’s argument as one that would require the patentee to disclose a preferred mode for carrying out an unclaimed routine detail and flatly rejected the argument as being in conflict with the scope of the claims at issue. Instead, the court stressed that the intent of Section 112, paragraph one is to prohibit concealment of the best mode of practicing the claimed invention. Finally, the court explained that section 112 requires only “an adequate disclosure of the best mode,” and that this adequate disclosure requirement does not preclude some experimentation.

In *Northern Telecom*, the Federal Circuit reversed the district court’s decision that the inventors violated the best mode requirement. The court did so by holding that the lower court misunderstood the invention at hand and erred in its determination as to the scope of the claimed invention—the pivotal best-mode inquiry. The Federal Circuit determined the scope of the claimed invention using the standard claim-construction analysis. Like the panel in *Eli Lilly*, the
court distinguished *Dana Corp.* and *Northern Telecom.* The court explained that each of those cases involved a situation where the patentee had omitted the best mode related directly to the claimed invention. Unlike the present case, where the alleged omitted best mode did not fall within the scope of the claims, in *Dana Corp.* and *Northern Telecom,* the asserted best modes directly related to the claimed utility of the invention and to a specific limitation in the claims.

**J. Signature Requirement**

In *Ajinomoto Co. v. Archer-Daniels-Midland Co.*, the accused infringer asserted that as a result of certain flaws in the application that led to the patent-in-suit, the patent was invalid. The United States patent originated from a Soviet Union Inventor’s Certificate. In particular, the defendant argued that at least one of the inventors had not personally signed the application, but that it had been signed by another in the inventor’s absence with authorization. The defendant argued that the inventor must sign the application, and failure to do so rendered the patent invalid. The defendant further asserted that the inventors could not fix this flaw in the application by ratification. During the litigation, the patent owner submitted a declaration signed by all fourteen inventors that stated the application filings signed by others with authorization occurred as a result of “lack of knowledge of the technical requirements of U.S. patent law and was made without any deceptive intent.” The defendant attacked this declaration through a handwriting expert, and argued that at least six or seven of the signatures did not appear to be authentic. The district court, which required clear and convincing evidence of fraud or inequitable conduct to invalidate the patent on the basis of failure to comply with the signature rules, ruled that technical errors made without deceptive intent could not serve as

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962. See id., 55 U.S.P.Q.2d (BNA) at 1069.
963. See id. at 1288, 55 U.S.P.Q.2d (BNA) at 1069.
964. See id., 55 U.S.P.Q.2d (BNA) at 1069.
967. See id. at 1341, 56 U.S.P.Q.2d (BNA) at 1334.
968. See id. at 1343, 56 U.S.P.Q.2d (BNA) at 1336.
969. See id., 56 U.S.P.Q.2d (BNA) at 1336.
970. Id. at 1344, 56 U.S.P.Q.2d (BNA) at 1337.
971. See *Ajinomoto Co. v. Archer-Daniels-Midland Co.*, 228 F.3d 1338, 1343, 56 U.S.P.Q.2d (BNA) 1332, 1337 (Fed. Cir. 2000) (recognizing that comparing the handwriting samples was difficult because they were written in different languages).
the basis for holding the patent invalid or unenforceable. 972

The Federal Circuit affirmed the district court’s holding, explaining that the “law does not bar the correction of defects when the defect was not the product of fraud.” 973 The Federal Circuit also rejected the accused infringer’s argument that the district court erroneously placed the burden of proof upon the party asserting failure to comply with the signature requirement, and reiterated that the burden of proving patent invalidity is upon the party who asserts the defense. 974

Furthermore, the court referred to the standard for inequitable conduct when describing the burden associated with invalidating a patent based on a flawed signature. Relying on *Kingsdown Medical Consultants, Ltd. v. Hollister Inc.*, 975 the court wrote that a moving party must prove by clear and convincing evidence the defendant’s failure to disclose or submission of false material information and an intent to deceive. 976 Thus, in the absence of deceptive intent, technical defects in an application, such as the signature requirement, can be cured and do not invalidate a patent. 977

**K. Indefiniteness**

For a claim to satisfy the two requirements for compliance with Section 112, paragraph 2, it must: (1) explain what the “applicant regards as his invention,” and (2) describe the invention with “sufficient particularity and distinctness.” 978

In *Moore U.S.A., Inc. v. Standard Register Co.*, 979 the Federal Circuit considered whether the term “distance sufficient” defined the claim with sufficient particularity and distinctness, where the patent claimed a “mailer” with adhesive applied at a distance sufficient from the edge of the paper to avoid interference with the printer rollers. 980 The PTO examiner had rejected the “distance sufficient” term as indefinite several times but ultimately allowed the claim. 981 To obtain

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972. See id., 56 U.S.P.Q.2d (BNA) at 1337 (recounting the district court finding that there was no deceptive intent present in the case).
973. *Id.*, 56 U.S.P.Q.2d (BNA) at 1337.
974. *Id.*, 56 U.S.P.Q.2d (BNA) at 1337.
975. 863 F.2d 867, 9 U.S.P.Q.2d (BNA) 1384 (Fed. Cir. 1988) (*en banc*).
976. See *Ajinomoto*, 228 F.3d at 1345, 56 U.S.P.Q.2d (BNA) at 1337.
979. 229 F.3d 1091, 56 U.S.P.Q.2d (BNA) 1225 (Fed. Cir. 2000).
981. See *id.*, 56 U.S.P.Q.2d (BNA) at 1238 (noting that the examiner denied the application because it was impossible to determine what distance was being claimed).
allowance, the patentee had argued the term was a permissible functional description. 982 The district court held that the examiner allowed the claim because the term was limited by a specific IBM printer mentioned in the preferred embodiment portion of the specification. 983 Judge Michel, writing for the court, disagreed because the examiner’s approval signified the “acceptance of the ‘distance sufficient’ limitation as functionally claimed and as properly definite under 35 U.S.C. § 112, ¶2.” 984 The court noted “that there is nothing wrong with defining the dimensions of a device in terms of the environment in which it is to be used.”

In Solomon v. Kimberly-Clark Corp., 985 the court considered what evidence may be evaluated when considering a patent’s compliance with the “definiteness” requirement of Section 112. 986 In reversing the district court’s grant of summary judgment of invalidity on the basis of indefiniteness, the court first reiterated that compliance with Section 112, paragraph 2 creates a question of law reviewable de novo. 987

The district court had invalidated the patent based on evidence from the inventor’s deposition testimony that contradicted statements in the patent specification. 988 The Federal Circuit overruled the district court’s use of this evidence because an inventor’s testimony obtained during litigation should not be relied upon to invalidate claims under Section 112, paragraph 2. 989 Basing its holding on an interpretation of Section 112 requiring a claim to be sufficiently definite, the court wrote:

Determining whether a claim is definite requires an analysis of whether one skilled in the art would understand the bounds of the claim when read in light of the specification. If the claims read in light of the specification reasonably apprise those skilled in the art of the scope of the invention, § 112 demands no more. 990

982. See id., 56 U.S.P.Q.2d (BNA) at 1238.
983. Id., 56 U.S.P.Q.2d (BNA) at 1238 (referring to an IBM 3800 computer).
984. Id. at 1111, 56 U.S.P.Q.2d (BNA) at 1239. Judge Newman disagreed with the court’s claim construction and dissented. Id. at 1118, 56 U.S.P.Q.2d (BNA) at 1243 (Newman, J., dissenting).
986. See Solomon, 216 F.3d at 1377, 55 U.S.P.Q.2d (BNA) at 1282 (finding that it was inappropriate to consider evidence beyond the patent application).
988. See id., 55 U.S.P.Q.2d (BNA) at 1282.
989. See id., 55 U.S.P.Q.2d (BNA) at 1282.
990. Id. at 1378, 55 U.S.P.Q.2d (BNA) at 1282 (quoting Personalized Media Communications, LLC v. ITC, 161 F.3d 696, 705, 48 U.S.P.Q.2d (BNA) 1880, 1888 (Fed. Cir. 1998)).
The court noted that disregarding the inventor’s testimony obtained during litigation was consistent with the logic of *Markman*, because in both the claim-construction context and the definiteness context, the inventor is not competent to construe the claims. The court has the duty to construe the claims; therefore the inventor’s testimony has no probative value.

The court further noted that extrinsic evidence is appropriate for the PTO to review during the examination context because the claims can be freely amended and an important function of patent examinations includes insuring that claims are clear and accurate.

The court also distinguished the evidence appropriate for the court to consider in evaluating patentability as opposed to validity. The focus of the definiteness inquiry is whether the claims adequately notify the public of the patentee’s right to exclude. Extrinsic evidence is irrelevant to the definiteness inquiry.

### L. Patent Ownership

“The general rule is that an individual owns the patent rights to the subject matter of which he is an inventor, even though he conceived it or reduced it to practice in the course of his employment.” The Federal Circuit has acknowledged two exceptions to the general rule. First, an employer owns the rights to his invention if an express contract creating that right exists; second, an employer may own the invention if it hired the employee “to invent something or solve a particular problem.” Although the Federal Circuit has jurisdiction over disputes of patent ownership, the exceptions to the rule are grounded in contract law, and as such are governed by state contract

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992. See *Solomon*, 216 F.3d at 1379-80, 55 U.S.P.Q.2d (BNA) at 1283.

993. See *id.*, 55 U.S.P.Q.2d (BNA) at 1282 (“[A]n essential purpose of the patent examination is to fashion claims that are precise, clear, correct, and unambiguous.”) (quoting *In re Zletz*, 893 F.2d 319, 321-22, 13 U.S.P.Q.2d (BNA) 1320, 1322 (Fed. Cir. 1989)).

994. See *id.*, 55 U.S.P.Q.2d (BNA) at 1283.

995. See *id.*, 55 U.S.P.Q.2d (BNA) at 1283 (citing United Carbon Co. v. Binney & Smith Co., 317 U.S. 228, 233 (1942); 3 DONALD S. CHISUM, PATENTS § 8.03, at 8-14 (1997)).

996. See *id.*, 55 U.S.P.Q.2d (BNA) at 1283 (concluding that extrinsic evidence, such as inventor testimony obtained in the context of litigation, has little, if any, probative value and should not be considered in determining definiteness).


998. See *Banks*, 228 F.3d at 1359, 56 U.S.P.Q.2d (BNA) at 1224.
In Banks v. Unisys Corp., the Federal Circuit considered the issue of patent ownership in the employer-employee context. Gerald Banks was hired as an expert by Unisys to work on the Image Camera Project. At the time of his hiring, he refused to sign a standard agreement assigning all patent rights to Unisys. On his own time and at his own initiative, Banks developed several patentable inventions for use with a high-speed document sorter. Unisys, without Banks’ knowledge, listed Banks as a co-inventor on three of six patents that were received and based on Banks’ work. The district court granted summary judgment on the patent ownership issue, agreeing with Unisys that Banks was “employed to invent,” and therefore Unisys owned the rights to the patents. Unisys argued that the “employed to invent” exception does not require an express agreement, and that an implied-in-fact contract existed between Banks and Unisys under the “employed to invent” rule. The Federal Circuit disagreed. Citing Banks’ refusal to sign the initial employment agreement, as well as his refusal to sign a “Restricted Information Obligation” form the last day of his employment, the court found material issues of fact “about whether there was a meeting of the minds necessary for an implied-in-fact contract.” Therefore, the court reversed the lower court’s decision to grant summary judgment.

M. Inequitable Conduct

Patent applicants and their legal representatives have a duty of candor, good faith, and honesty in representations to the PTO during prosecution of a patent application. A breach of this duty is

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999. See id., 56 U.S.P.Q.2d (BNA) at 1224 (discussing the application of contract principles to employee contracts where an employee is hired to invent).
1000. 228 F.3d 1357, 56 U.S.P.Q.2d (BNA) 1222 (Fed. Cir. 2000).
1001. See Banks, 228 F.3d at 1358, 56 U.S.P.Q.2d (BNA) at 1223.
1002. Id., 56 U.S.P.Q.2d (BNA) at 1223.
1003. See id., 56 U.S.P.Q.2d (BNA) at 1223 (noting that the application of the inventions involved the same principles as the image camera project).
1004. See id., 56 U.S.P.Q.2d (BNA) at 1223 (explaining that the subject matter of the patent applications included optics designed by Banks).
1005. See id., 56 U.S.P.Q.2d (BNA) at 1223.
1006. Banks v. Unisys Corp., 228 F.3d 1357, 1359, 56 U.S.P.Q.2d (BNA) 1222, 1223 (Fed. Cir. 2000) (concluding that the fact that Banks did not sign the agreement was irrelevant).
1007. Banks, 228 F.3d at 1360, 56 U.S.P.Q.2d (BNA) at 1223.
1008. See id., 56 U.S.P.Q.2d (BNA) at 1223.
considered inequitable conduct, and a patent may be rendered unenforceable on that basis.\textsuperscript{1010} “Inequitable conduct consists of affirmative misrepresentations of material fact or the submission of false material information during the prosecution of a patent, both coupled with an intent to deceive the PTO.”\textsuperscript{1011} The determinations of materiality and intent are reviewed under a clearly erroneous standard.\textsuperscript{1012} Once the threshold levels of materiality and intent are proven, it is within the trial court’s discretion to determine by weighing the levels of materiality and intent if the principles of equity require the conclusion that inequitable conduct has occurred.\textsuperscript{1013} The greater the showing of one factor, the lesser the required showing of the other for a determination of inequitable conduct.\textsuperscript{1014} As to the standard of review, the Federal Circuit noted that it will only overrule a lower court’s determination of inequitable conduct for an abuse of discretion.\textsuperscript{1015}

In \textit{Li Second Family Ltd. Partnership v. Toshiba Corp.},\textsuperscript{1016} the Federal Circuit considered whether failure to disclose to the examiner a PTO Board of Appeals decision that a related patent was not entitled to the benefit of the earlier filing date of any of the patentee’s earlier applications, constitutes inequitable conduct.\textsuperscript{1017} The Board had determined that the earlier ‘758 application was not entitled to the benefit of an earlier filing date in an appeal from the examiner’s rejection of Li’s claim for the earlier filing date.\textsuperscript{1018} A different examiner was responsible for the prosecution of the ‘102

\textsuperscript{1010}. \textit{See} \textit{Life Techs.}, 224 F.3d at 1324, 56 U.S.P.Q.2d (BNA) at 1189 (citing LaBounty Mfg., Inc. v. United States Int’l Trade Comm’n, 958 F.2d 1066, 1070, 22 U.S.P.Q.2d (BNA) 1025, 1028 (Fed. Cir. 1992) (describing the effects of a breach of the duty of candor, good faith, and honesty)).

\textsuperscript{1011}. \textit{Id.} at 1324, 56 U.S.P.Q.2d (BNA) at 1189 (“Materiality and intent to deceive are distinct factual inquiries, and each must be shown with clear and convincing evidence.”) (internal citations omitted).

\textsuperscript{1012}. \textit{See id.} at 1324, 56 U.S.P.Q.2d (BNA) at 1189 (discussing the standard of review utilized by the Federal Circuit in reviewing district court inequitable-conduct determinations).

\textsuperscript{1013}. \textit{See id.}, 56 U.S.P.Q.2d (BNA) at 1189.


\textsuperscript{1015}. \textit{See} \textit{Life Techs. v. Clontech Labs.}, 224 F.3d 1320, 1324, 56 U.S.P.Q.2d (BNA) 1186, 1190 (Fed. Cir. 2000) (“We must reverse a discretionary ruling of the district court when it is premised upon clearly erroneous findings of fact or on a misapplication or misinterpretation of applicable law, or evidences a serious error in judgment.”) (citing Kingsdown Med. Consultants, Ltd. v. Hollister, Inc., 863 F.2d 867, 876, 9 U.S.P.Q.2d (BNA) 1384, 1392 (Fed. Cir. 1988) \textit{(en bane)}).

\textsuperscript{1016}. 231 F.3d 1373, 56 U.S.P.Q.2d (BNA) 1681 (Fed. Cir. 2000).

\textsuperscript{1017}. \textit{See} \textit{Li Second Family}, 231 F.3d at 1378, 56 U.S.P.Q.2d (BNA) at 1685 (discussing Toshiba’s claim of inequitable conduct).

\textsuperscript{1018}. \textit{See id.}, 56 U.S.P.Q.2d (BNA) at 1683.
application—the application subject to the inequitable conduct claim. While Li did disclose a genealogy chart showing the parent applications to the '102 application, he disclosed nothing more, particularly the Board’s decision. The Federal Circuit held that the genealogy chart was not sufficient to disclose the Board’s decision regarding the priority date of the ‘758 application. Compounding his problems was the fact that Li had repeatedly argued to the examiner that the ‘102 patent application was entitled to the benefit of the earlier filing date.

Turning to the materiality element, the Federal Circuit stated:

Because the effective filing date of each claim in a patent application determines which references are available as prior art for purposes of §§ 102 and 103, information regarding the effective filing date is of the utmost importance to the examiner. Consequently, an applicant’s misrepresentation that he is entitled to the benefit of an earlier filing date is highly material.

The Federal Circuit noted that the information on the effective filing date was highly material in this case because the earlier filing date eliminated a reference specifically cited by the examiner. The Federal Circuit rejected Li’s argument that the reference was not material to his patent application and that the application was patentable even without the benefit of the earlier filing dates. The court observed that concealing information from the PTO may be material regardless of whether it invalidated the patent.

A court need not base its finding of intent to deceive the PTO solely on direct evidence, which is rarely available, and may instead infer intent “from clear and convincing evidence of the surrounding

1019. See id. at 1376, 56 U.S.P.Q.2d (BNA) at 1683 (indicating that Examiner Larkins processed the ‘758 application while Examiner Saba examined the ‘102 application).
1020. See id. at 1378, 56 U.S.P.Q.2d (BNA) at 1685.
1021. See id. at 1378-79, 56 U.S.P.Q.2d (BNA) at 1685 (finding no error in the district court’s determination of failure to provide adequate disclosure of the previous Board decision).
1023. Li Second Family, 231 F.3d at 1379-80, 56 U.S.P.Q.2d (BNA) at 1686.
1024. See id. at 1380, 56 U.S.P.Q.2d (BNA) at 1686 (noting that the eliminated reference disclosed an important feature of the disputed invention).
1025. See id., 56 U.S.P.Q.2d (BNA) at 1686 (emphasizing the materiality of the missing priority date information and not the missing reference and noting that if the missing reference was at issue, it would have been material).
1026. Id. at 1380, 56 U.S.P.Q.2d (BNA) at 1687 (remarking that “the test for materiality is whether a reasonable examiner would have considered the information important, not whether the information would conclusively decide the issue of patentability.”) (internal citations omitted).
A court must weigh all evidence when determining intent, including evidence of good faith. In *Li*, the court inferred intent from Li’s affirmative misrepresentations. Li argued that the inclusion of the patent reference in the genealogy chart as well as his disclosure of the Board’s decision in a later filed patent application was evidence of good faith and a lack of deceptive intent. The court disagreed and concluded that the district court did not commit clear error in finding that Li intended to deceive the PTO. The court also found that the district court did not abuse its discretion in finding Li’s non-disclosure and misrepresentation constituted inequitable conduct.

In *Life Technologies, Inc. v. Clontech Laboratories, Inc.*, the patentees failed to disclose the key role of an article in the motivation and development of their invention and that another inventor was working with the technology involved with their invention. The inventors did disclose the Johnson article and even discussed it in the written description of their patent application but did not disclose their reliance on the article or how it motivated them. In evaluating the district court’s application of the law, the court wrote: “Thus the district court determined that the manner in which the inventors used a disclosed prior art reference is material information and must be revealed to the PTO. Because this factual finding was premised upon a misapprehension of the legal standards of patentability, it is clearly erroneous.”

Turning to materiality, the Federal Circuit found that an inventor’s subjective motivations are immaterial because the courts apply an objective standard from the perspective of an individual of ordinary skill in the art. The district court found that the inventors made

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1027. *Id.* at 1381, 56 U.S.P.Q.2d (BNA) at 1687 (quoting Baxter Int’l, Inc. v. McGaw, Inc., 149 F.3d 1321, 1329, 47 U.S.P.Q.2d (BNA) 1225, 1230 (Fed. Cir. 1998)).
1029. *See Li Second Family*, 231 F.3d at 1380, 56 U.S.P.Q.2d (BNA) at 1686 (finding the misrepresentations equivalent to deliberate concealment of the previous Board decision).
1030. *See id.*, 56 U.S.P.Q.2d (BNA) at 1687.
1031. *Id.* at 1381, 56 U.S.P.Q.2d (BNA) at 1687.
1033. *See Life Techs.*, 224 F.3d at 1323-24, 56 U.S.P.Q.2d (BNA) at 1188-89 (noting patentees’ failure to disclose its reliance on the Johnson article and the fact that Goff also applied the technology used in the invention at issue).
1035. *Id.* at 1325, 56 U.S.P.Q.2d (BNA) at 1190.
1036. *See id.*, 56 U.S.P.Q.2d (BNA) at 1190 (“Because patentability is assessed from the perspective of the hypothetical person of ordinary skill in the art information regarding the subjective motivations of inventors is not material.”).
material misrepresentations regarding the Johnson article, thereby rendering their patent obvious. At the district court level, the inventors argued that the Johnson article was irrelevant because a person of ordinary skill in the art would not have had a reasonable expectation of success using Johnson’s teachings. However, the Federal Circuit characterized this exchange as follows: “In effect, the [district] court determined that inventors could not truthfully argue lack of reasonable expectation of success as a basis for non-obviousness when they successfully used the prior art reference at issue.”

The Federal Circuit disagreed with the district court’s determination, believing the district court was impermissibly using hindsight in its analysis. The examiner was free to accept or reject the inventors’ interpretation of the article. Accordingly, the district court committed clear error because the inventors made no affirmative misrepresentations giving rise to a finding of inequitable conduct.

With regard to the inventors’ knowledge of Goff’s work, the Federal Circuit held that the district court’s determination that this information was material also constituted clear error. The inventors knew only that Goff claimed to have reduced to practice a similar invention and claimed to have presented the invention at a conference they did not attend. The inventors lacked specific and definite information to prove Goff was a prior inventor. Thus, the court held that a reasonable examiner would not have considered the information important in deciding whether to allow the application to issue, which is the standard for materiality. In fact, the inventors disclosed the limits of their knowledge in a telephone conversation with the examiner. The examiner’s decision not to act on this information had “no bearing on the patents issued or the instant application.”

1039. *See Life Techs.*, 224 F.3d at 1326, 56 U.S.P.Q.2d (BNA) at 1191 (determining that expectation of success cannot be inferred from the inventor’s eventual success).
1040. *See id.*, 56 U.S.P.Q.2d (BNA) at 1191 (determining that advocacy of an interpretation by the inventor does not lead to a finding of misrepresentation).
1041. *See id.* at 1325, 56 U.S.P.Q.2d (BNA) at 1191 (finding no clear error because “the inventors’ non-obviousness arguments were not affirmative misrepresentations and cannot give rise to a determination of inequitable conduct”).
1042. *See id.* at 1326-27, 56 U.S.P.Q.2d (BNA) at 1191 (noting that the information possessed by the inventors regarding Goff’s work was limited).
1043. *See id.* at 1327, 56 U.S.P.Q.2d (BNA) at 1191.
1046. *Id.* at 1327, 56 U.S.P.Q.2d (BNA) at 1191 ("[T]he examiner stated the information had ‘no bearing on the patents issued or the instant application.’").
information clearly showed a lack of materiality.\textsuperscript{1047}

In \textit{Speedplay, Inc. v. Bebop, Inc.},\textsuperscript{1048} the defendant claimed that the patentee had engaged in inequitable conduct by failing to disclose material prior art during the prosecution of three patents.\textsuperscript{1049} Both the patentee and his counsel acknowledged their familiarity with much of the prior art cited by \textit{Bebop}, however, they asserted that (1) they had no intent to deceive the PTO; and (2) the prior art was not material.\textsuperscript{1050} The Federal Circuit held that the trial court’s finding of lack of intent was not clearly erroneous.\textsuperscript{1051} In addition, in order to hold all three patents unenforceable due to an alleged pattern of inequitable conduct, the court held that “we would have to find inequitable conduct sufficient to hold at least one patent unenforceable before considering whether to hold an entire group of related patents unenforceable.”\textsuperscript{1052}

In \textit{In re Spalding Sports Worldwide, Inc.},\textsuperscript{1053} the Federal Circuit reiterated the difference between inequitable conduct and common-law or \textit{Walker Process} fraud.\textsuperscript{1054} The court stated:

\begin{quote}
Consistent with the Supreme Court’s analysis in \textit{Walker Process} . . . we have distinguished “inequitable conduct” from \textit{Walker Process} fraud, noting that inequitable conduct is a broader, more inclusive concept than the common law fraud needed to support a \textit{Walker Process} counterclaim . . . Inequitable conduct in fact is a lesser offense than common law fraud, and includes types of conduct less serious than “knowing and willful” fraud.\textsuperscript{1055}
\end{quote}

The court continued, elaborating on the differences between \textit{Walker Process} fraud and inequitable conduct:

\begin{quote}
A finding of \textit{Walker Process} fraud requires higher threshold showings of both intent and materiality than does a finding of inequitable conduct. Moreover, unlike a finding of inequitable
\end{quote}

\textsuperscript{1047} See \textit{id.}, 56 U.S.P.Q.2d (BNA) at 1191 (noting “such a strong statement regarding the Goff information is highly probative of its immateriality”).
\textsuperscript{1048} 211 F.3d 1245, 53 U.S.P.Q.2d (BNA) 1984 (Fed. Cir. 2000).
\textsuperscript{1049} See \textit{Speedplay}, 211 F.3d at 1258-59, 53 U.S.P.Q.2d (BNA) at 1994 (stating that the party alleging a patent unenforceable must show the failure to disclose material information by an offering of clear and convincing evidence).
\textsuperscript{1050} \textit{Id.} at 1259, 53 U.S.P.Q.2d (BNA) at 1994 (noting that the district court accepted the patentee’s arguments).
\textsuperscript{1051} \textit{Id.}, 53 U.S.P.Q.2d (BNA) at 1994 (finding the lack of intent was supported at trial by adequate evidence).
\textsuperscript{1052} \textit{Id.}, 53 U.S.P.Q.2d (BNA) at 1994.
\textsuperscript{1053} 203 F.3d 800, 53 U.S.P.Q.2d (BNA) 1747 (Fed. Cir. 2000).
\textsuperscript{1054} See \textit{Spalding Sports}, 203 F.3d at 806-07, 53 U.S.P.Q.2d (BNA) at 1752 (discussing whether privileged communications between inventor and attorney are abrogated by the crime-fraud exception on a showing of inequitable conduct).
\textsuperscript{1055} \textit{Id.} at 807, 53 U.S.P.Q.2d (BNA) at 1752-53 (quoting Nobelpharma AB v. Implant Innovations, Inc., 141 F.3d 1059, 1069, 46 U.S.P.Q.2d (BNA) 1098, 1105 (Fed. Cir. 1998)).
conduct . . . a finding of Walker Process fraud may not be based upon an equitable balancing of lesser degrees of materiality and intent. Rather, it must be based on independent and clear evidence of deceptive intent together with a clear showing of reliance, i.e., that the patent would not have issued but for the misrepresentation or omission. Therefore, for an omission such as a failure to cite a piece of prior art to support a finding of Walker Process fraud, the withholding of the reference must show evidence of fraudulent intent. A mere failure to cite a reference to the PTO will not suffice.1056

The court concluded that inequitable conduct alone does not constitute common law fraud.1057 Wilson alleged that failure by Spalding to disclose to a prior art reference in the invention record constituted fraud.1058 The court held that Wilson’s allegation that Spalding failed to cite a reference, without more, did not constitute a prima facie showing of fraud.1059

In Upjohn Co. v. MOVA Pharmaceutical Corp.,1060 the Federal Circuit reversed a jury finding of inequitable conduct, finding lack of evidence of an intent to deceive.1061 MOVA alleged that Upjohn misrepresented certain facts relating to experiments, withheld adverse test data, and failed to ask the added inventors if they were aware of any information relating to patentability.1062 As to the first allegation, that Upjohn had misrepresented the content of tested formulations, the court found no evidence of guilty intent.1063 MOVA’s second allegation claimed that the results from tests conducted three years before the testing of the patented invention were material, that Upjohn admitted having knowledge of the test, and that from these facts a jury could infer intent to deceive.1064

1057. Id., 53 U.S.P.Q.2d (BNA) at 1753.
1058. See id. at 802, 53 U.S.P.Q.2d (BNA) at 1749 (responding to a motion to compel discovery of the invention record made by Wilson in a suit brought by Spalding).
1059. Id. at 808, 53 U.S.P.Q.2d (BNA) at 1753 (noting that in order to overcome the attorney-client privilege, a party need not conclusively prove fraud, but that Wilson did not show any evidence of intent to commit fraud).
1061. See Upjohn, 225 F.3d at 1315, 56 U.S.P.Q.2d (BNA) at 1293 (stating that the requirement of disclosure of material prior art does not require an inventor to disclose his entire knowledge regarding the field of the invention).
1062. See id. at 1312-13, 56 U.S.P.Q.2d (BNA) at 1293.
1063. Id. at 1314, 56 U.S.P.Q.2d (BNA) at 1292 (“There was no evidence that the content of the formulations was intentionally withheld. The evidence before the jury was not clear and convincing evidence of material withholding with culpable intent. . . .”).
1064. See id., 56 U.S.P.Q.2d (BNA) at 1292 (asserting that Upjohn failed to disclose the prior tests knowing they would be “fatal to patentability”).
Upjohn argued that the tests were immaterial because they dealt with subject matter outside of the claims of the patent and that there was no intent to deceive. The Federal Circuit agreed with Upjohn, holding that the failure to disclose the earlier tests “did not establish intent to deceive, and that a reasonable jury’s verdict could not have been based thereon.” Finally, MOVA alleged that two of the newly named inventors had knowledge regarding the invention and that this knowledge should have been disclosed to the PTO. Upjohn stated that it disclosed in the specification the knowledge that MOVA referred to in its allegation. The Federal Circuit agreed, finding no evidence of an intent to deceive. In addition, the court stated “[t]o require the inventor to describe his entire personal knowledge in the field of the invention, however the knowledge was obtained, would be an unmanageable assignment. It is prior art that must be disclosed, prior art that is material to patentability.”

In *Fiskars, Inc. v. Hunt Mfg. Co.*, the defendant argued that although the patentee had disclosed one item of prior art, the examiner had not considered the art—as evidenced by the line drawn through the reference by the examiner. Hunt alleged the line through the listed prior art imposed an obligation on Fiskars of explaining the significance of that item. The Federal Circuit disagreed and asserted that an applicant cannot commit inequitable conduct where he cites to the reference. In addition, the court held that Hunt failed to provide any evidence of intent, and that “the inequitable conduct claim [was] ‘so lacking in substance as to constitute a waste of the time and resources of all participants,’” and merited sanctions.

1065. *See id.* at 1314, 56 U.S.P.Q.2d (BNA) at 1292-93.
1067. The original patent application did not properly disclose the true inventors. Upon discovering the error Upjohn corrected the named inventors.
1068. *See Upjohn*, 225 F.3d at 1315, 56 U.S.P.Q.2d (BNA) at 1293 (noting the product in question was commercially available).
1069. *See id.* at 1314, 56 U.S.P.Q.2d (BNA) at 1292-93.
1070. *Id.* at 1318, 55 U.S.P.Q.2d (BNA) at 1569 (Fed. Cir. 2000).
1071. *See Fiskars*, 221 F.3d at 1327, 55 U.S.P.Q.2d (BNA) at 1576 (stating that the examiner manuals require the drawing of a line through a reference that is not to be considered).
1072. *Id.* at 1327, 55 U.S.P.Q.2d (BNA) at 1576 (explaining that Hunt argued “that this placed on Fiskars the obligation to stress to the examiner the relevance of [the prior art]”).
1073. *Id.*, 55 U.S.P.Q.2d (BNA) at 1576 (“An applicant cannot be guilty of inequitable conduct if the reference was cited to the examiner[,]”).
1074. *Id.* at 1328, 55 U.S.P.Q.2d (BNA) at 1577-78.
In *Union Oil Co. of California v. Atlantic Richfield Co.*, the Federal Circuit affirmed the district court's holding of no inequitable conduct. The district court determined that withheld test data was not material, that there was no evidence of intent to deceive, and that Unocal had acted in good faith during the prosecution of the patent. The Federal Circuit agreed, finding neither clear error nor abuse of discretion in the district court's finding of no inequitable conduct.

In *Semiconductor Energy Lab. Co. v. Samsung Electronics Co.*, the Federal Circuit considered the patentee's submission of a foreign language reference along with a one-page partial translation to the PTO. The court found no clear error in the district court's holding that the reference was not cumulative and established a *prima facie* case of unpatentability, therefore making the reference material. Intent presented a more difficult issue because the patentee had submitted the entire untranslated reference to the PTO, which the patentee offered as evidence of good faith. In addition, the patentee noted that the PTO rules do not require the patentee to submit a translated version of foreign references. The district court nonetheless held that the patentee had willfully misrepresented the reference, and the Federal Circuit agreed. The district court found that the inventor, Dr. Yamazaki, knew the materiality of the reference because he could read Japanese. The district court also believed that Dr. Yamazaki failed to provide a more complete translation because he knew from his experience with patent prosecution that it would decrease Semiconductor's ability to obtain the patent. "The district court thus concluded that Dr.

1077. *See Union Oil*, 208 F.3d at 1002, 54 U.S.P.Q.2d (BNA) at 1236 (describing the district court opinion as "thorough and well reasoned").
1078. *Id.* at 1001-02, 54 U.S.P.Q.2d (BNA) at 1235-36 (noting that a district court opinion will not be overturned without a finding of abuse of discretion).
1079. *Id.* at 1002, 54 U.S.P.Q.2d (BNA) at 1236.
1080. 204 F.3d 1368, 54 U.S.P.Q.2d (BNA) 1001 (Fed. Cir. 2000).
1082. *Id.* at 1374, 54 U.S.P.Q.2d (BNA) at 1005 (detailing the basis for the district court’s findings).
1083. *Id.* at 1375, 54 U.S.P.Q.2d (BNA) at 1006.
1084. *Id.* at 1377, 54 U.S.P.Q.2d (BNA) at 1007.
1085. *Id.*, 54 U.S.P.Q.2d (BNA) at 1007 (noting that the district court found the Semiconductor’s witnesses to be uncredible).
1087. *See Semiconductor Energy*, 204 F.3d at 1376, 54 U.S.P.Q.2d (BNA) at 1006
Yamazaki must have consciously decided which sections to reveal to the PTO through [Semiconductor’s] partial translation.\textsuperscript{1088}

Semiconductor ("SEL") pointed to its technical compliance with 37 C.F.R. § 1.98 in providing the foreign language reference in its defense.\textsuperscript{1089} However, the court noted that "Rule 98 provides neither a safe harbor nor a shield against allegations of inequitable conduct."\textsuperscript{1090} In addition, the court stated:

By submitting the entire untranslated Canon reference to the PTO along with a one-page, partial translation focusing on less material portions and a concise statement directed to these less material portions, SEL left the examiner with the impression that the examiner did not need to conduct any further translation or investigation. Thus, SEL deliberately deceived the examiner into thinking that the Canon reference was less relevant than it really was, and constructively withheld the reference from the PTO. SEL’s submission hardly satisfies the duty of candor required of every applicant before the PTO.\textsuperscript{1091}

Finally, the court noted that SEL’s argument—that the patent office should not require the translation of all foreign references into English by the applicant—missed the point.\textsuperscript{1092} "The duty of candor does not require that the applicant translate every foreign reference, but only that the applicant refrain from submitting partial translations and concise explanations that it knows will misdirect the examiner’s attention from the reference’s relevant teaching."\textsuperscript{1093} Therefore, the court found no clear error with the district court’s finding on materiality and intent and no abuse of discretion with its holding of inequitable conduct.\textsuperscript{1094}

In PerSeptive Biosystems, Inc. v. Pharmacia Biotech, Inc.,\textsuperscript{1095} the Federal Circuit considered the materiality of falsehoods and omissions to the

\textsuperscript{1088} Id. at 1376, 54 U.S.P.Q.2d (BNA) at 1006.
\textsuperscript{1089} See id. at 1375, 54 U.S.P.Q.2d (BNA) at 1006 (arguing that technical compliance with patent manuals should be taken into consideration when gauging intent to deceive).
\textsuperscript{1090} Id. at 1376, 54 U.S.P.Q.2d (BNA) at 1007.
\textsuperscript{1091} Id. at 1377, 54 U.S.P.Q.2d (BNA) at 1007.
\textsuperscript{1093} Semiconductor Energy, 204 F.3d at 1378, 54 U.S.P.Q.2d (BNA) at 1008.
\textsuperscript{1094} See id. at 1378, 54 U.S.P.Q.2d (BNA) at 1008 (holding the patent to be unenforceable due to inequitable conduct).
\textsuperscript{1095} 225 F.3d 1315, 56 U.S.P.Q.2d (BNA) 1001 (Fed. Cir. 2000). Two of the authors were counsel to Pharmacia Biotech in this case.
PTO regarding inventorship. The district court held that the patentees demonstrated a “persistent course of material representations, omissions, and half-truths to the PTO . . . on inventorship.” The court noted that the Manual of Patent Examining Procedure (hereinafter “MPEP”) “specifically notes that information about inventorship is material under 37 C.F.R. § 1.56[.]” PerSeptive argued that the district court erred in concluding that others should have been named as joint inventors to the patent, and that the claims had been narrowed during prosecution, curing any inventorship problem with the application.

The Federal Circuit viewed PerSeptive’s arguments as missing the point:

First, whether the inventorship of the patents as issued is correct does not determine the materiality of the statements in this case, just as whether concealed prior art would actually invalidate the patent is irrelevant to materiality. Second, the materiality of intentional false statements may be independent of the claims of the patent.

Ultimately, the Federal Circuit stated that “the issue is not inventorship per se, but misinformation about inventorship.” The inventor’s falsehoods, misrepresentations and omissions all dealt with inventorship, a material issue. Therefore, the inventors engaged in inequitable conduct, and the patents are unenforceable.

In a dissenting opinion, Judge Newman stated that “the court cannot ignore the correct inventorship, for when inventorship is correctly viewed as directed to that which is claimed, the information that the district court held should have been disclosed to the examiner is not material.” In addition, Judge Newman believed

1096. See PerSeptive, 225 F.3d at 1319-20, 56 U.S.P.Q.2d (BNA) at 1003-04.
1098. Id. at 1321, 56 U.S.P.Q.2d (BNA) at 1005 (detailing rules of inventorship to be used by examiners and noting that disputes regarding inventorship are material, and the duty to disclose requires careful consideration on the part of applicants) (citing MPEP § 2001.06(c) and § 2004).
1099. See id. at 1321-22, 56 U.S.P.Q.2d (BNA) at 1005-06 (arguing that error in naming of inventors originally eliminates the later finding of inequitable conduct).
1100. Id. at 1322, 56 U.S.P.Q.2d (BNA) at 1006 (internal citations omitted).
1102. See PerSeptive, 225 F.3d at 1322, 56 U.S.P.Q.2d (BNA) at 1006 (finding no error in the district court’s decision regarding materiality).
1103. See id. at 1322-23, 56 U.S.P.Q.2d (BNA) at 1006 (upholding the district court’s finding of five specific instances of falsehoods, misrepresentations, and omissions and finding no evidence that the district court abused its discretion).
1104. Id. at 1327, 56 U.S.P.Q.2d (BNA) at 1010.
the “acts with which the panel majority impeaches the named inventors are overstated if not irrelevant. By no stretch do they represent clear and convincing evidence of material omission or misrepresentation with intent to deceive the examiner as to inventorship.”

N. Certificates of Correction

Section 254 of the Patent Act, entitled “Certificate of correction of Patent and Trademark Office mistake,” provides:

Whenever a mistake in a patent, incurred through the fault of the Patent and Trademark Office, is clearly disclosed by the records of the Office, the Director may issue a certificate of correction stating the fact and nature of such mistake, under seal, without charge, to be recorded in the records of patents. A printed copy thereof shall be attached to each printed copy of the patent, and such certificate shall be considered as part of the original patent. Every such patent, together with such certificate, shall have the same effect and operation in law on the trial of actions for causes thereafter arising as if the same had been originally issued in such corrected form. The Director may issue a corrected patent without charge in lieu of and with like effect as a certificate of correction.

In *Southwest Software, Inc. v. Harlequin Inc.*, the Federal Circuit considered for the first time the effect of a correction issued subsequent to the filing of a lawsuit. Southwest, the patentee, had obtained a certificate of correction from the PTO in order to add the Program Printout Appendix (which the PTO mistakenly omitted) to the patent. However, the lawsuit against Harlequin was filed two years before the certificate of correction was issued. The Federal Circuit held that “the certificate of correction that added the Program Printout Appendix is not to be given effect in this pre-certificate lawsuit” and that it “is only effective for causes of action arising after it was issued.” Judge Schall, writing for the court, concluded that after the PTO issues the certificate, a court should consider it as part of the original application in subsequent causes of

1105. *Id.* at 1330, 56 U.S.P.Q.2d (BNA) at 1013.
1108. *See id.* at 1287 n.6, 56 U.S.P.Q.2d (BNA) 1166 n.6 (noting that another certificate of correction had been issued previously for the ’257 patent, and inserted a missing comma).
1109. *See id.* at 1293, 56 U.S.P.Q.2d (BNA) 1171. Southwest filed its lawsuit against Harlequin on January 20, 1995, but the PTO did not issue the certificate of correction until April 1, 1997. *See id.*
1110. *Id.* at 1294, 56 U.S.P.Q.2d (BNA) at 1172 (recognizing that this holding was based upon an interpretation of the language of § 254).
The Harlequin court rejected a Third Circuit decision, *Eagle Iron Works v. McLanahan Corp.*, issued before the Federal Circuit came into being, which interpreted the same language in a sister statute, 35 U.S.C. § 255, in the opposite manner. The court rejected that prior decision because the Federal Circuit had not adopted Third Circuit precedent, and because the *Eagle Iron Works* court did not explain its holding with respect to the certificate-of-correction issue. The Federal Circuit thus held that the patent without the certificate of correction may be invalid for purposes of the lawsuit, and remanded the case to the district court for consideration of the patent’s validity without the certificate of correction. However, the court noted that any invalidity due to the missing Program Printout Appendix ceased upon the issuance of the certificate of correction.

**O. Inventorship**

A patent application must name all of the actual inventors and only the actual inventors. Section 102(f) of the Patent Act states that “[a] person shall be entitled to a patent unless . . . he did not himself invent the subject matter sought to be patented . . . .” The Federal Circuit, relying upon a leading treatise, has explained section 102(f) in the following manner:

[Section 102(f)] bars issuance of a valid patent to a person or persons who derive the conception of the invention from any other source or person. A corollary of this requirement is the rule of

1111. See Southwest Software, Inc. v. Harlequin Inc., 226 F.3d 1280, 1295, 56 U.S.P.Q.2d (BNA) 1161, 1172 (Fed. Cir. 2000) (acknowledging that the language of § 254 mandated that in causes of action arising after the issuance of a certificate of correction, the patent together with the certificate, should be given the same effect and operation in law as if the same had been issued originally in such corrected form).  
1113. See *Harlequin*, 226 F.3d at 1296, 56 U.S.P.Q.2d (BNA) at 1174 (rejecting the reasoning of *Eagle Iron Works* in supporting Southwest’s claim against Harlequin).  
1114. See *id.* at 1296, 56 U.S.P.Q.2d (BNA) at 1173 (citing Minnesota Mining & Mfg. Co. v. Norton Co., 929 F.2d 670, 672, 18 U.S.P.Q.2d (BNA) 1302, 1304 (Fed. Cir. 1991), which found that decisions of other circuit courts are not binding for matters within its exclusive subject matter jurisdiction).  
1115. See *id.* at 1297, 56 U.S.P.Q.2d (BNA) at 1174 (concluding that the effectiveness of the certificate of correction was not supported by the language of 35 U.S.C. § 255).  
1116. See *id.*  
1117. See *id.* (reasoning that any causes of action arising after the date the certificate of correction was issued will treat the certificate, including the Program Printout Appendix, as part of the original patent, thus eliminating a finding of invalidity based on the absence of the Program Printout Appendix).  
1119. *Id.*
proper joinder of inventors. The rule operates both as to misjoinder (erroneous addition of a person who is not in fact a joint inventor) and as to nonjoinder (failure to add a joint inventor). Potentially, misjoinder and nonjoinder are as fatal to the validity of a patent (or the effectiveness of a filed application) as a case of complete inventorship error.\footnote{1120}

A patent may be held invalid if a party proves, by clear and convincing evidence, that the patentee failed to comply with section 102(f).\footnote{1121} The operation of the corrective process in 35 U.S.C. § 256 may help to save the patent from invalidity.\footnote{1122}

In \textit{Solomon v. Kimberly-Clark Corp.},\footnote{1123} the Federal Circuit held that Kimberly-Clark had failed to prove the patent invalid under § 102(f) by clear and convincing evidence.\footnote{1124} Kimberly-Clark asserted that, based upon the inventor’s deposition testimony, either the named inventor was not the true inventor or someone else (perhaps Solomon’s patent attorney) should have been joined as an inventor.\footnote{1125} In finding that Kimberly-Clark failed to prove the assertions by clear and convincing evidence,\footnote{1126} the Federal Circuit also noted that the suggestion that Solomon’s attorney was the true inventor was misguided.\footnote{1127} However, the court found the fact that the attorney did not assume the role of inventor was not a ground for invalidating the patent.\footnote{1128}


1121. See \textit{Pannu v. Idolab Corp.}, 155 F.3d 1344, 1349, 47 U.S.P.Q.2d (BNA) 1657, 1661 (Fed. Cir. 1998) (applying the “clear and convincing” standard where nonjoinder in patent cases and where nonjoinder of parties is not at issue); see also \textit{Solomon v. Kimberly-Clark Corp.}, 216 F.3d 1372, 1381, 55 U.S.P.Q.2d (BNA) 1279, 1285 (Fed. Cir. 2000) (applying the “clear and convincing” standard as set forth in \textit{Pannu}).

1122. See \textit{Pannu}, 155 F.3d at 1350, 47 U.S.P.Q.2d (BNA) at 1662 (stating that whenever a person is named or not named in error in an issued patent, the involved parties and assignees may use the remedies available under 35 U.S.C. § 256 to correct the error and save the patent from invalidity).


1124. See \textit{id.}, 1381, 55 U.S.P.Q.2d (BNA) at 1285 (agreeing that the district court correctly held that Kimberly-Clark failed to introduce clear and convincing evidence that the claims were invalid under Section 102(f)).

1125. See \textit{id.}, 1381-82, 55 U.S.P.Q.2d (BNA) at 1285 (noting that although Solomon’s testimony was vague and inconsistent at times, she steadfastly maintained that she was the inventor and submitted evidence demonstrating that her prototype was the foundation of the invention).

1126. See \textit{id.}, 1381, 55 U.S.P.Q.2d (BNA) at 1285 (finding Solomon’s evidence compelling while there was a total absence of evidence in support of Kimberly-Clark’s assertion that Solomon was not the inventor).

1127. See \textit{id.}, 1382, 55 U.S.P.Q.2d (BNA) at 1285 (clarifying that the attorney should not be a competitor of the client or an inventor).

1128. See \textit{id.}, 55 U.S.P.Q.2d (BNA) at 1285 (suggesting that Kimberly-Clark failed to understand the proper role of a patent attorney).}
In *Environ Products, Inc. v. Furon Co.*, the Federal Circuit affirmed a jury finding regarding the true inventor in a dispute among three parties. Two patents were issued, another application was pending for the same invention and all three applications had been co-pending in the PTO. The trial dealt with the limited issue of inventorship, in the context of an invalidity defense to Environ’s infringement suit. The district court accorded the asserted patent the presumption of validity under 35 U.S.C. § 282 and required Furon to prove inventorship by clear and convincing evidence.

The Federal Circuit began by noting that the burden is on the junior applicants to establish prior invention by a preponderance of the evidence in a PTO administrative hearing. Likewise, a district court proceeding under 35 U.S.C. § 291 also would have required proof by a preponderance of the evidence.

The issue, then, was the appropriate burden to place on the alleged infringer when inventorship is raised as an invalidity defense. The Federal Circuit held that the standard of proof should not vary based upon the context of the suit. As between co-pending interfering patents, the junior patentee bears the burden, by a preponderance of the evidence, of pleading and proving priority. Although the district court erred, the error was harmless because the jury had determined Environ was the inventor by a preponderance of evidence, precluding any finding that Furon was also the inventor under the preponderance of the evidence standard.

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1130. See id. at 1267, 55 U.S.P.Q.2d (BNA) at 1043 (affirming the jury verdict and remanding for further proceedings based on a finding of harmless error).
1131. See id. at 1265, 55 U.S.P.Q.2d (BNA) at 1041.
1132. See id., 55 U.S.P.Q.2d (BNA) at 1042 (noting that “the challenge to inventorship was raised as an invalidity defense to Environ’s charge of infringement . . . under 35 U.S.C. § 271 rather than pursuant to §§ 291 and 282.”).
1133. See id., 55 U.S.P.Q.2d (BNA) at 1042.
1134. See id., 55 U.S.P.Q.2d (BNA) at 1041 (“In a interference . . . a junior party shall have the burden of establishing priority by a preponderance of the evidence.”) (citing 37 C.F.R. § 1.657(b) (1998) and Bruning v. Hirose, 161 F.3d 681, 685-86, 48 U.S.P.Q.2d (BNA) 1934, 1938 (Fed. Cir. 1998)).
1135. See 35 U.S.C. § 291 (1994) (“The owner of an interfering patent may have relief against the owner of another by civil action, and the court may adjudge the question of the validity of any of the interfering patents. . . .”).
1137. See id. at 1266, 55 U.S.P.Q.2d (BNA) at 1041 (recognizing that this issue arises in the instances where patent applications are co-pending).
1138. See id. at 1266 n.4, 55 U.S.P.Q.2d (BNA) at 1042 n.4 (stating that this standard of proof does not apply to other questions that may be in dispute).
1139. See id. at 1266-67, 55 U.S.P.Q.2d (BNA) at 1043 (finding the error harmless because the error in weight of proof terminology in the instructions would not have
In *PerSeptive Biosystems, Inc. v. Pharmacia Biotech, Inc.*, the Federal Circuit considered the materiality of falsehoods and omissions to the PTO regarding inventorship. The district court held that the acts by the patentees demonstrated a “persistent course of material misrepresentations, omissions, and half-truths to the PTO . . . on inventorship.” The court observed that the MPEP “specifically notes that information about inventorship is material under 37 C.F.R. § 1.56.” PerSeptive argued that the district court erred in concluding that other parties should have been named as joint inventors to the patent, and the fact that the claims had been narrowed during prosecution thereby cured any inventorship problem with the application. The Federal Circuit believed the arguments missed the point:

First, whether the inventorship of the patents as issued is correct does not determine the materiality of the statements in this case, just as whether concealed prior art would actually invalidate the patent is irrelevant to materiality. Second, the materiality of intentional false statements may be independent of the claims of the patent.

Ultimately, the Federal Circuit’s key concern was misinformation about inventorship, rather than inventorship *per se*. The inventor’s inequitable conduct, consisting of falsehoods, misrepresentations and omissions concerning inventorship—a material issue—rendered the patents unenforceable.

Judge Newman’s dissent noted that when inventorship was viewed as directed to that which is claimed, the information that the district court believed should have been disclosed to the examiner was immaterial. In addition, Judge Newman believed that the majority

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1140. 225 F.3d 1315, 56 U.S.P.Q.2d (BNA) 1001 (Fed. Cir. 2000). As noted above, two of the authors were counsel to Pharmacia Biotech in this case. *See supra note* 1101.


1144. *Id.* at 1322, 56 U.S.P.Q.2d (BNA) at 1006 (internal citations omitted).

1145. *See id.,* 56 U.S.P.Q.2d (BNA) at 1006 (affirming the district court’s opinion finding no clear error in the materiality of the named inventors’ actions).


1147. *See id.* at 1327, 56 U.S.P.Q.2d (BNA) at 1010 (Newman, J., dissenting) (taking issue with the majority’s conclusion that PerSpective neglected to challenge the district court’s finding of material misrepresentation and deceptive intent).
treated the named inventors too harshly under the facts of the case because there was not clear and convincing evidence that the inventors’ acts constituted a “material omission or misrepresentation with intent to deceive the examiner as to inventorship.”

P. Double Patenting

The judicially-created doctrine of obviousness-type double patenting embodies the legislative limitation on the duration of a patentee’s right to exclude others from practicing a claimed invention in order to prevent extensions on exclusive rights through claims in a subsequent patent that are not patentably distinct from those in the earlier patent. In *Eli Lilly & Co. v. Barr Laboratories, Inc.*, the Federal Circuit held a claim invalid under this doctrine of obviousness-type double patenting.

The obviousness-type double patenting inquiry, like many patent-based inquiries, requires a two-step analysis. First, the court construes the claim in the earlier patent and the claim in the later patent, and makes a determination as to whether the later claim encompasses the subject matter of the earlier claim. The second part of the inquiry requires the court to determine whether the differences in subject matter between the two claims renders the claims patentably distinct. Consistent with this analysis, the court began by construing claims of the earlier and later patents. After construing the claims, the court addressed and rejected the patentee’s argument that the subject matter of the later claim would not be obvious to one of ordinary skill in the art. The court explained that obviousness-type double patenting is more concerned with the inventions that claims define than with what one skilled in the art would

1148. See id. at 1330, 56 U.S.P.Q.2d (BNA) at 1013.
1150. See *Eli Lilly Co.*, 222 F.3d at 988, 55 U.S.P.Q.2d (BNA) at 1619 (holding invalid Lilly’s attempt to extend term of exclusivity for an additional nine years beyond the statutory term).
1153. See id. at 985-86, 55 U.S.P.Q.2d (BNA) at 1617-18. 
1154. See id. at 986, 55 U.S.P.Q.2d at 1618.
In addition, the court distinguished two of its prior decisions, *In re Baird* and *In re Jones*, in which the court held that a species claim is not necessarily obvious in light of a prior-art disclosure of a genus. In the present case, the same party claimed a genus in an earlier patent and then claimed a species in a later patent, while in *Baird* and *Jones*, the prior art “merely disclosed a genus” and a subsequent patent claimed a species. The court explained further that because the earlier patent broadly disclosed and claimed the right to exclude others from administering any of thousands of compounds for the treatment of depression, the patentee could not, now that the earlier patent had expired, disavow its earlier broad disclosure and claims to argue that the selected class of compounds would not have been obvious.

The court continued its analysis, explaining that it had construed the respective claims and determined that the earlier claim covered the use of fluoxetine hydrochloride claimed in the later claim. In the second prong of the inquiry, the court held that the differences between the claims were not patentably distinct as past precedent had already established that a “later genus is not patentable over an earlier genus claim.”

In early 2001, the Federal Circuit accepted a petition for rehearing *en banc* in *Eli Lilly & Co. v. Barr Laboratories, Inc.* The *en banc* court vacated the panel’s original decision and reassigned the opinion to the panel for the purpose of revising the section concerning double patenting. The panel reaffirmed that the claim at issue was invalid due to obviousness-type double patenting, using a different analysis to reach the same result. Specifically, the panel re-phrased the first step of the two-step analysis employed in an obviousness-type double patenting analysis.

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1155. See *id.*, 55 U.S.P.Q.2d (BNA) at 1618 (quoting *In re Sarett*, 327 F.2d 1005, 1013, 140 U.S.P.Q. (BNA) 474, 481 (C.C.P.A. 1964)).
1158. See *Eli Lilly*, 222 F.3d at 986, 58 U.S.P.Q.2d (BNA) at 1618.
1159. See *id.* at 986-87, 55 U.S.P.Q.2d (BNA) at 1618-19 (discussing the “expansive right of exclusivity,” the “written description requirement” and the “enablement requirement” of patent claims).
1160. See *id.* at 987, 55 U.S.P.Q.2d (BNA) at 1619 (indicating that the court would proceed to resolve the issue of whether the two claims were patentably distinct).
1161. See *id.*, 55 U.S.P.Q.2d (BNA) at 1619 (citations omitted).
1162. See *id.*, 58 U.S.P.Q.2d (BNA) at 1865 (Fed. Cir. 2001).
1163. See *id.* at 958, 58 U.S.P.Q.2d (BNA) at 1870 (reaffirming the district court’s determination of the issue of best mode).
1164. See *id.*, 58 U.S.P.Q.2d (BNA) at 1870.
patenting case.\textsuperscript{1166} Focusing on a different earlier patent than in the original opinion, the court concluded that “[T]he only difference between claim 1 of the ‘213 patent and claim 7 of the ‘549 patent is that the former addresses a method of treating anxiety in humans with fluoxetine hydrochloride while the latter claims a method of using fluoxetine hydrochloride to block serotonin uptake in animals.”\textsuperscript{1167}

After determining the differences between the claims, the court proceeded to the next step, resolving whether the differences rendered the claims patently distinct.\textsuperscript{1168} On this point, the court concluded that the inhibition of serotonin uptake is a natural result of the administration of fluoxetine hydrochloride.\textsuperscript{1169} As a result, “the limitation of claim 7 of the ‘549 patent directed to blocking serotonin uptake by use of fluoxetine hydrochloride is an inherent characteristic of the administration of fluoxetine hydrochloride for any purpose, including the treatment of anxiety.”\textsuperscript{1170} Thus, the earlier claim anticipated the later claim and no patentable distinction existed.\textsuperscript{1171} Lastly, the court noted that the fact that the later claim was directed to animals rather than humans was not a patentable distinction, as humans are a species of the animal genus.\textsuperscript{1172}

Judge Newman dissented from the court’s refusal to consider the case \textit{en banc}.\textsuperscript{1173} Judge Newman believed that the law of double patenting should be limited to the situation where “neither patent is prior art against the other, usually because they have a common priority date.”\textsuperscript{1174} Therefore, Judge Newman concluded that the law of double patenting could not be applicable in this case because the ‘213 patent was filed nine years after the effective filing date of the now invalid ‘549 patent.\textsuperscript{1175} In addition, the ‘549 patent was listed as

\textsuperscript{1166} See id. at 968, 58 U.S.P.Q.2d (BNA) at 1878 (“First as a matter of law, a court construes the claim in the earlier patent and the claim in the later patent and determines the differences.” (quoting Georgia-Pac. Corp. v. United States Gypsum Co., 195 F.3d 1322, 1326, 52 U.S.P.Q.2d (BNA) 1590, 1593 (Fed. Cir. 1999))).

\textsuperscript{1167} Id. at 969, 58 U.S.P.Q.2d (BNA) at 1879.

\textsuperscript{1168} See id., 58 U.S.P.Q.2d (BNA) at 1879.


\textsuperscript{1170} Id., 58 U.S.P.Q.2d (BNA) at 1880.

\textsuperscript{1171} See id., 58 U.S.P.Q.2d (BNA) at 1880 (finding factual similarities between the present case and Burroughs Wellcome Co. v. Barr Laboratories, Inc., 40 F.3d 1223, 32 U.S.P.Q.2d (BNA) 1915 (Fed. Cir. 1994)).

\textsuperscript{1172} See id. at 971, 58 U.S.P.Q.2d (BNA) at 1880 (reciting the principle that later genus claim is anticipated by an earlier species claim and not patently distinct) (citations omitted).

\textsuperscript{1173} See id. at 972, 58 U.S.P.Q.2d (BNA) at 1866 (Newman, J., dissenting).

\textsuperscript{1174} Id. at 973, 58 U.S.P.Q.2d (BNA) at 1866 (Newman, J., dissenting) (asserting that the \textit{en banc} panel misapplied and misstated the law of double patenting).

\textsuperscript{1175} See Eli Lilly & Co. v. Barr Labs., Inc., 251 F.3d 955, 973, 58 U.S.P.Q.2d (BNA)
prior art against the ‘213 patent. Ultimately, Judge Newman concluded that the panel erred in holding that ‘213 claim that was issued prior to the ‘549 claim but filed nine years later rendered the ‘549 claim obvious.

**Q. Subject Matter (Plants)**

In *Pioneer Hi-Bred Intern., Inc. v. J.E.M. AG Supply, Inc.* the Federal Circuit considered whether plants and seeds for new varieties of hybrid and inbred corn are patentable under 35 U.S.C. § 101. The district court denied the defendant’s motion for summary judgment, noting that in the past fifteen years, the Patent and Trademark Office had granted patents on new and unobvious varieties of seed-grown plants. The defendants argued that seeds and seed-grown plants are not protectable under Section 101 of the Patent Act because Congress provided for protection of this subject matter under the Plant Variety Protection Act (PVPA). The Federal Circuit, in ruling on an interlocutory appeal, affirmed the district court’s denial of the defendant’s motion for summary judgment.

The *Pioneer* court relied on the Supreme Court’s holding in *Diamond v. Chakrabarty*, where the Court concluded that Congress intended the statute to encompass a broad subject matter. Hence, the district court held that an individual who develops a new plant variety may “have recourse to patenting under Title 35 or to registration under the PVPA.” In fact, Pioneer held both a patent on the plants and a certificate under the PVPA. The court noted that the PVPA does not remove seeds and seed-grown plants from the patent statute because the conflicting laws do not invalidate either statute. Seeds and seed–grown plants are patentable under Section 1065, 1067 (Fed. Cir. 2001).

1176. See id. at 974, 58 U.S.P.Q.2d (BNA) at 1867.
1177. See id., 58 U.S.P.Q.2d (BNA) at 1867 (Newman, J., dissenting) (finding insufficient support for the majority’s conclusion).
1179. See id. at 1376, 53 U.S.P.Q.2d (BNA) at 1441 (citing the district court opinion in *In re Hubbard*, 227 U.S.P.Q. (BNA) 443, 444 (Bd. Pat. App. & Int. 1985)).
1180. See id., 53 U.S.P.Q.2d (BNA) at 1441 (citing the Plant Variety Protection Act, 7 U.S.C. § 2321 et seq. (1970)).
1181. See *Pioneer*, 200 F.3d at 1375, 53 U.S.P.Q.2d (BNA) at 1441.
1183. See id.
1184. Id. at 1377, 53 U.S.P.Q.2d (BNA) at 1441-42.
1186. See id., 53 U.S.P.Q.2d (BNA) at 1442 (reasoning that the two statutes merely create different rights and obligations).

III. INFRINGEMENT

A person infringes a valid and enforceable U.S. patent when he makes, sells, offers for sale, or imports, without authorization, any patented invention within the United States during the term of the patent. The Federal Circuit has established a two-step analysis for determining when infringement has occurred. First, the claim must be properly interpreted (“construed”) to determine its meaning and scope. Second, a court should compare the properly construed claim to the accused product to determine whether the accused product contains every element of the properly construed claim.

A. Claim Construction

At least since 1995, it has been clear that, as a matter of law, the interpretation and construction of patent claims is reserved exclusively for the court. As a consequence, the Federal Circuit reviews questions of claim construction de novo, without the requirement of any deference to the district judge below who initially construed the claim. Nevertheless, the standard of de novo review does not require the court of appeals to ignore the district court. Former Chief Judge Archer, author of the Markman decision and two other recent Federal Circuit opinions, stressed that this de novo review requires careful consideration of the trial court’s work. In other words, the Federal Circuit will give as much respect to a district court’s claim construction as it deserves, but it also signals that the judges of the Federal Circuit will not, under the guise of de novo appellate review, rigidly ignore what has occurred in the district court.

1187. See id., 53 U.S.P.Q.2d (BNA) at 1443 (holding patentable subject matter under Section 101 includes seed and seed-grown matter).
1190. See id.
1191. See id.
1193. See Cybor, 138 F.3d at 1451, 46 U.S.P.Q.2d (BNA) at 1171 (affirming the district court’s decision upon de novo review).
For example, in *Vitronics Corp. v. Conceptronic, Inc.*, the Federal Circuit insisted that to interpret an asserted claim, a court must first examine the intrinsic evidence on the record, including the patent itself, the claims, the specification, and the prosecution history. While there is a “hierarchy among the intrinsic evidence,” claim construction takes on a special and primary function, for it is through the claim language that the patent applicant must “distinctly claim[]” the subject matter which the applicant regards as his invention. Thus, in some cases, the Federal Circuit has described the analysis of intrinsic evidence as “begin[ning] with the claim language itself,” and utilizing the “ordinary and accustomed” understanding of the claim term as a presumptive, “default meaning”:

The claim term’s ordinary and accustomed meaning initially serves as a default meaning because the patentee may act as a lexicographer and ascribe a different, or modified, meaning to the term. The court, therefore, must examine a patent’s specification and prosecution history to determine whether the patentee has given the term an unconventional meaning. If the patentee has not done so, the term’s ordinary and customary meaning controls.

Similarly, the court in *Interactive Gift Express, Inc. v. Compuserve, Inc.* recognized that where the claim language is facially clear, an evaluation must look only at whether other aspects of the intrinsic evidence deviate from the clear language of the claims. A deviation may be necessary in instances when a patentee decides to be his own lexicographer and uses terms in a context outside their ordinary meaning or in circumstances in which the patentee, by amendment or through argument to distinguish or overcome a reference, renders untenable a potential claim construction.

In the rare instance where the intrinsic evidence (claims, specification, and prosecution history) does not yield a firm construction of the claim at issue, only then may courts turn to

1196. See id. at 1582, 39 U.S.P.Q.2d (BNA) at 1576 (citing Markman, 52 F.3d at 979, 34 U.S.P.Q.2d at 1329).
1201. See id. at 865, 56 U.S.P.Q.2d (BNA) at 1652.
1202. See id., 56 U.S.P.Q.2d (BNA) at 1652.
extrinsic evidence as a claim-construction tool. The roles of the different types of intrinsic evidence, as well as the roles that extrinsic evidence and certain canons of construction may play in claim interpretation are discussed below.

1. Claim language

Claim construction starts with the actual words of the claim. A claim term should be given its “ordinary meaning” unless the specification or the prosecution history indicates otherwise. Consistent with the Federal Circuit’s increasing use of presumptions in claim construction inquiries, some cases explicitly invoke “a ‘heavy presumption in favor of the ordinary meaning of claim language.’”

However, it is not entirely clear where to obtain the ordinary meaning of a term appearing in a fully integrated patent document. Despite the fact that patents should be interpreted from the vantage point of the ordinarily skilled professional, the overwhelming trend in recent Federal Circuit cases is to find the ordinary meaning of claim terms in general-purpose dictionaries, and to treat that dictionary definition as controlling unless the specification or prosecution history of the patent provides a basis for overcoming the heavy presumption in favor of the dictionary definition. Despite

1203. See, e.g., Interactive Gift Express, 231 F.3d at 866, 56 U.S.P.Q.2d (BNA) at 1653.
1205. See Kegel Co. v. AMF Bowling, Inc., 127 F.3d 1420, 1427, 44 U.S.P.Q.2d (BNA) 1123, 1127 (Fed. Cir. 1997).
1207. See, e.g., Schering Corp. v. Amgen Inc., 222 F.3d 1347, 1353, 55 U.S.P.Q.2d (BNA) 1650, 1654-55 (Fed. Cir. 2000) (“As a general rule, the construing court interprets words in a claim as one of skill in the art at the time of invention would understand them.” (quoting Eastman Kodak Co. v. Goodyear Tire & Rubber Co., 114 F.3d 1547, 1555, 45 U.S.P.Q.2d (BNA) 1737, 1742 (Fed. Cir. 1997))); Hockerson-Halberstadt, Inc. v. Avia Group Int’l, Inc., 222 F.3d 951, 955, 55 U.S.P.Q.2d (BNA) 1487, 1490 (Fed. Cir. 2000) (“As a starting point, the court gives claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art.”); Solomon v. Kimberly-Clark Corp., 216 F.3d 1372, 1380, 55 U.S.P.Q.2d (BNA) 1279, 1284 (Fed. Cir. 2000) (“Although we recognize that ‘which the applicant regards as his invention’ is subjective language, . . . once the patent issues, the claims and written description must be viewed objectively, from the standpoint of a person of skill in the art.”); see also Elekta Instrument S.A. v. O.U.R. Scientific Int’l, Inc., 214 F.3d 1302, 1307, 54 U.S.P.Q.2d (BNA) 1910, 1913 (Fed. Cir. 2000) (noting that when a patentee chooses to be his own lexicographer by redefining a term in the specification, “the written description in such a case must clearly redefine a claim term ‘so as to put a reasonable competitor or one reasonably skilled in the art on notice that the patentee intended to so redefine that claim term.’” (quoting Process Control Corp. v. HydReclain Corp., 190 F.3d 1350, 1357, 52 U.S.P.Q.2d (BNA) 1029, 1033 (Fed. Cir. 1999))).
1208. See, e.g., Vanguard Prod. Corp. v. Parker Hannifin Corp., 234 F.3d 1370, 1372,
the trend toward consulting ordinary, general-purpose dictionaries to obtain the ordinary meanings of a claim term, the Federal Circuit normally treats dictionaries as extrinsic evidence—but views them as a special kind of extrinsic evidence.\(^{1209}\) Thus, the court frequently has warned against giving dictionaries excessive weight in claim construction so as to avoid converting dictionary definitions into technical terms of art that have legal significance.\(^ {1210}\) The best source for understanding a technical term is the specification from which it arose, and if necessary, information from the prosecution history.\(^ {1211}\) Furthermore, the court has warned that, although it is permissible to consult dictionaries to determine the meaning of certain claim terms, the courts should not employ this practice if the dictionary definition contradicts any definition found in or ascertained by a reading of the patent documents.\(^ {1212}\) It is important to note the difficulty in reconciling the notion that dictionaries cannot contradict the intrinsic evidence, with the approach of giving claim language a presumptive, dictionary meaning before consulting the remainder of the intrinsic evidence.\(^ {1213}\)

In 2000, the Federal Circuit continued its trend of increasing use of dictionaries for claim construction in a number of its published decisions. In *Vanguard Products Corp. v. Parker Hannifin Corp.*,\(^ {1214}\) the panel majority held that a claim for a gasket requiring two “integral” layers was properly construed using the dictionary definition of

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57 U.S.P.Q.2d (BNA) 1087, 1089 (Fed. Cir. 2000) (agreeing with the district court’s finding that the ‘854 patent uses the term “integral” in its ordinary dictionary meaning and finding no evidence contrary to this interpretation in the specifications or prosecution history); Cortland Line Co., Inc. v. Orvis Co., 203 F.3d 1351, 1356, 53 U.S.P.Q.2d (BNA) 1734, 1737 (Fed. Cir. 2000) (quoting the meaning of the term “plate” directly from WEBSTER’S NINTH NEW COLLEGIATE DICTIONARY 901 (1990)); Optical Disk Corp. v. Del Mar Avionics, 208 F.3d 1324, 1335, 54 U.S.P.Q.2d (BNA) 1289, 1295 (Fed. Cir. 2000) (noting that the dictionary definition provides the ordinary meaning of a term).

1209. See *Vanguard Prod. Corp.*, 234 F.3d at 1372, 57 U.S.P.Q.2d at 1089 (insisting that a dictionary is permissible as extrinsic evidence but should not broaden the scope of a term when the specification or prosecution history show that the inventor, or the common usage in the field of the invention, have given the term a limited or specialized meaning).

1210. See Multiform Dessicants, Inc. v. Medzam, Ltd., 133 F.3d 1473, 1478, 45 U.S.P.Q.2d (BNA) 1429, 1433 (Fed. Cir. 1998) (noting that dictionary definitions are relied upon as they are often viewed as the least controversial source of extrinsic evidence).

1211. See id., 45 U.S.P.Q.2d (BNA) at 1433 (explaining that meanings that evolve during claim restriction and examination reveal intent of the inventor and the patent examiner).


1213. See id. at 866, 56 U.S.P.Q.2d (BNA) at 1653.

1214. 234 F.3d 1370, 57 U.S.P.Q.2d (BNA) 1087 (Fed. Cir. 2000). One of the authors was counsel to Parker Hannifin Corporation in this case.
“integral.” The court reached this conclusion over the dissent of Chief Judge Mayer, who noted that in his view, the applicants had disclaimed layers joined by anything but a one-step process during prosecution of the patent. In *Tate Access Floors, Inc. v. Maxcess Technologies, Inc.*, the court looked primarily to *Webster’s New World Dictionary* for the ordinary meanings of the terms “inner,” “expose,” and “integral” in claims for a flooring panel. In *Hill-Rom Co., Inc. v. Kinetic Concepts, Inc.*, where the patent claim (drawn to a hospital bed) called for a “cushion,” the court affirmed the district court’s construction of “cushion” as meaning “a structure that provides basic support and comfort,” by looking to *Webster’s Third New International Dictionary*. In *Optical Disc Corp. v. Del Mar Avionics*, the court looked again to *Webster’s Third New International Dictionary* (as well as a confirmatory technical dictionary) to determine the “ordinary meaning” of the claim terms “ramped” and “decreasing” in a patent directed to a method and apparatus for improving the quality of compact discs.

In *Zodiac Pool Care, Inc. v. Hoffinger Industries, Inc.*, the panel disagreed as to the proper use of dictionaries in claim construction. At issue was the meaning of the claim term “a stop for preventing upward flexing of the peripheral edge beyond a predetermined amount located forward of the body and above and substantially inward of the peripheral edge” of the flexible disc, in a patent

1215. See id. at 1372, 57 U.S.P.Q.2d (BNA) at 1090 (noting that the district court, using a dictionary, properly found the term “integral” to mean “formed as a unit with another part”).
1216. See id. at 1373, 57 U.S.P.Q.2d (BNA) at 1090 (Mayer, C.J., dissenting) (taking note of applicants who had filed an amendment, prior to the notice of allowance, distinguishing their one-step system from other multi-step systems and effectively placing this information in the prosecution history on which the public should be able to rely).
1218. See id. at 967, 55 U.S.P.Q.2d (BNA) at 1519 (agreeing with the district court’s construction of terms and noting the consistency of the definitions in the patent description with the dictionary definitions).
1220. See id. at 1340-42, 54 U.S.P.Q.2d (BNA) at 1440 (finding consistency between the trial court’s construction of the term “cushion” and its meaning within both the dictionary and the the intrinsic evidence that the patent provided).
1221. 208 F.3d 1324, 54 U.S.P.Q.2d (BNA) 1289 (Fed. Cir. 2000).
1222. See id. at 1338, 54 U.S.P.Q.2d (BNA) at 1298 (indicating that to determine the meaning of the term “ramped,” the court referenced WEBSTERS THIRD NEW INTERNATIONAL DICTIONARY and the MODERN DICTIONARY OF ELECTRONICS, and to determine the meaning of the term “decreasing,” it relied upon WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY, when the patent specification provided evidence of “an express intent to impart a novel meaning to a claim term”).
claiming a vacuum system for cleaning swimming pools. The majority, citing no dictionary but invoking principles of “common usage,” concluded that this limitation did not include a stop extending to (or beyond) the peripheral edge of the flexible disc.

Dissenting on this point, Judge Bryson cited four different dictionaries to demonstrate that the word “substantially” may, in context, mean “very much” or “far,” as the majority held (such that the claim would require the stop to be “very much inward” or “far inward” from the edge). In Judge Bryson’s view, the dictionary provided another, better definition: “largely,” “essentially, or in the main,” such that the claim element would require the stop to be “mostly or mainly inward of the peripheral edge of the flexible disc.” The majority should have looked at alternative sources to determine which meaning to adopt, he concluded, because the differing dictionary definitions themselves demonstrated an ambiguity, including the written description and prosecution history.

The panel in Interactive Gift Express, Inc. v. Compuserve, Inc. expressed a somewhat less exalted view of dictionaries. After stating the rules for evaluating the intrinsic evidence, the panel noted that if the totality of the intrinsic evidence explains the claim limitations clearly, the claim has been construed. Extrinsic evidence may help resolve the lack of clarity if the claim limitation is still ambiguous. In an explanatory footnote, the panel noted that dictionaries, a form of extrinsic evidence, may be considered together with the intrinsic evidence.

It is difficult to reconcile the notion that dictionaries are extrinsic.

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1224. Id. at 1413-14, 54 U.S.P.Q.2d (BNA) at 1145.
1225. See id. at 1414, 54 U.S.P.Q.2d (BNA) at 1146 (stating the term’s common usage negates the possibility that a stop which is “substantially inward” of an edge could simultaneously extend to that edge).
1226. See id. at 1418, 54 U.S.P.Q.2d (BNA) at 1149 (Bryson, J., dissenting) (listing WEBSTER’S NEW 20TH CENTURY DICTIONARY 1817 (1983); WEBSTER’S NEW WORLD DICTIONARY OF THE AMERICAN LANGUAGE 1454 (1962); BLACK’S LAW DICTIONARY 1428 (6th ed. 1990); and WEBSTER’S NINTH NEW COLLEGIATE DICTIONARY 1176 (1983)).
1227. Id., 54 U.S.P.Q.2d (BNA) at 1149 (Bryson, J., dissenting).
1228. See Zodiac Pool Care, Inc. v. Hoflinger Indus., Inc., 296 F.3d 1408, 1418, 54 U.S.P.Q.2d (BNA) 1141, 1149 (Fed. Cir. 2000) (Bryson, J., dissenting) (looking to claim language, written descriptions and prosecution history to determine the meaning of a term that could have multiple meanings).
1230. See id., 56 U.S.P.Q.2d (BNA) at 1652-53 (noting further that if the claim language is clear on its face, then that language is controlling unless the prosecution history and written description call for deviation).
1231. See id. at 866, 56 U.S.P.Q.2d (BNA) at 1652-53 (remarking, however, that “such instances will rarely, if ever, occur”).
1232. See id. at 866 n.*, 56 U.S.P.Q.2d (BNA) at 1653 n.*.
evidence, or even the notion that they “may sometimes be considered along with the intrinsic evidence,” with the more prevalent view that the ordinary meaning of a claim term is to be presumptively determined by reference to the dictionary before consulting the specification and prosecution history in order to determine whether the patentee has used the term otherwise. Arguably, the use of general purpose dictionaries to obtain the presumptive ordinary meaning of a claim term is inconsistent with several other Federal Circuit decisions, such as Hockerson-Halberstadt, Inc. v. Avia Group International, Inc., which stress that to begin an inquiry, the court should determine the meaning of a claim term as an individual of ordinary skill in the art would understand it. In turn, relied on the Federal Circuit’s 1996 decision in Hoechst Celanese Corp. v. BP Chemicals Ltd., which held that unless the patent or prosecution indicate that the patentee intended a different meaning, the definition of a technical claim term should be based upon the meaning that an individual who is knowledgeable in the field of the invention would give to that term.

It is not certain that the definition of a term in a general-purpose dictionary will always provide the “ordinary and accustomed meaning” of that term as one who is educated in the field of the invention would understand it. At a minimum, one would expect to find that meaning in a specialized dictionary in the relevant art, not in a general-purpose dictionary. A prime example of this shortcoming in dictionary definitions is illustrated in Apple Computer, Inc. v. Articulate Systems, Inc., where the court could not easily define, by reference to a general purpose dictionary, the claim term “windows,” as used in a computer application. Instead, the Apple court immediately had to turn to the written description and the use of the same term in prior-art references cited in the patent.

1233. See supra notes 934-938 and accompanying text.
1235. See id. at 955, 55 U.S.P.Q.2d (BNA) at 1490 (citing Hoechst Celanese Corp. v. BP Chem., Ltd., 78 F.3d 1575, 1578, 38 U.S.P.Q.2d (BNA) 1126, 1129 (Fed. Cir. 1996)).
1236. 78 F.3d 1575, 38 U.S.P.Q.2d (BNA) 1126 (Fed. Cir. 1996).
1237. See id. at 1578, 38 U.S.P.Q.2d (BNA) at 1129.
1238. Cf. Optical Disc Corp. v. DelMar Avionics, 208 F.3d 1324, 1335, 54 U.S.P.Q.2d (BNA) 1289, 1295 (Fed. Cir. 2000) (relying first on WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY, and then on the MODERN DICTIONARY OF ELECTRONICS to determine the meaning of the claim term “ramped” in a patent directed to an improved process and apparatus for making compact discs).
1240. See Apple, 234 F.3d at 21, 57 U.S.P.Q.2d (BNA) at 1057 (recognizing that the court did not use a general purpose dictionary to define the claim term at issue).
specification. In any event, the ordinary meaning rule is not conclusive in every case. Rather, it creates, at most, a presumption that the ordinary meaning (whether derived from a dictionary or elsewhere) is the correct one. *Hockerson-Halberstadt v. Avia Group International, Inc.* is one case where the presumption was overcome with the use of intrinsic evidence. The claim, directed to an article of outer footwear, called for a “central longitudinal groove in the underside of the heel part extending forwardly through the heel part into the underside of the sole part to divide the lower surface of the heel part into a pair of fins.” The court concluded that in the course of prosecuting the patent, the applicant modified the ordinary meaning of “groove,” by disclaiming a particular interpretation of the term. During prosecution, the applicant submitted drawings comparing the features of his invention to a hypothetical combination of two prior-art patents. He noted that his invention provided a narrower groove than in the prior art to maximize the amount of the underneath surface of the footwear used for cushioning and support. The court thus concluded that “groove” in the claim in suit could not simply be any “long and narrow structure,” but instead had to be one that was narrower than the groove widths in the prior-art patents that the applicant distinguished. The court called the patentee’s contrary arguments “a request for a mulligan that would erase from the prosecution history the inventor’s disavowal of a particular aspect of a claim term’s meaning.”

As there is a presumption in favor of a claim’s ordinary meaning, presumptions also play a prominent role in the construction of “means-plus-function” or “step-plus-function” claim elements. In

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1241. See *id.*, 57 U.S.P.Q.2d (BNA) at 1057 (defining the term “windows” by looking to the written description of the patent and functioning of the computer application).


1244. See *id.* at 956, 55 U.S.P.Q.2d (BNA) at 1490-91 (conceding that the ordinary meaning of “groove” in the claims and specification was “a long and narrow structure”).

1245. See *id.*, 55 U.S.P.Q.2d (BNA) at 1491.

1246. See *id.*, 55 U.S.P.Q.2d (BNA) at 1491 (distinguishing the applicant’s invention and insisting that the narrower groove serves an entirely different purpose than the groove in the prior art).


1248. *Id.*, 55 U.S.P.Q.2d (BNA) at 1491.

1249. See 35 U.S.C. § 112 (1994) (“An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital
Kemco Sales, Inc. v. Control Papers Co., the court found that use of the term “means” in a patent claim created a presumption of a means-plus-function claim, requiring the applicant to demonstrate that the properly construed claim limitation recites definite structure to perform the claimed function in order to rebut the presumption. The Federal Circuit agreed with the district court that the claim term “plastic envelope closing means” was in means-plus-function format, because the claim term used the word “means” and failed “to recite sufficient structure for closing the envelope that would otherwise rebut that presumption.

Similarly, in Watts v. XL Systems, Inc., the court reiterated and expanded upon its prior holdings, concluding that the failure to use the word “means” in a claim element created a “rebuttable presumption” that 35 U.S.C. § 112, ¶6 did not apply. Demonstrating that the claim element “recite[s] a function without reciting sufficient structure for performing that function” rebuts that presumption. The Watts court, in analyzing a claim element that required two joints to be “sealingly connected,” first held that the absence of “means” in this claim gave rise to a presumption that Section 112, paragraph 6 did not apply. Next, the court examined the claim language and concluded that the presumption was not rebutted because the claim limitation “refers to terms that are reasonably well understood in the art as names for structure that perform the recited function of sealing.” Specifically, the court noted the language in the claim limitation requiring “a second end formed with tapered external threads” and “a first end” having “tapered internal threads,” concluding that “[t]hese terms clearly have reasonably well understood meanings in the art as names for structure.” The court drew further confirmation from the written description, explaining that these interlocking threads would perform the “sealing” function. Accordingly, the court concluded

of structure, material, or acts in support thereof . . . . ”.

1251. Id., 54 U.S.P.Q.2d (BNA) at 1313.
1254. See id., 56 U.S.P.Q.2d (BNA) at 1838.
1255. See id., 56 U.S.P.Q.2d (BNA) at 1839 (noting that the limitation does not include the word “means” and therefore is not a means-plus-function limitation).
1256. See id., 56 U.S.P.Q.2d (BNA) at 1839 (noting that one with knowledge in the art easily would recognize the terms and their functions).
1257. Id., 56 U.S.P.Q.2d (BNA) at 1839.
that Section 112, paragraph 6 did not apply, and proceeded to construe the claims in the customary way.\textsuperscript{1259}

Another case involving means-plus-function claims, \textit{Ishida Co., Ltd. v. Taylor},\textsuperscript{1260} highlighted some of the differences between the customary way of construing claims and the manner in which claim construction takes place under Section 112, paragraph 6. In \textit{Ishida}, the claim in suit contained a means-plus-function claim element requiring the function of “stripping and sealing” to be performed by some means disclosed in the specification.\textsuperscript{1261} The district court consulted the specification, which depicted two “structurally very different” embodiments that were to perform the claimed function.\textsuperscript{1262} The appellant, Taylor, argued that the district court erred in not creating a single claim construction to cover all the embodiments of the invention as shown in the specification, a task the court described as “impossible.”\textsuperscript{1263} In support, the court noted two prior cases, \textit{Serrano v. Telular Corp.},\textsuperscript{1264} and \textit{Micro Chemical, Inc. v. Great Plains Chemical Co.},\textsuperscript{1265} in which patents disclosed alternative structures for accomplishing the recited function, yet the courts were not required to craft a singular claim construction that would cover each.\textsuperscript{1266}

In \textit{Clearstream Wastewater Systems v. Hydro-Action, Inc.},\textsuperscript{1267} another case addressing construction of a means-plus-function claim element, the court rejected the argument that the patentee’s criticism of a prior-art device in the written description foreclosed consideration of the elements of that prior-art device as “corresponding structure” for purposes of Section 112, paragraph 6.\textsuperscript{1268} The court noted that in a combination claim, a claim limitation often may read on the prior art since old elements are part of the combination claims.\textsuperscript{1269} The court

\begin{footnotesize}
\begin{enumerate}
\item See \textit{id.} at 881-82, 56 U.S.P.Q.2d (BNA) at 1839 (applying the principles of standard claim construction).
\item 221 F.3d 1310, 55 U.S.P.Q.2d (BNA) 1449 (Fed. Cir. 2000).
\item \textit{See Ishida}, 221 F.3d at 1316, 55 U.S.P.Q.2d (BNA) at 1452.
\item \textit{See id.}, 55 U.S.P.Q.2d (BNA) at 1452.
\item \textit{See id.}, 55 U.S.P.Q.2d (BNA) at 1452 (rejecting appellant’s theory).
\item 111 F.3d 1578, 42 U.S.P.Q.2d (BNA) 1558 (Fed. Cir. 1997).
\item 194 F.3d 1250, 52 U.S.P.Q.2d (BNA) 1258 (Fed. Cir. 1999). Two of the authors of this article were counsel for Micro Chemical, Inc. in this case.
\item \textit{See Ishida}, 221 F.3d at 1316, 55 U.S.P.Q.2d (BNA) at 1452-53 (citing cases interpreting 35 U.S.C. § 112, ¶ 6 as requiring the identification of alternative structures that perform the function, but not requiring a single claim construction to cover all embodiments).
\item 206 F.3d 1440, 54 U.S.P.Q.2d (BNA) 1185 (Fed. Cir. 2000).
\item \textit{See Clearstream}, 206 F.3d at 1445-46, 54 U.S.P.Q.2d (BNA) at 1189-90 (noting that while the written description avoids the conclusion that prior-art cannot perform the appropriate function, even while pointing out the disadvantages of prior-art).
\item \textit{See id.} at 1445, 54 U.S.P.Q.2d (BNA) at 1189.
\end{enumerate}
\end{footnotesize}
concluded that, despite the fact that the written description highlighted the disadvantages of the prior-art system, an element of that system could be considered as “corresponding structure” in the combination claims at issue. The court nonetheless noted that in certain situations, it would construe a means-plus-function limitation as covering only new elements but those certain situations would have to involve a clear teaching away from the prior art, or a clear disavowal of the prior art as “corresponding structure” capable of performing the claimed function, such as a statement that the prior-art structure was “incapable” of performing the claimed function.

Beyond the limited area of means-plus-function claim elements, the court in 2000 dealt with a handful of recurring issues of claim construction: the use of claim preambles, the role of singular and plural claim terms, the role of “open” and “closed” claim terms, the use of “about” as a qualifier for a numerical claim element, and the order of steps in a method claim.

The panel in Apple Computer, Inc. v. Articulate Systems, Inc. addressed the use of claim preambles in interpreting patent claims. Apple contended, based on a claim preamble, that two claims in suit required that the claimed computer windows contain “data” on which a user may operate. The court rejected that argument, applying its previously announced rule that “[l]anguage in a claim preamble . . . acts as a claim limitation only when such language serves to ‘give meaning to a claim and properly define the invention,’ not when the preamble merely states a purpose or intended use of the invention.” The court treated the term “data” as referring to “a purpose or intended use of the windows of the claimed invention” and not as a claim limitation because in examining the claims as a whole and in light of the written description, the recitation of “data” is not used to define the invention.

In 2000, the Federal Circuit decided two cases dealing with the rules for interpreting claim elements phrased in the singular or

1270. See id., 54 U.S.P.Q.2d (BNA) at 1189-90 (noting that “a claim may consist of all old elements and one new element, thereby being patentable”).
1271. See id. at 1445-46, 54 U.S.P.Q.2d (BNA) at 1189 (differentiating Clearstream from other cases where written descriptions clearly indicate the impossibility of prior-art performing the necessary functions).
1273. See Apple, 234 F.3d at 22, 57 U.S.P.Q.2d (BNA) at 1062.
1274. Id., 57 U.S.P.Q.2d (BNA) at 1063 (quoting In re Paulsen, 30 F.3d 1475, 1479, 31 U.S.P.Q.2d (BNA) 1671, 1673 (Fed. Cir. 1994)).
1275. See id., 57 U.S.P.Q.2d (BNA) at 1063 (recognizing the recitation of “data” did not give meaning to these claims).
plural. In *Interactive Gift Express, Inc. v. CompuServe Inc.*, the court examined a claim that specifically recited the language “reproducing in a material object.” While the claim preambles and some references elsewhere in the specification referred, somewhat ambiguously, to multiple “material objects” or “a plurality of blank material objects,” the court concluded that the totality of the specification required that the reference to a plurality be understood as referring to a “supply” of blank material objects that can consist of one material object. In support, the *Interactive Gift Express* court cited its prior decision in *Digital Biometrics, Inc. v. Identix, Inc.* for the proposition that the basis of a claim construction must be the written description in its entirety, notwithstanding any isolated conflicting passages.

In *Embrex, Inc. v. Service Engineering Corp.*, the claim was drawn to a process for “controlling an immunizable disease” in birds, calling for “injecting a vaccine . . . into the egg embodying the embryo . . . wherein said injection is made during the final quarter of the incubation period whereby the embryo has developed immunologic competence.” The question for the court was whether the process required inoculation of an entire population of birds (and effective immunization of a high percentage of treated birds), or whether the method required only the inoculation of a single bird. The court held that inoculation of a single bird would suffice for infringement, because the claim language and the rest of the specifications were phrased in the singular. Descriptions of “singular injections” into “individual eggs,” without more, did not limit the claims to cover only inoculations of an entire flock of birds; as use of the singular form of a word does not preclude a meaning that encompasses the plural.

In *Lampi Corp. v. American Power Products, Inc.*, the court

1278. *Id.*, 56 U.S.P.Q.2d (BNA) at 1654.
1279. *Id.*, 56 U.S.P.Q.2d (BNA) at 1654.
1281. 149 F.3d 1335, 1345, 47 U.S.P.Q.2d (BNA) 1418, 1425 (Fed. Cir. 1998).
1284. *Id.* at 1348, 55 U.S.P.Q.2d (BNA) at 1163.
1286. *See id.*, 55 U.S.P.Q.2d (BNA) at 1164 (indicating that the process which was patented involved “immunization of an individual egg, rather than a process for entire populations of birds”).
1287. *See id.*, 55 U.S.P.Q.2d (BNA) at 1164 (emphasis in original) (citation omitted).
1288. 228 F.3d 1365, 56 U.S.P.Q.2d (BNA) 1445 (Fed. Cir. 2000).
addressed the distinction between “open” and “closed” claim elements. The claim element in *Lampi* called for a “housing having two half-shells,” and the issue on appeal was whether the term “having” meant that the device had to have *at least* two half-shells (an “open” claim), or whether it had to have *only* two half-shells (a “closed” claim). The district court construed the term as a “closed” claim, such that the accused device could not infringe because it included five parts, not just the two called out by the claim. Disagreeing with the district court, the Federal Circuit applied the rule established by the *Manual of Patent Examining Procedure*, that transitional phrases, such as “having,” must be interpreted with reference to the specification in order to resolve whether open or closed language is intended. The court concluded that the specification indicated that the patentee’s intent was for the word “having” to be open.

*Vehicular Technologies Corp. v. Titan Wheel International, Inc.* dealt with the most prevalent “open” and “closed” terms used in patent drafting: “comprising” and “consisting of.” In discussing why the trial court properly granted summary judgment in favor of the defendant under the doctrine of equivalents, the Federal Circuit noted that the claim language expressly required two springs, whereas the accused product had only one. Moreover, the use of the introductory phrase, “consisting of,” emphasized the limitation because in patent law the phrase “consisting of” is used to indicate restriction or exclusion. A drafter should use the phrase “consisting of” to indicate “I claim what follows and nothing else.”

In *Jeneric/Pentron, Inc. v. Dillon Company, Inc.*, the court addressed

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1289. See *Lampi*, 228 F.3d at 1376, 56 U.S.P.Q.2d (BNA) at 1453.
1290. See id. at 1375-76, 56 U.S.P.Q.2d (BNA) at 1453.
1291. See id. at 1375, 56 U.S.P.Q.2d (BNA) at 1453.
1292. See id. at 1376, 56 U.S.P.Q.2d (BNA) at 1453 (referring to M.P.E.P. § 2111.03 (7th ed. rev. 2000)).
1293. See id., 56 U.S.P.Q.2d (BNA) at 1453.
1295. See id. at 1382, 54 U.S.P.Q.2d (BNA) at 1845.
1296. See id. at 1382-83, 54 U.S.P.Q.2d (BNA) at 1845.
1297. See id., 54 U.S.P.Q.2d (BNA) at 1845 (citing Parmle Pharm Co. v. Zink, 285 F.2d 465, 469, 128 U.S.P.Q. (BNA) 271, 275 (8th Cir. 1961), and JOHN LANDIS, MECHANICS OF PATENT CLAIM DRAFTING 11-13 (1974)) (clarifying that use of the term “comprising” would have indicated an open-ended construction).
1298. See id., 54 U.S.P.Q.2d (BNA) at 1845 (comparing the use of the term “comprising” to signify “I claim at least what follows and potentially more”).
1299. See id., 54 U.S.P.Q.2d (BNA) at 1845.
the practice of using the term “about” to describe a numerical range in a patent claim. The claim at issue in this preliminary-injunction case was drawn to a porcelain composite for dental restoration products. The claim required the composition to have a “maturing temperature of from about 750° to about 1050° C and a coefficient of thermal expansion of from about 12 x 10–6/°C to about 17.5 x 10–6/°C,” but then claimed the elements of the composition in specific weight percentages unmodified by “about.” The panel noted that it could not give a precise construction to a term such as “about,” but instead would rely on the factual situation presented. On that basis, the panel upheld the district court’s claim construction: “claim I uses the word ‘about’ to qualify the values of many variables . . . . In contrast, the claim recites precise ranges for the weight of dental compositions. Under these circumstances, the district court correctly limited the weight ranges to those recited precisely in the table of claim 1.”

Finally, in *Interactive Gift Express, Inc. v. Compuserve Inc.*, the court discussed the requirements of a method claim, and the circumstances in which a method claim will be limited to methods which perform each of the steps in a specified order. The Federal Circuit disagreed with the district court’s finding that the claims required “step one of the claim to be performed prior to step four.” The steps of a method claim ordinarily are not construed to require performing the steps in a particular order, “[u]nless the steps of a method actually recite an order” or “when the method steps implicitly require that they be performed in the order written.” In examining the claim language, the remainder of the specification, and the prosecution history, the court found no support for the notion that the method claims required the performance of step 1 prior to step 4. The court emphasized the fact that, were the method claim so limited, it “would not read on the preferred embodiment,” resulting in a construction that is “rarely, if ever,
2. **Specification (written description)**

Beyond the claims themselves, a second aspect of intrinsic evidence that is fundamental to patent claim construction involves the patent specification. Section 112, paragraph 1 requires a patent specification to contain a written description of the invention in clear and concise terms so that any individual skilled in the relevant art can use the same, and shall set forth the best mode of carrying out his invention.\[^{1312}\]

Recently, some judges of the Federal Circuit have begun demanding more statutory exactness in their terminology, requiring the use of “written description” instead of “specification,” because Paragraph 2 of Section 112 makes clear that the “claims” are considered part of the specification, not separate from it.\[^{1313}\]

Recent Federal Circuit decisions have reflected some uncertainty regarding the proper use of the specification in construing patent claims. On the one hand, one line of decisions reflects an application of the axiom that a court may not introduce a limitation from the written description into the claim.\[^{1311}\] Another line of cases suggests that the court should always consult the specification (or written description) before arriving at a construction of a patent claim.\[^{1315}\]

Several panels have noted that there is a “fine line” between the permissible use of the specification for claim-construction purposes, and the impermissible “importation” of a limitation from the specification to a claim.\[^{1316}\]

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\[^{1312}\] See 35 U.S.C. § 112, ¶ 1 (1994) (stating that a patent specification should also include the manner and process of using the invention).

\[^{1313}\] See 35 U.S.C. § 112, ¶ 2 (1994) (“The specification shall conclude with one or more claims . . . .”) Compare Watts v. XL Sys., Inc., 292 F.3d 877, 882, 56 U.S.P.Q.2d (BNA) 1836, 1839 (Fed. Cir. 2000) (“In construing a claim, a court principally consults the evidence intrinsic to the patent, including the claims, the specification, and the relevant prosecution history.”) (emphasis added) (citing Vitronics, 90 F.3d at 1582, 39 U.S.P.Q.2d (BNA) at 1576), *with Interactive Gift Express*, 231 F.3d at 865, 56 U.S.P.Q.2d (BNA) at 1653 (“It is well settled that, in interpreting an asserted claim, the court should look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history.”) (emphasis added) (quoting *Vitronics*, 90 F.3d at 1582, 39 U.S.P.Q.2d (BNA) at 1576).


\[^{1316}\] See, e.g., *Interactive Gift Express*, 231 F.3d at 865-66, 56 U.S.P.Q.2d (BNA) at
Some panels have attempted, without much success, to give definition to this “fine line” by clarifying that the purpose of looking to the specification is to ascertain the meaning of the claim term as it used in the context of the entire invention and not for the purpose of “merely” limiting a claim term.\textsuperscript{1317} Although this phraseology stresses the importance of understanding claims in their full context, it is otherwise of little help to courts and litigants because the “fine line” between “mere” importation and contextual construction is often illusory, and certainly not predictive. Thus, it is not surprising that despite the seemingly hard-and-fast rule against importing limitations from the patent specification, several decisions from the Federal Circuit in 2000 could easily be understood as endorsing the importation of limitations from the specification.

For example, in Watts v. XL Systems, Inc.,\textsuperscript{1318} the panel interpreted a method claim requiring “tapered external threads [to be] dimensioned” to be limited to only the method for doing so set forth in the specification, the use of “misaligned taper angles.”\textsuperscript{1319} In Kemco Sales, Inc. v. Control Papers Co.,\textsuperscript{1320} the panel disclaimed reading a limitation into the claims from the preferred embodiment.\textsuperscript{1321} The court nonetheless looked to the specification to determine what structure the “closing means” limitation referred to in a means-plus-function element of a claim to “tamper-evident” security envelopes.\textsuperscript{1322} And in Cultor Corp. v. A.E. Staley Mfg. Co.,\textsuperscript{1323} the claim language referred broadly to “dissolving polydextrose in water,” without any reference whatsoever to the catalyst that was to be used in the dissolving process. Nonetheless, the claim was properly construed as limited to polydextrose dissolved in water using citric acid as a catalyst.\textsuperscript{1324} The panel in Cultor explained that limiting a claim to the preferred embodiment set forth in the specification had to be done on a case-by-case basis.\textsuperscript{1325}

\textsuperscript{1318} See Interactive Gift Express, 231 F.3d at 866, 56 U.S.P.Q.2d (BNA) at 1652.
\textsuperscript{1319} Id. at 882-83, 56 U.S.P.Q.2d (BNA) at 1840.
\textsuperscript{1320} 208 F.3d 1352, 54 U.S.P.Q.2d (BNA) 1308 (Fed. Cir. 2000).
\textsuperscript{1321} See id. at 1362-63, 54 U.S.P.Q.2d (BNA) at 1840 (finding no support in the written description to support Kemco’s expansive interpretation of what structures correspond to the closing means limitation).
\textsuperscript{1322} See id. at 1360, 54 U.S.P.Q.2d (BNA) at 1308.
\textsuperscript{1323} 224 F.3d 1328, 56 U.S.P.Q.2d (BNA) 1208 (Fed. Cir. 2000).
\textsuperscript{1324} See id. at 1330-31, 56 U.S.P.Q.2d (BNA) at 1209-10.
\textsuperscript{1325} See id. at 1331, 56 U.S.P.Q.2d (BNA) at 1210 (explaining that the specificity of the description of the invention and the prosecution history dictates whether the court should limit a claim to the specific embodiment presented in the specification); see also Tate Access Floors, Inc. v. Maxcess Techs., Inc., 222 F.3d 958,
In view of this language from *Cultor*, it is clear that the “rule” that a limitation cannot be imported from the specification is not actually a rule at all, but simply the conclusion that is reached in certain cases. But, where the application of a principle “depends in each case” on case-specific factors, that principle has no predictive value.\textsuperscript{1326} Obviously, both *Cultor* and *Watts*, as well as several prior Federal Circuit cases,\textsuperscript{1327} recognize that in certain cases it is permissible, even mandated, to limit a claim to “the specific embodiment presented in the specification.”\textsuperscript{1328} The reason that these two lines of authority are in actual or potential conflict becomes clear when one considers the consequences of the “bar” on importing limitations from the specification into the claim.\textsuperscript{1329} If the specification must be consulted before arriving at a correct understanding of a claim, as numerous Federal Circuit cases require, a court cannot possibly determine whether a limitation has been impermissibly “imported” from the specification into a claim until the claim has received a fixed meaning, a process which requires the use of the specification.\textsuperscript{1330} The court would have to find some other source of information,

\textsuperscript{1326} See *Cultor*, 224 F.3d at 1331, 56 U.S.P.Q.2d (BNA) at 1210 (noting that lower courts and litigants have no stringent rule that would help to predict how a court will construct their claims).

\textsuperscript{1327} See, e.g., *Toro Co. v. White Consol. Indus.*, Inc., 199 F.3d 1295, 1302, 53 U.S.P.Q.2d (BNA) 1065, 1069-70 (Fed. Cir. 1999) (invoking a claim that called for a cover “including” a restriction ring required permanent attachment of the ring to the cover, in light of specification and drawings, which described only permanently attached rings); *Wang Labs.*, Inc. v. *America Online*, Inc., 197 F.3d 1377, 1383, 53 U.S.P.Q.2d (BNA) 1161, 1165 (Fed. Cir. 1999) (“The only embodiment described in the ‘689 patent specification is the character-based protocol, and the claims were correctly interpreted as limited thereto.”); *O.I. Corp. v. Tekmar Co.*, 115 F.3d 1576, 1581, 42 U.S.P.Q.2d (BNA) 1777, 1781 (Fed. Cir. 1997) (holding that the claim term “‘passage’ does not include ‘smooth-walled, completely cylindrical’ passage because of statements contained in the written description); *General Am. Transp. Corp. v. Cryo-Trans, Inc.*, 93 F.3d 766, 770, 772, 39 U.S.P.Q.2d (BNA) 1801, 1803, 1805-06 (Fed. Cir. 1996) (limiting the definition of the claim element because the teaching in the specification “is not just the preferred embodiment of the invention; it is the only one described”).

\textsuperscript{1328} *Cultor*, 224 F.3d at 1331, 56 U.S.P.Q.2d (BNA) at 1210.

\textsuperscript{1329} See, e.g., *Moore U.S.A.*, Inc. v. *Standard Register Co.*, 229 F.3d 1091, 1109-10, 56 U.S.P.Q.2d (BNA) 1225, 1238 (Fed. Cir. 2000) (enunciating the rule against introducing limitations from the specification into the claim).
extrinsic to the patent, that would give definition to the claims prior to consulting the specification (or written description).

Although the court should avoid extrinsic evidence unless all of the intrinsic evidence fails to yield a fixed meaning for the claims, one place that some Federal Circuit panels have looked for such an initial meaning is the dictionary. 1331 This approach, however, yields the strange result that a dictionary definition—considered by all to be extrinsic evidence—obtains a mongrel status in which it is preferred over intrinsic evidence such as the specification and prosecution history. Thus, it would seem preferable for the court to eliminate any vestiges of a hard-and-fast rule that limitations can never be imported from the specification into the claims, for unreflective application of such a “rule” would be inconsistent with the court’s prior decisions. Indeed, its application could actually prevent the proper required consideration of the specification in certain cases. The divide in the cases is deep, and the lack of useful guidance so manifest, that resolution of this divide may have to await en banc treatment. 1332

Other doctrines or presumptions involving the use of the specification are somewhat less controversial. The court, on several occasions, has resorted to the axiom that a claim construction that would not read on the preferred embodiment is “rarely, if ever, correct and would require highly persuasive evidentiary support . . .” 1333 The reasoning behind this presumption is that it is highly unlikely that an inventor would simultaneously set forth the “preferred” mode of his invention in the written description and at the same time draft claims to the invention that did not capture that “preferred embodiment.” This “rule” allows for an exception in cases of “highly persuasive evidentiary support,” where the drafting of the claims leaves little doubt that the preferred embodiment was not to be covered by the claims, because the objective meaning of a claim may change from application to issuance with amendments or

1331. See supra notes 928-962 and accompanying text (explaining Federal Circuit panels’ decision to use dictionary definitions to determine initial meaning of claims).
1332. See supra notes 1034-1048 and accompanying text (discussing in depth the Federal Circuit’s conflicting decisions regarding the rule and its application).
1333. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1583, 39 U.S.P.Q.2d (BNA) 1573, 1578 (Fed. Cir. 1996); see also Modine Mfg. Co. v. United States Int’l Trade Comm’n, 75 F.3d 1545, 1550, 37 U.S.P.Q.2d (BNA) 1609, 1612 (Fed. Cir. 1996) (“[A] claim interpretation that would exclude the inventor’s device is rarely the correct interpretation; such an interpretation requires highly persuasive evidentiary support. . . .”); Hoechst Celanese Corp. v. BP Chems. Ltd., 78 F.3d 1375, 1581, 38 U.S.P.Q.2d (BNA) 1126, 1130 (Fed. Cir. 1996) (“We share the district court’s view that it is unlikely that an inventor would define the invention in a way that excluded the preferred embodiment, or that persons of skill in this field would read the specification in such a way.”).
arguments during prosecution. Until 2000, however, the exception was merely a hypothetical one, as the Federal Circuit had never explicitly encountered a case where this “highly persuasive evidentiary support” had been made out.

The exceptional “highly persuasive evidentiary support” was demonstrated in *Elekta Instrument S.A. v. O.U.R. Scientific International, Inc.*, where the claim was drawn to a “gamma unit” (also known as a “gamma knife”), a medical device used for treating brain tumors through focused doses of radiation. The claim in suit, as well as the written description, originally described a unit where the radiation sources were oriented between latitudes of 0° and 45°. After an obviousness rejection, the claim in suit was amended to specify that the radiation sources were oriented “only within a zone extending between latitudes 30°-45°, as seen from said diametrical plane.” The preferred embodiment set forth in the written description, however, remained unchanged.

The patentee, Elekta, argued that the term “extending between latitudes 30°-45°” should be understood as a ceiling. Elekta further argued that its proffered construction had to be the correct one, because limiting the latitudes to a range of 30° to 45° would “fail[] to cover the preferred embodiment.” The court agreed that the preferred and only embodiment disclosed in the specification, which disclosed radiation sources and beam channels oriented between the latitudes of 0° and 45°, would not be covered by the claims under the accused infringer’s claim construction. Nonetheless, because the totality of intrinsic evidence demonstrated that the applicant had amended the claim to limit the claimed latitudes to “the zone which is exclusively 30°-45°,” the court concluded that this is “the rare case in which such an interpretation [i.e., one which excludes the preferred embodiment from the claims] is compelled.”

Although not technically part of the “specification” (which is by definition limited to the written description and the claims), other

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1335. *See id.* at 1304, 54 U.S.P.Q.2d (BNA) at 1911 (explaining that in a gamma unit, “multiple radiation beams are aimed at a single focal point on a patient’s brain”, and when the beams meet at the focal point, their “combined energy destroys abnormal brain tissue.”).
1336. *Id.*, 54 U.S.P.Q.2d (BNA) at 1911.
1337. *See id.* at 1307, 54 U.S.P.Q.2d (BNA) at 1913 (explaining that the term “extending” should be understood as meaning “reaching” so that the claim would cover latitudes of 0° to an upper boundary of between 30° and 45°).
1338. *Id.*, 54 U.S.P.Q.2d (BNA) at 1913.
1339. *Id.* at 1308, 54 U.S.P.Q.2d (BNA) at 1914.
textual aspects of the patent document, such as the title and the abstract, are sometimes invoked for claim-construction purposes. In Moore U.S.A., Inc. v. Standard Register Co., the court rejected the accused infringer’s attempt to limit the claimed invention, a mailer-type business form, to business forms designed for use on an IBM 3800 printer. Having already noted that the claims would not be limited to the preferred embodiment because the specification referred generally (in one place) to “a printer used to process the mailers” and specifically (in the preferred embodiment) to the use of an “IBM 3800 printer,” the court also rejected the accused infringer’s effort to rely on the title of the patent—“Pressure Seal Adhesive Pattern for IBM 3800 Printers”—in holding that “the bar on importing limitations from the written description into the claims applies no less forcefully to a title.”

As with the supposed “bar” on importing limitations from the written description into the claims, this “bar” on reading limitations into the claims from the title is less rigid than one might suspect from this pronouncement, as the Federal Circuit has, on at least two prior occasions, utilized the title of a patent as an important claim-construction tool.

Another panel confronted a similar issue in Hill-Rom Co. v. Kinetic Concepts, Inc., where the court—against the argument of the patentee—utilized the abstract of the disclosure as a claim-construction tool on a par with the written description itself. The patentee, citing a rule of the Patent and Trademark Office providing that the abstract of a patent “shall not be used for interpreting the scope of the claims,” urged that it would be improper for the panel to consider the abstract in determining whether the district court correctly construed the claims of the patent. Rejecting this argument, Judge Bryson, writing for the panel, ruled that Section 1.72(b):

1341. 229 F.3d 1091, 56 U.S.P.Q.2d (BNA) 1225 (Fed. Cir. 2000).
1342. See id. at 1111, 56 U.S.P.Q.2d (BNA) at 1239.
1343. Id., 56 U.S.P.Q.2d (BNA) at 1239 (“[I]f we do not read limitations into the claims from the specification that are not found in the claims themselves, then we certainly will not read limitations into the claims from the patent title.”).
1344. See Exxon Chem. Patents, Inc. v. Lubrizol Corp., 64 F.3d 1553, 1557, 35 U.S.P.Q.2d (BNA) 1801, 1804 (Fed. Cir. 1995) (using the title of the patent at issue to bolster the court’s claim interpretation); Titanium Metals Corp. of Am. v. Banner, 778 F.2d 775, 780, 227 U.S.P.Q. (BNA) 773, 777-78 (Fed. Cir. 1985) (suggesting that the court should not overlook the title of the patent when interpreting claims). Two of the authors were counsel to The Lubrizol Corporation in the Exxon Chemical Patents case.
1346. Id. at 1341 n*, 54 U.S.P.Q.2d (BNA) at 1440 n.1 (citing 37 C.F.R. § 1.172(b)(1996)).
governs the conduct of patent examiners in examining patent applications; it does not address the process by which courts construe claims in infringement actions. We have frequently looked to the abstract to determine the scope of the invention, . . . and we are aware of no legal principle that would require us to disregard that potentially helpful source of intrinsic evidence as to the meaning of claims.”

One can easily see the tension between this holding and the seemingly absolute bar on the use of the patent title announced in Moore U.S.A., given that this case states that a patent’s title could be a “potentially helpful source of intrinsic evidence as to the meaning of claims.” One might also detect some tension between the panel’s rejection of Patent Office claim-interpretation rules in Moore U.S.A. and the panel’s reliance on Patent Office claim-interpretation principles in Lampi Corp. v. American Power Products Inc., where the court looked to the Manual of Patent Examining Procedure to interpret the transitional phrase “having.”

3. Prosecution history

Like the specification or written description, the prosecution history is one of the three aspects of intrinsic evidence that must be considered in construing a patent claim. Both the Federal Circuit and the Supreme Court have stressed that the prosecution history, if in evidence, is “always relevant to a proper interpretation of a claim.” There is a “clear distinction between such a use and the doctrine of prosecution history estoppel which estops later expansion of a claim’s protection under the doctrine of equivalents.” While the more significant developments in 2000 with regard to prosecution history came in the context of the doctrine of equivalents, in which prosecution history estoppel doctrine creates the most significant limitation on application of the doctrine of

1347. Id., 54 U.S.P.Q.2d (BNA) at 1440 n.1.
1348. See id., 54 U.S.P.Q.2d (BNA) at 1440 n.1 (comparing the title to the abstract to illustrate that both are useful sources for determining the meaning of a claim).
1349. 228 F.3d 1365, 56 U.S.P.Q.2d (BNA) 1453 (Fed. Cir. 2000).
1350. See id. at 1376, 56 U.S.P.Q.2d (BNA) at 1453.
1351. See Graham v. John Deere Co., 383 U.S. 1, 33 (1966) (referring to the prosecution history at times as the “file history” or the “file wrapper”).
1352. SSIIH Equip. S.A. v. United States Int’l Trade Comm’n, 718 F.2d 365, 376, 218 U.S.P.Q. (BNA) 678, 688 (Fed. Cir. 1983) (emphasis added); see also Graham, 383 U.S. at 33 (acknowledging that the law is well settled that the invention is construed in light of the claims and with reference to the file wrapper in the Patent Office).
equivalents, the Federal Circuit in 2000 nonetheless continued using
prosecution history in the law of claim construction.

The use of prosecution history in claim construction is similar to
the use of the specification or written description in claim
construction. In other words, the ordinary meaning of a claim term
controls, unless there is some clear indication in the specification or
in the prosecution history that another meaning should be ascribed
to the claim term. The panel in *Interactive Gift Express, Inc. v. CompuServe Inc.*\(^{1355}\) lumped the specification (or written description)
and the prosecution history together as “the rest of the intrinsic
evidence” in endorsing this approach to claim construction:

> If the claim language is clear on its face, then our consideration of
> the rest of the intrinsic evidence is restricted to determining if a
deviation from the clear language of the claims is specified. A
deviation may be necessary if ‘a patentee [has chosen] to be his
> own lexicographer and use terms in a manner other than their
> ordinary meaning.’ . . . A deviation may also be necessary if a
> patentee has ‘relinquished [a] potential claim construction in an
> amendment to the claim or in an argument to overcome or
distinguish a reference.’ . . . If however the claim language is not
clear on its face, then our consideration of the rest of the intrinsic
evidence is directed to resolving, if possible, the lack of clarity.\(^{1356}\)

This approach suggests an initial analysis and presumption in favor
of the ordinary meaning of the claim language, followed by a review
of the specification and prosecution history to determine if a
deviation from that ordinary meaning is appropriate.

It remains for resolution on a case-by-case basis, what sort of
showing in the prosecution history will amount to a lexicographer’s
re-definition, or a relinquishment, to overcome the ordinary
understanding of the claim language itself. Thus, for example, in
*Northern Telecom Ltd. v. Samsung Electronics Co.*,\(^{1357}\) the court rejected
Samsung’s argument that the claim term “plasma etching” excluded
etching via ion bombardment, despite some language in the
prosecution history suggesting that the applicants were distinguishing
their invention from ion bombardment etching.\(^{1358}\) The court relied
on the “heavy presumption in favor of the ordinary meaning of claim


\(^{1358}\) See id. at 1294-95, 55 U.S.P.Q.2d (BNA) at 1074-75.
language, and concluded that the isolated statements did not "demonstrat[e] that the patentees—with reasonable clarity and definiteness...—defined 'plasma etching' as excluding ion bombardment." The Northern Telecom court repeatedly stressed that the prosecution history would have to contain statements that "exclude the possibility of ion bombardment" being covered by the claims, "clearly call for a narrower definition," or provide "a special definition... with reasonable clarity and precision."

Similarly, in Vanguard Products Corp. v. Parker Hannifin Corp., the product claims were drawn to a gasket having two "integral" layers. The accused infringer urged that the two layers could not be made "integral" by any process other than co-extrusion, which was said in the prosecution history to be "fundamental" and "require[ed]" for the claimed invention. The panel majority rejected the accused infringer's argument, ruling that the dictionary definition of "integral" prevailed, and that "[t]he method of manufacture, even when cited as advantageous, does not of itself convert product claims into claims limited to a particular process." Chief Judge Mayer dissented. In his dissenting opinion, he urged judgment as a matter of law for the defendant, without remand for a new trial under his claim construction, in light of the fact that the same prosecution history representations would have "act[ed] as an estoppel barring the application of the doctrine of equivalents to the material that was surrendered during prosecution."

This lends credence to the notion that the law as it currently exists provides few generally applicable or predictable standards for the use of prosecution history in claim construction. Yet another presumption that the Federal Circuit has created in connection with patent claim construction, that is arguably at odds with the the "reasonable clarity and definiteness" standard set forth in Northern Telecom, provided the rule of decision in Watts v. XL Systems, Inc. In Watts, the court identified statements in the prosecution

1359. Id. at 1295, 55 U.S.P.Q.2d (BNA) at 1075 (quoting Johnson Worldwide Assoc., Inc. v. Zebco Corp., 175 F.3d 985, 989, 50 U.S.P.Q.2d (BNA) 1607, 1610 (Fed. Cir. 1999)).


1361. Id. at 1295, 55 U.S.P.Q.2d (BNA) at 1075.

1362. 234 F.3d 1370, 57 U.S.P.Q.2d (BNA) 1087 (Fed. Cir. 2000). As noted above, one of the authors was counsel to Parker Hannifin Corp. in this case.

1363. See id. at 1372, 57 U.S.P.Q.2d (BNA) at 1089.

1364. Id. at 1371-74, 57 U.S.P.Q.2d (BNA) at 1089-91 (Mayer, C.J., dissenting).

1365. Id., 57 U.S.P.Q.2d (BNA) at 1089-90.

1366. Id. at 1374, 57 U.S.P.Q.2d (BNA) at 1091 (Mayer, C.J., dissenting).

1367. See id., 57 U.S.P.Q.2d (BNA) at 1091 (Mayer, C.J., dissenting).

history which, if applicable to the claim in suit, would have required a deviation from the “ordinary understanding” of the claim term.\textsuperscript{1369} The panel rejected the patentee’s argument that the prosecution history in question did not apply to the claim in suit, noting that “it [was] irrelevant whether Watts’ prosecution history remarks were directed to claim 18 specifically because there is no clear indication that they were not.”\textsuperscript{1370} In other words, for claim-construction purposes, prosecution-history remarks directed at language that appears in claim A will be presumed to apply to the same language appearing in claim B absent the patentee’s submission of a “clear indication” to the contrary.

4. Extrinsic evidence

When the Federal Circuit, in 1995, decided \textit{Markman v. Westview Instruments, Inc.},\textsuperscript{1371} it rendered extrinsic evidence irrelevant to the large majority of claim construction cases.\textsuperscript{1372} Under the prevailing rule, “if the meaning of the claim limitations is apparent from the totality of the intrinsic evidence, then the claim has been construed. If however a claim limitation is still not clear, we may look to extrinsic evidence to help resolve the lack of clarity.”\textsuperscript{1373} This is an exceptional circumstance, as such instances will rarely occur.\textsuperscript{1374}

Taking this rule into account, one type of extrinsic evidence, dictionaries, has assumed a vaunted place in claim construction.\textsuperscript{1375} Some panels of the Federal Circuit have treated dictionary definitions as so exalted that they seem to be on a par with the claim language itself. The “ordinary meaning” approach that has gained increasing popularity relies largely on dictionaries to establish the “default” meaning of patent claims.

The remainder of this discussion of extrinsic evidence will focus on truly extrinsic evidence, such as expert and inventor testimony about

\textsuperscript{1369} See \textit{Watts}, 232 F.3d at 882, 56 U.S.P.Q.2d (BNA) at 1840 (noting that in constructing a claim, a court principally consults the evidence intrinsic to the patent, including the claims, the written description, and the relevant prosecution history).
\textsuperscript{1370} \textit{Id.} at 883, 56 U.S.P.Q.2d (BNA) at 1841.
\textsuperscript{1372} \textit{See Markham}, 52 F.3d at 986, 34 U.S.P.Q.2d (BNA) at 1335 (providing extrinsic evidence is designed to clarify ambiguities in claim terminology).
\textsuperscript{1374} \textit{See Interactive Gift Express}, 231 F.3d at 866, 56 U.S.P.Q.2d (BNA) at 1653.
\textsuperscript{1375} \textit{See supra} notes 927-961 and accompanying text.
\textsuperscript{1376} \textit{See supra} notes 932-940 and accompanying text (discussing that courts may consult a dictionary prior to considering the rest of the intrinsic evidence).
the meaning of claim terms. Despite the seeming rarity of considering extrinsic evidence for claim interpretation, the Federal Circuit has left the door wide open for judges to consider extrinsic evidence to “understand” the particular art or technology at issue.\textsuperscript{1377} At issue in \textit{Ajinomoto Co. v. Archer-Daniels-Midland Co.}\textsuperscript{1378} was the meaning of “chromosome DNA fragment of a donor bacterium” in a patent drawn to a method of modifying the genetic structure of bacteria in order to increase production of amino acids.\textsuperscript{1379} The panel’s entire discussion of the issue of claim construction (and infringement under that claim construction) occurred without any reference to the patent and prosecution history. Instead, the Federal Circuit’s affirmance rested on the “extensive expert testimony on all the issues and arguments raised by ADM.”\textsuperscript{1380} Astonishingly, despite the Federal Circuit’s previously stated views that extrinsic evidence will “rarely, if ever” be the basis for a patent claim construction, the panel in \textit{Ajinomoto} affirmed the district court’s claim construction entirely on the basis of extrinsic evidence, expert testimony and the accused infringer’s (and its supplier’s) own usage of the terminology.\textsuperscript{1381} Perhaps the panel had already concluded in its own collective mind that the intrinsic evidence did not provide sufficient clarity for the claims, but there is no evidence on the face of the \textit{Ajinomoto} opinion that this was the case.

The panel adopted a somewhat more typical approach to the use of extrinsic evidence in claim construction in \textit{Aqua-Aerobic Systems, Inc. v. Aerators Inc.},\textsuperscript{1382} although the opinion contains some curious \textit{dicta}. In \textit{Aqua-Aerobic}, the dispute was over the meaning of claim clauses requiring “preventing passage of atmospheric air” and “preventing the flow of atmospheric air” in a patent covering a mixer to be used in water-treatment plants and tanks.\textsuperscript{1383} The patentee argued that the clauses should be construed as “permitting the passage of more than a minuscule or negligible amount of air,” while the accused infringer

\textsuperscript{1377} See \textit{Interactive Gift Express}, 231 F.3d at 866, 56 U.S.P.Q.2d (BNA) at 1653 (asserting that the consultation of extrinsic evidence is appropriate to ensure the judge’s understanding of technical aspects of the patent remains consistent with the understanding of those knowledgeable in the art).

\textsuperscript{1378} 228 F.3d 1338, 56 U.S.P.Q.2d (BNA) 1332 (Fed. Cir. 2000).

\textsuperscript{1379} See \textit{id.} at 1348, 56 U.S.P.Q.2d (BNA) at 1340.

\textsuperscript{1380} See \textit{id.} at 1349, 56 U.S.P.Q.2d (BNA) at 1340 (explaining that the basis for its affirmance was that “the district court’s claim construction and related conclusions are supported by the testimony of experts and fully in accord with ADM’s and ABP’s own usages”).

\textsuperscript{1381} See \textit{id.}, 56 U.S.P.Q.2d (BNA) at 1340 (affirming district court’s holding on the strength of the extrinsic evidence).

\textsuperscript{1382} 211 F.3d 1241, 54 U.S.P.Q.2d (BNA) 1566 (Fed. Cir. 2000).

\textsuperscript{1383} See \textit{id.} at 1244, 54 U.S.P.Q.2d (BNA) at 1567.
urged that the specification required the invention to “exclude all atmospheric air.” The court started its discussion of claim construction by noting that “[t]he expert witnesses for both sides agreed that persons of skill in this field would understand that the structure depicted in the ’771 patent is not air-tight.”

The district court, believing that prior Federal Circuit cases barred consideration of extrinsic evidence, declined to rely on this agreed-upon expert testimony. Concurring with the district court’s construction of the patent claim elements, the Federal Circuit concluded that that construction was consistent with the teachings of the specification, which do not allow more than a very small amount of air to enter and pass through the mixer. Were the claims interpreted otherwise by reference to the extrinsic evidence, the construction would be “directly contrary to the limitations in the claims and the description in the specification.” Even so, the court noted in *dicta* that “expert testimony that is admissible in the proceeding [under Rule 702 of the Federal Rules of Evidence] may be considered by the court and given weight appropriate to its content.” But what does “given weight appropriate to its content” mean? If this language was meant to state a standard for admissibility of expert evidence for claim-construction issues, its development is obviously going to have to await future cases. Coincidentally, Judge Newman, joined in both cases by the now-late Senior Judge Smith, authored both *Ajinomoto* and *Aqua-Aerobic*.

*Dow Chemical Co. v. United States* involved the trial court’s overuse of extrinsic evidence, resulting in a reversal of the judgment. Dow’s patent claimed a system for filling vacant underground mines in order to prevent the collapse of the overlying land. One claim element called for:

injecting said suspension [a] combination of a carrier liquid and solids] into said void through [a] conduit at an injection rate which is sufficiently low such that initially upon entrance into [the] void from [the] conduit the velocity of the suspension is below its minimum linear velocity and at least a portion of said solid

1384. See *id.*, 54 U.S.P.Q.2d (BNA) at 1568 (setting forth summaries of the respective arguments of the parties involved in the action).
1385. *Id.*, 54 U.S.P.Q.2d (BNA) at 1568.
1386. See *id.* at 1244-45, 54 U.S.P.Q.2d (BNA) at 1568.
1387. See *id.* at 1245, 54 U.S.P.Q.2d (BNA) at 1568.
1389. *Id.* at 1244, 54 U.S.P.Q.2d (BNA) at 1568.
1391. See *id.*, 56 U.S.P.Q.2d (BNA) at 1017.
particles are deposited to form a mound which decreases the cross-sectional area of [the] void and sufficiently high to propel the suspension over [the] mound at a velocity at least equal to its minimum linear velocity to carry particles over [the] mound . . . .

The written description set forth a formula for determining “the minimum rate at which the suspension must be injected.”

In construing this claim element, the Court of Federal Claims (the trial court in patent-infringement claims against the government) relied heavily on one of Dow’s witnesses who testified that the formula was irrelevant, calling it the “brute strength” formula and analogizing the formula to “driving a car through a brick wall at 100 miles per hour when one knows that 10 miles per hour will work.” The Court of Federal Claims agreed with this testimony and explicitly stated that “the formula was irrelevant.”

According to the Federal Circuit, the trial court failed to weigh the intrinsic evidence sufficiently; in fact, the intrinsic evidence was largely ignored.

In Northern Telecom Ltd. v. Samsung Electronics Co., the court found unpersuasive Samsung’s reliance on an article that the inventor of a patent wrote at about the same time as the application for the patent at issue. Samsung argued the court should import into the patent the definition of “plasma etching” contained in the article.

The court rejected that argument, noting that “extrinsic evidence is rarely, if ever, probative of a special and particular definition of a limitation found in a [patent] claim.” The court reasoned that definitional statements in the patent claim terms could modify the ordinary meaning of the claim terms, but reference to extrinsic evidence should never alter those claim terms, for that would allow the public record of the patent to be changed for purposes of litigation, thus abrogating the notice function of the patent documents. The court ultimately concluded that the article did not even support the definitional point for which it was proffered.

1392. Id. at 1340, 56 U.S.P.Q.2d (BNA) at 1018 (quoting the language used in the patent).

1393. Id. at 1340, 56 U.S.P.Q.2d (BNA) at 1018.

1394. Id. at 1341, 56 U.S.P.Q.2d (BNA) at 1019.


1396. See id., 56 U.S.P.Q.2d (BNA) at 1019 (noting the flaws in the trial court’s infringement analysis).


1398. See id. at 1295-96, 55 U.S.P.Q.2d (BNA) at 1076.

1399. See id., 55 U.S.P.Q.2d (BNA) at 1076.

1400. Id. at 1295, 55 U.S.P.Q.2d (BNA) at 1075.

1401. See id. at 1296, 55 U.S.P.Q.2d (BNA) at 1076.
and thus rejected Samsung’s argument.1402

One knotty question that has continued since the Federal Circuit’s 1995 Markman decision is this: Since a patent is to be interpreted (at least according to some panels) from the vantage point of one of ordinary skill in the relevant art, how should courts use extrinsic evidence, such as expert or inventor testimony, to gauge how one of ordinary skill in the art would read the claim? In other words, since a judge is not one of ordinary skill in the relevant art, can he or she rely on extrinsic evidence in order to understand how that ordinarily skilled professional might read the claims? The answer is unclear.

The court can probably admit the evidence under Federal Rule of Evidence 702,1403 under the standard of helpfulness to the trier of fact.1404 It is not clear, however, whether the court can rely on that testimony to support its claim construction.

In Solomon v. Kimberly-Clark Corp.,1405 which was primarily an invalidity case, the panel noted that the Federal Circuit had “not specifically addressed the types of evidence that may be considered in analyzing whether a claim complies with the ‘which the applicant regards as his invention’ portion of [Section 112, paragraph 2].”1406 The court concluded that it should be the same type of evidence that may be used to ascertain whether a claim satisfies the definiteness portion of Section 112, paragraph 2.1407 “Despite this general rule,” which focuses on the intrinsic evidence of claims and specification, the panel in Solomon stated in a footnote that certain circumstances require review of evidence beyond the claims and written description,

1402. See id., 55 U.S.P.Q.2d (BNA) at 1076-77; see also id. at 1076, 55 U.S.P.Q.2d (BNA) at 1076 (rejecting as unpersuasive Samsung’s reliance on similar statements made by the inventors in prosecuting a related Japanese patent application).

1403. Fed. R. Evid. 702 (“If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.”).

1404. See Aqua-Aerobic Sys., Inc. v. Aerators, Inc., 211 F.3d 1241, 1244, 54 U.S.P.Q.2d (BNA) 1566, 1568 (Fed. Cir. 2000) (“[E]xpert testimony that is admissible in the proceeding . . . may be considered by the court and given weight appropriate to its content.”) (citations omitted). Query, however, whether Rule 702’s reference to “the trier of fact” precludes its applicability to claim-construction issues, which are viewed as questions of law. See, e.g., Markman v. Westview Instruments, Inc., 517 U.S. 370, 371, 38 U.S.P.Q.2d (BNA) 1461, 1465 (1996) (describing the first issue in a patent case, construing the patent, as a question of law the court should determine, and further characterizing the second issue, whether infringement occurred, as a question of fact for a jury to resolve).


1407. See id., 55 U.S.P.Q.2d (BNA) at 1280-82 (stating that the standard set forth in § 112, ¶ 2 “depends on whether those skilled in the art would understand the scope of the claim when the claim is read in light of the specification”).
because determining the perspective of one of skill in the art may involve reference to extrinsic evidence including the prior art and witness testimony. There is good reason to believe that a future panel might follow a similar standard in a case presenting a more straightforward issue of claim construction, because the “which the applicant regards as his invention” language of Section 112, paragraph 2, is the language that sets forth the elements that a patent claim must describe. Following a similar path for claim-construction purposes would also be in accord with the well-settled principle that claims should be construed the same way for both validity and infringement analyses.

In the end, the continuing tensions in the Federal Circuit’s decisions with respect to use of extrinsic evidence seem to fall into three categories: (i) the role of dictionaries in claim construction; (ii) the situations where extrinsic evidence will be allowed, and (iii) the tension between the claim-construction vantagepoint of one of ordinary skill in the art and the disfavor of extrinsic evidence such as testimony from those who are skilled in the art.

5. Canons of construction

Finally, beyond the issues of intrinsic and extrinsic evidence, the Federal Circuit has often applied what one might call “canons of construction” in order to assist the claim-construction task. Each of these canons can be understood much like the various other “presumptions” (discussed above) that the Federal Circuit applies in claim construction. A “canon of construction” is little more than saying that if a certain condition is present, then it should be presumed (subject to rebuttal) that a certain claim construction should follow. For example, the presumption in favor of a claim term’s “ordinary meaning” presumes, subject to rebuttal, that each word in a claim was used in a manner consistent with its ordinary meaning (which sometimes, but not always, means its “dictionary definition”). Similarly, the means-plus-function claim element

1408. See id. at 1378-79 n.4, 55 U.S.P.Q.2d (BNA) at 1283 n.4.
1409. See, e.g., C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1363, 48 U.S.P.Q.2d (BNA) 1225, 1241 (Fed. Cir. 1998) (“Claims must be interpreted the same way for determining infringement as was done to sustain their validity.”).
1410. See supra notes 927-961 and accompanying text (summarizing federal cases addressing claim construction issues).
1411. See supra notes 1089-1132 and accompanying text (examining the types and amount of evidence required by courts in patent cases).
1412. See supra notes 1353-1366 and accompanying text (discussing the doctrine of equivalents).
1413. See supra notes 923-925 and accompanying text (explaining the court’s
presumption assumes, subject to rebuttal, that the use of the term “means” in a claim element requires that element to be understood as a means-plus-function element subject to Section 112, paragraph 6, and that the absence of the term “means” takes it out of the ambit of that paragraph.\textsuperscript{1414} Other “canons of construction” can be understood in much the same way.

One well-established canon of construction is the rule that “claims should be read in a way that avoids ensnaring prior art if it is possible to do so.”\textsuperscript{1415} This is an easily understandable presumption: since the patent office issued the patent after an interactive exchange with the applicant and an administrative evaluation of patentability, the patent itself is entitled to a substantial presumption of validity.\textsuperscript{1416} Therefore, a claim construction that would “ensnar[e] prior art”\textsuperscript{1417} (i.e., render the patent invalid) is likely incorrect, since the patent office should be presumed to have done its job correctly and not to have issued invalid patents or claims.

The canon is merely a presumption, as two recent cases from the Federal Circuit demonstrate. In \textit{Apple Computer, Inc. v. Articulate Systems, Inc.},\textsuperscript{1418} the panel noted the canon that the claims should be construed to preserve validity, but concluded that in the instant case it was impossible to do so because the only claim construction that was consistent with the claim’s language and written description rendered the claim invalid.\textsuperscript{1419} Similarly, in \textit{Elekta Instrument S.A. v. O.U.R. Scientific International, Inc.},\textsuperscript{1420} the patentee argued that to adopt the accused infringer’s construction of the patent would render the independent claim in suit invalid as inoperative.\textsuperscript{1421} Putting aside the issues of validity and operability, the panel concluded that the canon was inapplicable in any event, because the claim “is susceptible of only one reasonable construction.”\textsuperscript{1422} In

\begin{itemize}
  \item \textsuperscript{1414} \textit{See supra} notes 1249-1268 and accompanying text (describing the use of a means-plus-function argument).
  \item \textsuperscript{1415} \textit{Apple Computer, Inc. v. Articulate Sys., Inc.}, 234 F.3d 14, 24, 57 U.S.P.Q.2d (BNA) 1057, 1064 (Fed. Cir. 2000) (quoting Eastman Kodak Co. v. Goodyear Tire & Rubber Co., 114 F.3d 1547, 1556, 42 U.S.P.Q.2d (BNA) 1737, 1743 (Fed. Cir. 1997)). The authors’ law firm was counsel to Eastman Kodak in the latter case.
  \item \textsuperscript{1416} \textit{See} 35 U.S.C. § 282 (1994) (“A patent shall be presumed valid.”).
  \item \textsuperscript{1417} \textit{See Apple}, 234 F.3d at 24, 57 U.S.P.Q.2d at 1057.
  \item \textsuperscript{1418} 234 F.3d 14, 57 U.S.P.Q.2d (BNA) 1057 (Fed. Cir. 2000).
  \item \textsuperscript{1419} \textit{See id.} at 24, 57 U.S.P.Q.2d (BNA) at 1064 (explaining that in this instance, the axiom does not apply and the claim is simply invalid).
  \item \textsuperscript{1420} 214 F.3d 1302, 54 U.S.P.Q.2d (BNA) 1910 (Fed. Cir. 2000).
  \item \textsuperscript{1421} \textit{See id.}, 54 U.S.P.Q.2d (BNA) at 1910.
  \item \textsuperscript{1422} \textit{Id.} at 1309, 54 U.S.P.Q.2d (BNA) at 1914. The panel declined to reach the issues of validity and also found the record was unclear on the issue of operability. \textit{See id.}, 54 U.S.P.Q.2d (BNA) at 1914.
\end{itemize}
short, the canon of construction favoring claim constructions preserving the validity of the patent over those that do not applies only where the intrinsic (and perhaps even extrinsic) evidence leaves the claims truly unambiguous, i.e., "susceptible of only one reasonable construction." As a result, it will be the rare case where this canon is anything but confirmatory of the correct construction of a patent claim.

Another canon of construction is the doctrine of claim differentiation, which "creates a rebuttable presumption that each claim in a patent has a different scope." Again, this canon is understandable as a presumption, since it is more likely than not that the patent applicant, in prosecuting separate claims in his application, did not intend two of them to be superfluous to one another. However, that is not always the case. Indeed, it is not impossible, when one understands how patents get prosecuted to allowance, to see how overlapping claims might eventually issue. For example, the applicant might amend a claim so that, even though it uses different words than another claim in the patent, the claim ends up coextensive with the other claim. Or the applicant might make a statement in the prosecution history that defines a term in an independent claim so narrowly that it renders narrowing language in a dependent claim to be superfluous. For these reasons, claim differentiation has to be at most a rebuttable presumption, and certainly not a conclusive one.

This point was illustrated in Kraft Foods, Inc. v. International Trading Co., where the patent was drawn to food-packaging trays. The first claim (claim 1) of the patent called for a "back panel" comprised of a "flat relatively stiff planar sheet." Claim 2 also called for a "back panel" (specifically, a "protecting back panel"), but did not expressly

1423. See id., 54 U.S.P.Q.2d (BNA) at 1914 (holding the canon was inapplicable in the instant case).
1425. See, e.g., id. at 1342, 56 U.S.P.Q.2d (BNA) at 1020 (noting that accepting inventor’s stated intent of a broader scope in an independent claim eliminated perceived redundancy of a second, dependent claim).
1427. See Dow, 226 F.3d at 1341, 56 U.S.P.Q.2d (BNA) at 1019 (determining that in situations where this arises, the limitations stated in a dependent claim should not ordinarily be read into an independent claim).
1428. See Kraft, 203 F.3d at 1368, 53 U.S.P.Q.2d (BNA) at 1819.
1429. See id. at 1367, 53 U.S.P.Q.2d (BNA) at 1817.
require the panel to be “relatively stiff.” The district court recognized the doctrine of claim differentiation, but concluded that the written description and the prosecution history rebutted this presumption. The Federal Circuit agreed, noting that claim differentiation “only creates a presumption that each claim in a patent has a different scope; it is ‘not a hard and fast rule of construction.’” The panel went on to note that the fact “that the claims are presumed to differ in scope does not mean that every limitation must be distinguished from its counterpart in another claim, but only that at least one limitation must differ.”

Similarly, the court in Tate Access Floors, Inc. v. Maxcess Technologies, Inc., found the presumption overcome on the record in that case, holding that the terms “inner layer” and “inner body portion” meant the same thing in different claims, as did the terms “border” and “integral contrasting border” as used in different claims. The panel in Tate Access Floors also noted that “the doctrine of claim differentiation cannot broaden claims beyond their permissible scope,” which is a curious statement as it presents the question of whether the doctrine of claim differentiation can play a useful role in determining the “permissible scope” of claims, when the “permissible scope” is already fixed before the doctrine of claim differentiation is applied.

A related (but nonetheless distinct) canon of construction is the principle that a word or phrase used throughout a patent should ordinarily be given a consistent meaning throughout. In CAE Screenplates Inc. v. Heinrich Fiedler GmbH & Co. KG, the issue was the correct interpretation of the claim term “bottom plane” in a patent. The Federal Circuit disagreed with the patentee’s argument that this “bottom plane” did not require the presence of a physical structure, but merely defined an area of space, noting that all other references to a “plane” in the patent required a physical

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1431. See id., 53 U.S.P.Q.2d (BNA) at 1818.
1432. Id. at 1368, 53 U.S.P.Q.2d (BNA) at 1818 (quoting Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1186, 48 U.S.P.Q.2d (BNA) 1001, 1005 (Fed. Cir. 1998)).
1433. Id., 53 U.S.P.Q.2d (BNA) at 1818.
1435. See id. at 967-69, 55 U.S.P.Q.2d (BNA) at 1518-20 (comparing the claims terms used in the different claims).
1436. Id. at 968, 55 U.S.P.Q.2d (BNA) at 1519.
1438. See id., 55 U.S.P.Q.2d (BNA) at 1804 (explaining that the claim term referred to a covering device used to screen contaminants from paper slurry).
structure. At the same time, the panel noted that “[i]n some cases, a claim term can be given a different meaning in the various claims of the same patent, when a patent so provides.” It is perhaps only a slight exaggeration to say that this principle amounts to a lukewarm “rule” that the same claim term generally will be given the same meaning throughout a patent, except when it will not. As with some of the Federal Circuit’s other rules and presumptions, this one seems little more than a statement of the likely result over a large number of cases, and not a rule that can be applied in any useful or predictable way by courts or litigants.

B. Infringement

Generally, an accused device or method can infringe a claim in two ways—literally, or under the doctrine of equivalents. To establish a claim of literal infringement, a patentee must be able to show, by a preponderance of the evidence, that every single limitation of his patent claim is literally, exactly present in the accused device or method. As a consequence, any deviation from the claim limitation will preclude a finding of literal infringement.

If the patentee cannot sustain a claim of literal infringement, he may nonetheless be able to sustain a claim of infringement under the doctrine of equivalents. The doctrine of equivalents allows infringement to be found, even when all of the elements of the patent are not literally present in the accused device or method, where there is equivalence between the elements of the accused device and the claimed elements of the patented invention.

For example, a hypothetical patent claim to a carrot cake which called for specific quantities of flour, sugar, carrots, raisins, and butter would be literally infringed by a cake actually containing the same elements in the called-for quantities. That same patent claim

1439. See id. at 1317, 55 U.S.P.Q.2d (BNA) at 1810 (“Given this character of the side planes, there is little reason to believe that the third component ‘forming’ the grooves, the bottom plane, does not also refer to a groove structure, particularly when all three groove components include the term ‘plane.’”).

1440. Id., 55 U.S.P.Q.2d (BNA) at 1810.


1442. See id. at 1359 (“Infringement under the doctrine of equivalents requires that the accused product contain each limitation of the claim or its equivalent.”) (citing Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 40, 41 U.S.P.Q.2d (BNA) 1865, 1875).
might be infringed under the doctrine of equivalents by a cake actually containing all of the same elements in the called-for quantities, except that an identical quantity of margarine was substituted for the called-for quantity of butter. Likewise, the same claim might be infringed under the doctrine of equivalents by a cake actually containing all of the same elements in the called-for specific quantities, except for somewhat less sugar. But the vagaries engendered by these “might bes” under the doctrine of equivalents have proven to be frustrating for courts and litigants alike.

The court’s most significant infringement opinion in 2000, the en banc ruling in Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., imposed some discipline on the vagaries of the equivalence analysis. This decision is the focus of much of our discussion of the doctrine of equivalents for the year 2000, and it will be the focus of the Supreme Court in its October 2001 Term.

1. Literal infringement

As noted above, an infringement inquiry consists of two steps—legal claim construction, followed by factual comparison of the accused device or method to the terms of the properly construed claim. When it comes to questions of literal infringement, the disputes are largely resolved at the legal, claim-construction step, for often there is no dispute between the parties as to the structure or steps performed by the accused device or method. Consequently, a fair number of literal-infringement claims should be amenable to summary judgment—if the literal-infringement claim involves a legal determination of patent claim construction and an application of that legal determination to the undisputed material facts of what the accused device is (or what the accused method does), then there should be no genuine dispute as to any material fact, and application of these undisputed material facts should demonstrate that one party or the other is entitled to judgment of literal infringement, or no


1444. See Purdue Pharm. L.P. v. Faulding, Inc. 230 F.3d 1320, 1326, 56 U.S.P.Q.2d (BNA) 1481, 1486 (Fed. Cir. 2000); see also Ruiz v. A.B. Chance Co., 234 F.3d 654, 669, 57 U.S.P.Q.2d (BNA) 1161, 1170 (Fed. Cir. 2000) (clarifying that claim construction is a question of law reviewed de novo while comparing the properly construed claims to the accused device is a question of fact reviewed for clear error).

1445. See e.g., Paul R. Michel, The Court of Appeals for the Federal Circuit Must Evolve to Meet the Challenges Ahead, 48 AM. U. L. REV. 1177, 1187-88 (1999) (“[O]nce the asserted claims of a patent have been construed fully as to any disputed terms, the existence of literal infringement can frequently be determined as a matter of law because the structure and operation of the accused device are rarely subject to genuine evidentiary dispute.”) (footnotes omitted).
As Judge Michel wrote in a recent edition of this Law Review, “The role of summary judgment in modern patent cases is difficult to overestimate. Recent changes in claim construction methodology have increased the number of issues and, indeed, the number of cases amenable to final disposition on summary judgment.”

Judge Michel’s statement is borne out by the cases. Of the Federal Circuit’s ninety-four published patent opinions in the year 2000, fifty-one of them addressed issues of literal infringement. Of those fifty-one cases, the district court resolved the literal-infringement issues on a motion for summary judgment in thirty of them. Three others came up to the Federal Circuit on judgments of no literal infringement, to which the patentees’ stipulated, after the district

1446. See Fed. R. Civ. P. 56(c) (listing the criteria for granting summary judgment).

1447. Michel, supra note 1445, at 1187.

court construed the patent claims as a matter of law. Although it may be a mistake to extrapolate those figures across the entirety of the Federal Circuit’s patent caseload (in part because summary judgment records may provide “cleaner” or superior vehicles for the court to issue published opinions, whereas “black box” jury verdicts may be less attractive candidates for full published-opinion dispositions), the numbers are nonetheless striking and indicate just how many patent-infringement disputes are now amenable to disposition on summary judgment.

A cursory affidavit from an expert will not prevent summary judgment in patent cases. In Arthur A. Collins, Inc. v. Northern Telecom Ltd., the patent term at issue called for “a time-space-time (TST) switch.” In response to Northern Telecom’s (NorTel’s) motion for summary judgment, in which it asserted that its accused device did not infringe the Collins patents, NorTel stated that “Collins [the patentee] asserted that NorTel’s [accused] DMS switches have either a JNET or an ENET switching fabric, and that both JNET and ENET are TST switches.” Collins also produced an expert declaration that the “JNET is a TST.” The Federal Circuit held that the expert’s conclusory assertion was insufficient to defeat summary judgment, reasoning that “[a] party may not avoid that rule by simply framing the expert’s conclusion as an assertion that a particular critical claim limitation is found in the accused device.” Thus, the expert’s testimony was effectively disregarded because Collins’ expert framed his conclusion without any “explanation of why JNET’s structure renders it a TST switch in his view,” and because, “[t]o
the extent that [Collins’ expert’s] construction of the term ‘TST switch’ can be discerned from his several submissions to the district court, his construction was broader than the one we have adopted.”

Although the court noted that the sufficiency of an expert affidavit to defeat summary judgment is a question of regional circuit law, the court also laid out some ground rules for a sufficient expert affidavit:

When, as here, the construction of a critical claim limitation is in dispute, a party may not avoid summary judgment simply by offering an opinion of an expert that states, in effect, that the critical claim limitation is found in the accused device. Although such testimony of an expert witness may be proper during trial when the opposing party can challenge the factual basis of the expert’s opinion during cross-examination, . . . the affidavit of an expert submitted in opposition to a motion for summary judgment must do more by “set[ting] forth specific facts showing that there is a genuine issue for trial. . . .” Thus, the expert must set forth the factual foundation for his opinion—such as a statement regarding the structure found in the accused product—in sufficient detail for the court to determine whether that factual foundation would support a finding of infringement under the claim construction adopted by the court, with all reasonable inferences drawn in favor of the nonmovant.

Nonetheless, there remain some cases where there is truly a material dispute as to the precise structure, qualities, or operation of the accused product or process, such that a factfinder will have to address the issue. In *Hilgraeve Corp. v. McAfee Associates, Inc.*, *Id.* at 1047, 55 U.S.P.Q.2d (BNA) at 1147, Hilgraeve held a patent on a computer virus protection program and alleged that McAfee’s virus detection product, VirusScan, infringed on it. *Id.* at 1351, 55 U.S.P.Q.2d (BNA) at 1658 (indicating that neither party disputed the district court’s claim construction).
VirusScan and interpreted its source code. The Federal Circuit concluded that summary judgment was improper because these experts’ testimony was in conflict on material factual issues.\footnote{See id. at 1352-54, 55 U.S.P.Q.2d (BNA) at 1659-61 (reversing grant of summary judgment, based on differences in expert’s descriptions of appellees’ virus protection software).}

Even beyond summary judgment cases, it remains clear that the lion’s share of infringement disputes in patent cases are claim-construction disputes, not truly factual ones, as illustrated in Hill-Rom Co. v. Kinetic Concepts, Inc.,\footnote{See id., 54 U.S.P.Q.2d (BNA) at 1342 (demonstrating how the factual infringement inquiry is typically largely grounded in disputes not over facts, but about the legal construction of patent claims).} which arose after a bench trial.\footnote{See id. at 1340-42, 54 U.S.P.Q.2d (BNA) at 1439-41 (rejecting Hill-Rom’s arguments and holding that the trial court correctly construed the term “cushion” to mean a structure that provides basic support and comfort).} After holding in Section II of its opinion that the claim term “cushion” necessarily carried with it the requirement of having “supporting” and “comforting” qualities,\footnote{Id., 54 U.S.P.Q.2d (BNA) at 1441.} the panel, in Section III of its opinion, addressed the parties’ factual infringement contentions.\footnote{Id., 54 U.S.P.Q.2d (BNA) at 1441.} The court noted that “Hill-Rom’s principal theory of infringement is answered by the district court’s claim construction, which we adopt.”\footnote{Id., 54 U.S.P.Q.2d (BNA) at 1441.} The court also rejected Hill-Rom’s “alternative argument,” which was truly a factual one: Hill-Rom urged that—even under the district court’s claim construction—the accused hospital beds still infringed because the inflatable bladders on the bed, while they do make a patient “less comfortable” than the patented bed, nonetheless “can still be said to provide basic support and comfort.”\footnote{Hill-Rom Co. v. Kinetic Concepts, Inc., 209 F.3d 1337, 1342, 54 U.S.P.Q.2d (BNA) 1437, 1441 (Fed. Cir. 2000).}

Compared to the number of presumptions, doctrines, and rules applicable to patent claim construction, the Federal Circuit’s patent opinions in 2000 yielded relatively few elucidations of similar doctrines applicable to the factual second step of literal infringement analysis. One such doctrine that was the subject of some discussion in 2000, however, was the “rule” that the presence of additional elements in the accused device (or additional steps in the accused method) will not avoid a finding of infringement. In Tate Access
Floors, Inc. v. Maxcess Technologies, Inc.\textsuperscript{1470} where the patent was drawn to a floor panel having an “integral” border, the accused infringer argued that the border on its accused floor panel was not “integral” because it must be painted.\textsuperscript{1471} The Federal Circuit disagreed since “the addition of paint does not eliminate a limitation or inherent feature of the claim, Maxcess may not avoid infringement by merely adding paint to the border of its floor panel.”\textsuperscript{1472}

Likewise, in Northern Telecom Ltd. v. Samsung Electronics Co.,\textsuperscript{1473} the panel explained that this general rule applies unless the claims are properly construed to exclude the possibility of an additional element, noting that “if a patent requires A, and the accused device or process uses A and B, infringement will be avoided only if the patent’s definition of A excludes the possibility of B.”\textsuperscript{1474} Statements that merely note a distinction between A and B are not helpful to avoid infringement because what matters is that that A and B must be mutually exclusive, not that the patent describes A and B as different.\textsuperscript{1475}

Such “mutually exclusive” claim drafting often appears in patent claims containing numerical limitations. Thus, in Jeneric/Pentron, Inc. v. Dillon Co., Inc.,\textsuperscript{1476} where the patent claims required “a two-phase dental porcelain composition with 0-1% cerium oxide,” there was no infringement by a composition containing 1.61% cerium oxide.\textsuperscript{1477} The patentee nonetheless argued that the accused infringer’s composition contained “0-1%” cerium oxide, because the total

\begin{thebibliography}{1470}
\bibitem{1470} 222 F.3d 958, 55 U.S.P.Q.2d (BNA) 1513 (Fed. Cir. 2000).
\bibitem{1471} See id. at 970, 55 U.S.P.Q.2d (BNA) at 1520.
\bibitem{1472} \textit{Id.} (comparing Suntiger, Inc. v. Blublocker Corp., 189 F.3d 1327, 1336, 51 U.S.P.Q.2d (BNA) 1811, 1816 (Fed. Cir. 1999) (holding that the district court erred by finding different color coating on lens changed an inherent property) with Insiuform Techs. Inc. v. Cat Contracting, Inc., 99 F.3d 1098, 1106, 40 U.S.P.Q.2d (BNA) 1602, 1608 (Fed. Cir. 1996) (finding that adding elements will prevent a finding of literal infringement where the claim is specific and adding elements eliminates an inherent feature of the claim)).
\bibitem{1473} 215 F.3d 1281, 55 U.S.P.Q.2d (BNA) 1065 (Fed. Cir. 2000).
\bibitem{1474} \textit{Id.} at 1296-97, 55 U.S.P.Q.2d (BNA) at 1065.
\bibitem{1475} \textit{See id.}, 55 U.S.P.Q.2d (BNA) at 1065 (“The addition of features does not avoid infringement, if all the elements of the patent claims have been adopted.”); see also Uniroyal, Inc. v. Rudkin-Wiley Corp., 897 F.2d 1044, 1057, 5 U.S.P.Q.2d (BNA) 1434, 1444 (Fed. Cir. 2000) (“Adding features to an accused device will not result in noninfringement if all the limitations in the claims, or equivalents thereof, are present in the accused device.”); A.B. Dick Co. v. Burroughs Corp., 713 F.3d 700, 703, 218 U.S.P.Q. (BNA) 965, 967 (Fed. Cir. 1983) (“It is fundamental that one cannot avoid infringement merely by adding elements if each element recited in the claims is found in the accused device.”).
\bibitem{1476} 205 F.3d 1377, 54 U.S.P.Q.2d (BNA) 1086 (Fed. Cir. 2000).
\bibitem{1477} \textit{See id.} at 1382-83, 54 U.S.P.Q.2d (BNA) at 1090 (agreeing with the district court’s determination that Jeneric had not shown a reasonable likelihood of success on literal infringement).
\end{thebibliography}
amount of cerium oxide was best understood as consisting of two components: “The first—0.92% of cerium oxide—acts as an antigreening agent and, thus, falls within the 0-1% range of claim 1. The remaining—0.69% of cerium oxide—acts as an opacifying or fluorescing agent in a third phase outside the claimed two-phase matrix.” Here, the ordinary principle, that additional elements in the accused infringing product do not prevent infringement, was inapplicable, because the patentee had specified a precise range of percentages in the claim. Jeneric’s infringement theory essentially proposes that the precisely claimed ranges do not limit the amount of porcelain compositions, but this theory would read out of claim 1 the express claim ranges.

Issues under the second, factual prong of the infringement analysis are more prevalent with respect to infringement of “means-plus-function” claim elements under Section 112, paragraph 6 of the Patent Act. Infringement of such a claim element requires the factfinder to determine that the “structure, material, or acts described in the specification” corresponding to the “means or step for performing a specified function,” or “equivalents thereof,” are present in the accused device. “[E]quivalents thereof” under Section 112, paragraph 6 will literally infringe a means-plus-function claim element and it is therefore theoretically possible for an equivalent (under the Doctrine) of an equivalent (under the statute) to infringe a means-plus-function claim element. The Federal Circuit, in _Kemco Sales, Inc. v. Control Papers Co._, reiterated the

1478. _Id._ at 1382, 54 U.S.P.Q.2d (BNA) at 1090.
1479. _See id._ at 1282-83, 54 U.S.P.Q.2d (BNA) at 1090 (rejecting any attempt to carve out a portion of cerium oxide according to functions not recited in the claim).
1480. _See id._, 54 U.S.P.Q.2d (BNA) at 1090.
1481. _See 35 U.S.C. § 112 (1994) (“An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.”).  
1482. _Id._
approach to infringement analysis under Section 112, paragraph 6 in a discussion that aptly captures both the infringement standard under Section 112, paragraph 6 and the overlap and interplay between the “equivalents” of Section 112, paragraph 6 and “equivalents” under the doctrine of equivalents:

In order for an accused structure to literally meet a section 112, paragraph 6 means-plus-function limitation, the accused structure must be either the same as the disclosed structure or be a section 112, paragraph 6 “equivalent,” i.e., (1) perform the identical function and (2) be otherwise insubstantially different with respect to structure. . . . Under a modified version of the function-way-result methodology described in Graver Tank & Manufacturing Co. v. Linde Air Products Co., . . . two structures may be “equivalent” for purposes of section 112, paragraph 6 if they perform the identical function, in substantially the same way, with substantially the same result. . . .

If an accused structure is not a section 112, paragraph 6 equivalent of the disclosed structure because it does not perform the identical function of that disclosed structure and hence does not literally infringe, it may nevertheless still be an “equivalent” under the Doctrine of Equivalents. Thus, if one applies the traditional function-way-result test, the accused structure must perform substantially the same function, in substantially the same way, to achieve substantially the same result, as the disclosed structure. A key feature that distinguishes “equivalents” under section 112, paragraph 6 and “equivalents” under the doctrine of equivalents is that section 112, paragraph 6 equivalents must perform the identical function of the disclosed structure . . . .

Because the “way” and “result” prongs are the same under both the section 112, paragraph 6 and Doctrine of Equivalents tests, a structure failing the section 112, paragraph 6 test under either or both prongs must fail the Doctrine of Equivalents test for the same reason(s) . . . .

Thus, in Kemco, the court concluded that the district court had correctly held that no reasonable jury could have found the accused envelope to be infringing, either literally or under the doctrine of equivalents:

[Both the accused and disclosed structures perform the identical function, which is to close the envelope. However, unlike the disclosed flap, which closes by folding over the envelope, the dual-lip structure closes the accused envelope in a different way by meeting together and binding via the internal adhesive.]

1485. Id. at 1364, 54 U.S.P.Q.2d (BNA) at 1315-16 (citations and footnote omitted).
accused structure’s different way of closing also yields a substantially different result. The first and second sealing means in the disclosed structure are ultimately attached to the outside of the envelope. In contrast, the first sealing means in the TripLok envelope is internally attached to the two lips of the dual-lip structure, thereby sealing the envelope. 1486

As a result of these substantial differences of “way” and “result,” the accused dual-lip structure was held to be neither a section 112, paragraph 6 equivalent nor an equivalent under the doctrine of equivalents. 1487

Two cases from 2000 addressed the specific acts that will constitute patent infringement. Section 271(a) of the Patent Act provides that “whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States, or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.” 1488  Until recently, the definition of infringement was limited to making, using, or selling the patented invention, but offers to sell and importation were added as acts of infringement as of January 1, 1996. 1489  Thus, the patent bar has only recently had to grapple with proving infringement by importation, and in particular the relationship of process patents to infringement by importation. This has meant coming to grips with some relatively new statutes that help to define specific acts of infringement.

In Ajinomoto Co. v. Archer-Daniels-Midland Co., 1490 the statutory issue of first impression was the meaning of Section 271(g) of the Patent Act, which provides:

Whoever without authority imports into the United States or offers to sell, sells, or uses within the United States a product which is made by a process patented in the United States shall be liable as an infringer, if the importation, offer to sell, sale, or use of the product occurs during the term of such process patent. . . . 1491

The accused infringer, Archer-Daniels-Midland (ADM), argued that its imported bacteria were not imported “without authority,”

1486.  Id. at 1365, 54 U.S.P.Q.2d (BNA) at 1316.
1487.  See id., 54 U.S.P.Q.2d (BNA) at 1316 (holding “the dual-lip structure is not a section 112, paragraph 6 equivalent of a fold-over flap because the ‘way’ and ‘result’ are substantially different; accordingly, the dual-lip structure also cannot be an equivalent under the doctrine of equivalents”).
1489.  See Pub. L. No. 103-465, § 533(a), 108 Stat. 4089, 4988 (codified as 35 U.S.C. § 271(a)) (revising definition of infringement to include offers to sell or import patented materials).
because a Soviet Union authority had authorized ADM’s purveyor to use the patents exclusively to manufacture the bacteria in several Scandinavian and nearby countries, and to sell and use the produced bacteria non-exclusively everywhere else in the world, except the United States and Japan. The Federal Circuit rejected ADM’s argument, stating that Section 271(g) applies to unauthorized actions within the United States and it is irrelevant that authorization to produce the product came from outside of the United States. When the process used abroad is the same as the process that the patent in the United States covers, liability for infringement arises only upon importation, sale or offers, or use in the United States. Consequently, the court held ADM liable for infringement when ADM imported its particular bacteria strain because the process that ADM used was the same as a process covered by a U.S. patent.

Another relatively new statututory provision, Section 295 of the Patent Act, was addressed by the Federal Circuit for the first time in 2000. This section is likely to be a particularly useful statute for patent holders in infringement-by-importation cases. For example, in Nutrinova Nutrition Specialties and Food Ingredients GmbH v. International Trade Commission, the Federal Circuit noted that this burden-shifting mechanism serves two purposes—it “works for the benefit of the patentee” by shifting the burden (upon a sufficient showing) to the accused infringer to prove that his accused process was in fact not

1492. See Ajinomoto, 228 F.3d at 1347-48, 56 U.S.P.Q.2d (BNA) at 1339 (noting that the license “to A.C. Biotechnics granted the exclusive right to use the licensed strain, knowledge and patents for the purpose of manufacturing of L-threonine in the territory [Belgium, Denmark, Finland, FRG, Holland, Iceland, Luxemburg, Norway, and Sweden] and the non-exclusive right to use and sell L-threonine, thus produced in the territory and the zone of non-exclusive right [worldwide except the U.S.A. and Japan]” (citation omitted).
1493. See id. at 1348, 56 U.S.P.Q.2d (BNA) at 1340.
1494. See id., 56 U.S.P.Q.2d (BNA) at 1340 (indicating the point at which infringement occurs under § 271(g) of the Patent Act).
1495. See id. (noting that importation occurred without authorization of the patent holder).
1496. See 35 U.S.C. § 295 (1994), providing that:
In actions alleging infringement of a process patent based on the importation, sale, offer for sale, or use of a product which is made from a process patented in the United States, if the court finds—
(1) that a substantial likelihood exists that the product was made by the patented process, and
(2) that the plaintiff has made a reasonable effort to determine the process actually used in the production of the product and was unable to so determine,
the product shall be presumed to have been so made, and the burden of establishing that the product was not made by the process shall be on the party asserting that it was not so made.
infringing, and “it also serves the needs of the court as a mechanism for enforcing its processes and orders” by “provid[ing] the trial court with a potent weapon to use against a non-cooperative defendant.”

In *Nutrinova*, an administrative law judge (ALJ) of the International Trade Commission found, as a matter of fact, that the patent holder (Nutrinova) had “failed to satisfy the second prong of § 295.”

Notwithstanding Nutrinova’s submission of test results which it said were inconclusive (because they did not remove the possibility that post-processing treatment might have changed the residual by-products), in the ALJ’s view, “Nutrinova could, in fact, reasonably determine from testing whether the acesulfame potassium produced at that facility was manufactured by the [patented] process.”

The court noted that this finding was not erroneous, but supported by substantial evidence, because the Section 295 inquiry “is not determined subjectively by the plaintiff, but is determined objectively by the court.”

The court punctuated its discussion of Section 295 with an interesting footnote, noting the possibility that Section 295 provides that the burden shifts “if the court finds” the two prongs satisfied, the panel said: “It is possible that § 295 does not apply to proceedings before the ITC, since the statute on its face applies to courts, not agencies.”

The court further noted that since the Commission did not raise this point, it is treated as waived for purposes of this opinion. Thus it remains plausible that, in a future case where the issue is not waived, the Federal Circuit could hold that Section 295 (or, for that matter, any other patent statute addressed to “courts”) does not apply to proceedings before the International Trade Commission (ITC), which is not, technically, a “court.” Such a result, however, would render a highly useful statute inapplicable to an institution which deals exclusively with imports—a context where the burden-shifting mechanism of Section 295 is most salutary, since the accused infringer is often not even subject to the jurisdiction of

1498. *Id.* at 1360, 55 U.S.P.Q.2d (BNA) at 1954.
1502. *See id.* at 1359-60 n.1, 55 U.S.P.Q.2d (BNA) at 1954 n.1 (pointing out the language of § 295 that states that the burden shifts “if the court finds” the two prongs satisfied).
the ITC for discovery and other purposes (the ITC has in rem, not in personam, jurisdiction).

Not applying Section 295 to ITC proceedings would also arguably be inconsistent with the approach taken by the Federal Circuit in *Texas Instruments Inc. v. Tessera, Inc.*, where the court held that ITC proceedings were “litigation” as that term was used in a license agreement between the parties. Indeed, if Section 295 were held not to apply to the ITC, it would yield the strange result that its burden-shifting mechanism would be forbidden to the ITC, but could be applied by the Federal Circuit (which is indubitably a “court”), which reviews ITC decisions. The better view is the one that the ITC seemingly adopted. The ITC did not even raise this as an issue in the *Nutrinova* case, thus indicating that the ITC considers itself bound by Section 295 as a court.

2. Infringement by equivalents

The most significant infringement developments in 2000 came, without a doubt, in the area of infringement by equivalents. The doctrine of equivalents (sometimes abbreviated as the “DOE”) prevents an accused infringer from avoiding liability for patent infringement by making only minor or insubstantial changes to an invention covered by the claims of a patent, thereby avoiding literal infringement while retaining the invention’s “essential identity.”

As Judge Learned Hand wrote over fifty years ago, the doctrine of equivalents is utilized “to temper unsparing logic and prevent an infringer from stealing the benefit of the invention.”

The doctrine is hotly contested, as it must strike a delicate balance between

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1505. See 19 U.S.C. § 1333 (1994) (stating, for example, that the ITC may invoke the aid of any U.S. court in requiring attendance and testimony of witnesses).


1507. See id. at 1331, 56 U.S.P.Q.2d (BNA) at 1678-79 (concluding that the term “litigation” in the governing law clause of the license agreement includes section 337 proceedings at the ITC).


ensuring that the patentee enjoys the full benefit of his patent without opportunistic poaching by competitors, while at the same time ensuring that the public receives “‘fair notice’ of the patent’s scope.”\(^{1511}\) Or, as the Supreme Court has put it: “There can be no denying that the doctrine of equivalents, when applied broadly, conflicts with the definitional and public-notice functions of the statutory claiming requirement.”\(^{1512}\)

In 1996 and 1997, the Federal Circuit and the Supreme Court attempted to resolve some of these inherent conflicts. In retrospect, neither effort was terribly successful. In *Hilton Davis Chemical Co. v. Warner-Jenkinson Co.*,\(^{1513}\) the Federal Circuit held that, in addition to the well-established function-way-result test,\(^{1514}\) a product or process may also infringe if it contains an element with “insubstantial differences” from the claimed element.\(^{1515}\) The authors of a prior Area Summary in this Law Review remarked that the Federal Circuit in *Hilton Davis* held that “there is simply no definitive test for infringement under the doctrine of equivalents.”\(^{1516}\) The Federal Circuit in *Hilton Davis* did recognize the evidentiary value of evidence such as “copying,” “independent development,” and “designing around,” but refused to impose any threshold evidentiary showing as a prior requirement.\(^{1517}\) Over vehement dissents from Judge Plager,\(^{1518}\) among others,\(^{1519}\) the *en banc* court refused to impose an “equitable”

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1514. *See id.* at 1518, 35 U.S.P.Q.2d (BNA) at 1645 (noting that in recent decisions, the Court of Appeals for the Federal Circuit has stressed the significance of the “insubstantial differences” standard).
1516. *See Hilton Davis*, 520 U.S. at 29, 41 U.S.P.Q.2d (BNA) at 1645-46 (noting that in recent decisions, the Court of Appeals for the Federal Circuit has stressed the significance of the “insubstantial differences” standard).
1517. *See id.* at 1527, 35 U.S.P.Q.2d (BNA) at 1652-53 (stating that neither evidence of copying, nor independent development, nor “designing around” has relevance to the state of mind of the accused infringer in a doctrine of equivalents analysis because infringement is a strict liability offense).
1518. *See id.* at 1536, 35 U.S.P.Q.2d (BNA) at 1661 (Plager, J., dissenting) (opinion joined by Chief Judge Archer and Judges Rich and Lourie) (differing with the majority as to whether the function-way-result test is a proper analysis). Judge Plager offers an alternative to assess substantiality, such that “other objective indicia may be considered, such as the known interchangeability of the accused and claimed elements by persons reasonably skilled in the art; whether there is evidence of intentional copying; and whether there is evidence of an attempt to design around the patented matter.” *Id.*, 35 U.S.P.Q.2d (BNA) at 1661.
1519. *See id.* at 1545, 35 U.S.P.Q.2d (BNA) at 1661 (Lourie, J., dissenting) (opinion
limitation or threshold on application of the Doctrine, such that a finding of “fraud on the patent” or knowing copying would be required before a judge could apply the doctrine of equivalents. Relaterly, the court also concluded that application of the doctrine of equivalents was a factual question of infringement for a properly instructed jury. This conclusion, too, was met with stern objection from dissenters.

The Supreme Court took the case, and, in 1997, reversed the judgment and remanded for further proceedings. The most significant developments in the Supreme Court’s opinion were: (1) creation of a presumption that any amendment to a patent claim invokes prosecution-history estoppel, which would become conclusive unless the patentee could establish that the amendment was not made for “a substantial reason relating to patentability”; (2) confirmation that the Federal Circuit’s long-standing “all elements rule” imposed a significant and required limitation on application of the doctrine of equivalents; and, (3) suggestion that the doctrine of equivalents could not be allowed such free play as to “vitiates” a claim element “in its entirety.” The Supreme Court also rejected Warner-Jenkinson’s attempt to impose other limitations on the doctrine of equivalents, such as the “equitable” role envisioned by Judge Plager, a threshold requirement of “proof of intent” to copy or infringe, or an “independent experimentation” defense. The Supreme Court also refused to limit the Doctrine to “equivalents that

joined by Judges Rich and Plager) (dissenting because trial judge did not properly instruct jury on doctrine of equivalents); id. at 1550, 35 U.S.P.Q.2d (BNA) at 1672-73 (Nies, J., dissenting) (opinion joined in part by Chief Judge Archer) (dissenting because Supreme Court precedent indicates that under the “doctrine of equivalents,” questions of law and fact still exist and the meaning of the words of the claim must be defined by the court).

1520. See id. at 1519-20, 35 U.S.P.Q.2d (BNA) at 1646-47 (holding lack of substantial differences, rather than the accused infringer’s motives or intent, triggers application of the doctrine of equivalents).

1521. See id. at 1522, 35 U.S.P.Q.2d (BNA) at 1648-49 (emphasizing that infringement under the doctrine of equivalents is an issue of fact for a jury and for a judge in a bench trial).

1522. See, e.g., Hilton Davis Chem. Co. v. Warner-Jenkinson Co., 62 F.3d 1512, 1543, 35 U.S.P.Q.2d (BNA) 1641, 1666 (Fed. Cir. 2000) (en banc) (per curiam) (Plager, J., dissenting) (noting that doctrine of equivalents is equitable in nature and, since juries do not exercise equitable powers, the doctrine of equivalents was not a factual question of infringement for a properly instructed jury, contrary to the majority’s holding).


1524. Id. at 33.

1525. See id. at 28-30.

1526. See id. at 39 n.8.

1527. See id. at 35-40.
are disclosed within the patent itself," reasoning that evaluation of
equivalency should occur at the time of infringement rather than at
the issuance of the patent.

The Court did not otherwise disturb the en banc court's
determinations, but noted its concern that the doctrine of
equivalents has "taken on a life of its own, unbounded by the patent
claims,"1529 and that it expected that “[a] focus on individual elements
and a special vigilance against allowing the concept of equivalence to
eliminate completely any such elements should reduce considerably
the imprecision of whatever language is used” to describe the
equivalence analysis, whether it be the “triple identity test” (function-
way-result) or the “insubstantial differences” test.1530 The court
deprecated to “micromanag[e] the Federal Circuit’s particular word
choice for analyzing equivalence," and instead left it with the power
to refine the equivalence test by using case-by-case determinations.1531

We have noted the increasingly important role of summary
judgment in literal infringement cases. The same is true in doctrine
of equivalents cases.1532 The Supreme Court, in Warner-Jenkinson,
presaged the importance of summary-judgment practice in equivalents cases:

With regard to the concern over unreviewability due to black-box
jury verdicts, we offer only guidance, not a specific mandate. Where
the evidence is such that no reasonable jury could
determine two elements to be equivalent, district courts are obliged
to grant partial or complete summary judgment. . . . Of course, the
various legal limitations on the application of the doctrine of
equivalents are to be determined by the court, either on a pretrial
motion for partial summary judgment or on a motion for judgment
as a matter of law at the close of the evidence and after the jury
verdict. . . . Thus, under the particular facts of a case, if prosecution
history estoppel would apply or if a theory of equivalence would
entirely vitiate a particular claim element, partial or complete
judgment should be rendered by the court, as there would be no
further material issue for the jury to decide.1533

1528. See id. at 37 (discussing the proper time for evaluating infringements).
(1997) (explaining that the doctrine of equivalents has been broadened by patent
claims).
1530. See id. at 40 (providing various methods and tools that courts can employ to
limit the doctrine of equivalents).
1531. See id. (placing confidence in the Federal Circuit to refine the equivalents
test).
1532. See supra Part I.A.1 and accompanying text (discussing the prevalence of
summary judgment in the Federal Circuit).
1533. 520 U.S. at 39 n.8 (citations omitted).
This is easier said than done. Recent decisions have confirmed the difficulty of successfully applying the “function-way-result” test or the “insubstantial differences” test to resolve equivalence infringement cases on summary judgment. In *Caterpillar Inc. v. Deere & Co.*, the panel reversed a summary judgment of noninfringement and remanded for a trial under Section 112, paragraph 6 equivalents and under the doctrine of equivalents, concluding that the district judge had impermissibly resolved conflicting issues of material fact on summary judgment. Judge Plager, long the Federal Circuit’s leading spokesman for limiting and rationalizing the doctrine of equivalents, wrote a concurring opinion that aptly sums up many of the perceived problems with the doctrine of equivalents as it had been operating:

I join the opinion and concur in the conclusion that this case must be returned for trial, but I do so without enthusiasm. If the trial judge sat as the trier of fact, I would find his assessment of the facts unimpeachable. But he does not. Instead, under the rules as we now have them, and because the patentee’s lawyer did a good job of building a record of arguably disputable facts, the matter (unless settled) will now go to a jury before whom there will be a lengthy and costly battle of the experts. The jury will then pick a winner; it may be the judge’s winner, or it may not. In either event, the case provides a textbook example of the insubstantial nature of the “insubstantial differences” test, and its marginally legitimate child, “substantially the same way to achieve substantially the same result,” on which the outcome will turn. May the best lawyer win.

The court confronted similar problems in the course of reversing a grant of summary judgment in *Optical Disk Corp. v. Del Mar Avionics*. One of the issues in the case, which involved compact disc (CD) technology, was whether the claims’ requirement of a “ramped trailing edge” was met by an equivalent in the accused device, a double-step trailing edge (which had a different geometric shape than the single-step “ramped trailing edge” called out by the claims). The district court analogized the case to *Tronzo v. Biomet*,

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1536. See id. at 1380, 56 U.S.P.Q.2d (BNA) at 1311 (explaining the court’s rationale for reversing the district court’s decision).
1537. Id. at 1381, 56 U.S.P.Q.2d (BNA) at 1311 (Plager, J., concurring).
1538. 208 F.3d 1324, 54 U.S.P.Q.2d (BNA) 1289 (Fed. Cir. 2000).
1539. See id. at 1330, 54 U.S.P.Q.2d (BNA) at 1292 (Fed. Cir. 2000).
Incorporating essentially concluding that where a patent calls for a specific geometric shape in a claim element (e.g., “ramped trailing edge,” or, as in Tronzo, a “conical” cup implant for a hip bone), that element cannot be equivalent to a different geometrical shape (e.g., a double-step trailing edge, or, as in Tronzo, a hemispheric implant). The Federal Circuit rejected the analogy, concluding that Tronzo used the conventional doctrine of equivalents law, which included the “all elements” or “all limitations” rule. The court acknowledged that an expert for the patent holder submitted a declaration and inspection report indicating his belief that the double-step trailing edge of the accused CDs was equivalent to the ramped trailing edge of the patent. On much the same reasoning, the court also reversed the district court’s grant of summary judgment of no equivalents infringement on another claim element.

Similarly, in Jeneric/Pentron, Inc. v. Dillon Co., which did not involve summary judgment but instead involved preliminary-injunction practice, the Federal Circuit upheld the district court’s denial of a preliminary injunction. The district court had found no realistic likelihood of success on the plaintiff’s infringement claim, and as to literal infringement, the Federal Circuit discussed the issue and agreed with the district court. As to whether the patentee had demonstrated a realistic likelihood of demonstrating infringement under the doctrine of equivalents, the Federal Circuit declined even to reach the issue. The court noted that although it affirmed the district court’s decision to deny the preliminary injunction, it did not use the doctrine of equivalents to reach the issue of infringement

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1540. 156 F.3d 1154, 47 U.S.P.Q.2d (BNA) 1829 (Fed. Cir. 1998).
1541. See Optical Disk, 208 F.3d at 1336-37, 54 U.S.P.Q.2d (BNA) at 1297 (clarifying the district court’s conclusions pertaining to specific geometric shapes).
1542. See id. at 1337, 54 U.S.P.Q.2d (BNA) at 1297 (rationalizing that Tronzo stated no such black-letter rule).
1543. See id., 54 U.S.P.Q.2d (BNA) at 1298

Its function is to change the thermal profile at the ablative surface of the dye-polymer disc master in the region of the trailing edge of the pit being formed in that surface, by means of progressively reducing the energy delivered to that surface in that region, to result in controlling the shape of the trailing edge of that pit.

Id.
1544. See id. at 1337-39, 54 U.S.P.Q.2d (BNA) at 1298-99 (discussing the reversal of the district court’s summary judgment).
1546. See id. at 1377, 54 U.S.P.Q.2d (BNA) at 1092.
1547. See id., 54 U.S.P.Q.2d (BNA) at 1092.
1548. See id. at 1384, 54 U.S.P.Q.2d (BNA) at 1091 (noting that the District Court did not conduct an equivalents analysis).
because it is a factual inquiry that is seldomly made clear on an incomplete record.\textsuperscript{1549} This suggests that it will be the rare case indeed when a patent holder will be able to establish a substantial likelihood of success in an infringement case where his lone theory of infringement is under the doctrine of equivalents. \textit{Jeneric} also underscores the difficulty of making a conclusive infringement-by-equivalents determination on anything less than a full trial record, whether it be at the preliminary-injunction stage or on a motion for summary judgment.\textsuperscript{1550} By contrast, summary rejection of infringement claims is much easier on preliminary records when the issue can be resolved by applying one of the legal limitations on the doctrine of equivalents. Thus, in \textit{Cortland Line Co. v. Orvis Co.},\textsuperscript{1551} the court was able to affirm a summary judgment of noninfringement under the doctrine of equivalents on two grounds: First, the district court correctly concluded that no reasonable jury could find the elements of the accused fishing reel to be insubstantially different from the corresponding claimed limitation in the patent.\textsuperscript{1552} Second, the patentee had, during prosecution, noted that a prior-art reel, disclosed in the Duffelen patent, was “completely different than applicant’s reel both in structure and function.”\textsuperscript{1553} Noting that the Duffelen patent disclosed a reel “very similar” to the accused reel, the court concluded that Cortland’s statement makes clear that the fishing reels were made using Duffelen’s teachings.\textsuperscript{1554} This latter conclusion—essentially an application of argument-based prosecution-history estoppel—foreshadowed the Federal Circuit’s \textit{en banc} elaborations of the doctrine of prosecution-history estoppel, which came later in the year.\textsuperscript{1555}

Indeed, the most significant developments in 2000 for the law of equivalents involved not so much the application of the doctrine itself, but limitations upon its application such as prosecution-history estoppel, the all-elements rule, prior-art estoppel (as we have named

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\item[1549.] \textit{See id.}, 54 U.S.P.Q.2d (BNA) at 1091 (explaining the court’s reasons for not using the doctrine of equivalents to deny the preliminary injunction).
\item[1550.] \textit{See id.}, 54 U.S.P.Q.2d (BNA) at 1091 (noting that the issue of infringement under the doctrine of equivalents is a “highly factual inquiry”).
\item[1551.] 203 F.3d 1351, 53 U.S.P.Q.2d (BNA) 1734 (Fed. Cir. 2000).
\item[1552.] \textit{Id.} at 1359, 53 U.S.P.Q.2d (BNA) at 1739.
\item[1553.] \textit{Id.} at 1360, 53 U.S.P.Q.2d (BNA) at 1739 (quoting the language in the prosecution history).
\item[1554.] \textit{See id.}, 53 U.S.P.Q.2d (BNA) at 1739.
\end{itemize}
\end{footnotesize}
it), an applicant’s failure to prosecute broader claims that he might have otherwise successfully prosecuted, and—an issue that will be taken up by the Federal Circuit *en banc* in 2001—“dedication to the public.” We address the significant developments in each of these five areas below.

### a. Prosecution-history estoppel

The doctrine of prosecution-history estoppel—also known, albeit in more archaic usage, as “file-wrapper estoppel”\(^{1556}\)—limits the scope of patent protection available to a patentee under the doctrine of equivalents. It is, as the Federal Circuit describes, “one tool that prevents the doctrine of equivalents from vitiating the notice function of claims.”\(^{1557}\) It precludes a patentee using the doctrine of equivalents from obtaining coverage of subject matter that the patentee has relinquished during the prosecution of the patent application.\(^{1558}\) Importantly, prosecution-history estoppel will bar a claim of infringement under the doctrine of equivalents regardless of whether the accused device or process meets the function-way-result test or the “insubstantial differences” test. For that reason, it is said that “[t]he doctrine of equivalents is subservient to [prosecution-history] estoppel.”\(^{1559}\) Additionally, since the court evaluates prosecution-history estoppel on an objective reading of the prosecution history,\(^{1560}\) and because it “is a question of law subject to review without deference,”\(^{1561}\) prosecution-history estoppel can provide a useful and litigation-saving threshold bar to an infringement-by-equivalents claim which trial and appellate courts can evaluate on motions for preliminary injunction or for summary judgment. The Federal Circuit noted that “[h]aving prosecution history estoppel as a purely legal issue is consistent with fostering certainty as to a patent’s scope, a consideration that is important for

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\(^{1559}\) Festo, 234 F.3d at 564, 56 U.S.P.Q.2d (BNA) at 1869 (quoting Autogiro Co. v. United States, 384 F.2d 391, 400-01, 155 U.S.P.Q. (BNA) 697, 705 (1967)).


The policy reasons behind prosecution-history estoppel are largely grounded in the public-notice function of patents. The logic of prosecution history estoppel is that the patentee, during prosecution, has created a record that fairly notifies the public that the patentee has surrendered the right to claim particular matter as within the reach of the patent. Thus, because the prosecution history of a patent—beyond the initial application—consists primarily of amendments and arguments made by the applicant, the Federal Circuit has recognized two related, but nonetheless distinct, varieties of prosecution-history estoppel: estoppel by argument and estoppel by amendment.

“Argument-based estoppel” is the less controversial of the two strains of prosecution-history estoppel. Under the doctrine of argument-based estoppel, “[a]rguments made voluntarily during prosecution may give rise to prosecution history estoppel if they evidence a surrender of subject matter.” In KCJ Corp. v. Kinetic Concepts, Inc., the patent applicant amended his claim by adding two new clauses, and supplemented that amendment with remarks that clearly indicated that the air mattress he was claiming had to have airflow “throughout the entirety of the lower chamber.” The Federal Circuit concluded that the remarks “reflect a clear and unmistakable surrender of mattresses without airflow ‘throughout the entirety of the lower chamber.’” The Federal Circuit applied the same “clear and unmistakable surrender” standard, applied from the viewpoint of a “reasonable competitor,” in another doctrine of equivalents case decided in 2000, Bayer AG v. Elan Pharmaceutical Research Corp., which was

1562. Bayer AG, 212 F.3d at 1254, 54 U.S.P.Q.2d (BNA) at 1720 (citing Markman v. Westview Instruments, Inc., 517 U.S. 370, 391 (1996) for the proposition that “allowing claim construction to be a question of law promotes both uniformity and certainty in the meaning of a patent’s claims”).
1563. Festo, 234 F.3d at 564, 56 U.S.P.Q.2d (BNA) at 1869 (providing the underlying rationale of prosecution-history estoppel).
1566. Festo, 234 F.3d at 568, 56 U.S.P.Q.2d (BNA) at 1872.
1568. See id., at 1359, 55 U.S.P.Q.2d (BNA) at 1841-42 (noting that the applicant had surrendered claims to any air mattress that did not have this characteristic).
1569. See id., 55 U.S.P.Q.2d (BNA) at 1842.
authored by Judge Schall (later the author of Festo) involved Bayer’s patent on a high-blood-pressure medication. Bayer’s patent claimed “an effective amount of nifedipine crystals with a specific surface area of 1.0 to 4 m²/g, in admixture with a solid diluent, to result in a sustained release of nifedipine.” In connection with amendments to the patent claim that added the specific-surface-area range of “1.0 to 4 m²/g,” Bayer made “affirmative statements about the superiority of the 1.0 to 4 m²/g range.” Bayer went so far as to call its claims directed to “a special form of nifedipine, namely, having a specific surface area of 1.0 to 4 m²/g.” “In short, through its statements to the PTO and the declarations it filed, Bayer made statements of clear and unmistakable surrender of subject matter outside the claimed SSA range of 1.0 to 4 m²/g.”

The Federal Circuit also held that this “clear and unmistakable surrender” standard was to be evaluated “with respect to how a competitor would reasonably view the ‘446 patent’s prosecution history.” Rejecting Bayer’s claim that an expert declaration created a genuine issue of material fact on how a competitor would view the prosecution history, the court concluded that testimony as to what a reasonable competitor would conclude from the prosecution history cannot create a genuine issue of material fact so as to bar summary judgment. Such testimony is only a tool, which the judge can use at his or her discretion, to aid in the legal determination of prosecution history estoppel.

The court reasoned that to hold otherwise would transform prosecution-history estoppel into a question of fact, in turn making the standard of review more deferential than the well-established de novo review applicable to prosecution-history estoppel issues. In turn, such a holding would “hamper the promotion of uniformity by binding this court to the deference required with respect to fact findings at the trial level.” Although the court did not explicitly mention it, treating prosecution-history estoppel as a purely legal issue which is evaluated from an objective standpoint allows district

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1571. See id., 54 U.S.P.Q.2d (BNA) at 1711.
1572. Id. at 1246, 54 U.S.P.Q.2d (BNA) at 1713.
1573. Id. at 1252, 54 U.S.P.Q.2d (BNA) at 1718.
1574. Id., 54 U.S.P.Q.2d (BNA) at 1718.
1575. Id. at 1253, 54 U.S.P.Q.2d (BNA) at 1719.
1577. Id., 54 U.S.P.Q.2d (BNA) at 1720.
1578. Id., 54 U.S.P.Q.2d (BNA) at 1720 (“[I]f claim construction had underlying factual inquiries, the goal of national uniformity would be frustrated”) (citing Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1455, 46 U.S.P.Q.2d (BNA) 1169, 1173-74 (Fed. Cir. 1998) (en banc)).
courts free rein to grant summary judgment of noninfringement. Concomitantly, such treatment prevents patentees from automatically avoiding summary judgment by submitting expert affidavits, as Bayer sought to do in that summary judgment case.\footnote{1579}

The more controversial arm of prosecution-history estoppel, amendment-based estoppel, was addressed in Festo. In 1988, Festo Corporation sued Shoketsu Kinzoku Kogyo Kabushiki Co. (also known as SMC Corporation) and SMC Pneumatics, Inc. in federal court in Massachusetts.\footnote{1580} Festo’s claim was that SMC had infringed two of its patents relating to magnetically coupled rodless cylinders, which are used to repeatedly move articles a short distance, most typically in assembly lines.\footnote{1581} The judge on summary judgment, and later a jury, found infringement of both patents under the doctrine of equivalents.\footnote{1582} SMC appealed, and a panel of the Federal Circuit (Judges Rich, Newman, and Michel) affirmed, relying in part on its then-recent \textit{en banc} decision in \textit{Hilton Davis}.\footnote{1583} Prosecution-history estoppel was not an issue on this first appeal.

SMC petitioned the Supreme Court for a writ of certiorari,\footnote{1584} which was granted by the Supreme Court following its decision in the \textit{Warner-Jenkinson} case.\footnote{1585} The Supreme Court vacated the Federal Circuit’s judgment, and remanded to the Federal Circuit for further consideration in light of the \textit{Warner-Jenkinson} decision.\footnote{1586} This grant-vacate-remand order, colloquially known as a “GVR,” allowed the Federal Circuit to give further consideration to its decision in \textit{Festo} with the benefit of the Supreme Court’s pronouncement in \textit{Warner-Jenkinson}.\footnote{1587} The Supreme Court issued GVR orders in two other

\footnote{1579. See id. (noting submission of affidavit of Professor Jorda).}
\footnote{1581. See id., 50 U.S.P.Q.2d (BNA) at 1386.}
\footnote{1582. See id. at 1365, 50 U.S.P.Q.2d (BNA) at 1397.}
\footnote{1584. See id., 37 U.S.P.Q.2d (BNA) at 1161.}
\footnote{1585. The relevant question presented in SMC’s petition for certiorari was: “In a patent case, can the statutory requirement for patent claims (35 U.S.C. \textsection\ 112, \textparagraph\ 2) and the statutory restriction for correcting them (35 U.S.C. \textsection\ 251, \textparagraph\ 4) be nullified by the judicially created doctrine of equivalents?” See \textit{Festo}, 172 F.3d at 1365, 50 U.S.P.Q.2d (BNA) at 1387 (quoting SMC’s petition for certiorari).}
\footnote{1587. See Shoketsu Kinzoku Kogyo Kabushiki Co. v. Festo Corp., 520 U.S. 1111 (1997).}
The Federal Circuit ordered further briefing on the case, and heard reargument. In connection with rebriefing and reargument, SMC urged that the “new” presumption established by the Supreme court in *Warner-Jenkinson* applied to bar Festo’s infringement claims under the doctrine of prosecution-history estoppel. SMC also submitted additional materials, not previously part of the trial and appeal record, dealing with possible estoppel under one of the two patents in suit. On April 19, 1999, the same panel (Judges Rich, Newman, and Michel) issued a new opinion dealing with the doctrine of equivalents. With respect to one patent, it reinstated its earlier judgment, and with respect to the other patent, the panel ruled that the new evidentiary materials submitted by SMC—which the Federal Circuit decided to allow into the record “[i]n full implementation of the GVR”—needed to be considered by the district court to determine “whether [the *Warner-Jenkinson*] presumption has arisen, whether it can be rebutted, and the scope of any resultant estoppel.”

The “scope” of any particular prosecution-history estoppel has been a divisive issue in the Federal Circuit almost since that court’s inception in 1982. In the court’s first significant doctrine of equivalents case, *Hughes Aircraft Co. v. United States*, the Federal Circuit noted that some of the regional circuit courts of appeals (which had jurisdiction over most patent-infringement cases prior to the creation of the Federal Circuit) had “expressed the view that virtually any amendment of the claims creates a ‘file wrapper

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1592.  *See id.* at 1378-80, 50 U.S.P.Q.2d (BNA) at 1397-98 (evaluating SMC’s arguments).
1593.  *See id.* at 1361, 50 U.S.P.Q.2d (BNA) at 1385.
1594.  *Id.* at 1380, 50 U.S.P.Q.2d (BNA) at 1398.
1595.  *Id.* 50 U.S.P.Q.2d (BNA) at 1398.
estoppel’ effective to bar all resort to the doctrine of equivalents, and to confine patentees ‘strictly to the letter of the limited claims granted.’”

The panel in *Hughes Aircraft* rejected this “wooden application of estoppel”
choosing instead to follow a case-by-case approach to estoppel, whereby,

> depending on the nature and purpose of an amendment, it may have a limiting effect within a spectrum ranging from great to small to zero. The effect may or may not be fatal to application of a range of equivalents broad enough to encompass a particular accused product. It is not fatal to application of the doctrine itself.

But this was not the uniform approach of the Federal Circuit, as another case decided just ten and a half months after *Hughes Aircraft*, *Kinzenbaw v. Deere & Co.*, demonstrates. *Kinzenbaw* was decided by a five-judge panel of the Federal Circuit consisting of then-Chief Judge Markey and Judges Friedman, Rich, Davis and Baldwin. Interestingly, the five-judge *Kinzenbaw* panel included all three judges from the *Hughes Aircraft* panel—Chief Judge Markey and Judges Davis and Baldwin. The five-judge *Kinzenbaw* panel unanimously held—and arguably contrary to *Hughes Aircraft*—that by “intentionally narrow[ing] his claims in order to avoid the examiner’s rejection and obtain the patent,” the patentee was properly estopped from “avoid[ing] that limitation upon the claims through the doctrine of

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1598. *Id.* at 1362, 219 U.S.P.Q. (BNA) at 481 (quoting Nationwide Chem. Corp. v. Wright, 584 F.2d 714, 719, 200 U.S.P.Q. (BNA) 257, 261 (5th Cir. 1978)).
1599. *Id.* at 1362, 219 U.S.P.Q. (BNA) at 481.
1600. *Id.* at 1363, 219 U.S.P.Q. (BNA) at 481.
1602. See 28 U.S.C. § 46(b) (1996). In each circuit the court may authorize the hearing and determination of cases and controversies by separate panels, each consisting of three judges. . . . The United States Court of Appeals for the Federal Circuit shall determine by rule a procedure for the rotation of judges from panel to panel to ensure that all of the judges sit on a representative cross section of the cases heard and, notwithstanding the first sentence of this subsection, may determine by rule the number of judges, not less than three, who constitute a panel. *Id.* (emphasis added).

Although several of the Federal Circuit’s early cases, such as *Kinzenbaw*, involved five-judge panels, that practice—though still authorized by statute and by court rule—has fallen into disuse in the past several years. But see I DONALD R. DUNNER ET AL., COURT OF APPEALS FOR THE FEDERAL CIRCUIT: PRACTICE AND PROCEDURE § 5.01, at 5-4 (2000) (opining, seemingly contrary to 28 U.S.C. § 46(b) and Federal Circuit Rule 47.2(a), that “the court’s rules no longer provide for such augmented panels”).

1603. The Federal Circuit is the only court of appeals entitled to sit in *sub en banc* panels consisting of five judges. *See Fed. Cir. R.* 47.2(a) (“Cases and controversies will be heard and determined by a panel consisting of an odd number of at least three judges, two of whom may be senior judges of the court.”).
equivalents.” Although the patentee (Deere) “attempt[ed] to avoid the doctrine of prosecution history estoppel on the ground that [the inventor’s] limitation of his claims . . . was unnecessary to distinguish the prior art,” the *Kinzenbaw* panel “decline[d] to undertake the speculative inquiry whether, if [the inventor] had made only that narrowing limitation in his claim, the examiner nevertheless would have allowed it.”

It was obvious that *Hughes Aircraft* and *Kinzenbaw* were not easily reconcilable. As three commentators, writing in the second of these *Area Summaries* published in the *American University Law Review*, noted at the time:

> The Federal Circuit’s continued reluctance to define the precise boundaries of the doctrine of prosecution history estoppel exemplifies the court’s unease in dealing with certain issues that were outside of the former CCPA’s jurisdiction. Prior to this past year, the Federal Circuit applied two divergent lines of authority dealing with prosecution history estoppel. The first, following the lead case of *Hughes Aircraft Co. v. United States*, states that under some circumstances, statements made during prosecution can be ignored for purposes of estoppel. The second, following the lead case of *Kinzenbaw v. Deere & Co.*, holds the patentee more firmly to the representations he has made to the PTO. No test is able to predict adequately which line of authority the court will apply in a given case.

The authors concluded that:

> “[t]he Federal Circuit’s continued statements that it will be guided in this area by ‘equitable and public policy principles’ and the facts of the case are so broad and diffuse that they are essentially useless as precedent. No one can predict the outcome of a future case that the court will evaluate under this anti-rule . . . . The court’s vague language in reality reflects the Federal Circuit’s inability to articulate the criteria on which its decisions are actually based. The court’s continued reluctance to engage in the task of defining those criteria may be the single largest failing of the court.”

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1605. *Id.*, 222 U.S.P.Q. (BNA) at 933.
1606. *Id.*, 222 U.S.P.Q. (BNA) at 933.
1608. *Id.* at 888-89 (footnotes omitted). Similarly, other commentators had noted, or been critical of, the Federal Circuit’s inconsistent approaches to prosecution-history estoppel. *See, e.g.*, 5A DONALD S. CHISUM, PATENTS § 18.05[3][b], at 18-492 (1998) (noting the development by the Federal Circuit of two lines of authority on the scope of prosecution-history estoppel); Gregory J. Smith, *The Federal Circuit’s Modern Doctrine of Equivalents in Patent Infringement*, 29 SANTA CLARA L. REV. 901, 921.
Despite these divergent lines of authority, however, it is undeniable that most (although not all) of the Federal Circuit’s post-Hughes Aircraft-and-Kinzenbaw published decisions followed the “flexible” approach of Hughes Aircraft rather than the “absolute bar” approach of Kinzenbaw.

On June 9, 1999, less than two months after the panel’s decision on remand from the Supreme Court, and while a petition for rehearing en banc was pending in the Federal Circuit in Festo, one of the Festo panel members, Judge Rich, died. While it is uncertain what effect, if any, Judge Rich’s departure had on the outcome of the Festo en banc poll, it unquestionably did not reduce the number of votes required to accept the case for en banc review. His passing reduced by one the number of active judges who could have participated in such a poll from eleven to ten, but six votes in favor of en banc review were still required. A majority of eleven active judges would have been six judges, but a majority of ten active judges also would have required six votes. Nonetheless, it is possible that Judge Rich’s passing may have eased the way for the remaining members of the court to take up the issue. For not only was Judge Rich a legendary figure in the history of the Federal Circuit and its predecessor court, the Circuit Court of Patent Appeals (CCPA), but he was also the last active member of the Federal Circuit from the Kinzenbaw panel, as well as the author of another early Federal Circuit decision arguably applying a complete-bar approach to prosecution-history estoppel.

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1611. See Fed. R. App. P. 35(a) (providing that “a majority of the circuit judges in regular active service” must agree to hear a case en banc) (emphasis added).

1612. See id. (indicating that a case will be accepted for en banc review only “if a majority of the judges in regular active service agree to hear it en banc.”).

1613. See, e.g., United States v. Leichter, 167 F.3d 667, 667 (1st Cir. 1999) (“We construe this language [in 28 U.S.C. § 46(c) and Fed. R. App. P. 35(a)] to require that an absolute majority of the court’s active judges vote in favor of the petition.”).

1614. See Prodyne Enter., Inc. v. Julie Pomerantz, Inc., 743 F.2d 1581, 223
Whatever the effect of Judge Rich’s passing, the Federal Circuit granted *en banc* review in *Festo* on August 20, 1999, only two months after his death. The court’s *en banc* order in *Festo* posed five questions:

1. For the purposes of determining whether an amendment to a claim creates prosecution history estoppel, is “a substantial reason related to patentability,” limited to those amendments made to overcome prior art under § 102 and § 103, or does “patentability” mean any reason affecting the issuance of a patent?

2. Under *Warner-Jenkinson*, should a “voluntary” claim amendment—one not required by the examiner or made in response to a rejection by an examiner for a stated reason—create prosecution history estoppel?

3. If a claim amendment creates prosecution history estoppel, under *Warner-Jenkinson* what range of equivalents, if any, is available under the doctrine of equivalents for the claim element so amended?

4. When “no explanation [for a claim amendment] is established,” thus invoking the presumption of prosecution history estoppel under *Warner-Jenkinson*, what range of equivalents, if any, is available under the doctrine of equivalents for the claim element so amended?

5. Would a judgment of infringement in this case violate *Warner-Jenkinson*’s requirement that the application of the doctrine of equivalents “is not allowed such broad play as to eliminate [an] element in its entirety.” In other words, would such a judgment of infringement, post *Warner-Jenkinson*, violate the “all elements” rule?

In response to this order, the court received supplemental briefs, including *amicus curiae* briefs, and heard oral argument on March 29, 2000.

Eight months to the day later, on November 29, 2000, the *en banc* court issued its decision in *Festo*. In response to *en banc* question 1,

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U.S.P.Q.2d (BNA) 477 (Fed. Cir. 1984). Judge Rich’s opinion was joined by Judges Friedman and Cowen, both of whom are now Senior Judges on the Federal Circuit.
1618. Id. at 29.
the court concluded that the term “a substantial reason related to patentability,” as used in Warner-Jenkinson, “is not limited to overcoming or avoiding prior art, but instead includes any reason which relates to the statutory requirements for a patent.” Thus, an amendment made to satisfy the Patent Act’s utility, best mode, and claiming requirements will also give rise to prosecution-history estoppel. The court viewed this result as more in keeping with “the functions of prosecution history estoppel—preserving the notice function of the claims and preventing patent holders from recapturing under the doctrine of equivalents subject matter that was surrendered before the Patent Office.” Given the breadth of that result, it is difficult to imagine that any kind of claim amendment, other than one to make a minor ministerial or scrivening change, will not give rise to estoppel.

With regard to en banc question 2, the court concluded that a “voluntary” claim amendment—just as with one made in response to an examiner’s request or rejection—should give rise to prosecution-history estoppel as to the amended claim element. Both voluntary amendments and amendments required by the Patent Office signal to the public that subject matter has been surrendered. There is no reason why prosecution history estoppel should arise if the Patent Office rejects a claim because it believes the claim to be unpatentable, but not arise if the applicant amends a claim because he believes the claim to be unpatentable.

Indeed, the court viewed its holding as to “voluntary” amendments as “consistent with the doctrine of argument-based estoppel,” under which a patentee’s arguments, comments and representations to the Patent Office, even though the choice and scope of those arguments is made voluntarily, will nonetheless serve to estop the patentee from later asserting claim scope that is inconsistent with those prior voluntary remarks via the doctrine of equivalents. The court also

1622. See id. at 566, 56 U.S.P.Q.2d (BNA) at 1870.
1624. See id. § 112 (“The specification . . . shall set forth the best mode contemplated by the inventor of carrying out his invention.”).
1625. See id. (“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.”).
1626. See Festo, 234 F.3d at 567, 56 U.S.P.Q.2d (BNA) at 1871 (reviewing the statutory requirements for obtaining a patent).
1627. Id., 56 U.S.P.Q.2d (BNA) at 1871.
1628. See id. at 568, 56 U.S.P.Q.2d (BNA) at 1871.
1630. Id., 56 U.S.P.Q.2d (BNA) at 1872. For examples of cases in which “[a]rguments made voluntarily during prosecution may give rise to prosecution
viewed its holding on question 2 as consistent with Warner-Jenkinson, where the Supreme Court noted that the patent’s lower pH limit of 6.0 was apparently a voluntary amendment, but “[n]evertheless . . . could give rise to prosecution history estoppel.”

The en banc court’s answer to question 3 was the most controversial of its holdings, for here the court overruled the entire Hughes Aircraft line of “flexible bar” cases: “When a claim amendment creates prosecution history estoppel with regard to a claim element, there is no range of equivalents available for the amended claim element. Application of the doctrine of equivalents to the claim element is completely barred (a ‘complete bar’).” The court concluded that “the question of the scope of equivalents available when prosecution history estoppel applies to a claim element has not been directly addressed or answered by the Supreme Court, at least in circumstances where the claim was amended for a known patentability reason.” The court first addressed several pre-Warner-Jenkinson Supreme Court decisions applying prosecution history estoppel, concluding that in none of them had the court “analyze[d] the actual scope of equivalents that might be available when prosecution history estoppel applied, i.e., the extent of the subject matter surrendered by amendment.” Here, the majority responded to the dissenting opinion of Judge Michel, who claimed that several prior Supreme Court decisions had in fact allowed some range of equivalents even where prosecution-history estoppel applied, concluding that in the cases cited by Judge Michel, “the range of

history estoppel if they evidence a surrender of subject matter,” see KCJ Corp. v. Kinetic Concepts, Inc., 223 F.3d 1351, 1359-60, 55 U.S.P.Q.2d (BNA) 1835, 1841-42 (Fed. Cir. 2000) (holding that voluntary supplements to a claim amendment which narrow the claim, preclude the recapturing of subject matter by the doctrine of equivalents); Bayer AG v. Elan Pharm. Research Corp., 212 F.3d 1241, 1252-53, 54 U.S.P.Q.2d (BNA) 1711, 1719 (Fed. Cir. 2000) (finding that it would be reasonable for a competitor to believe that the disputed subject matter had been surrendered given the prosecution history as a whole); Pharmacia & Upjohn Co. v. Mylan Pharm., Inc., 170 F.3d 1373, 1377, 50 U.S.P.Q.2d (BNA) 1033, 1036 (Fed. Cir. 1999) (noting activities that may give rise to prosecution history estoppel); Southwall Techs., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1583, 34 U.S.P.Q.2d (BNA) 1679, 1682 (Fed. Cir. 1995) (“We must examine the character of the assertions made in the prosecution history in addition to the result of those assertions . . . when determining whether they create an estoppel.”); Texas Instruments Inc. v. United States Int’l Trade Comm’n, 988 F.2d 1165, 1174, 26 U.S.P.Q.2d (BNA) 1018, 1025 (Fed. Cir. 1993).

1631. Festo, 234 F.3d at 568-69, 56 U.S.P.Q.2d (BNA) at 1872 (citing Warner-Jenkinson, 520 U.S. at 34, for the proposition that a voluntary amendment may give rise to prosecution-history estoppel).
1632. Id. at 569, 56 U.S.P.Q.2d (BNA) at 1872.
1633. Id., 56 U.S.P.Q.2d (BNA) at 1872.
1634. Id., 56 U.S.P.Q.2d (BNA) at 1873.
equivalents available to an amended claim element simply was not before the Supreme Court in those cases.\textsuperscript{1635} Having concluded that the Supreme Court had not previously passed on the question, the \textit{en banc} majority went on to “independently decide the issue,” invoking its congressionally mandated duty “to resolve issues unique to patent law.”\textsuperscript{1636} The court noted the divergent lines of authority headed by \textit{Hughes Aircraft} and \textit{Kinzenbaw},\textsuperscript{1637} and concluded that the “flexible bar” represented by the \textit{Hughes Aircraft} decision should be repudiated in favor of the complete bar of \textit{Kinzenbaw}, a conclusion reached “after nearly twenty years of experience in performing our role as the sole court of appeals for patent matters,” during which “the notice function of patent claims has become paramount, and the need for certainty as to the scope of patent protection has been emphasized.”\textsuperscript{1638} This experience, the Federal Circuit said, led it to conclude that “the flexible bar approach [makes it] virtually impossible to predict before the decision on appeal where the line of surrender is drawn.”\textsuperscript{1639} The majority concluded that “the current state of the law regarding the scope of equivalents that is available when prosecution history estoppel applies is ‘unworkable’” and “‘poses a direct obstacle to the realization of important objectives.’”\textsuperscript{1640} By contrast, the majority concluded that the complete bar “enforce[s] the disclaimer effect of a narrowing claim amendment,”\textsuperscript{1641} “serves the definitional and notice functions” of patent claims,\textsuperscript{1642} and “eliminates the public’s need to speculate as to the subject matter surrendered by an amendment that narrows a claim for reasons related to patentability.”\textsuperscript{1643} The bar therefore “lend[s] certainty to the process of determining the scope of protection afforded by a patent.”\textsuperscript{1644}

With respect to \textit{en banc} question 4, the majority concluded that “[w]hen no explanation for a claim amendment is established, no

\textsuperscript{1635} \textit{Id.} at 570-71, 56 U.S.P.Q.2d (BNA) at 1873-74 (addressing the dissenting arguments of Judge Michel). For Judge Michel’s dissent, see 234 F.3d at 601-05, 56 U.S.P.Q.2d (BNA) at 1899-1902.

\textsuperscript{1636} \textit{Id.} at 571-72, 56 U.S.P.Q.2d (BNA) at 1874-75.

\textsuperscript{1637} \textit{See Festo}, 234 F.3d at 572-73, 56 U.S.P.Q.2d (BNA) at 1875-76 (noting that the Federal Circuit has followed both the “strict rule of complete surrender” approach and the “flexible bar approach to prosecution history estoppel”).

\textsuperscript{1638} \textit{Id.} at 574-75, 56 U.S.P.Q.2d (BNA) at 1877.

\textsuperscript{1639} \textit{Id.} at 575, 56 U.S.P.Q.2d (BNA) at 1877.

\textsuperscript{1640} \textit{Id.}, 56 U.S.P.Q.2d (BNA) at 1877-78 (discussing the “traditional justification[s] for overruling a prior case” (alteration in original) (quoting Patterson v. McLean Credit Union, 491 U.S. 164, 173 (1989))).

\textsuperscript{1641} \textit{Id.} at 575, 56 U.S.P.Q.2d (BNA) at 1878.

\textsuperscript{1642} \textit{Id.} at 576, 56 U.S.P.Q.2d (BNA) at 1878-79.

\textsuperscript{1643} \textit{Id.} at 577, 56 U.S.P.Q.2d (BNA) at 1879.

\textsuperscript{1644} \textit{Festo}, 254 F.3d at 578, 56 U.S.P.Q.2d (BNA) at 1880.
range of equivalents is available for the claim element so amended. The court viewed this question as already answered by the Supreme Court in *Warner-Jenkinson*: “Where no explanation is established, . . . prosecution history estoppel would bar the application of the doctrine of equivalents as to that element.” The court found it unnecessary to reach en banc question 5, whether a judgment of infringement by equivalents in the present case would violate the “all-elements” rule. In other words, according to of *Warner-Jenkinson*, it would have been superfluous to inquire whether a judgment of infringement by equivalents would “eliminate [an] element in its entirety” from the patent claims.

Judge Plager, who assumed senior-judge status the day after *Festo* was decided, filed a brief concurring opinion. Although he joined the opinion and judgment of the court, he viewed the en banc decision as “a second-best solution to an unsatisfactory situation.” In keeping with several of his prior criticisms of the application of the doctrine of equivalents, he noted that the “insubstantial differences” standard announced in *Hilton Davis* was “a wonderfully indeterminate phrase, lending itself to making every decision under the doctrine an individualistic choice, if not simply a flip of the coin.” Judge Plager’s preferred solution, as he noted in *Hilton Davis*, “would be to declare the doctrine of equivalents—a judge-made rule in the first place—to have its roots firmly in equity, and to acknowledge that when and in what circumstances it applies is a question of equitable law, a question for which judges bear responsibility.” No other Federal Circuit judge joined Judge Plager’s concurring opinion, so with his subsequent election of senior-judge status, the Federal Circuit appears to have lost—at least as far as en banc decision-making goes—its principal spokesman for an “equitable” doctrine of equivalents. Note, however, that Judge

1645. *Id.* at 578, 56 U.S.P.Q.2d (BNA) at 1880.
1648. See *id.* at 591-95, 56 U.S.P.Q.2d (BNA) at 1890-93 (Plager, J., concurring).
1650. See, e.g., Hilton Davis Chem. Co. v. Warner-Jenkinson Co., 62 F.3d 1512, 1537, 35 U.S.P.Q.2d (BNA) 1641, 1661 (Fed. Cir. 1995) (Plager, J., dissenting) (“[I]t may be asked why the court needs to undertake this inquiry into the doctrine of equivalents at all. Is something broke that needs fixing? The short answer is yes.”); Caterpillar Inc. v. Deere & Co., 224 F.3d 1374, 1381, 56 U.S.P.Q.2d (BNA) 1305, 1311 (Fed. Cir. 2000) (Plager, J., concurring) (criticizing the “insubstantial differences” test and arguing that the current rules will create a “lengthy and costly contest of the experts”).
1652. *Id.* at 593, 56 U.S.P.Q.2d (BNA) at 1891 (Plager, J., concurring).
Lourie, who joined Judge Plager’s Hilton Davis dissent but not his Festo concurrence, remains.

Indeed, Judge Lourie wrote his own concurring opinion in Festo, despite having authored several opinions supporting a flexible bar rather than a complete bar, in which he had “followed what seemed to be the strongest line of precedent at that time,” he concluded that,

in light of experience, and recognizing the Congressional requirement for precision in claims, . . . I am persuaded that when we have the opportunity en banc to depart from an unworkable rule by holding patent applicants to their actions in the PTO, we should do so. Adoption of a firmer rule today is in the best interest of the patent system.

Judge Michel, joined by Judge Rader, filed a lengthy dissent from the court’s disposition of en banc question 3 (the flexible-bar-versus-complete-bar issue). Judge Michel viewed the majority’s decision as disturbing the balance struck by the Supreme Court between “a patentee’s need for meaningful protection against copying and the public’s need for notice as to the effective scope of a patentee’s claims.” In his view, the complete bar paid insufficient attention to whether a reasonable competitor would view the prosecution history as surrendering any equivalents for amended claim elements. Judge Michel also concluded that the majority’s complete-bar holding was flatly contrary to two Supreme Court cases from the late nineteenth century which, on his reading, allowed some range of equivalents even though prosecution-history estoppel was held to apply, as well as six other Supreme Court decisions that suggest a more flexible approach to prosecution-history estoppel was mandated. The majority dismissed all of these Supreme Court
cases as either not actually involving prosecution-history estoppel or being otherwise inapposite. Judge Michel further viewed the “complete-bar” line of cases as not actually being another “line of authority,” but at best an aberration represented by two cases—Kinzenbaw and Prodyne Enterprises, Inc. v. Julie Pomerantz. Conceding that both Kinzenbaw and Prodyne “contain language which, taken alone, is arguably consistent with the complete bar imposed by the court today,” Judge Michel nonetheless urged that “neither opinion departs from” Hughes Aircraft, for “each opinion purports to follow and quotes [Hughes Aircraft]” and in fact (despite the arguably contrary language) applies a flexible bar, not an absolute one. Finally, Judge Michel stated his view that the majority’s opinion would reduce the settled expectations of patent holders by diminishing their value: “I feel that today’s ruling will upset basic assumptions regarding the effective scope of patents, and will unfairly disrupt commercial relations based on those assumptions.

Judge Rader also filed a separate opinion dissenting in part, principally focusing on the role of after-arising technology in equivalents analysis. In Judge Rader’s view, the complete bar of the majority’s opinion at a minimum should not apply to after-arising technology because a patentee cannot possibly surrender in prosecution that of which he does not (and could not) know.

77 (1900); Royer v. Coupe, 146 U.S. 524 (1892); Phoenix Caster Co. v. Spiegel, 133 U.S. 360 (1890); Shepard v. Carrigan, 116 U.S. 593 (1886); Sutter v. Robinson, 119 U.S. 530 (1886); and Fay v. Cordesman, 109 U.S. 408 (1883)).

See Festo, 234 F.3d at 570-71, 56 U.S.P.Q.2d (BNA) at 1873-74 (concluding that the “range of equivalents available to an amended claim element simply was not before the Supreme Court in the cases Judge Michel cites, and the Supreme Court did not discuss the issue presented in en banc Question 3”).

See id. at 610, 56 U.S.P.Q.2d (BNA) at 1906 (rejecting the majority’s proposition that there are two lines of authority regarding prosecution-history estoppel).


Festo, 234 F.3d at 610, 56 U.S.P.Q.2d (BNA) at 1906 (Michel, J., concurring in part and dissenting in part).

Id., 56 U.S.P.Q.2d (BNA) at 1906 (Michel, J., concurring in part and dissenting in part).

Id. at 619, 56 U.S.P.Q.2d (BNA) at 1913 (Michel, J., concurring in part and dissenting in part).

Id. at 619-20, 56 U.S.P.Q.2d (BNA) at 1914 (Rader, J., concurring in part and dissenting in part).

Id. at 620, 56 U.S.P.Q.2d (BNA) at 1914 (Rader, J., concurring in part and dissenting in part) stating that:

The court reasons today that it will not inquire about the scope of an estoppel because it cannot with certainty ascertain the scope of the applicant’s surrender. Although that premise is questionable for the reasons enunciated by Judges Michel and Linn, one thing is beyond question: That premise does not apply to after-arising technology. Because after-arising technology was not in existence during the patent application process, the
Judge Linn, who joined the Federal Circuit after *en banc* consideration had been ordered in *Festo*, but before oral argument, also filed an opinion dissenting in part as to *en banc* question 3. His opinion was also joined by Judge Rader. Although Judge Linn joined the majority’s conclusions on the other *en banc* questions, he broke from the majority on the issue of the complete bar by amendment. Judge Linn focused on the purposes of the patent system, the policies behind the doctrine of equivalents, and the fact that patent claims must use ordinary language to describe difficult concepts, making the level of precision demanded by the majority elusive, if not impossible. But perhaps his most significant contribution was to point out the striking conflict between the majority opinion and the *Warner-Jenkinson* opinion that it purported to implement:

> If the doctrine of equivalents is completely barred when no reason for an amendment can be discerned from the prosecution history, and it is likewise completely barred when a reason is stated, what is the point of exploring the “reason (right or wrong) for the [examiner’s rejection of the claim prior to its being amended] and the manner in which the amendment addressed and avoided that [rejection?]” Thus, adoption of a rebuttable presumption of estoppel for an amendment that was made for an unknown reason necessarily presupposes the possibility that no estoppel will apply where the reason for the amendment is known, or where that presumption is rebutted.

The majority opinion had no good answer to this apparent conflict between *Warner-Jenkinson* and its own abolition of the flexible-bar approach to estoppel by amendment.

Judge Newman also filed an opinion dissenting in part. She, too, pointed out the tension between the Supreme Court’s remand order in *Warner-Jenkinson*, linking the reason for an amendment with the question of prosecution-history estoppel, and the majority’s approach, making the reasons for an amendment far less central to

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1669. See *id.*, 56 U.S.P.Q.2d (BNA) at 1914 (Rader, J., concurring in part and dissenting in part). Similarly, Judge Dyk, who joined the majority opinion in *Festo*, became a member of the Federal Circuit after argument but before decision.

1670. See *Festo*, 234 F.3d at 620, 56 U.S.P.Q.2d (BNA) at 1914 (Linn, J., concurring in part and dissenting in part).

1671. See *id.* at 626, 56 U.S.P.Q.2d (BNA) at 1919 (Linn, J., concurring in part and dissenting in part) (citations omitted).

1672. *Id.* at 625, 56 U.S.P.Q.2d (BNA) at 1918 (Linn, J., concurring in part and dissenting in part) (citations omitted).
the estoppel analysis. Judge Newman also noted that the disapproved Hughes Aircraft decision dealt with the application of the doctrine of equivalents to “later-developed technology.” Finally, Judge Newman dealt with the complex issues of public policy raised by the doctrine of equivalents, noting that while the Doctrine does tend to diminish incentives for competitors, it also encourages competitors to make real and substantial patentable innovations instead of simply nibbling around the edges of the claims.

As of the initial writing of this Area Summary, the final chapter of Festo is yet to be concluded. On April 9, 2001, after much complicated and public wrangling over positional conflicts of interest, Festo filed a petition for a writ of certiorari with the Supreme Court of the United States, urging that the Court accept the case to resolve two issues:

1. Whether every claim-narrowing amendment designed to comply with any provision of the Patent Act—including those provisions not relating to prior art—automatically creates prosecution history estoppel regardless of the reason for the amendment; and

2. Whether the finding of prosecution history estoppel completely bars the application of the doctrine of equivalents.

The Supreme Court granted certiorari on June 18, 2001, received briefing during Summer 2001, and will hear arguments during October Term 2001.

While there were ample reasons for the Supreme Court to exercise its discretion to accept Festo for review, there were at least as many reasons against such review. For one, the Supreme Court in Warner-Jenkinson said that it was leaving the development of the law of equivalents largely to the Federal Circuit, in the exercise of its specialized and congressionally mandated jurisdiction to administer the patent laws. For another, because the Festo approach is a new one, it might have been more appropriate for the Court, at a

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1673. See id. at 630, 56 U.S.P.Q. 2d (BNA) at 1922 (Newman, J., concurring in part and dissenting in part).
1674. See id. at 635, 56 U.S.P.Q. 2d (BNA) at 1926.
1675. See id. at 640, 56 U.S.P.Q. 2d (BNA) at 1931 (Newman, J., concurring in part and dissenting in part).
1676. See, e.g., Jonathan Ringel, Conflict Gives Bork a Starr Turn: Kirkland & Ellis forced to give up role in Festo, LEGAL TIMES, Apr. 16, 2001, at 6 (discussing the firm’s conflict of interest in representing Honeywell, a company which stands to financially benefit from overturning Festo).
minimum, to defer ruling at this time and await a future case, so that the Supreme Court’s deliberations would benefit from a body of Federal Circuit (and lower-court) experience in interpreting and applying the Festo rules.

Finally, although it is at least arguable (for the reasons stated by Judges Michel and Linn) that the Festo decision conflicts with the Supreme Court’s approach in Warner-Jenkinson, the complete bar announced in Festo does what the Federal Circuit has rarely done in its history, i.e., rather than announcing a vague and unpredictable “totality of the circumstances”-type test, it goes a long way toward creating an actual rule that can be applied predictably and (more or less) uniformly by courts and litigants alike. And there is little doubt that the present Supreme Court is much more favorably disposed to bright-line rules such as the one adopted by the Festo majority than to murky, multifactor, case-by-case inquiries.

Because Festo was pending in the Federal Circuit for most of the year, there were few opportunities for the court to apply Festo in 2000, and the court—consistent with its prior practice of not backing up its docket in anticipation of en banc rulings such as Markman and Hilton Davis—continued to issue prosecution-history estoppel rulings throughout the year. Since the judges deciding these cases, and writing these opinions, presumably had an inkling of how Festo was going to come out in the end, it is interesting to look back on the court’s pre-Festo prosecution-history estoppel rulings and see how consistent the pre-Festo rulings were. There was, indeed, a remarkable foreshadowing of Festo in results, if not approaches, because most pre-Festo panel decisions rested on alternative prosecution-history estoppel grounds. For example, in Hilgraeve Corp. v. McAfee Associates, Inc., the panel ruled that an amendment made by Hilgraeve resulted in prosecution-history estoppel. However,

1679. See, e.g., Seal-Flex, Inc. v. Athletic Track & Court Const., 98 F.3d 1318, 1323 n.2, 40 U.S.P.Q.2d (BNA) 1450-53 n.2 (Fed. Cir. 1996) (noting, in the context of the 35 U.S.C. § 102(b) on-sale bar, that the Federal Circuit’s “standard of the totality of circumstances has been criticized as unnecessarily vague”).


1683. See id. at 1355, 55 U.S.P.Q.2d (BNA) at 1661-62.
the panel’s rationale was grounded primarily in the arguments that Hilgraeve made to the PTO in connection with that amendment, rather than the fact of the amendment itself. It appears that the court followed similar belt-and-suspender strategies in other pre-Festo equivalents cases, including *KCJ Corp. v. Kinetic Concepts, Inc.*[^1685] and *Bayer AG v. Elan Pharmaceutical Research Corp.*[^1686], both of which grounded their estoppel decisions in an amalgam of estoppel-by-amendment and estoppel-by-argument rationale. Since the line of estoppel-by-argument cases was discussed, but not otherwise put at issue in *Festo*, it was safe for pre-*Festo* panels to ground their decisions not merely on estoppel by amendment, but also in the estoppel-by-argument line of authorities, even though *Festo*’s estoppel-by-amendment holding would have yielded the same result in cases like Hilgraeve, *KCJ*, and *Bayer*.

b. The all-elements rule, or the anti-vitiation rule

“[T]he second legal limitation on the doctrine” of equivalents is the “all elements rule,” variously known as the “all limitations rule” or the rule against vitiation of a claim element.[^1687] The “all elements rule,” which holds that there can be no infringement under the doctrine of equivalents if even one element of a claim or its equivalent is not present in the accused device, is the same rule served by *Warner-Jenkinson*’s principle that an infringement-by-equivalents claim cannot be “allowed such broad play as to effectively eliminate that element in its entirety,” or “vitiate the central functions of the patent claims themselves.”[^1688] Aside from the first legal limitation on the doctrine of equivalents, that of prosecution-history estoppel, the anti-vitiation rule was invoked by several Federal Circuit cases in 2000.

Although the panel in *Elekta Instrument, S.A. v. O.U.R. Scientific Int’l, Inc.*[^1689] remanded for the district court to consider equivalence in the first instance, the panel nonetheless offered significant *dicta* (or, more positively viewed, guidance for the district court on remand) regarding application of the anti-vitiation rule.[^1690] In *Elekta*, the

[^1684]: See *id.*, 55 U.S.P.Q.2d (BNA) at 1661.
[^1687]: See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.,* 234 F.3d 558, 587, 56 U.S.P.Q.2d (BNA) 1865, 1887 (Fed. Cir. 2000) (noting that the “all elements” rule should be used if prosecution history estoppel does not bar the application of the doctrine of equivalents).
[^1690]: See *id.* at 1307, 54 U.S.P.Q.2d (BNA) at 1913 (discussing the elements that
Federal Circuit reversed a summary judgment of literal infringement in favor of the patent owner, concluding that the gamma knife claimed in the *Elekta* patent was limited to those having radiation sources "only within a zone extending between latitudes 30°-45°, as seen from the diametrical plane." After concluding—contrary to the district court’s claim construction—that the 30°-45° range stated in the claim was the exclusive range for location of the radiation sources and not merely an upper limit for their positions, the Federal Circuit reversed the summary judgment of literal infringement and (effectively) ordered summary judgment of no literal infringement in favor of the accused infringer.

Although the panel nominally remanded for consideration of Elekta’s equivalents claim, it offered the following in a footnote: “We note, however, that in light of our claim construction, a finding of infringement under the doctrine of equivalents would seemingly vitiate the clear limitation ‘only within a zone extending between latitudes 30°-45°’ in claim 1.” Thus, the court opined that any claim of equivalents that would capture radiation sources not within the latitudes of 30°-45° would effectively rub out that numerical claim limitation.

The court reached a similar result, on similar reasoning, in *Moore U.S.A., Inc. v. Standard Register Co.* There, the patent claim, a mailer-type business form, required paper adhesive strips which extend “a majority of the lengths” of the longitudinal margins of the patented form. The accused form had strips that extended 47.8% of its longitudinal margins. The panel concluded that:

the applicant’s use of the term ‘majority’ is not entitled to a scope of equivalents covering a minority for at least two reasons. First, to allow what is undisputedly a minority (i.e., 47.8%) to be equivalent to a majority would vitiate the requirement that the ‘first and second longitudinal strips of adhesive . . . extend the majority of the lengths of said longitudinal marginal portions.’ . . . If a minority could be equivalent to a majority, this limitation would hardly be necessary . . . Second, it would defy logic to conclude that

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1691. *Id.* at 1307, 54 U.S.P.Q.2d (BNA) at 1913.
1692. *See id.* at 1309, 54 U.S.P.Q.2d (BNA) at 1914 (holding that the district court erred when construing the claim to cover gamma units outside the range between 30°-45°).
1694. *Id.* at 1309 n.2, 54 U.S.P.Q.2d (BNA) at 1914 n.2.
1695. *See id.* at 1307, 54 U.S.P.Q.2d (BNA) at 1913.
1697. *See id.* at 1105, 56 U.S.P.Q.2d (BNA) at 1235 (quoting the patent language).
1698. *See id.* at 1106, 56 U.S.P.Q.2d (BNA) at 1235.
a minority—the very antithesis of a majority—could be insubstantially different from a claim limitation requiring a majority, and no reasonable juror could find otherwise.\footnote{1699}

Citing the Federal Circuit’s prior decision in \textit{Sage Products Inc. v. Devon Industries, Inc.},\footnote{1700} the court in \textit{Moore U.S.A} suggested that this result was the inevitable consequence of “the inherent narrowness of the claim language.” Judge Newman dissented on this point, concluding:

Whether 47.8\% is equivalent to a majority is a question of fact, and could not be decided adversely to the patentee as a matter of law. The evidence of identity of function, way, and result, and of insubstantial difference, was not disputed on summary judgment; the question requires findings of fact, not summary disposition.\footnote{1702}

The panel in \textit{Zodiac Pool Care, Inc. v. Hoffinger Industries, Inc.},\footnote{1703} also bottomed much of its “vitiation” holding on \textit{Sage Products}. The patent there, drawn to a vacuum cleaner for a swimming pool, required a “stop” structure to be located “substantially inward” of the peripheral edge of a disc.\footnote{1704} The panel held that the accused device could not literally infringe this claim element, because it had weight arms that “clearly extend at least to the peripheral edge of the flexible disc.”\footnote{1705}

Relying on \textit{Sage Products}, the court concluded that this same evidence also prohibited a finding of infringement by equivalents.\footnote{1706} These cases may reach the correct result, but this aspect of “vitiation” doctrine—like so many areas of the Federal Circuit’s case law—lends itself only to case-by-case adjudication, not broad application. The very essence of a claim of infringement under the doctrine of equivalents is that one or more of the limitations of the written claim is not literally met by the accused product or process.\footnote{1707} Thus, the

\footnotesize{\textit{Id.}\footnote{1701} at 1119, 56 U.S.P.Q.2d (BNA) at 1235 (Newman, J., concurring in part and dissenting in part).

\textit{Id.}\footnote{1704} at 1414, 54 U.S.P.Q.2d (BNA) at 1146.

\textit{Id.}\footnote{1706} at 1412, 44 U.S.P.Q.2d (BNA) at 1117 (quoting \textit{Sage Products}, 126 F.3d at 1424, 44 U.S.P.Q.2d (BNA) at 1107).

[L]ike the patent at issue in \textit{Sage Products}, the ‘382 patent contains “clear structural limitations,” including a limitation that the stop be located “substantially inward” of the peripheral edge of the disc. Given the proper construction of this limitation, a verdict of infringement under the [doctrine of equivalents] would reduce the claims to nothing more than “functional abstracts, devoid of meaningful structural limitations on which the public could rely.”\footnote{1707}

\textit{Id.}}
“equivalent” is, by definition, something that is not literally within the scope of the claim element in question. In some sense, then, every finding of infringement under the doctrine of equivalents could be said to “vitiating” a claim element because it does not require one (or more) elements to be literally present. In the words of Sage Products, a finding of equivalence will always, in some sense of the term, vitiate a “clear structural limitation” in the patent. 1708 Precise numerical or spatial limitations are seemingly the easiest examples of patent claims for which Sage Products’ anti-vitiation rule can be applied. Even so, it is clear from Warner-Jenkinson itself, in which the lower 6.0 pH limit was in play under the doctrine of equivalents, that not all numerical limitations in a patent claim will inherently invoke the rule against vitiation. More help in this area is desperately needed from the Federal Circuit.

c. Prior-art estoppel

The doctrine of equivalents cannot be applied in such an expansive manner that it allows patentees to recapture prior art by a reflexive application of the doctrine. 1709 Indeed, where an accused device reads on the prior art, that—“in and of itself,” without regard to whether infringement is alleged literally or by equivalents—“mandates a finding of noninfringement.” 1710 Thus, the Federal Circuit has created a “hypothetical claim” mechanism for evaluating whether a claim of infringement by equivalents would invade the prior art. Under “hypothetical claim” analysis, the patentee alleging a claim of infringement under the doctrine of equivalents must “propos[e] a hypothetical claim that is sufficiently broad in scope to literally encompass the accused product or process . . . If that [hypothetical] claim would have been allowed by the PTO over the prior art, then the prior art does not bar the application of the doctrine of equivalents.” 1711 We have given this doctrine the shorthand nickname of “prior-art estoppel.” Under proper hypothetical-claim analysis, “the accused infringer must come forward

1708. Sage Products, 126 F.3d at 1425-26, 44 U.S.P.Q.2d (BNA) at 1108.
1709. See, e.g., Wilson Sporting Goods Co. v. David Geoffre & Assoc., 904 F.2d 677, 683-85, 14 U.S.P.Q.2d (BNA) 1942, 1947-49 (Fed. Cir. 1990) (holding that “a patentee should not be able to obtain, under the doctrine of equivalents, coverage which he could not lawfully have obtained from the PTO by literal claims”).
with evidence that the hypothetical claim reads on the prior art.\(^{1712}\) “[O]nce the patentee makes out his \textit{prima facie} case of infringement by equivalence, the ultimate burden of persuasion rests on the patentee to show that the hypothetical claim does not read on the prior art.”\(^{1713}\)

Although the hypothetical-claim analysis was originally designed to cabin patentees’ reliance on the doctrine of equivalents, it has gained some currency with patentees as a methodology to “freely redraft granted claims.”\(^{1714}\) In \textit{Ultra-Tex Surfaces, Inc. v. Hill Brothers Chemical Co.},\(^{1715}\) the Federal Circuit affirmed the district court’s determination that the patentee’s equivalence claim was barred by prior-art estoppel on two independent bases. First, the court agreed with the district court that “Ultra-Tex used hypothetical analysis to ‘freely redraft’ its claim by impermissibly broadening and narrowing it at the same time, a practice our case law clearly forbids.”\(^{1716}\) As the court noted, quoting its prior opinion in \textit{Streamfeeder, LLC v. Sure-Feed Systems, Inc.},\(^{1717}\) “‘one cannot, in the course of litigation and outside of the PTO, cut and trim, expanding here, and narrowing there, to arrive at a claim that encompasses an accused device, but avoids the prior art. Slight broadening is permitted at that point, but not narrowing.’”\(^{1718}\) Second, and aside from the prohibition on narrowing a claim to simultaneously avoid prior art yet capture the accused device, the court concluded that Ultra-Tex’s hypothetical claim described a process that had been in public use more than one year prior to the application’s filing date, and thus would be invalid under the public-use bar of Section 102(b).\(^{1719}\) This was the first time that the Federal Circuit had invalidated a hypothetical claim under Section 102(b), but it was hardly a shocking result.\(^{1720}\)

To the extent that \textit{Ultra-Tex} and \textit{Streamfeeder} state a rule, for hypothetical-claim analysis, that “[s]light broadening is permitted . . . but not narrowing,” the rule is halfway useful. An absolute prohibition on “narrowing” a claim for hypothetical analysis is

\begin{itemize}
\item[]{1712} \textit{Id.} at 1365, 53 U.S.P.Q. 2d (BNA) at 1896.
\item[]{1713} \textit{Ultra-Tex}, 204 F.3d at 1365, 53 U.S.P.Q. 2d (BNA) at 1896.
\item[]{1714} \textit{Streamfeeder}, LLC \textit{v. Sure-Feed Sys., Inc.}, 175 F.3d 974, 983, 50 U.S.P.Q. 2d (BNA) 1515, 1521 (Fed. Cir. 1999).
\item[]{1715} 204 F.3d 1360, 53 U.S.P.Q. 2d (BNA) 1892 (Fed. Cir. 2000).
\item[]{1716} \textit{Id.} at 1366, 53 U.S.P.Q. 2d (BNA) at 1897.
\item[]{1717} 175 F.3d 974, 50 U.S.P.Q. 2d (BNA), 515 (Fed. Cir. 1999).
\item[]{1718} \textit{Ultra-Tex}, 204 F.3d at 1366, 53 U.S.P.Q. 2d (BNA) at 1897 (quoting \textit{Streamfeeder}, 175 F.3d at 983, 50 U.S.P.Q. 2d (BNA) at 1521).
\item[]{1719} \textit{See Ultra-Tex}, 204 F.3d at 1366, 53 U.S.P.Q. 2d (BNA) at 1897.
\item[]{1720} \textit{Id.}, 53 U.S.P.Q.2d (BNA) at 1897 (“An invalidating public use is just as damaging to the patentability of a proposed hypothetical claim as any other type of prior art.”).
relatively clear and predictably informs the public, litigants, and courts that a particular sort of hypothetical claim will prove unsuccessful. But to the extent that there is a legally significant difference between permissible “[s]light broadening” and “impermissibly broadening” a claim in hypothetical analysis, the distinction is elusive and standardless. While the line between “slight” and “impermissible” broadening necessarily requires case-by-case adjudication, that line is neither obvious from the case law nor applicable before the fact in a useful, predictive fashion.

The court also addressed hypothetical-claim analysis in Moore U.S.A., Inc. v. Standard Register Co., a decision that was primarily grounded in the anti-vitiation rule. There, the patentee offered a hypothetical claim to support its contention that the claim language, requiring adhesive strips that extend the “majority of the lengths” of the margins of the patented mailer, could have been patentably broadened by a hypothetical claim where the language “about half of the length of the first face, or essentially the entire length” replaces “the majority of the lengths of said longitudinal marginal portions” in the claim. The court rejected this hypothetical claim as establishing a valid equivalents claim in view of its holding, under the all-elements rule, that claim language requiring a “majority” cannot capture an accused device having only a “minority.”

Such an analysis is not divorced from the claim language, but rather must be anchored in the limitation for which a range of equivalents is sought . . . A hypothetical claim analysis cannot operate to the exclusion of the doctrine of prosecution history estoppel or the All Limitations Rule . . . Given our holding that the All Limitations Rule bars Moore’s desired scope of equivalents, Moore’s poorly-articulated hypothetical claim analysis must also fail.

Thus, as Moore U.S.A. makes clear, proving the absence of a prior-art estoppel by hypothetical-claim analysis may be a necessary condition for establishing a claim of infringement by equivalents, but it is plainly not a sufficient one.

1721. 229 F.3d 1091, 56 U.S.P.Q.2d (BNA) 1225 (Fed. Cir. 2000).
1723. Id. at 1106-07, 56 U.S.P.Q.2d (BNA) at 1236.
Another judge-made limitation on the doctrine of equivalents has, not surprisingly, proven to be similarly elusive. In 1997, in *Sage Products, Inc. v. Devon Industries Inc.*, the Federal Circuit barred a patentee from relying on the doctrine of equivalents in an attempt to capture “a relatively simple structural device” not literally covered by the claims, not involving after-arising technology, and foreseeable by “[a] skilled patent drafter.” As the court reasoned in *Sage Products*:

> If Sage desired broad patent protection for any container that performed a function similar to its claimed container, it could have sought claims with fewer structural encumbrances. Had Sage done so, then the Patent and Trademark Office (PTO) could have fulfilled its statutory role in helping to ensure that exclusive rights issue only to those who have, in fact, contributed something new, useful, and unobvious. Instead, Sage left the PTO with manifestly limited claims that it now seeks to expand through the doctrine of equivalents. However, as between the patentee who had a clear opportunity to negotiate broader claims but did not do so, and the public at large, it is the patentee who must bear the cost of its failure to seek protection for this foreseeable alteration of its claimed structure.

Judge Rader’s concurrence in *Vehicular Technologies Corp. v. Titan Wheel International, Inc.*, addressed the application of the *Sage Products* bar to a summary judgment of nonequivalence. The Vehicular patent was directed to a locking differential for use in automobiles. One of the elements of that locking differential was “a spring assembly consisting of two concentric springs bearing against one end of [a] pin.” The accused device used one spring in conjunction with a plug. The panel held that the district court properly granted summary judgment of noninfringement under the doctrine of equivalents, largely in view of the claim’s use of the closed term “consisting of two concentric springs.”

Judge Rader concurred, but on a substantially different ground. After noting that the case “presents the difficult problem of performing a doctrine of equivalents analysis on the limited facts

1724. 126 F.3d 1420, 44 U.S.P.Q.2d (BNA) 1103 (Fed. Cir. 1997).
1725.  Id. at 1425, 44 U.S.P.Q.2d (BNA) at 1107.
1726.  Id., 44 U.S.P.Q.2d (BNA) at 1107.
1728.  Id. at 1379, 54 U.S.P.Q.2d (BNA) at 1842.
1729.  See id., 54 U.S.P.Q.2d (BNA) at 1842.
1730.  Id. at 1385, 54 U.S.P.Q.2d (BNA) at 1845.
available for a motion of summary judgment," he nonetheless joined the majority’s disposition “because this case fits well within this court’s reasoning in *Sage Products . . .*. As he noted, “a skilled patent drafter would readily foresee the limiting potential of the ‘consisting of two concentric springs’ limitation. [He] would not confront the need for particularly subtle or ambiguous language to describe inventive features that are complex, or were never described before in scientific discourse.”

Foreshadowing his later dissent in *Festo*, Judge Rader also found it significant that “this limitation does not call into question issues of after-arising technology which, by definition, cannot be foreseen at the time of claim drafting.”

Judge Rader also pointed out that Vehicular had asserted its infringement claim against Titan within the two-year period allowed for reissuing a patent under 35 U.S.C. § 251. Section 251 permits a patentee, who “through error without any deceptive intent . . . claim[s] more or less than he had a right to claim,” to enlarge the patent claims within two years of the grant of the original patent. He concluded that Vehicular, “as in *Sage*, . . . fits the circumstances for restricting the application of the doctrine of equivalents without further fact finding.”

The *Sage Products* estoppel doctrine has sound policy justifications. Yet, and particularly because Judge Rader’s views in *Vehicular Technologies* were not shared by the other Judges, the *Sage Products* bar remains somewhat fuzzy. Its notion of “foreseeable alterations” seems more conclusory than broadly applicable and thus difficult to administer at the margins, at least at an appellate level. “Foreseeability,” in tort and damages law, typically presents a fact question for the jury. The *Sage Products* bar does not seem to go so

1751. *Id.*., 54 U.S.P.Q.2d (BNA) at 1845 (Rader, J., concurring).
1752. *Id.*. (Rader, J., concurring).
1753. *Vehicular Techs.*, 212 F.3d at 1384, 54 U.S.P.Q.2d (BNA) at 1846 (Rader, J., concurring).
1755. *Vehicular Techs.*, 212 F.3d at 1384, 54 U.S.P.Q.2d (BNA) at 1846 (Rader, J., concurring).
1756. *Id.*. (Rader, J., concurring).
1758. See, e.g., *AUSA Life Ins. Co. v. Ernst & Young*, 206 F.3d 292, 217 (2d Cir. 2000) (noting that “[a] foreseeability determination in and of itself is also a question of fact for resolution by the finder of fact.”); cf. *First Interstate Bank of Arizona, N.A. v. Murphy, Weir & Butler*, 210 F.3d 983, 987 (9th Cir. 2000) (holding that “[f]oreseeability is a question of fact in many contexts. However, in defining the boundaries of duty, foreseeability is a question of law for the court.” (quoting *Nichols* ...)
far as to impose an absolute prohibition on capturing, through the doctrine of equivalents, anything that existed at the time of the patent application—although in both *Sage Products* and *Vehicular Technologies*, the court and Judge Rader, respectively, took pains to ground their analyses in substantial part on the fact that the accused device was not after-developed technology. Such a bar would be at least predictable and easily applicable, even if perhaps overbroad (a charge that might appropriately be leveled at *Festo*, as well). But the most intriguing suggestion in Judge Rader’s concurrence from *Vehicular Technologies* involves the interplay between the reissue statute and the doctrine of equivalents. According to Judge Rader, it seems fair to patentees, consistent with the notice function of patents that protects competitors, and workable in practice, to forbid a patentee from resorting to the doctrine of equivalents if the patentee knows (or should know) of the accused technology during the two-year reissue period, during which the patentee would be allowed to obtain (or at least attempt) reissue of claims that would literally cover the accused device. Though it is not presently the law (but simply the view of a single judge), it will be interesting to follow this argument to see if it becomes Federal Circuit law in the years to come.

e. Dedication to the public

One final legal limitation on the doctrine of equivalents—the doctrine of dedication to the public—is, at this writing, the subject of a pending *en banc* determination in the Federal Circuit. The origins of this debate in the Federal Circuit are recent, being rooted in the court’s 1996 ruling in *Maxwell v. J. Baker, Inc.* In *Maxwell*, a panel of the court (Judges Lourie, Skelton, and Schall) held that “subject matter disclosed but not claimed in a patent application is dedicated to the public.” Two years later, another panel of the court (Judges Newman, Rich, and Smith) in *YBM Magnex, Inc. v. United States International Trade Commission* limited *Maxwell* to its “particular facts.” In reality, though, the panel in *YBM Magnex* simply held, in
polite language, that Maxwell was wrongly decided.\textsuperscript{1744} Most notably, the YBM Magnex panel viewed Maxwell as inconsistent with the Supreme Court’s decision in Graver Tank & Manufacturing Co. v. Linde Air Products Co.,\textsuperscript{1745} which held that an asserted equivalent disclosed in the specification (manganese silicate) actually supported the patentee’s case for equivalency because “the patent itself fully discloses that welding compositions composed chiefly of manganese silicate and prepared according to the teachings of the patent are equivalent to those in which the alkaline earth metals [called for by the claim] are the principal constituents.”\textsuperscript{1746} According to the panel in YBM Magnex, “[t]he Supreme Court sustained this conclusion against the Court’s dissenters, who urged that ‘what is not specifically claimed is dedicated to the public.’”\textsuperscript{1747} This argument, however, had already been answered in Maxwell, where the court explained that in Graver Tank, compositions including manganese silicate had been claimed, but the Supreme Court had, in the prior term, “affirmed the district court’s decision in which it held these broad claims to be invalid on the ground that many metal silicates embraced by the claims, but not disclosed in the specification, were inoperative.”\textsuperscript{1748}

Thus, after YBM Magnex, the Federal Circuit had two divergent lines of authority. One line, with Maxwell and Unique Concepts, Inc. v. Brown\textsuperscript{1749} anchoring the poles, holds that any subject matter that has been disclosed in a patent application, but not claimed, is dedicated to the public.”\textsuperscript{1750} Another, with YBM Magnex carrying the flag, and ostensibly supported by the Supreme Court’s decision in Graver Tank, holds, in the words of a recent Area Summary in this law review, that “the doctrine of equivalents criteria must be applied to the specific facts of the case, thereby producing individualized results.”\textsuperscript{1751}
those authors viewed the Federal Circuit’s decision in \textit{YBM Magnex} as a decision that “clarified its holding in \textit{Maxwell v. J. Baker},”\textsuperscript{1752} we view \textit{YBM Magnex} as not clarifying, but only serving to muddy the court’s body of precedent. Thus, \textit{YBM Magnex} makes the Federal Circuit’s decisions seem less grounded in law and more grounded in the preferences of the particular panel assigned to hear the case.

In one decision from 2000, Judge Michel, writing for the panel in \textit{Moore U.S.A., Inc. v. Standard Register Co.},\textsuperscript{1753} tried valiantly to mediate the conflicting views by seeking to portray \textit{Maxwell} and \textit{YBM Magnex} as coherent members of a uniform body of law:

Likewise, while Moore argues that the written description’s teaching that the length of the first and second strips may be about “half the length” of the longitudinal marginal portions gives rise to a scope of equivalents that would cover a “minority,” our case law reveals that Moore is mistaken. In \textit{Maxwell v. J. Baker}, . . . , we explained the contrary principle that “subject matter disclosed in the specification, but not claimed, is dedicated to the public” in determining infringement under the doctrine of equivalents. . . . Having fully disclosed two distinct embodiments, one in which the first and second longitudinal strips extend a majority of the length of the longitudinal marginal portions, and one in which they do not, Moore is not entitled to “enforce the unclaimed embodiment as an equivalent of the one that was claimed.”\textsuperscript{1754}

But by quoting the broadly applicable, absolute “rule” of \textit{Maxwell} in tandem with \textit{YBM Magnex}’s description of the holding of \textit{Maxwell}, the panel in \textit{Moore U.S.A.} left little doubt that it was siding with the \textit{Maxwell} view of the world. Little wonder that Judge Newman, the author of \textit{YBM Magnex}, dissented on this point.\textsuperscript{1755}

On January 24, 2001, in \textit{Johnson & Johnston Associates Inc. v. R.E. Service Co., Inc.},\textsuperscript{1756} a case that had been argued on December 7, 1999 before a panel of Judges Newman and Rader and Senior Judge Archer, the Federal Circuit “sua sponte order[ed] that the case be heard \textit{en banc}” to address the following questions:

(1) Whether and under what circumstances a patentee can rely upon the doctrine of equivalents with respect to unclaimed subject

\textsuperscript{1752}Id. at 1420.
\textsuperscript{1753} 229 F.3d 1091, 56 U.S.P.Q.2d (BNA) 1225 (Fed. Cir. 2000).
\textsuperscript{1754} Id. at 1107, 56 U.S.P.Q.2d (BNA) at 1236.
\textsuperscript{1755} Id. at 1119-20, 56 U.S.P.Q.2d (BNA) at 1246 (Newman, J., concurring in part and dissenting in part) (“The panel majority also states that Moore dedicated to the public all embodiments less than the majority of the length. There is no support for such statement. Neither prosecution history estoppel nor prior art was asserted as limiting equivalency to over 50% of the length.”).
\textsuperscript{1756} 238 F.3d 1347, 1349, [U.S.P.Q.2d (BNA) citation not available].
matter disclosed in the specification.

(2) Whether in this case the jury’s finding of infringement should be reversed because the patentee was foreclosed from asserting the doctrine of equivalents with respect to unclaimed subject matter disclosed in the specification.

At this writing, briefing in Johnson & Johnston has been completed, and oral argument was held on October 3, 2001.\textsuperscript{1757}

The Federal Circuit’s path from Maxwell to YBM Magnex to Johnson & Johnston ought to be a cautionary tale for the court. Regardless of whether Maxwell was correctly decided, the panel in YBM Magnex ought not to have tried to eviscerate the prior panel decision in Maxwell by confining it to its facts, or by attempting to re-define the holding. Instead, the YBM Magnex panel should have either followed the prior panel decision, as it is obligated to do under Federal Circuit precedent,\textsuperscript{1759} or, as the court’s rules allow, sought \textit{en banc} review of the issue either when Maxwell was decided in 1996, or when YBM Magnex came before the court.\textsuperscript{1760} And it is equally unfortunate that the full court did not exercise its prerogative to resolve this facially apparent conflict \textit{en banc} when YBM Magnex was first decided by the panel. But what panels of the court should not do is what, it appears, the panel in YBM Magnex did—it effectively swept aside the prior panel decision because it disagreed with that decision, and left intact for three years two obviously conflicting strands of authority, which only serves to confuse courts and litigants. Lower courts and litigants (actual and potential) alike cannot effectively conduct their affairs when every case to come before the Federal Circuit has the potential to turn not upon predictable and effective legal rules or prior panel decisions, but upon the particular panel members’ views of the “totality of the circumstances” and the potential that prior panel decisions will be “limited to their facts,” whatever they might be. As Justice Scalia wrote, those are the sorts of tests “most beloved by a court unwilling to be held to rules (and most feared by litigants who want to know what to expect).”\textsuperscript{1761}

\textsuperscript{1757} Id. at 1347.
\textsuperscript{1758} See id.
\textsuperscript{1759} See, e.g., Newell Co., Inc. v. Kenney Mfg. Co., 864 F.2d 757, 765, 9 U.S.P.Q.2d (BNA) 1417, 1423 (Fed. Cir. 1988) (“This court has adopted the rule that prior decisions of a panel of the court are binding precedent on subsequent panels unless and until overturned \textit{en banc}.”).
\textsuperscript{1760} See Fed. R. App. P. 35 (stating that an \textit{en banc} hearing should be ordered when it is necessary to secure or maintain uniformity of the court’s decision); Fed. Cir. R. 35.
The costs of this uncertainty to litigants are manifest, but the price to the court may ultimately be more costly: a loss of public confidence in its decisions. At a minimum, the court should demonstrate a willingness to use its en banc procedures more frequently so that the full court can effectively police the consistency and predictability of the court’s jurisprudence. That, in turn, ought to make individual panels less likely to ignore (or distinguish away to a vanishing point) prior panel decisions.

3. Other infringement doctrines

In 2000, the Federal Circuit addressed a handful of other infringement doctrines, including inducing infringement under Section 271(f) of the Patent Act, infringement by the filing of an abbreviated new drug application (ANDA) under the Hatch-Waxman Act, and willful infringement. Additionally, in one case the court had the occasion to discuss exceptions to findings of patent infringement.

a. Inducing infringement

In Arthur A. Collins, Inc. v. Northern Telecom Ltd., the Federal Circuit affirmed a grant of summary judgment holding that the defendant, NorTel, did not induce infringement of the two patents in suit. Noting that the plaintiff had to “show a direct infringement of the [two] patents” in order to establish liability for inducing infringement, the court upheld the summary judgment on the basis that it had affirmed the summary judgment of no direct infringement.

b. Infringement under the Hatch-Waxman Act

The Hatch-Waxman Act amended and modified the Federal Food, Drug, and Cosmetic Act (FDCA), as well as the patent laws. Under the amended FDCA, a pharmaceutical manufacturer may submit an Abbreviated New Drug Application (ANDA) in order to seek expedited approval from the Food and Drug Administration.

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1763. See id. at 1049, 55 U.S.P.Q.2d (BNA) at 1148-49.
1764. See id. at 1048, 55 U.S.P.Q.2d (BNA) at 1148.
1765. Arthur A. Collins, 216 F.3d at 1049, 55 U.S.P.Q.2d (BNA) at 1148. ("Because there is no evidence of direct infringement, an essential element of induced infringement, we need not reach Collins’s assertion that the district court committed legal error in other aspects of its analysis of the induced infringement claim.").
(FDA) of a generic version of a previously approved (i.e., “listed”) drug.\footnote{1768} A generic-drug manufacturer may file an ANDA if the active ingredient of the generic drug is the “bioequivalent” of the listed drug.\footnote{1769} In the course of submitting an ANDA, the generic-drug manufacturer must certify to at least one of the following statements concerning the listed drug:

- the listed drug is not patented;
- the listed drug’s patent has expired;
- the expiration date of the listed drug’s patent; or
- the listed drug’s patent “is invalid or will not be infringed by the manufacture, use, or sale of the new drug” disclosed in the ANDA.\footnote{1770}

If the generic-drug manufacturer files the last of these certifications (known as a “Paragraph IV certification” in view of its statutory location), the applicant must notify the patent’s owner of the certification.\footnote{1771}

An ANDA certified under Paragraphs I or II is approved immediately by the FDA, once it has determined that the generic drug satisfies all applicable scientific and regulatory requirements.\footnote{1772} An ANDA certified under Paragraph III cannot be certified until the applicable patent expires.\footnote{1773} But the notice required under Paragraph IV allows the patent holder forty-five days from receipt to bring suit for infringement under Section 271(e)(2)(A) of the Patent Act.\footnote{1774} A Paragraph IV certification thus cannot be approved, if suit is brought, until (i) the court decides that the patent is invalid or not infringed; (ii) the patent expires; or (iii) thirty months from the notice (subject to court approval).\footnote{1775} Because of the need to “tee up” the validity and infringement issues for prompt judicial resolution upon the filing of a Paragraph IV certification, Congress has deemed a Paragraph IV certification itself to be an act of infringement, “if the purpose of such a submission is to obtain approval under the [FDCA] to engage in the commercial manufacture, use, or sale of a drug . . . claimed in a patent or the use of which is claimed in a patent before the expiration of such a patent.”\footnote{1776} If the patent holder prevails in

\footnotesize{\begin{itemize}
\item 1769.  See id. § 355(j)(2)(A)(iv).
\item 1770.  Id. § 355(j)(2)(A)(vii)(I)-(IV).
\item 1771.  See id. § 355(j)(2)(B).
\item 1776.  35 U.S.C. § 271(c)(2)(A).
\end{itemize}}
that infringement suit, he “is entitled to an order that FDA approval of the ANDA containing the paragraph IV certification not be effective until the patent expires.”

In many ways, an infringement case premised on the filing of an ANDA resembles a garden-variety patent-infringement case, as illustrated by the Federal Circuit’s decisions in *Upjohn Co. v. Mova Pharmaceutical Corp.* 1778 and *Yamanouchi Pharmaceutical Co. v. Danbury Pharmaceal, Inc.* 1779 At the same time, such an infringement case is somewhat artificial because it is premised on a “hypothetical inquiry” into “what the ANDA applicant will likely market if its application is approved, an act that has not yet occurred.” 1780 In *Bayer AG v. Elan Pharmaceutical Research Corp.,* 1781 the court affirmed a grant of summary judgment in favor of the generic-drug manufacturer, rejecting the patent holder’s arguments that genuine issues of material fact existed as to whether the generic manufacturer’s biobatch infringed the patent in suit. 1782 The reason that the biobatch (a batch of the proposed generic drug made and tested for the ANDA process 1783) created no genuine issues, according to the court, was that the “hypothetical inquiry” called for by Section 271(e)(2)(A) “is properly grounded in the ANDA application and the extensive materials typically submitted in its support.” 1784 Where “the ANDA ‘is to sell [a] well-defined compound,’ then the ‘ultimate question of infringement is usually straightforward.’” 1785 The specification of the generic manufacturer’s ANDA specified that the drug manufactured pursuant thereto would avoid the literal language of the patent claims, found to be dispositive by the Federal Circuit for two reasons: first, the Hatch-Waxman Act provides an ANDA applicant with immunity from allegations of infringement for “acts that are necessary in preparing an ANDA,” such as “[t]he production of a biobatch, and the submission of a [certificate of quality and analysis] regarding this biobatch.” 1786 Second, in light of all the criminal and

1782. *See id.* at 1248, 54 U.S.P.Q.2d (BNA) at 1715.
1783. *See id.* at 1246, 54 U.S.P.Q.2d (BNA) at 1713.
1784. *Bayer AG, 212 F.3d at 1248, 54 U.S.P.Q.2d (BNA) at 1715* (quoting *Glaxo, 110 F.3d at 1569, 42 U.S.P.Q.2d (BNA) at 1263*).
1785. *Id.* at 1249, 54 U.S.P.Q.2d (BNA) at 1715-16 (quoting *Glaxo, 110 F.3d at 1569, 42 U.S.P.Q.2d (BNA) at 1263*).
1786. *Id.* at 1249, 54 U.S.P.Q.2d (BNA) at 1716.
civil penalties attendant to the submission of a false ANDA, and the fact that a generic manufacturer is prohibited by law “from selling any product that does not meet its ANDA’s requirements,” the court must conclude that the generic manufacturer “is bound by this specification,” and thus must measure allegations of infringement against that specification. The court distinguished its prior decision in Glaxo, Inc. v. Novopharm, Ltd., in which the Federal Circuit “approved of the district court looking to a biobatch for help in deciding the issue of infringement,” as one where “the biobatch . . . was properly considered because the ANDA specification in that case did not define the compound in a manner that directly addressed the issue of infringement.”

c. Willful infringement

A competitor who has actual notice of an existing patent has an affirmative duty of due care to avoid infringing that patent. Failure to exercise that level of care can result in a finding of willful infringement, particularly in cases tried by a jury. If a properly instructed jury finds willful infringement, it is difficult to disturb that finding on appeal, since willful infringement “turns on considerations of intent, state of mind, and culpability.” The punitive consequences of a finding of willful infringement are significant, as such a finding authorizes (though it does not mandate) the trial judge to enhance damages, up to three times the actual damages awarded.

Appellate review of jury findings of willful infringement is limited. Thus, for example, in Stryker Corp. v. Davol Inc., the court affirmed a verdict of willfulness as supported by substantial evidence, with little need for discussion of the point. Likewise, in Ajinomoto Co. v. Archer-Daniels-Midland Co., the Federal Circuit upheld a district

1787. See Bayer AG, 212 F.3d at 1249-50, 54 U.S.P.Q.2d (BNA) at 1716.
1788. 110 F.3d 1562, 42 U.S.P.Q.2d (BNA) 1257 (Fed. Cir. 1997).
1789. 212 F.3d at 1250, 54 U.S.P.Q.2d (BNA) at 1717.
1794. Id. at 1259, 57 U.S.P.Q.2d (BNA) at 1130 (“[T]he jury reasonably could have credited the testimony that Davol’s reliance on the opinions of counsel was not reasonable, and that it did not in fact follow those opinions, and that the designs for the accused devices were finalized before obtaining an opinion of counsel.”).
judge’s finding of no willful infringement in similar short order. 1796

Challenges to the district court’s granting or denial of enhanced damages under the second paragraph of Section 284 may be treated less deferentially; even though that paragraph of Section 284 grants the district court substantial discretion, 1797 the Federal Circuit demands a certain level of rational explanation by the district courts in exercising that discretion. Thus, in Tate Access Floors, Inc. v. Maxcess Technologies, Inc., 1798 the court vacated that portion of the district court’s judgment denying the patent holder an award of attorneys’ fees after a jury finding of willful infringement. While noting that such a willfulness finding “does not mandate that damages be increased or that attorneys fees be awarded,” 1799 the court concluded that it could not let the denial of fees stand without requiring an explanation from the district judge as to why he denied fees in the face of the jury finding of willfulness. 1800 Although the Federal Circuit’s cases do not use the term, one could easily view this procedural rule as a “presumption” similar to those created in the areas of claim construction and infringement analysis. That is, where willful infringement is found, it will be presumed that enhanced damages will attach. Thus, the district court will be obliged to provide a reasoned explanation, based on the facts and circumstances of the case, for finding that the presumption has been overcome and enhanced damages are not appropriate.

d. Exceptions to infringement

In Embrex, Inc. v. Service Engineering Corp., 1801 the accused infringer of a patent claiming a method for controlling immunizable diseases

1796. Id. at 1352, 56 U.S.P.Q.2d (BNA) at 1343.

The [district] court referred to the representations made to ADM by ABP and Genetika’s subsequent failure to enforce the condition in the Biotechnics license, and declined to impute bad faith to ADM’s dealings with ABP. The district court observed that ADM mounted a substantial, albeit unsuccessful, challenge on the issues of validity and infringement. We do not discern clear error in the district court’s finding on the issue of no willful infringement.

1797. See 35 U.S.C. § 284 (1994) (“[T]he court may increase the damages up to three times the amount found or assessed”).


1799. Id. at 972, 55 U.S.P.Q.2d (BNA) at 1522 (quoting Jurgens v. CBK, Ltd., 80 F.3d 1566, 1573, 38 U.S.P.Q.2d (BNA) 1397, 1402 (Fed. Cir. 1996)).

1800. Tate Access Floors, 222 F.3d at 972, 55 U.S.P.Q.2d (BNA) at 1522 (“On remand, the district court is directed to consider whether Maxcess sought the opinion of counsel or otherwise exercised due care, and whether there was a reasonable basis for concluding that the accused floor panel did not infringe the claims of the . . . patent.”).

in birds urged that its acts of infringement—tests performed on birds—“did not infringe because they were scientific experiments and did not result in the sale of any machines, and therefore were either merely de minimis, or exempt under the experimental use exception.” The panel majority, noting that the Federal Circuit “has construed both the experimental use and de minimis exceptions very narrowly,” concluded that the defendant’s usages of the patented invention fell under neither exception. The court in *Embrex* noted that “[b]inding precedent from the United States Court of Claims” had previously acknowledged a “narrow defense to infringement performed ‘for amusement, to satisfy idle curiosity, or for strictly philosophical inquiry’” [but that the defendant’s tests were] performed . . . expressly for commercial purposes.” The defendant’s “chief commercial purpose was to demonstrate to its potential customers the usefulness of the methods performed by its in ovo injection machines.”

Judge Rader concurred separately. In his view, “the Patent Act leaves no room for any de minimis or experimental use excuses for infringement.” Judge Rader viewed the *per curiam* majority’s approach as conflating the two concepts, when “clarity call[ed] for separate analyses.” As to the de minimis exception, Judge Rader pointed out that “[s]ince its inception, this court has not tolerated the notion that a little infringement—de minimis infringement—is acceptable infringement or not infringement at all.” Rather than try to force-fit notions of de minimis infringement into Section 271(a), whose language admits of no such exception, Judge Rader concluded that “the statute accommodates concerns about de minimis infringement in damages calculations.” And as to the “experimental use” exception, Judge Rader noted that both the Federal Circuit and the Supreme Court—most notably in the area of

1802. *Id.* at 1349, 55 U.S.P.Q.2d (BNA) at 1163.
1803. *Id.*, 55 U.S.P.Q.2d (BNA) at 1163.
1804. *Id.* at 1349, 55 U.S.P.Q.2d (BNA) at 1164 (quoting Roche Prods., Inc. v. Bolar Pharm. Co., 733 F.2d 858, 863, 221 U.S.P.Q. (BNA) 937, 940 (Fed. Cir. 1984)).
1805. *Id.* at 1349, 55 U.S.P.Q.2d (BNA) at 1164.
1806. *Id.* at 1349, 55 U.S.P.Q.2d (BNA) at 1164.
1807. *Id.* at 1352, 55 U.S.P.Q.2d (BNA) at 1165 (Rader, J., concurring).
1808. *Id.*
infringement under the doctrine of equivalents—“have recently reiterated that intent is irrelevant to infringement.” Since intent is irrelevant, there is, according to Judge Rader, no “reason to excuse infringement because it was committed with a particular purpose or intent, such as for scientific experimentation or idle curiosity.”

Judge Rader has the better of this argument as an original matter, for there seems to be no statutory basis for these apparently judicially constructed exceptions. But the panel majority has precedent on its side, and in an appellate court, that—more than logic—is power. Thus, if Judge Rader’s view is ever to hold sway in the Federal Circuit, it appears that either the court en banc or the Supreme Court will have to intervene.

IV. REMEDIES AND LIMITATIONS ON RECOVERY

Overall, the Federal Circuit broke little new ground regarding remedies in 2000; rather, its cases tended to address specific factual situations in traditional damages contexts, and to apply existing rules to those situations. One area of interest was the subject of future damages and future price erosion, where the Federal Circuit did to some degree reach out past its prior, seminal decision in Lam, Inc. v. Johns-Manville Corp.

A. Damages

1. General damages

In Ajinomoto Co., Inc. v. Archer-Daniels-Midland Co., the district court awarded damages calculated as a royalty of $1.23/kg of threonine produced by the defendant’s infringing use of certain strains of genetically modified bacteria for the period May 1993 to March 1998. ADM challenged the award for the period subsequent to November 1996, when it allegedly switched, the day after the trial concluded, to a different bacterial culture which was non-infringing when compared to the previous culture. ADM had not told the court about the change in strain, despite the year-and-a-half gap between the end of the trial and the rendering of judgment.

1812. Id., 55 U.S.P.Q.2d (BNA) at 1167 (Rader, J., concurring).
1813. Id., 55 U.S.P.Q.2d (BNA) at 1167 (Rader, J., concurring).
1817. See id. at 1349, 56 U.S.P.Q.2d (BNA) at 1341.
and moved to amend the judgment to reflect the change.\textsuperscript{1818} The district court denied the motion, and the Federal Circuit, reviewing the denial of the motion to amend under an abuse-of-discretion standard, affirmed, noting that the facts before the district court fully supported the damage award over the entire period, based on the record evidence.\textsuperscript{1819} ADM had within its power the ability to inform the district court, and its opponent, of the change in strain, but had affirmatively taken steps prior to trial to prevent discovery of its shift to the new bacterial culture, and had produced a trial witness who dissembled on the point during his testimony.\textsuperscript{1820} In this light, the district court did not run afoul of its “broad discretion” under Rule 59(e) by denying ADM’s motion without a further hearing on the alleged non-infringement of the later culture, when that issue could have been presented and resolved concurrently in the first trial.\textsuperscript{1821}

2. Lost-profits damages

Several Federal Circuit decisions in 2000 addressed lost-profits damages. In \textit{Tate Access Floors, Inc. v. Maxcess Technologies, Inc.},\textsuperscript{1822} Tate Access succeeded in securing a jury verdict of literal infringement and non-invalidity for its ‘491 patent, which was directed to an elevated floor panel with a laminate floor covering.\textsuperscript{1823} Maxcess contended that Tate Access failed to prove the absence of non-infringing alternatives, and also failed to prove that it would have captured all of Maxcess’s infringing sales “but for” the infringement, particularly given that the parties each sold their respective products through exclusive dealerships.\textsuperscript{1824} Tate Access noted that its own patented floor panel and Maxcess’s Duratrim floor panel were the only two available panels that had self-formed recessed edges, and that all other panels had add-on trims that made them non-acceptable substitutes.\textsuperscript{1825}

The Federal Circuit held that there was substantial evidence supporting the jury’s finding that Tate Access was entitled to lost

\begin{footnotesize}
\begin{enumerate}
\item[1818.] \textit{See id.}, 56 U.S.P.Q.2d (BNA) at 1341 (discussing the time periods in which ADM claimed to use the infringing strain).
\item[1819.] \textit{See id.} at 1350-51, 56 U.S.P.Q.2d (BNA) at 1342 (noting that ADM had no explanation for its silence in finding no abuse of discretion).
\item[1820.] \textit{See id.} at 1349, 56 U.S.P.Q.2d (BNA) at 1341 (highlighting the testimony of ADM’s group leader, and final witness, who gave no indication that a change in strains was planned for the next day).
\item[1821.] \textit{See id.} at 1350-51, 56 U.S.P.Q.2d (BNA) at 1342.
\item[1822.] 222 F.3d 958, 55 U.S.P.Q.2d (BNA) 1513 (Fed. Cir. 2000).
\item[1823.] \textit{See id.} at 963, 55 U.S.P.Q.2d (BNA) at 1515.
\item[1824.] \textit{See id.} at 970, 55 U.S.P.Q.2d (BNA) at 1521.
\item[1825.] \textit{See id.} at 971, 55 U.S.P.Q.2d (BNA) at 1521.
\end{enumerate}
\end{footnotesize}
profits, and that the district court therefore had not erred in denying JMOL as to lost profits.\textsuperscript{1826} The court recited the tried and true “but for” standard: “To recover lost profits, a patentee must show a reasonable probability that, ‘but for’ the infringement, it would have made the sales made by the infringer.”\textsuperscript{1827} The court also noted that a useful but non-exclusive way to prove lost profits was to satisfy the four-part \textit{Panduit} test.\textsuperscript{1828}

The court concluded, agreeing with Tate Access, that no non-infringing substitutes for the patented floor panel were available, because customers who wanted a panel with recessed edges could choose only the Tate Access product or the infringing Maxcess Duratrim panel.\textsuperscript{1829} Substantial evidence of the non-acceptability of panels with add-on trim existed, including Maxcess’s own product brochure, which said that applied or add-on trims were not acceptable for purchasers of the Duratrim panel.\textsuperscript{1830} Given the absence of any acceptable non-infringing substitutes, the court agreed that there was a reasonable probability that Tate Access would have made the sales made by Maxcess.

In \textit{Fiskars, Inc. v. Hunt Manufacturing Co.},\textsuperscript{1832} the court affirmed a jury verdict of infringement relating to a circular blade paper cutter covered by Fiskars’ patent.\textsuperscript{1833} The jury also awarded Fiskars lost profits of $114,760, which Hunt challenged on the ground that Fiskars would not have made the sales Hunt did make, because Fiskars failed the “but for” lost profits test.\textsuperscript{1834} Hunt stressed that 90% of its sales were made to Staples, which as a matter of internal policy, preferred to deal with a single supplier who would provide a full line of paper cutters, linear as well as rotary.\textsuperscript{1835} Because Fiskars (unlike Hunt) did not make a full line of paper cutters, Hunt argued that Fiskars would not have made any sales of the rotary paper cutters to

\textsuperscript{1826} See id., 55 U.S.P.Q.2d (BNA) at 1521.
\textsuperscript{1827} See id., 55 U.S.P.Q.2d (BNA) at 1521.
\textsuperscript{1828} The \textit{Panduit} test “requires that the patentee establish: (1) demand for the patented product; (2) absence of acceptable non-infringing substitutes; (3) manufacturing and marketing capability to exploit the demand; and (4) the amount of the profit it would have made.” Id., 55 U.S.P.Q.2d (BNA) at 1521 (citing \textit{Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.}, 557 F.2d 1152, 1156 197 U.S.P.Q. (BNA) 726, 730 (6th Cir. 1978)).
\textsuperscript{1829} See \textit{Tate Access Floors}, 222 F.3d at 971, 55 U.S.P.Q.2d (BNA) at 1521 (detailing the similarities between the Tate Access panel and the Maxcess Duratrim panel).
\textsuperscript{1830} See id., 55 U.S.P.Q.2d (BNA) at 1521.
\textsuperscript{1831} See id., 55 U.S.P.Q.2d (BNA) at 1521.
\textsuperscript{1832} 221 F.3d 1318, 55 U.S.P.Q.2d (BNA) 1569 (Fed. Cir. 2000).
\textsuperscript{1833} See id. at 1324, 55 U.S.P.Q.2d (BNA) at 1574.
\textsuperscript{1834} See id. at 1324-25, 55 U.S.P.Q.2d (BNA) at 1574-75.
\textsuperscript{1835} See id. at 1325, 55 U.S.P.Q.2d (BNA) at 1575.
The court disagreed, concluding that there was, in fact, substantial evidence supporting the verdict of lost-profits damages. The trial evidence showed that no single supplier would have been able to provide a full line of paper cutters without infringing, for no non-infringing substitute was commercially available for Fiskars’ rotary cutter. But, applying the deferential JMOL review of the jury’s verdict, the district court concluded that the jury had enough evidence from which to conclude that Hunt’s customer, Staples, would in fact have purchased its supply of rotary cutters from Fiskars but for Hunt’s infringement, and the Federal Circuit agreed. Even so, the court offered no explanation as to where Staples would obtain linear cutters, and did not explicitly reject Hunt’s contention that Staples would only deal with one full-line supplier. This theory could have prevailed in a trial court, but was not likely to provide a basis for reversal on appeal. As in Tate Access, the argument and proof on this Panduit element was too weak.

In Embrex, Inc. v. Service Engineering Corp., Embrex was awarded damages for Service Engineering’s infringement of the ‘630 patent, including direct damages. Embrex was the exclusive licensee of the ‘630 patent, which was directed to a method of inoculating birds against disease by injecting vaccines into a specified region of an egg before hatching. On receiving the ‘630 patent license, Embrex began designing machines to perform the innoculation in large-scale industrial chicken farms. Service Engineering tried to interest Embrex in using its equipment in the practice of the method, but Embrex refused. Service Engineering then worked with two other companies to design around the ‘630 patent, resulting in an infringement suit by Embrex against all three, which was resolved by a settlement and dismissal.

Service Engineering, however, continued to build a machine to practice the patented innoculation method, leading to the

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1836. See id., 55 U.S.P.Q.2d (BNA) at 1575.
1837. See id., 55 U.S.P.Q.2d (BNA) at 1575.
1838. See Fiskars, 221 F.3d at 1325, 55 U.S.P.Q.2d (BNA) at 1575.
1839. See id., 55 U.S.P.Q.2d (BNA) at 1575.
1841. See id. at 1345-46, 55 U.S.P.Q.2d (BNA) at 1162.
1842. See id., 55 U.S.P.Q.2d (BNA) at 1162.
1843. See id. at 1346, 55 U.S.P.Q.2d (BNA) at 1162 (explaining Embrex’s production process).
1844. See id., 55 U.S.P.Q.2d (BNA) at 1162 (discussing Service Engineering’s attempts to work with Embrex).
1845. See id. at 1345-46, 55 U.S.P.Q.2d (BNA) at 1162.
development of a prototype and tests by retained consultants. While preparing the prototype and running the tests, Service Engineering offered to sell the machines to a U.S. company and to a Canadian company, effectively depriving Embrex of the sales. Embrex again filed suit, alleging willful infringement of the ‘630 patent, breach of the settlement agreement, and violation of Section 43(a) of the Lanham Act. The jury returned a verdict for Embrex on breach of contract, infringement and willfulness, awarding $500,000 in direct damages. Service Engineering challenged the award on the ground that there was no evidence that it had practiced the claimed method, but had only offered to sell machines that performed the method, which by law is not a sale of the process. The court agreed, and vacated the direct damage award, finding that “SEC’s offer to sell its machines cannot supply adequate evidentiary support for a compensatory damage award.”

Although not technically a patent case, one decision issued by the Federal Circuit in 2000 applied analogous state contract-damages law principles in a license dispute. In U.S. Valves, Inc. v. Dray, Dray exclusively licensed his patents to U.S. Valves in 1991. After the business relationship with U.S. Valves deteriorated, Dray began manufacturing and selling valves himself, including the patented technology. U.S. Valves sued for breach of contract, claiming that Dray sold valves covered by the licensed patents, with Dray counterclaiming for damages for unpaid royalties. After a bench trial the district court found that Dray had sold valves in violation of the license and issued a permanent injunction against further sales by Dray and awarded $241,351 in damages.

The court vacated the damages award, finding numerous errors under controlling state contract law in the method the district court

1846. See Embrex, 216 F.3d at 1346-47, 55 U.S.P.Q.2d (BNA) at 1162-63 (acknowledging attempts by Service Engineering to avoid infringement of the ‘630 patent).
1847. See id. at 1347, 55 U.S.P.Q.2d (BNA) at 1163 (noting Service Engineering’s solicitation of orders).
1848. See id., 55 U.S.P.Q.2d (BNA) at 1163.
1849. See id. at 1347, 1349, 55 U.S.P.Q.2d (BNA) at 1163, 1165.
1850. See id. at 1350, 55 U.S.P.Q.2d (BNA) at 1165.
1853. See id. at 1370, 54 U.S.P.Q.2d (BNA) at 1835.
1854. See id. at 1370-71, 54 U.S.P.Q.2d (BNA) at 1835-36.
1856. See id. at 1369-70, 54 U.S.P.Q.2d (BNA) at 1835.
had used to arrive at the amount. The problem was that Dray had developed another valve model—a sliding ring valve—that was not established at trial to be covered by the licensed patents or the license. Dray sold his ring valve at various times along with his original valve, which did fall within the license. Yet the damages award did not differentiate between the two. The district court, not having determined the number of valves sold by Dray that were covered by the license, used summary figures alleged to show Dray’s shipments and invoices as a base for the award. But because these summary figures included both infringing and noninfringing valves, the Federal Circuit sent the case back for a proper determination by the district court.

3. Price-erosion damages

In Fiskars, Inc. v. Hunt Manufacturing Co., the jury awarded both past price-erosion and future price-erosion damages in Fiskars’ favor. Hunt challenged both awards as “speculative and contradictory.” Financial and marketing officers and accounting witnesses for both sides presented damages evidence to the jury. Fiskars’ damages expert testified as to the effect of Hunt’s past infringement on Fiskars’ prices for the patented circular blade paper cutters, and the effect this price erosion would have in the future. The expert apparently applied the Panduit factors, adopted by the Federal Circuit as noted in Rite Hite Corp. v. Kelley Co.

Hunt responded that Fiskars’ damage expert had failed to take into account that Fiskars would have sold fewer cutters had it not reduced its prices in the face of Hunt’s competing, infringing cutter. Hunt also challenged the Fiskars’ expert testimony that Fiskars’ sales of rotary cutters would have grown at a ten percent rate, despite the fact that the overall growth rate of the industry was one percent. According to the testimony of a member of Fiskars’ marketing department, Fiskars had experienced this substantial growth rate in the sales of its rotary cutters and therefore the witness estimated the future growth rate and described the price reduction Fiskars had

1857. See id. at 1370, 54 U.S.P.Q.2d (BNA) at 1835.
1858. See U.S. Valves, 212 F.3d at 1375, 54 U.S.P.Q.2d (BNA) at 1839.
1859. See id. at 1374-75, 54 U.S.P.Q.2d (BNA) at 1838.
1862. 221 F.3d at 1324-25, 55 U.S.P.Q.2d (BNA) at 1574-75.
1863. Id. at 1324, 55 U.S.P.Q.2d (BNA) at 1574.
1865. See Fiskars, 221 F.3d at 1325, 55 U.S.P.Q.2d (BNA) at 1575.
been obliged to make to remain competitive in response to Hunt’s infringing sales.\footnote{1866} The Federal Circuit tersely rejected Hunt’s challenge, stating that “[o]n these conflicting positions and arguments, there was substantial evidence whereby a reasonable jury could have reached the damages verdicts reached.”\footnote{1867} In support of that statement, the court cited its prior decision in Brooktree Corporation v. Advanced Micro Devices, Inc.\footnote{1868} for the proposition that a jury’s award of damages will be upheld unless “‘grossly excessive or monstrous,’ clearly not supported by the evidence, or based only on speculation or guesswork.” The court also cited the Seventh Circuit’s decision in Smith v. Rowe\footnote{1869} for the proposition that “[d]amages assessed by a jury are largely discretionary with it . . . To reverse the judgment of the trial court, the appellate court must conclude that the verdict was so ‘gross’ or ‘monstrously excessive’ that the trial court abused its discretion in permitting it to stand.”

Fiskars appeared to be less rigorous in its consideration of the future price-erosion evidence than the Lam court had been. This may presage a more receptive view of future price-erosion damages awarded by a jury, under substantial-evidence appellate review—especially the acceptance of an estimate of future growth rate rather than projected figures, as was used in Lam.

4. Future profits damages

In U.S. Valves, Inc. v. Dray,\footnote{1870} the Federal Circuit agreed with the district court’s refusal to award future damages in view of the fact that it had enjoined Dray from selling the valves covered under the license agreement at issue.\footnote{1871} The court found that any future harm arising from the infringement would be speculative at best since the district court had enjoined Dray from producing any additional infringing products.\footnote{1872} Also, the license agreement gave no basis to award damages for future sales; it did not mention future sales, but instead set up an ongoing arrangement in which the parties would apportion future revenues from the continuing sale of licensed valves.\footnote{1873}

\footnote{1866} See id., 55 U.S.P.Q.2d (BNA) at 1575.
\footnote{1867} Id., 55 U.S.P.Q.2d (BNA) at 1575.
\footnote{1869} 761 F.2d 360, 368 (7th Cir. 1985).
\footnote{1870} 212 F.3d 1368, 54 U.S.P.Q.2d (BNA) 1834 (Fed. Cir. 2000).
\footnote{1871} See id. at 1371, 54 U.S.P.Q.2d (BNA) at 1836.
\footnote{1872} See id. at 1375, 54 U.S.P.Q.2d (BNA) at 1840.
\footnote{1873} See id. at 1375-76, 54 U.S.P.Q.2d (BNA) at 1840.
Moreover, the termination date of the agreement was unknown. Without any way to determine future profits, the court held that any award of damages for future profits would be wholly speculative. U.S. Valves tried to avoid this problem with high-tech computations: it presented expert testimony on lost future profits calculated with a computer-forecasting model. While the Federal Circuit noted that the record did not make clear whether the district court had actually used the evidence, or tested it under the Daubert v. Merrell Dow Pharms., Inc. or Kumho Tire Co. v. Carmichael standards, it found that “[w]ithout such assurance, and in the light of the impossibility of calculating at the time of the simulation the life of the license agreement, this testimony also appears conjectural.” The court stated that “[s]peculative or contingent profits, as opposed to those a plaintiff would certainly earn but for the default, are recoverable only when the record permits estimation of probable profits with reasonable certainty.” The record failed in that respect and the Federal Circuit affirmed the district court’s denial of future damages.

B. Enhanced Damages

The Federal Circuit considered a number of cases raising enhanced-damages issues in 2000. These cases continue to demonstrate the fact-specific nature of enhanced damages awards under the flexible and unpredictable “totality of the circumstances” standard for willfulness and exceptional-case determinations.

In Stryker Corp. v. Davol, Inc., a court reviewed the district court finding that Davol had willfully infringed certain claims of Stryker’s ‘402 patent, which was directed to an endoscopic surgical suction irrigator. The district court denied a JMOL motion and motion for new trial brought by Davol, and awarded enhanced damages and costs to Stryker for pre-verdict infringement. The district court’s first judgment was for a reasonable royalty and prejudgment interest,

1874. See id., 54 U.S.P.Q.2d (BNA) at 1840 (“The agreement was to last until ‘the expiration of the patent or subsequent improvement patents . . .’”).
1875. See id. at 1375-76, 54 U.S.P.Q.2d (BNA) at 1840.
1876. See id. at 1376, 54 U.S.P.Q.2d (BNA) at 1840.
1879. 212 F.3d at 1376, 54 U.S.P.Q.2d (BNA) at 1840.
1880. Id., 54 U.S.P.Q.2d (BNA) at 1840.
1881. See id., 54 U.S.P.Q.2d (BNA) at 1840.
1883. See id. at 1254-55, 57 U.S.P.Q.2d (BNA) at 1134-35.
together with enhanced damages of fifty percent of that amount. The court then entered a permanent injunction. Based on Davol’s continued willful infringement of the ‘402 patent during the period between the jury verdict and entry of the injunction, the district court awarded additional reasonable royalty damages and prejudgment interest, and then doubled those amounts as the quantum of enhanced damages. Davol contended that the district court had abused its discretion in awarding enhanced damages. The court disagreed, concluding that the district court properly considered the evidence of Davol’s culpability and correctly applied the enhancement factors. The court found that the district court was well within its discretion in enhancing the pretrial infringement damages by fifty percent and doubling damages for post-verdict infringement until entry of the permanent injunction.

In Ajinomoto Co., Inc. v. Archer-Daniels-Midland Co., Ajinomoto cross-appealed the district court’s finding that Archer-Daniels-Midland (ADM) had not willfully infringed the patent, which led in turn to the court’s refusal to award enhanced damages. Based on (1) ADM’s knowledge of the ‘765 patent at the time it bought the infringing bacterial strain (culture 3) from ABP for use in the United States, (2) ADM’s knowledge that Ajinomoto held exclusive rights under the U.S. patent, and (3) ADM’s assertion that it failed to obtain counsel’s opinion before beginning its infringing activities, Ajinomoto contended that the district court clearly erred in failing to find the case exceptional and declining to award enhanced damages. However, the court found no clear error on willful infringement, and affirmed the district court’s withholding of enhanced damages.

In Tate Access Floors, Inc. v. Maxcess Technologies, Inc., Maxcess appealed a jury finding that it had willfully infringed the ‘491 patent.

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1885. See id. at 1256, 57 U.S.P.Q.2d (BNA) at 1136.
1886. See id. at 1256, 57 U.S.P.Q.2d (BNA) at 1136.
1887. See id. at 1256-57, 57 U.S.P.Q.2d (BNA) at 1136.
1889. See id. at 1259-60, 57 U.S.P.Q.2d (BNA) at 1139 (“The paramount determination in deciding to grant enhancement and the amount thereof is the egregiousness of the defendant’s conduct based on all the facts and the circumstances.”) (citing Read Corp. v. Porter, Inc., 970 F.2d 816, 826, 23 U.S.P.Q.2d (BNA) 1426, 1435 (Fed. Cir. 1992)).
1890. See id. at 1260, 57 U.S.P.Q.2d (BNA) at 1139.
1891. 228 F.3d 1338, 56 U.S.P.Q.2d (BNA) 1332 (Fed. Cir. 2000).
1892. See id. at 1351-52, 56 U.S.P.Q.2d (BNA) at 1342-43.
1893. See id. at 1351-52, 56 U.S.P.Q.2d (BNA) at 1342-43.
1894. See id. at 1352, 56 U.S.P.Q.2d (BNA) at 1343.
The district court had denied Tate Access’s motion to amend the judgment to increase damages under 35 U.S.C. § 284, and Tate Access cross-appealed from that denial. Maxcess contended that the district court did not abuse its discretion when it refused to enhance damages because it was a close case. According to Maxcess, there was evidence that the ‘491 patent was invalid, and Maxcess believed in good faith that its floor panel did not infringe the patent. The court vacated the denial of Tate Access’s motion for enhanced damages, because the district court abused its discretion when it refused to award enhanced damages without articulating any reason for refusing to make the award. While a finding of willful infringement does not mandate that damages be increased, following an express finding of willful infringement a trial court should provide reasons for not increasing the damage award. The court specifically instructed the district court “to consider whether Maxcess sought counsel’s opinion or otherwise exercised due care, and whether there was a reasonable basis for concluding that the accused floor panel did not infringe the ‘491 patent.”

C. Attorneys’ Fees

Several of the Federal Circuit’s year 2000 cases addressed attorneys’ fee awards, usually under the exceptional-case provision of 35 U.S.C. § 285. Again, these cases are consistent with the court’s typical practices, and focus on specific facts and circumstances, with a willful infringement finding or invalidity of the patent in suit the usual basis for the exceptional-case holding.

In Stryker Corp. v. Davol, Inc., Davol appealed a jury verdict of willful infringement. After entry of a permanent injunction, and a refusal of Stryker’s request for attorneys’ fees for pre-verdict infringement, Davol began selling a modified version of the irrigator that had been found to infringe by the jury. The court awarded attorneys’ fees, costs, and reasonable royalties for post-injunction infringing sales, and then tripled those royalties as enhanced damages for willfulness.

Stryker, however, cross-appealed the denial of its attorneys’ fees for pre-verdict infringement. The Federal Circuit rejected that challenge.

1896. See id. at 961, 55 U.S.P.Q.2d (BNA) at 1514.
1897. See id. at 971-72, 55 U.S.P.Q.2d (BNA) at 1522.
1898. See id., 55 U.S.P.Q.2d (BNA) at 1522.
1899. See id., 55 U.S.P.Q.2d (BNA) at 1522.
1901. See id. at 1256, 57 U.S.P.Q.2d (BNA) at 1136.
1902. See id. at 1256-57, 57 U.S.P.Q.2d (BNA) at 1136.
and affirmed the district court’s ruling. Stryker argued that it was entitled to its pre-infringement attorneys’ fees due to Davol’s alleged deliberate copying and litigation behavior. The district court’s approach in enhancing damages for pre-trial infringement by fifty percent, and doubling damages for infringement after the verdict and before entry of the permanent injunction was, in the court’s view, a reasonable measurement of the culpability of Davol’s conduct. Relying on the discretionary nature of the district court’s reasonable measurement, the Federal Circuit concluded that Stryker’s request for additional attorneys’ fees was not an abuse of discretion. The award of attorneys’ fees in relation to Davol’s contemptuous conduct was also affirmed on Davol’s direct appeal. Considering the conclusory nature of the opinion of counsel used by Davol to justify selling the revised device and the minor changes made to the original device, the Federal Circuit concluded that the district court did not abuse its discretion in awarding the compensatory royalty damages, attorneys’ fees and costs.

In Ruiz v. A.B. Chance Co., the court reviewed a district court trial finding that Chance’s patents in suit were invalid for obviousness, even though they were infringed. Ruiz cross-appealed the denial of its motion for attorneys’ fees under 35 U.S.C. § 285. Whether a case is “exceptional” under Section 285, which allows for the award of reasonable attorneys’ fees, is a question of fact reviewed under a “clearly erroneous” standard. The prevailing party has the burden of proving the case exceptional by clear and convincing evidence. Only if the prevailing party satisfies its initial burden of proving an exceptional case does the district court even consider whether to award attorneys’ fees.

Ruiz had based its request for an exceptional-case finding on the

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1903. See id. at 1259-60, 57 U.S.P.Q.2d (BNA) at 1139.
1904. See id. at 1260, 57 U.S.P.Q.2d (BNA) at 1139.
1905. See id., 57 U.S.P.Q.2d (BNA) at 1139; see also Spindelfabrik Suessen-Schurr v. Schubert & Salzer Maschinenfabrik AG, 903 F.2d 1568, 1578, 14 U.S.P.Q.2d (BNA) 1913, 1921 (Fed. Cir. 1990) (holding that the district court did not abuse its discretion when it awarded attorneys’ fees and increased damages for flagrant contemptuous conduct).
1907. See id. at 660, 57 U.S.P.Q.2d (BNA) at 1163 (finding that the patent was infringed, but vacating the finding that the patent was invalid for obviousness and remanding with instructions to make factual findings on obviousness in accordance with the four factor test set forth in Graham v. John Deere Co., 383 U.S. 1 (1966)).
1908. See Ruiz, 234 F.3d at 669, 57 U.S.P.Q.2d (BNA) at 1171.
1909. Id. at 669, 57 U.S.P.Q.2d (BNA) at 1171.
1910. See id., 57 U.S.P.Q.2d (BNA) at 1171 (“If the district court applied the correct legal standard and did not clearly err in its factual findings, then we review the court’s decision whether or not to award attorney fees for abuse of discretion.”).
alleged inequitable conduct of Chance in failing to submit information that had, in part, been relied upon by the district court in finding the patents invalid for obviousness. The district court, however, found that the prior-art information was properly disclosed in the specification of the patents in suit and that there was no evidence of intent to deceive. The Federal Circuit affirmed the district court’s judgment of no liability for attorneys’ fees because, “at the very least the court’s findings are not clearly erroneous.”

In Yamanouchi Pharmaceutical Co., Ltd. v. Danbury Pharmaceutical, Inc., Yamanouchi, the owner of a patent for the anti-ulcer drug famotidine, brought an infringement action under 35 U.S.C. § 271(e)(2)(A) against Danbury, who had filed an Abbreviated New Drug Application (ANDA) for a generic version of the drug. The district court, granting Yamanouchi’s JMOL motion after a bench trial, held for the patent owner, finding that the patent was not invalid as obvious and was willfully infringed, and awarded attorneys’ fees and costs for the filing of a baseless ANDA. The district court found that Danbury, in its paragraph IV certification in the ANDA, had not shown any motivation to combine selected portions of various prior-art compounds to create the specific compound famotidine. “The district court characterized Danbury’s obviousness case as largely hindsight, speculation and argument without adequate foundation.” That finding in turn led to the district court’s finding

1911. See id. at 660, 57 U.S.P.Q.2d (BNA) at 1171 (noting that failure to disclose information will be measured in terms of the information’s materiality and the intent to deceive, in determining whether the nondisclosure amounted to inequitable conduct).
1912. See id. at 670, 57 U.S.P.Q.2d (BNA) at 1171 (discussing the district court’s conclusion that the language in the specifications of the patents and the materials in the patent file wrapper history were sufficient for proper disclosure).
1913. Id., 57 U.S.P.Q.2d (BNA) at 1171 (noting that Ruiz had not offered clear and convincing evidence of the intent to deceive or of the materiality of the withheld information).
1916. See id. at 1341-43, 56 U.S.P.Q.2d (BNA) at 1642-44.
1917. See id. at 1342-43, 56 U.S.P.Q.2d (BNA) at 1645 (explaining that an ANDA proponent must certify one of four things: that the previously approved drug is not patented (paragraph II certification); its patent has expired (paragraph II certification); its patent will soon expire on a specific date (paragraph III certification); or its patent “is invalid or will not be infringed by the manufacture, use, or sale of the new drug” covered by the ANDA (paragraph IV certification)).
1918. Id., 56 U.S.P.Q.2d (BNA) at 1643.
that Danbury had willfully infringed the patent, which in turn qualified the case as exceptional under 35 U.S.C. § 285 and supported the attorneys’ fees award. In addition, 35 U.S.C. § 271(e)(4) independently provided a basis for an attorneys’ fee award to the prevailing party in an exceptional ANDA-based case.  

The award of fees for infringement under 35 U.S.C. § 271(e)(2), is not, as the Federal Circuit noted, limited to cases involving infringing commercial sales because “[t]he mere act of filing an ANDA constitutes infringement.”  

Danbury appealed the award of attorneys’ fees and the court, finding no abuse of discretion in the award, affirmed.

Although the district court had found Danbury’s conduct to be willful infringement, such a finding was not, in the Federal Circuit’s view, necessary to the fees award. The Hatch-Waxman Act, the court stated, imposes a duty of care on a party making an ANDA certification, such that, in a case initiated by a Section 271(e)(2) filing, the case may become exceptional if the ANDA filer makes baseless certifications.

The court agreed that the conclusion of a baseless certification was not clearly erroneous, pointing to particular district court findings: that Danbury’s case for obviousness presented at trial contained “glaring weaknesses,” leading to a JMOL at the close of its evidence on obviousness; that the ANDA certification notice and supporting affidavits, on which Danbury relied to show a good faith

1919. See id. at 1346, 56 U.S.P.Q.2d (BNA) at 1646. Section 271(e)(4) states that “[f]or an act of infringement described in paragraph (2) . . . a court may award attorneys’ fees under section 285.” Section 285, in turn, provides “[t]he court in exceptional cases may award reasonable attorney fees to the prevailing party.” The “paragraph (2)” infringement specified in § 271(e)(4) is the filing of an ANDA.  

Id.  

1920. Yamanouchi, 231 F.3d at 1346, 56 U.S.P.Q.2d (BNA) at 1646 (explaining that a submission of an ANDA can qualify as an infringement if the purpose of the ANDA is to gain approval to market or manufacture the generic drug).

1921. Id. at 1347, 56 U.S.P.Q.2d (BNA) at 1646.  

An ANDA filing by its very nature is a ‘highly artificial act of infringement,’ therefore, the trial court need not have elevated the ANDA certification into a finding of willful infringement . . . Rather, Danbury’s misconduct in filing a wholly unjustified ANDA certification and misconduct during the litigation that followed warranted the district court’s finding that this case was exceptional.

Id.  

1922. See id. at 1347, 56 U.S.P.Q.2d (BNA) at 1647 (noting that a paragraph IV filing requires “a certification, in the opinion of the applicant and to the best of his knowledge, [that] each patent . . . for which the applicant is seeking approval . . . is invalid.”) (quoting 21 U.S.C. § 355 (j)(2)(A)(vii)(IV)).  

1923. See id., 56 U.S.P.Q.2d (BNA) at 1647.

1924. See 21 U.S.C. § 355(j)(2)(B)(ii) (requiring that the person filing for an ANDA send notice to the patentee of “the factual and legal basis” of invalidity).
belief in invalidity, suffered “similar weaknesses,” viz. that it did not present a prima facie case of invalidity, and made “no reference to famotidine’s potency, safety and lack of side effects, among other distinguishing properties accompanying its unusually high activity;” that Danbury’s expert could not tell from famotidine’s chemical structure whether it would be toxic and could not predict its freedom from side effects or its potency; and that, “when Danbury proceeded in the face of these weaknesses, its certification amounted to baseless and unjustified misconduct.” According to the court, Danbury, in certifying the alleged invalidity, had disregarded its duty to exercise due care.

An additional factor that the court noted, in stating that the district court must look to the totality of the circumstances in determining a case to be exceptional, was Danbury’s introduction into evidence of a 1993 legal opinion from its patent attorney containing a basic chemistry error that was critical to the conclusion of obviousness. Danbury’s expert was forced to concede the flat incorrectness of the opinion due to that error. All in all, the court agreed that the district court properly found Danbury’s ANDA filing “without adequate foundation and speculative at best.”

The question remains whether Yamanouchi will have a chilling effect on generic drug ANDA filers who seek to challenge the validity of a patent covering the proprietary drug product, consistent with the Hatch-Waxman Act’s underlying philosophy. At a minimum, Yamanouchi cautions generic-drug manufacturers to put a rigorous case together before starting down the ANDA road, lest they risk paying the other side’s legal bills.

In Hoffman-La Roche, Inc. v. Invamed, Inc., Syntex manufactured a drug it sold under the TICLID brand. Syntex held patents both on the drug itself and on the process of making it. Hoffmann-La Roche (Roche) was the exclusive distributor of TICLID. Torpharm and other generic drug manufacturers filed an ANDA to the generic

1925. Yamanouchi, 231 F.3d at 1347, 56 U.S.P.Q.2d (BNA) at 1647.
1926. Id., 56 U.S.P.Q.2d (BNA) at 1647.
1927. See id., 56 U.S.P.Q.2d (BNA) at 1647 (concluding that the district court’s finding that Danbury’s certification was baseless was not clearly erroneous).
1928. See id., 56 U.S.P.Q.2d (BNA) at 1647 (pointing out that Danbury’s expert admitted at trial that the lawyer’s “interpretation of the [‘408] patent was patently incorrect and that the [‘408] patent nowhere described the formulation relied upon by [the lawyer]”) (quoting Yamanouchi Pharm. Co., Ltd. v. Danbury Pharmacal, Inc., 21 F. Supp. 2d 366, 376 (S.D.N.Y. 1998)).
1931. See id. at 1361, 54 U.S.P.Q.2d (BNA) at 1847.
form of the TICLID brand drug. Roche and Syntex then sued, alleging that in manufacturing the generic product, the companies used a process that infringed various Syntex patents.

In the pleadings, Syntex and Roche alleged that before suit they sought information from each defendant as to how the generic drug material was being made, to “assist Roche and Syntex in confirming whether each defendant’s synthesis . . . is within the lawful scope of one or more claims of the Syntex Patents.” They also alleged that while the generic manufacturers provided samples, no defendant provided any process information. Further, the plaintiffs pled that there was no analytical technique which could be used to determine if the generic drug was made by use of the claimed process, and that, in the absence of that information, Syntex and Roche were forced to “resort to the judicial process and the aid of discovery to obtain under appropriate judicial safeguards such information as is required to confirm their belief and to present to the court evidence that each . . . defendant infringes one or more claims of the Syntex Patents.”

A pre-filing attempt to reverse-engineer the process of manufacture from the samples was unsuccessful.

After suit was filed, the parties entered into settlement discussions, which led to the execution of a non-disclosure agreement and Torpharm’s disclosure to Roche and Syntex of the process used to make its generic drug. Roche and Syntex concluded that the process did not infringe the process patents, and they voluntarily dismissed the case.

Torpharm then moved for an award of sanctions under Rule 11,
and for attorneys’ fees under 35 U.S.C. § 285, asserting that the suit was baseless and that Roche and Syntex had brought the suit in bad faith. The district court denied sanctions and attorneys’ and baseless-suit fees. The court denied Rule 11 sanctions because, although Roche’s and Syntex’s “pre-filing inquiry with respect to defendant Torpharm was unsuccessful, it was reasonable.” The district court similarly refused to find the case “exceptional” under 35 U.S.C. § 285, because Torpharm had not met its “burden of establishing that this is an exceptional case. . . . Even if plaintiff’s pre-suit investigation was unreasonable, an unreasonable investigation alone does not demonstrate that the ensuing litigation was vexatious, unjustified, or brought in bad faith.”

Torpharm appealed, and the Federal Circuit affirmed. Reviewing the refusal to award Rule 11 sanctions under an abuse-of-discretion standard, the court agreed with the district court that Roche’s and Syntex’s prefiling inquiry with respect to Torpharm was reasonable, and that their attempts to ascertain whether the processes used were infringing were the best they could manage under the circumstances. 

Torpharm’s position was that, because Roche and Syntex were unable to obtain and set forth in their complaint facts showing infringement, they should not have filed suit at all. Although Hoffman and Syntex “could have assumed non-infringement” when “[a]t the end of the plaintiff’s pre-suit investigation it had neither evidence of infringement nor non-infringement . . ., that they chose to file suit and engage in discovery instead does not subject them to sanctions,” as the district court had noted. The Federal Circuit stated that if Torpharm had initially disclosed the manufacturing process under the cover of a nondisclosure agreement, as it subsequently did, Torpharm “could have avoided this litigation and the expenses incurred in defending it.” The court remarked that “[i]t is difficult to imagine what else Roche and Syntex could have


1941. See id.
1942. 213 F.3d at 1362, 54 U.S.P.Q. 2d (BNA) at 1848.
1944. See id. at 1363, 54 U.S.P.Q.2d (BNA) at 1849 (“[A]n appellate court should apply an abuse-of-discretion standard in reviewing all aspects of a district court’s rule 11 determination.”) (quoting Cooter and Gell v. Hartmarx Corp., 496 U.S. 384, 405 (1990)).
1945. See id., 54 U.S.P.Q.2d (BNA) at 1849 (rejecting Torpharm’s position and noting that Torpharm did not point to any other options, other than filing suit, available to Roche and Syntex).
done to obtain facts relating to Torpharm’s alleged infringement of their process patents.  

Turning to 35 U.S.C. § 285, the Federal Circuit reviewed the district court’s refusal to find the case exceptional as a factual finding, reviewable under the clear-error standard.  The district court found that Torpharm had not carried its burden to show, by clear and convincing evidence, that Roche and Syntex’s suit was “vexatious, unjustified or brought in bad faith.” The court stated that rejection of Torpharm’s Rule 11 claim, based on affirmance of the district court’s ruling that Roche and Syntex made a reasonable pre-filing inquiry, also supported the district court’s finding that the case was not exceptional.  Torpharm presented no facts showing that when Roche and Syntex filed their complaint, they had reason to believe that their patents did not cover the processes used to make Torpharm’s generic drug. Absent that, the court found no reason to overturn the district court’s conclusion of no bad faith or baseless claims.  

Contrasted with Yamanouchi, Hoffman-La Roche demonstrates that it is far better to be the patentee than an ANDA-filing generic drug manufacturer, at least for purposes of Section 285.  Hoffman-La Roche stands for the proposition that it is permissible to go forward and sue for infringement of a process patent where analysis will not disclose the process, or where no other information about the process is available, and the patentee has not concluded that the process is not being used. In these circumstances, not knowing one way or the other is sufficient to satisfy Rule 11 and avoid an exceptional-case finding under 35 U.S.C. § 285, even if time, events, and later information prove the accusation of infringement wrong, and certainly so where, as in Hoffman-La Roche, the patentee has tried but failed to obtain relevant information from the accused infringer.  

In Tate Access Floors, Inc. v. Maxcess Technologies, Inc., the jury returned a willful-infringement verdict, but the district court denied Tate Access’s motion for attorneys’ fees, leading to a cross-appeal of that denial. The Federal Circuit vacated in part the district court’s  

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1949. See id. at 1365, 54 U.S.P.Q.2d (BNA) at 1850 (noting that § 285 provides for the award of attorneys’ fees to prevailing parties in exceptional cases, and that the district court’s determination of whether a case is exceptional is a factual finding only reviewed for clear error).  
1950. Id., 54 U.S.P.Q.2d (BNA) at 1850.  
1951. See id., 54 U.S.P.Q.2d (BNA) at 1850.  
1952. See id. at 1365-66, 54 U.S.P.Q.2d (BNA) at 1850.  
denial of Tate Access’s motion for damages and attorneys’ fees and remanded without reaching the merits of the parties’ arguments relating to attorneys’ fees. In view of the jury’s finding of willful infringement, the district court abused its discretion in refusing to award attorneys’ fees, because it failed to articulate any reasons for its refusal. The case was returned to the district court with specific instructions for that court to consider whether Maxcess had obtained a competent opinion of counsel or otherwise exercised due care, and whether there was a reasonable basis for concluding the accused floor panel was non-infringing.

In *Embrex Inc. v. Service Engineering Corp.*, the jury returned a verdict of willful infringement in an infringement action that arose after settlement of earlier litigation. The jury, in a special verdict, found that Service Engineering had acted in bad faith and had breached the agreement, which supported the award of attorneys’ fees. The district court awarded attorneys’ fees under the terms of the settlement agreement as well as under 35 U.S.C. §§ 284 and 285. Service Engineering appealed, arguing that the district court erred because the award of fees was based in part on the willfulness verdict, which was in turn flawed because of an erroneous jury instruction. The Federal Circuit affirmed the district court’s award of attorneys’ fees in accordance with the terms of the agreement.

The court likewise found no clear error in the district court’s finding of willful infringement by Service Engineering. See *id.* at 972, 55 U.S.P.Q.2d (BNA) at 1522 (noting but not relying on Tate Access’ argument that, because Maxcess willfully infringed and engaged in vexatious litigation, Tate Access was entitled to increased damages and attorneys’ fees). See *id.* at 1522 (noting that while an express jury finding of willful infringement does not automatically dictate that attorneys’ fees and enhanced damages will be awarded, after such a finding the lower court must provide reasons for refusing to award such fees).

See *id.* at 1347, 55 U.S.P.Q.2d (BNA) at 1163. See *id.* at 1350, 55 U.S.P.Q.2d (BNA) at 1165 (noting that while the court requires proof of willfulness by clear and convincing evidence, the jury was instructed that willfulness could be proved by the lower standard of preponderance of the evidence). Embrex maintained that Service Engineering had waived its right to appeal the instruction for failure to object at trial. The court determined that Service Engineering had not waived its appeal, as the jury instructions had been “plain error.” See *id.* at 1350-51, 55 U.S.P.Q.2d (BNA) at 1165-66 (relying on Fourth Circuit precedent allowing appeal of jury instructions in the absence of a timely objection only when there is “plain error”) (citing *Rice v. Community Health Ass’n*, 203 F.3d 283, 286 (4th Cir. 2000)).

See *Embrex*, 216 F.3d at 1351, 55 U.S.P.Q.2d (BNA) at 1166 (noting that even if the SEC’s argument that the fee award was erroneous because it was based on erroneous jury instructions was valid, the settlement agreement provided for attorneys’ fees and costs).
that the case was exceptional, under 35 U.S.C. § 285, nor an abuse of discretion in setting the amount of attorneys’ fees on that ground as well.\textsuperscript{1962} In Zodiac Pool Care, Inc.\textit{ v. Hoffinger Industries Inc.},\textsuperscript{1965} Hoffinger cross-appealed the district court’s refusal to award attorneys’ fees as to the claims surrounding the ‘068 patent, which Hoffinger had been found not to infringe on summary judgment.\textsuperscript{1964} The district court denied fees on the ground that Zodiac and its expert had a good-faith belief that Hoffinger infringed through sale of its accused pool cleaners.\textsuperscript{1965} The Federal Circuit affirmed that denial as well within the district court’s discretion, relying on the record evidence that Zodiac had hired an expert and secured an opinion of infringement before filing suit.\textsuperscript{1966} The district court had heard and witnessed testimony from the expert during trial, and had the opportunity to observe his demeanor. Under those circumstances, the court concluded, “it cannot be said that the ‘record contains no basis on which the district court rationally could have made its decision or . . . [that] the judicial action is arbitrary, fanciful or clearly unreasonable.’”\textsuperscript{1967}

In Speedplay, Inc.\textit{ v. Bebop Inc.},\textsuperscript{1968} Speedplay, the licensee of several clipless bicycle pedal and cleat patents, sued Bebop, the manufacturer of a competing clipless pedal system, for patent and trademark infringement. Bebop counterclaimed, seeking a declaration that the patents were invalid. The ‘894 Speedplay patent was found invalid because the invention was “on sale” more than one year before the patent was filed, but the district court denied Bebop’s motion for attorneys’ fees.\textsuperscript{1969} Bebop appealed the denial of fees,

\begin{itemize}
  \item \textsuperscript{1962} \textit{See id.}, 55 U.S.P.Q.2d (BNA) at 1166 (noting that the SEC did not carry its burden of showing that the district court committed clear error).
  \item \textsuperscript{1963} 206 F.3d 1408, 54 U.S.P.Q.2d (BNA) 1141 (Fed. Cir. 2000).
  \item \textsuperscript{1964} \textit{See id.} at 1410-13, 54 U.S.P.Q.2d (BNA) at 1143-45 (reiterating the district court’s finding on summary judgment that Hoffinger did not literally or under the doctrine of equivalents (DOE) infringe the ‘068 patent, and did not literally infringe the ‘382 patent). The case proceeded to trial on the issue of infringement of a third patent, the ‘382 patent, and the jury found it was willfully infringed under the DOE. Both parties then moved for a JMOL, and the district court, granting Hoffinger’s motion, found that he had not infringed the ‘382 patent. \textit{See id.} at 1410, 54 U.S.P.Q.2d (BNA) at 1143.
  \item \textsuperscript{1965} \textit{See id.} at 1413, 54 U.S.P.Q.2d (BNA) at 1145.
  \item \textsuperscript{1966} \textit{See id.} at 1417, 54 U.S.P.Q.2d (BNA) at 1148 (utilizing an abuse of discretion standard of review).
  \item \textsuperscript{1967} \textit{Id.}, 54 U.S.P.Q.2d (BNA) at 1148 (quoting Cambridge Prods. Ltd. v. Penn Nutrients, Inc., 962 F.2d 1048, 1050 (Fed. Cir. 1992)).
  \item \textsuperscript{1968} 211 F.3d 1245, 53 U.S.P.Q.2d (BNA) 1984 (Fed. Cir. 2000). The patents at issue concerned clip-less bicycle pedal and cleat assemblies, which allow bicyclers to secure their feet to the pedals and transmit more power to the wheels by applying both pushing and pulling force. \textit{See id.} at 1248, 53 U.S.P.Q.2d (BNA) at 1985-86.
  \item \textsuperscript{1969} \textit{See id.} at 1260, 53 U.S.P.Q.2d (BNA) at 1986.
\end{itemize}
urging that Speedplay had acted inequitably and had failed to conduct an adequate investigation before bringing suit, making the defeated infringement accusation under the ‘894 patent rise to the level of an exceptional case under 35 U.S.C. § 285.\textsuperscript{1970} The Federal Circuit affirmed the district court’s ruling that Speedplay did not engage in inequitable conduct. As to the inadequate investigation, although the district court’s “on sale” invalidity ruling was based on an invoice Speedplay delayed in producing at trial, the court concluded that this conduct was less extreme than other cases where fees were awarded under Section 285.\textsuperscript{1971}

In \textit{Automated Business Companies, Inc. v. NEC America, Inc.},\textsuperscript{1972} the district court granted summary judgment of non-infringement, after which NEC moved for sanctions against ABC, the plaintiff-patentee. NEC Corp. was the parent of NEC USA, which in turn was the parent of NEC America, the defendant. In a meeting between NEC Corp. personnel and ABC’s counsel, ABC described its basis for alleging infringement: the description of the NEFAX 790 unit in a facsimile machine buyer’s guide.\textsuperscript{1973} NEC explained that the information in the guide was incorrect and showed ABC why the new NEC product, the FAX 791, did not infringe.\textsuperscript{1974} After the meeting, ABC stipulated that none of the accused devices, the original units and the new FAX 791, infringed. When asked to dismiss the case with prejudice, ABC refused, proposing a dismissal without prejudice or that discovery continue to determine if any other NEC products infringed.\textsuperscript{1975}

NEC America moved for summary judgment of non-infringement on the old and new units. ABC admitted non-infringement but maintained that the action should remain docketed for ABC to determine if any other product infringed. The district court granted

\textsuperscript{1970} See \textit{id.}, 54 U.S.P.Q.2d (BNA) at 1986 (noting that Bebop contended that it incurred unnecessary legal costs preparing for a trial on a patent that was subsequently found to be invalid).

\textsuperscript{1971} See \textit{id.}, 53 U.S.P.Q.2d (BNA) at 1995 (distinguishing Eltech Systs. Corp. v. PPG Indus., Inc., 903 F.2d 805, 810, 14 U.S.P.Q.2d (BNA) 1969 (Fed. Cir. 1990) (noting that a fee award was affirmed because the trial court had evidence that the patentee knew that its suit was unfounded). The court also distinguished \textit{Judin v. United States}, 110 F.3d 780, 784, 42 U.S.P.Q. (BNA) 1300, 1304 (Fed. Cir. 1997) (explaining that an imposition of sanctions was upheld because the patentee had not obtained a sample of the allegedly infringing device before bringing an infringement action) and Hughes v. North Am. Inc., 724 F.2d 122, 124, 220 U.S.P.Q.2d (BNA) 707, 709 (Fed. Cir. 1984) (noting that a fee award was upheld because the patentee had resisted the defendants’ efforts to have the patent declared invalid despite the fact that the patentee had widely sold the product for more than two years before the date of the patent application).


\textsuperscript{1973} See \textit{id.} at 1354, 53 U.S.P.Q.2d (BNA) at 1602.

\textsuperscript{1974} See \textit{id.}, 53 U.S.P.Q.2d (BNA) at 1602.

\textsuperscript{1975} See \textit{id.}, 53 U.S.P.Q.2d (BNA) at 1602.
NEC America’s motion for summary judgment, and NEC America moved for sanctions, which the district court granted under 35 U.S.C. § 285. 1976 The district court found that circumstances demonstrated that ABC’s litigation was baseless, and awarded fees, including fees paid by NEC America’s grandparent company, NEC Corp. 1977 On appeal, ABC did not challenge the finding of the case as exceptional, or the discretionary decision to award fees, but did question the amount of the fees awarded. ABC’s point was that only the fees paid by the prevailing party NEC America, not NEC Corp., should have been included in the award. 1978 The Federal Circuit affirmed, finding that for purposes of the attorneys’ fees award, the degree of participation or control of NEC Corp. was not a critical factor. 1979 In determining the compensatory quantum of an award under Section 285, the Federal Circuit noted that a trial court should not be, and in the past has not been, limited to reimbursement of only the actual amount paid by the injured named party. 1980 Where a company’s closely related grandparent company assisted in the defense of an infringement action, and assumed some of the legal expenses, that company is entitled to an award of attorneys’ fees, even though that company was not a named party. 1981

D. Pre-Judgment Interest

In C&F Packing Co. v. IBP, Inc. 1982 the plaintiff brought suit against a competitor and restaurant chain for patent infringement and various torts, including misappropriation of trade secrets. 1983 The district court found the patent in suit invalid under 35 U.S.C. § 102(b) as being on sale more than one year before the patent-application date, and dismissed the trade-secret allegations against

1977. See id., 53 U.S.P.Q.2d (BNA) at 1602 (noting that the district court rejected NBC’s first two bases for sanctions, but found against ABC on the third, the exceptional case finding).
1979. See id., at 1355-56, 53 U.S.P.Q.2d (BNA) at 1603 (reviewing the award under an abuse of discretion standard and noting that NEC Corp. was a participant in settlement meetings and had paid ABC’s legal fees).
1981. See id. at 1356, 53 U.S.P.Q.2d (BNA) at 1603 (affirming the full attorneys’ fees award after finding no abuse of discretion or other error in the district court’s award).
1983. See id. at 1301, 55 U.S.P.Q.2d (BNA) at 1867.
Pizza Hut on statute-of-limitations grounds. The trade-secret claim against IBP proceeded to trial. The jury awarded C&F Packing $10.9 million in unjust-enrichment damages, and $5.1 million in prejudgment interest. IBP moved for JMOL and, after its motion was denied, the Federal Circuit affirmed the damages award, but reversed the award of prejudgment interest under controlling Illinois law. Under Illinois law, a party may generally recover prejudgment interest only by express agreement, by statutory authorization, or if it is “warranted by equitable considerations.” There being no express agreement or statutory basis for interest, IBP urged that the equity exception could not be justified because IBP had no fiduciary or confidentiality obligations to C&F. The court disagreed. The court also rejected C&F’s attempt to rely upon patent and trademark cases in support of the prejudgment interest award on the ground that those cases have no application to trade-secret cases.

E. Permanent Injunctions

The court’s year 2000 cases addressing permanent injunctions stayed the traditional course: if the manufacturing patentee wins against an accused infringer, the patentee is (barring extraordinary circumstances) entitled to a permanent injunction.

In Tate Access Floors, Inc. v. Maxcess Technologies Inc., the district court entered judgment following a jury verdict of willful infringement in favor of Tate Access. Tate Access cross-appealed from the denial of its motion for entry of a permanent injunction. The court concluded that because the jury’s finding of literal infringement was supported by substantial evidence, and because Maxcess had represented that it would not oppose the entry of a permanent injunction, the district court’s refusal to order a permanent injunction was an abuse of discretion, and on remand ordered the district court to grant the requested injunction.

1984. See id. at 1300-01, 55 U.S.P.Q.2d (BNA) at 1867.
1985. See id. at 1301, 55 U.S.P.Q.2d (BNA) at 1867-68.
1986. See id. at 1305, 55 U.S.P.Q.2d (BNA) at 1871 (noting that the district court had awarded the prejudgment interest “as a matter of fairness and equity”).
1989. See id. at 1305, 55 U.S.P.Q.2d (BNA) at 1871 (noting that the cases relied on by the district court involved parties who had fiduciary relationships).
1992. See id. at 971-72, 55 U.S.P.Q.2d (BNA) at 1522 (noting that Tate Access also argued that there was no strong public policy against an injunction).
In *U.S. Valves, Inc. v. Dray*, the district court, after a bench trial, found that Dray had violated his license agreement with U.S. Valves and permanently enjoined Dray from selling valves covered under the license agreement. The license agreement related to valves covered by Dray's '282 and '514 patents for internal piston valves, which regulate the flow of molten plastic in an injection-molding process. On appeal, Dray contended that the injunction awarded more relief than was justified by the license agreement because it permanently enjoined Dray from selling the valves covered by the license agreement. The Federal Circuit disagreed, concluding that the injunction, properly understood, enjoined only sales of valves covered under the license agreement according to the license's terms. The life of the injunction thus spanned only the life of the license terms, or until expiration of the patents. Once the patents expire, the court said, the license protection of the patented valves lapses, and the injunction ends. The wording of the injunction, under the terms of the license, thus gave fair and precise notice of what was covered, and of what the injunction actually prohibited. Because the district court's injunction was neither indefinite nor effective in perpetuity, it was proper in law.

### F. Post-Injunction Infringement/Contempt

In *Stryker Corp. v. Davol, Inc.*, the fact that Davol made post-permanent injunction sales of devices that were allegedly modified to avoid infringement was at issue. Davol received an oral opinion of counsel, committed to writing eight days before entry of the permanent injunction, advising that the modified Hydro-Surg Plus

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1995. See id. at 1376, 54 U.S.P.Q.2d (BNA) at 1840 (noting that the injunction stated that "Dray is permanently enjoined from selling the dry valve (including the continuation-in-part valves) covered under the license agreement between Dray and U.S. valves.").
1996. See id., 54 U.S.P.Q.2d (BNA) at 1840 (noting that upon expiration of the patents, the valves are no longer "covered by the license agreement").
2000. See id. at 1256, 57 U.S.P.Q.2d (BNA) at 1136 (remarking that the district court had entered a permanent injunction against Davol's infringement on December 23, 1998, and within one week, Davol was selling modified versions of the irrigator). Davol's modifications included changing the method by which the motor was attached, replacing a spike in the original design with a narrower spike, and adding clips used to attach the irrigator to an IV pole. See id., 57 U.S.P.Q.2d (BNA) at 1136.
suction irrigator did not infringe the ‘402 patent. The opinion noted, however, that Stryker might assert infringement under the doctrine of equivalents, that sales of the modified irrigator would likely be said to violate any permanent injunction that might be issued, and that Stryker might move to hold Davol in contempt. The opinion further stated that it was more likely than not that the district court would consider allegations of infringement by the modified irrigator in a contempt proceeding, and that, while it could not state with certainty that there was no risk whatsoever, the risk in selling the revised irrigator was “well within acceptable limits.”

The district court found the new irrigator insubstantially modified from the enjoined design after entry of the injunction, and awarded attorneys’ fees, costs, and reasonable royalties for the post-injunction infringing sales, tripling those royalties for willful infringement. Davol appealed, and the court, applying the abuse-of-discretion standard of appellate review, affirmed both the contempt finding and the awards of damages, attorneys’ fees, and costs.

Reviewing the district court’s decision to proceed via a contempt hearing, the Federal Circuit reasoned that the differences between the original infringing product and the redesigned irrigator were not so marked that a wholly new infringement case was warranted. The Federal Circuit found contempt proceedings were appropriate because the new device did not raise “substantial open issues” of infringement. In the contempt proceedings, Stryker submitted evidence, including unrefuted anecdotal evidence that hospitals using the modified irrigator were not using the modification that allegedly caused the new irrigator to avoid infringement. Davol also conceded that it had not investigated whether customers would actually follow the instructions provided with the product to use the modifications necessary to avoid infringement. The court

2003. *See id.* at 1256-57, 57 U.S.P.Q.2d (BNA) at 1136 (detailing the evidence Davol offered when ordered to show cause that he was not in contempt of the injunction). Davol asserted that adding clips to the original design was a substantial change, and supported his assertion with affidavits from medical professionals which stated that the added clips were necessary for the new design. *See id.* at 1257, 57 U.S.P.Q.2d (BNA) at 1136. Stryker countered this evidence, pointing to several occasions when hospitals had used the new design without the clips. *See id.*, 57 U.S.P.Q.2d (BNA) at 1136.
2004. *See id.* at 1259-60, 57 U.S.P.Q.2d (BNA) at 1139 (noting that Davol appealed the award of enhanced and supplemental damages, and Stryker cross-appealed the District Court’s denial of attorneys’ fees after it found the case to be exceptional).
concluded that the district court had thus properly found contempt. The court also found no abuse of discretion in the district court’s award of treble damages, attorneys’ fees and costs, particularly considering the conclusory nature of the opinion of counsel used by Davol to justify selling the revised device, and the minor changes made to the original device.

V. ALTERNATE SOURCES OF LIABILITY

A. Licenses/Construction and Validity

The court considered several license issues in its decisions rendered in 2000. In Texas Instruments, Inc. v. Tessera, Inc., Texas Instruments (TI) sought to enjoin Tessera from continuing to participate in a U.S. International Trade Commission (ITC) investigation that Tessera had commenced against TI and Sharp, on the basis of a license agreement between TI and Tessera. The license provided that “if such disputes, controversies, claims or differences cannot be settled between the parties, any litigation relating to this Agreement shall take place in California.” The Federal Circuit, reversing the district court, held that “litigation,” as used in the license agreement, included ITC proceedings, and reversed the district court’s conclusion on the likelihood-of-success prong of the preliminary-injunction analysis.

In Dow Chemical Company v. United States, the government was licensed to use Dow’s subsidence-control-material patents, with royalty payments to be made as stated in the agreement. In 1975,
Dow requested an accounting of royalties due from the government under the license, and negotiations continued during the remainder of 1975 and into 1976. In December 1976, the government informed Dow that it had not, in fact, practiced the covered invention, and as a result, no royalty payments were due. Dow asked the government to reconsider. In 1978, the government told Dow that there were “seriously litigable issues” as to validity, infringement and the viability of the license. The government stated that no royalty payments would be made, that this was the government’s final decision, and that no further reconsideration would occur. Five years later, in January 1983, Dow filed suit seeking a reasonable royalty for the government’s infringement of the licensed patent, and in the alternative sought damages for breach of the license. By letter dated January 10, 1985, Dow told the government it was terminating the license effective as of the date of the breach of contract or the date of notice, whichever was earlier.

The Court of Federal Claims found that the patent was not invalid and was therefore infringed by the government. Consequently, the government’s non-payment of royalties and repudiation of the license constituted material breaches of the license that warranted voiding the contract ab initio—leading to an award of patent damages on the basis of unlicensed infringement, instead of breach-of-contract damages. The government appealed the Court of Federal Claims decision, including the judgment that the license was void ab initio and the method of assessing damages.

On appeal, the Federal Circuit held that although the government had repudiated the license, the contract should not be treated as rescinded, or that rescission should be allowed as a remedy. The court reversed the determination that the license was void ab initio.

Applying basic contract law principles, however, it found that the government’s material breach and repudiation of the license gave

25% of a reasonable commercial rate to be agreed upon by the parties.

See id., 56 U.S.P.Q.2d (BNA) at 1015.


2017. See id. at 1337, 56 U.S.P.Q.2d (BNA) at 1015 (noting that Dow again asked the government to reconsider its decision regarding royalty payments).


2021. See Dow, 226 F.3d at 1338, 56 U.S.P.Q.2d (BNA) at 1016 (noting that the government also appealed the judgment as to the validity and infringement of the patent).

Dow the right to either terminate the license or to continue to treat it as outstanding. Dow’s letter of January 1985 effected a termination of the license, which confirmed the propriety of calculating damages under Section 1498 only for a period subsequent to the termination. For the period prior to termination, the provisions of the agreement were applicable in calculating damages for breach of contract. Following termination, damages under Section 1498 were proper. The court remanded to the Court of Federal Claims for a proper recalculation of the damages.

The Federal Circuit decided several other license-related cases, including Prima Tek II, LLC v. A-Roo Company, Speedplay, Inc. v. Bebop, Inc., and Ajinomoto Co. v. Archer-Daniels-Midland Co. Each of these cases addressed issues related to standing to sue and are discussed earlier in this Area Summary.

B. Trade Secrets

The Federal Circuit decided two cases involving significant issues of trade secret misappropriation in 2000. In C&F Packing Co. v. IBP Inc., C&F sued IBP and Pizza Hut for trade-secret misappropriation involving a process for making and freezing precooked sausage for pizza toppings. Precooked sausage made under the protected process had the appearance, taste and other characteristics of freshly cooked sausage. In 1985, Pizza Hut agreed to buy C&F’s precooked sausage, on the condition that C&F divulge its secret.

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2023. See id. at 1345, 56 U.S.P.Q.2d (BNA) at 1023 (citing the government’s denial to pay royalties and its challenge to the legality of the license, which made the lack of a termination clause in the license immaterial).


Whenever an invention described in and covered by a patent of the United States is used or manufactured by or for the United States without a license of the owner thereof or lawful right to use or manufacture the same, the owner’s remedy shall be by action against the United States in the United States Court of Federal Claims for the recovery of his reasonable and entire compensation for such use and manufacture.

Id.

2025. See Dow, 226 F.3d at 1347-48, 56 U.S.P.Q.2d (BNA) 1024-25 (noting that the method used by the Court of Federal Claims to calculate damages was too speculative).

2026. See id. at 1347-48, 56 U.S.P.Q.2d (BNA) at 1025 (asserting that the Court of Federal Claims should have used a more conventional and proven method to compute damages).


2030. See supra Part IA.2.


2032. See id. at 1299, 55 U.S.P.Q.2d (BNA) at 1866 (noting that C&F’s precooked sausage exceeded competitors’ in price and quality).
process to several other Pizza Hut suppliers. In exchange for the
process disclosure, Pizza Hut promised to purchase a large quantity
of precooked sausage from C&F. C&F disclosed the process under
confidentiality agreements with those other companies. By 1986,
Pizza Hut’s other suppliers had learned the C&F process, and Pizza
Hut told C&F it would not purchase any more sausage without drastic
price reductions.

In 1989, Pizza Hut started talks with IBP about purchasing
precooked sausage pizza toppings. Pizza Hut furnished IBP, under
a confidentiality agreement, information about C&F’s sausage
process via documents and personal discussions with IBP employees.
IBP also hired a former supervisor in C&F’s sausage plant as a
production superintendent, who used information from C&F while
helping IBP refine its process.

In its Second Amended Complaint, filed in May 1993, C&F added,
inter alia, trade-secret misappropriation claims against Pizza Hut and
IBP. The district court dismissed C&F’s misappropriation claim
against Pizza Hut in January 1994, on the basis of a statute-of-
limitations defense: the court determined that Kansas law, which had
a 3-year statute of limitations, and not Illinois law, which had a 5-year
statute of limitations, controlled. C&F’s trade-secret claim against
IBP proceeded to trial. In December 1998, a jury determined that
IBP had misappropriated C&F’s trade secrets, awarding $10.9 million
for unjust enrichment and $5.1 million in prejudgment interest.

The district court denied IBP’s JMOL motion, and IBP appealed.
Applying Illinois state court standards for JMOL, as is required in
the Seventh Circuit, the Federal Circuit affirmed the denial with
respect to the trade-secret verdict. IBP contended that for C&F to
show it had trade secrets that could be misappropriated, it had to

2033. Pizza Hut’s ostensible motivation was to ensure that back-up suppliers were available. See id., 55 U.S.P.Q.2d (BNA) at 1866.
2035. See id. at 1299, 55 U.S.P.Q.2d (BNA) at 1866-67 (observing that C&F had invested $4.5 million in a new plant for Pizza Hut).
2036. See id. at 1300, 55 U.S.P.Q.2d (BNA) at 1867.
2037. See id., 55 U.S.P.Q.2d (BNA) at 1867.
2038. See id. (noting that claims against Pizza Hut also included fraud, breach of fiduciary duty, unfair competition, unjust enrichment, and tortious interference with business expectancy).
2039. See C&F Packing, 224 F.3d at 1300, 55 U.S.P.Q.2d (BNA) at 1867-68 (finding that C&F should have known of the misappropriation as early as March, 1986).
2040. See id., 55 U.S.P.Q.2d (BNA) at 1867.
2041. See id. at 1301, 55 U.S.P.Q.2d (BNA) at 1868-69 (stating that C&F’s claims would still be time barred under Kansas’s five-year statute of limitations).
2042. See id. at 1301-02, 55 U.S.P.Q.2d (BNA) at 1868.
corroborate the existence of the trade secret [process] with evidence beyond the testimony of interested parties, basing this theory on the “analogous context” of patent-priority contests. The court rejected this analogy on the grounds that patent-law requirements do not set the standard for detecting the existence of a trade secret; rather, the trade-secret law of the relevant state—here, the Illinois Trade Secrets Act 2043 and Illinois common law—controls in misappropriation cases. 2044 The court then concluded that, under Illinois law, the jury was presented with substantial evidence that C&F possessed trade secrets. 2045

Addressing damages, IBP complained that the damages finding did not properly account for IBP’s costs, and assumed IBP would make no profit without using the misappropriated trade secrets. Opposing expert testimony was offered to the jury on the effect of the misappropriated trade secrets on profits. The jury chose to believe C&F’s expert, with IBP’s profits being calculated by the jury from IBP’s own financial reports and reasonably extrapolated for those years where the figures were not available. 2046 A jury instruction expressly directed the jury to deduct IBP’s costs, and the record did not show that the jury ignored that instruction. As a result, the panel concluded that there was no manifest error or unreasonableness in the jury’s assessment of damages. 2047

In Vanmoor v. Wal-Mart Stores Inc. 2048 Vanmoor brought suit for infringement of the ‘331 patent, directed to a construction for a cartridge used to dispense caulking compound, and further alleged misappropriation of trade secrets relating to the cartridge. The district court, on summary judgment, found that the ‘331 patent was invalid under Section 102(b) of the Patent Act, and that no trade secrets had been misappropriated because Vanmoor had failed to present anything beyond conclusory allegations that the manufacturers had violated their confidentiality agreements with

2044. See C&F Packing, 224 F.3d at 1302, 55 U.S.P.Q.2d (BNA) at 1868-69 (mentioning that both Illinois statutory law and common law emphasize the characteristic of secrecy when defining “trade secret”).
2045. See id. at 1303, 55 U.S.P.Q.2d (BNA) 1869 (stating that the evidence presented fit the six-factor test for determining the existence of a trade secret).
2046. See id. at 1304, 55 U.S.P.Q.2d (BNA) at 1870-71 (noting that under Illinois law, “[d]amages can include both the actual loss caused by misappropriation and the unjust enrichment caused by misappropriation that is not taken into account in computing actual loss”).
2047. See C&F Packing, 224 F.3d at 1304-05, 55 U.S.P.Q.2d (BNA) at 1871 (holding that the jury’s award of damages was not unreasonable or manifestly erroneous).
The Federal Circuit affirmed the summary judgment of no trade-secret misappropriation, agreeing with the district court that Vanmoor’s conclusory allegations were insufficient to create a genuine issue of material fact. The manufacturers contended that they did not use or disclose any information received from Vanmoor under the confidentiality agreements they entered into with Vanmoor. They supported their position with documentary evidence that the agreements were entered into in October/November 1994 and that the accused products had been manufactured to specifications that remained unchanged since before October 1994.

C. RICO

For the first time, the Federal Circuit in 2000 addressed the application of the federal Racketeer Influenced and Corrupt Organizations (“RICO”) Act to inequitable procurement and enforcement of United States patents. In Semiconductor Energy Laboratories Co., Ltd. v. Samsung Electronics Co. Ltd., Samsung alleged RICO counterclaims under the federal and New Jersey RICO statutes. The district court granted summary judgment dismissing the RICO counterclaims, even although it allowed Samsung’s inequitable-conduct defense with respect to the ‘636 patent, and ultimately found that patent unenforceable due to inequitable conduct. On appeal, the Federal Circuit affirmed the district court’s unenforceability holding, finding no abuse of discretion, and also affirmed the RICO summary judgment ruling.

Samsung’s RICO claim was undeniably creative. It urged that Semiconductor Energy Laboratories (SEL) had committed predicate acts of mail fraud in its prosecution of the ‘636 patent. Samsung alleged that SEL made material misrepresentations to, and withheld

2049. See id. at 1365, 53 U.S.P.Q.2d (BNA) at 1378 (stating that the motion for summary judgment was supported by evidence illustrating that manufacturing specifications and methods of operation were identical to those manufactured, used, and sold).
2050. See id. at 1367, 53 U.S.P.Q.2d (BNA) at 1380.
2051. See id. at 1367, 53 U.S.P.Q.2d (BNA) at 1379-80 (observing that Vanmoor offered no evidence to support a claim for trade secret misappropriation).
2053. 204 F.3d 1368, 54 U.S.P.Q.2d (BNA) 1001 (Fed. Cir. 2000).
2054. See id. at 1372, 54 U.S.P.Q.2d (BNA) at 1002.
2055. See id., 54 U.S.P.Q.2d (BNA) at 1002.
2056. See id. at 1371, 1372, 54 U.S.P.Q.2d (BNA) at 1002-03.
2057. See id. at 1379, 54 U.S.P.Q.2d (BNA) at 1009.
material references from the PTO using the U.S. mail.\textsuperscript{2058} The Federal Circuit stated that it would apply its own law to determine whether SEL’s conduct before the PTO qualified as mail fraud for purposes of the predicate acts required of the federal RICO statute.\textsuperscript{2059} The Federal Circuit held as a matter of law that inequitable conduct before the PTO would not qualify as an act of mail fraud or wire fraud for purposes of the predicate-act requirements, since such inequitable conduct does not “defraud” the government of any “property” as those terms are used in the federal mail or wire-fraud statutes.\textsuperscript{2060} Because the failure of Samsung’s mail-fraud claim meant that it had failed to establish a “predicate act” for purposes of the federal RICO Act, the district court’s grant of summary judgment dismissing Samsung’s federal RICO claims was affirmed.\textsuperscript{2061}

With respect to Samsung’s counterclaim under New Jersey’s state RICO statute, the court was faced with different issues. Although the New Jersey act was modeled after the federal statute, the qualifying predicate acts under the state law were different and arguably broader than the federal predicate acts.\textsuperscript{2062} For example, fraudulent practices and making false statements to PTO examiners in violation of federal penal provisions would satisfy the New Jersey statute.\textsuperscript{2063} SEL contended that summary judgment regarding the New Jersey statute should be affirmed not on substantive grounds, but on the ground of federal preemption.\textsuperscript{2064} The Federal Circuit agreed that the federal patent laws preempted Samsung’s New Jersey RICO counterclaims, consistent with its ruling in \textit{Abbott Laboratories \textit{v. Brennan}},\textsuperscript{2065} that state abuse-of-process claims were preempted by the federal patent laws.

\textit{Semiconductor} is likely to dispose of any further attempt to apply federal (or state) RICO laws to inequitable-conduct-based procurement and enforcement allegations relating to U.S. patents.

\textsuperscript{2058} See \textit{id.}, 54 U.S.P.Q.2d (BNA) at 1009 (stating that under Supreme Court precedent and federal patent law, an issued patent is property).
\textsuperscript{2059} See \textit{id.} at 1380, 54 U.S.P.Q.2d (BNA) at 1009-10.
\textsuperscript{2060} See \textit{id.}, 54 U.S.P.Q.2d (BNA) at 1009-10 (stating that a patent application that has not yet matured into a patent cannot be defined as “government property”).
\textsuperscript{2061} See \textit{Semiconductor}, 204 F.3d at 1380, 54 U.S.P.Q.2d (BNA) at 1010.
\textsuperscript{2062} See \textit{id.} at 1380-81, 54 U.S.P.Q.2d (BNA) at 1010.
\textsuperscript{2063} See \textit{id.} at 1381, 54 U.S.P.Q.2d (BNA) at 1010-11 (discussing Samsung’s argument that the patent statute does not expressly exclude RICO remedies).
\textsuperscript{2064} See \textit{id.}, 54 U.S.P.Q.2d (BNA) at 1010.
\textsuperscript{2065} 952 F.2d 1346, 21 U.S.P.Q.2d (BNA) 1192 (Fed. Cir. 1998).
D. Antitrust

Patent issues often come to the Federal Circuit hand-in-hand with antitrust issues. In its only major pronouncement on the patent/antitrust interface in 2000, the Federal Circuit continued in its view that it, and not the regional circuits, will make antitrust law related to patents, at least in appeals that reach the Federal Circuit.

In *In re Independent Service Organizations Antitrust Litigation*, a group of independent service organizations (“ISOs”) brought suit against Xerox, claiming that its refusal to sell patented parts and copyrighted manuals and to license copyrighted software violated the federal antitrust laws. The district court granted summary judgment for Xerox, and the ISOs appealed. The Federal Circuit affirmed, holding that the ISOs had not raised any genuine issue as to any material fact and that Xerox was entitled to judgment as a matter of law.

The ISOs’ complaint alleged that Xerox violated the Sherman Act by setting prices on its patented parts for ISOs which were higher than the prices charged to end-users of the copiers, which were designed to force ISOs to raise their prices and in turn eliminate ISOs as competitors in the relevant market for high-speed copier and printer servicing. Xerox had counterclaimed for patent and copyright infringement, and contested the ISOs’ antitrust claims as relying on injury caused solely by Xerox’s lawful refusal to sell or license patented parts and copyrighted software. Citing *Nobelpharma AB v. Implant Innovations, Inc.*, the court confirmed that it would apply Federal Circuit law to the ISOs’ antitrust claims arising from Xerox’s refusal to sell its patented parts, but it would apply Tenth Circuit law to the ISOs’ antitrust claim based on Xerox’s refusal to sell or license its copyrighted manuals and software.

Initially, the court noted that intellectual property rights do not confer a privilege to violate the antitrust laws, but at the same time

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2007. See id. at 1324, 53 U.S.P.Q.2d (BNA) at 1853-54 (noting that Xerox counterclaimed for patent and copyright infringement).
2008. See id., 53 U.S.P.Q.2d (BNA) at 1856 (stating that “Xerox’s refusal to sell or license its copyrighted works was squarely within the rights granted by Congress to the copyright holder and did not constitute a violation of the antitrust laws”).
2012. See *In Re Indep. Serv. Orgs. Antitrust Litig.*, 203 F.3d at 1325, 53 U.S.P.Q.2d (BNA) at 1854 (noting that when reviewing a district court’s decision regarding antitrust law, the Federal Circuit will look to the regional circuit law in which the district court sits).
the antitrust laws do not negate the patentee’s statutory right to exclude others from patent property. A patent does not, without more, demonstrate market power for purposes of the antitrust laws. And even where market power exists, the court said, that does not impose on the patent owner an obligation to license the use of that property to others.

The ISOs did not allege a Walker Process violation. Nor did they allege that the counterclaims were shams. Instead, they alleged that the patents were being misused by Xerox illegally trying to leverage its (presumably legitimate) dominance in the equipment and parts market into dominance in the service market. In support, the ISOs relied upon Eastman Kodak Co. v. Image Technical Services, Inc., a tying case where no patent had been asserted in defense to the antitrust claims against Kodak. The panel noted, however, that absent any claims of illegally tying the sale of Xerox’s patented parts to unpatented products, Kodak did not resolve the issue. The court stated that Kodak did nothing to limit the right of a patentee to refuse to sell or license in markets within the scope of the statutory patent grant.

The ISOs also relied upon the Ninth Circuit’s holding on remand in Image Technical Services, which adopted a rebuttable presumption that the exercise of the statutory right to exclude provides a valid business justification for consumer harm which required an evaluation of the patentee’s subjective motivation for refusing to sell or license its patent and products for pretext. The court refused to

2073. See id. at 1325, 53 U.S.P.Q.2d (BNA) at 1854-55.
2074. See id., 53 U.S.P.Q.2d (BNA) at 1854-55.
2075. [A] patent owner who brings suit to enforce the statutory right to exclude others from making, using, or selling the claimed invention, is exempt from the antitrust laws, . . . unless the infringement defendant proves one of two conditions: . . . he may prove that the asserted patent was obtained through knowing and willful fraud within the meaning of Walker Process Equipment . . . [o]r he may demonstrate that the infringement suit was a mere sham to cover what is actually no more than an attempt to interfere directly with the business relationships of a competitor.
2076. See id. at 1326, 53 U.S.P.Q.2d (BNA) at 1845-55 (internal citations omitted).
2077. See id., 53 U.S.P.Q.2d (BNA) at 1855-56.
2078. See In re Indep. Serv. Orgs. Antitrust Litig., 203 F.3d at 1327, 53 U.S.P.Q.2d (BNA) at 1855-56 (indicating that a patent holder is not allowed to use its statutory right “to refuse to sell patented parts to gain a monopoly in a market beyond the scope of the patent”).
2079. See id., 53 U.S.P.Q.2d (BNA) at 1855-56 (observing that absent exceptional circumstances, a patent holder may have the right to stop competition completely in more than one antitrust market).
2080. See id., 53 U.S.P.Q.2d (BNA) at 1855 (citing Eastman Kodak Co. v. Image Tech. Serv., 125 F.3d 1195, 1218 (9th Cir. 1997) (concluding that a jury must reject
follow the Ninth Circuit’s decision in *Image Technical Services*. Under *Nobelpharma*, the Federal Circuit law has held that unless a patent-infringement suit was objectively baseless, an antitrust defendant’s subjective motivation is immaterial.2081 Therefore, so long as the anticompetitive effect of refusing to sell or license a patented invention does not illegally extend beyond the statutory patent grant, no inquiry into subjective motivation is necessary, even though that refusal may have some anticompetitive effect.2082 Concluding that Xerox’s refusal to sell its patented parts did not exceed the scope of the patent grant, the inquiry was over; Xerox was under no obligation to sell or license its patented parts, and did not violate the antitrust laws by refusing to do so.2083

With respect to the ISOs’ copyright-based antitrust allegations, the panel initially noted the lack of United States Supreme Court or Tenth Circuit guidance regarding the antitrust implications of a unilateral refusal to sell or license copyrighted expression.2084 That left the court in the position of having to predict where the Tenth Circuit would come out on the point, so it looked to and evaluated the strength of other circuits’ precedent.2085 Reviewing the Fourth Circuit’s decision in *Service & Training, Inc. v. Data General Corp.*,2086 the First Circuit’s decision in *Data General Corp. v. Grumman Systems Support Corp.*,2087 and the Ninth Circuit’s decision in *Image Technical Service*,2088 the court concluded that the First Circuit’s approach was most consistent with both the antitrust and copyright laws, and would be most likely followed by the Tenth Circuit in considering the effect of Xerox’s unilateral right to refuse to license or sell copyrighted manuals and diagnostic software under the antitrust laws.2089 The First Circuit followed the rule that an author’s desire to exclude others from use of its copyrighted work is a presumptively valid

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2081. See id. at 1327-28, 53 U.S.P.Q.2d (BNA) at 1856.
2082. See id., 53 U.S.P.Q.2d (BNA) at 1856 (asserting that the party accused of infringement bears the burden to prove exceptional circumstances).
2083. See id. at 1328, 53 U.S.P.Q.2d (BNA) at 1856.
2084. See id. at 1328, 53 U.S.P.Q.2d (BNA) at 1856-57 (noting that the Supreme Court has ruled that a property right granted by federal copyright law cannot extend beyond congressional intent).
2087. 36 F.3d 1147 (1st Cir. 1994).
2088. 203 F.3d at 1322, 53 U.S.P.Q.2d (BNA) at 1852.
2089. See In re Indep. Serv. Orgs. Antitrust Litig., 203 F.3d at 1329, 53 U.S.P.Q.2d (BNA) at 1857-58 (arguing that the First Circuit conducted the most thorough analysis in the area of copyright law).
business justification for any immediate harm to consumers. The Federal Circuit refused to examine Xerox’s subjective motivation in asserting its right to exclude under the copyright laws for pretext, in the absence of any evidence that the copyrights were obtained by unlawful means or were used to gain monopoly power beyond the statutory copyright granted by Congress.

E. Trade Dress/Lanham Act

In Speedplay Inc. v. Bebop, Inc., Speedplay alleged that Bebop, in addition to infringing several Speedplay patents, was also infringing Speedplay’s trade dress for clipless pedal and cleat assemblies for bicycles under Section 43(a) of the Lanham Act. Following a bench trial, the district court entered judgment against Speedplay on all claims in its amended complaint, including the trade-dress allegations. Speedplay appealed.

The court, applying Ninth Circuit trade-dress law, affirmed. Under Ninth Circuit law, Speedplay was required to prove that its trade-dress was distinctive and non-functional, and that consumers were likely to confuse Bebop’s pedals with Speedplay’s pedals. The district court found that Speedplay had proved its design was distinctive, but did not prove non-functionality or likelihood of confusion.

Applying the Ninth Circuit’s standard of review for a trial court’s finding, the district court’s finding that there was little likelihood of confusion was held to be not clearly erroneous: Despite Speedplay’s contrary evidence, the district court correctly found, based on the record, that the two products were sold in distinct markets, and that the isolated instances of actual confusion were entitled to little weight under the circumstances. The court therefore did not need to reach the district court’s alternative ground of decision, that the design of the pedals was functional and not in the nature of trade dress.

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2090. See id. at 1328, 53 U.S.P.Q.2d (BNA) at 1857.
2091. See id. at 1329, 53 U.S.P.Q.2d (BNA) at 1858.
2093. See id. at 1249, 53 U.S.P.Q.2d (BNA) at 1986 (asserting that the district court found the patent invalid because the invention was on sale for a year before the patent application was filed).
2094. See id. at 1258, 53 U.S.P.Q.2d (BNA) at 1993 (citing Disc Golf Ass’n v. Champion Discs, Inc., 158 F.3d 1002, 1005, 48 U.S.P.Q.2d (BNA) 1132, 1134 (9th Cir. 1998) (observing that the Ninth Circuit Court of Appeals applies the “clearly erroneous” standard of review)).
2095. See id., 53 U.S.P.Q.2d (BNA) at 1993 (holding that the district court’s ruling on trade dress was correct).
The Federal Circuit’s only significant discussion of copyright issues in 2000 came in the context of alleged antitrust violations for refusal to license copyrighted works in *In re Independent Service Organizations Antitrust Litigation.*

**G. Trademark**

In *Cortland Line Company, Inc. v. The Orvis Company, Inc.*, the district court granted summary judgment of no trademark infringement, and of non-infringement of Cortland’s ‘003 patent. Although affirming the patent non-infringement holding, the Federal Circuit vacated the grant of summary judgment of no trademark infringement and remanded.

Cortland sued Orvis, alleging infringement of the registered mark CASSETTE; Orvis defended on the grounds of genericness and fair use. The district court agreed that fair use under 15 U.S.C. § 1115(6)(a) had been shown, granted summary judgment, and declined to reach the genericness issue. The Federal Circuit applied Second Circuit law in reviewing the summary judgment. To establish a fair-use defense, Orvis had to prove that its use of “cassette” was used only descriptively, fairly and in good faith. The court stated,

Cortland raises disputed issues of material fact on whether the trademark CASSETTE is descriptive of specific characteristics exhibited by both Cortland’s CASSETTE Reels and the Orvis Rocky Mountain Reel. For example, evidence of record indicates that before Cortland’s use of the term cassette, the fishing reel market used other terms to describe similar products, including spare, extra, or cartridge spools. [Cortland further] asserts that no manufacturer had used the term cassette to describe either fishing equipment or spare cartridge spools.

Cortland also alleged “that Orvis used the disputed term in a trademark sense by referring to the Rocky Mountain Reel as a...
cassette type reel.” There was also evidence of actual customer confusion, including past customer inquiries, product compatibility, and questions on electronic bulletin boards. In addition to the disputed facts on the extent of use of the mark and actual confusion, the intent underlying Orvis’ use—whether Orvis used the mark in good faith—was also in dispute. Additionally, the district court had stated in its opinion that “[h]ow often Orvis used the term ‘cassette’ and in what context is a matter of some debate.”

In addition to remanding for further proceedings on the disputed fair-use issues, remand for consideration of generic-ness was also ordered, as the determination over whether a mark is generic is relevant to the existence of an enforceable trademark.

CONCLUSION

The Federal Circuit in 2000 continued and expanded its role as perhaps the most important court for United States (and international) business. However, the court also continued its practices—which can be enormously frustrating for business planning and settled expectations—of limited en banc review, inconsistent panel-to-panel adjudications, fluid totality-of-the-circumstances tests, and pliable “presumptions.” It is said by some who practice before the Federal Circuit that this is the result of its being a court disposed to “do equity” in individual cases, but the price of such individualized decision-making is ultimately paid by the public at large.

2104. Id., 53 U.S.P.Q.2d (BNA) at 1740.
2105. Id., 53 U.S.P.Q.2d (BNA) at 1740.
2106. See id. at 1361-62, 53 U.S.P.Q.2d (BNA) at 1740-41.
ADDENDUM

As practitioners, our clients often ask us, “When can we expect a decision?” For years, we have been trying to answer these and other similar questions anecdotally, rather than with any systematic or studied information on which to base our guesses. In an attempt to provide our impressionistic augery with some empirical support, we have tried, in the tables and discussion that follow, to provide a statistical “snapshot” of the Federal Circuit’s work in the year 2000, based on our study of the court’s 92 published patent opinions from last year. We recognize, of course, that any such statistical study has its limitations. First, the universe of opinions being surveyed consists of the court’s published, patent opinions. Our survey fails to account for the presumably much shorter disposition time of unpublished patent opinions, or “Rule 36” affirmances, or the other areas of the court’s work (government employment cases, government contract cases, etc.). Second, in many cases, the statistics set forth below are of limited predictive value, since they are based on a statistically insignificant number of data points. Finally, every case is unique, and treating each decision as a data point for statistical averages may not be fair or accurate in every case. Nevertheless, we have found many of the results set forth below to be enlightening, and for that reason we are sharing them with the bench, bar, and other persons interested in the work of the Federal Circuit.
TABLE 1
PUBLISHED PATENT OPINIONS BY JUDGE, JANUARY 1, 2000 - DECEMBER 31, 2000

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2110. Judge Rich, who passed away on June 9, 1999, was a member of the panel hearing oral argument in *Dow Chemical Co. v. United States*, 226 F.3d 1334, 55 U.S.P.Q.2d (BNA) 1305 (Fed. Cir. 2000). *Dow Chemical* was argued on December 4, 1997, before a panel consisting of then-Chief Judge Archer and Judges Rich and Gajarsa. The case was decided on September 6, 2000, by the remaining two members of the panel. See *Fed. Cir. R. 47. 11.*
Table 1 sets forth some raw numbers about the ninety-two published patent opinions issued by the Federal Circuit during 2000, listed by judge.

The first column ("# authored") reflects the number of majority patent opinions each judge published in 2000. Thus, Chief Judge Mayer authored seven majority patent opinions that were published in 2000, Judge Newman wrote nine, and so on. Judges Rader, Lourie, and Gajarsa led the way with twelve, eleven, and ten opinions respectively. Judges Clevenger, Plager, and Schall trailed with four, five, and six, respectively. Five cases were decided *per curiam*.

The second column ("# on panel") sets forth the number of times each judge was on a panel for one of those ninety-two cases decided in 2000. One interesting discovery from our statistical work is that, while nine of the ten “established” judges (i.e., those active on the court prior to 2000) participated in anywhere from twenty to twenty-seven of the published patent opinions, one judge—Judge Rader—participated in thirty-four of the published decisions, a difference that is arguably statistically significant. One possible explanation for this difference—assuming that all active judges are likely to participate in roughly the same number of cases during the course of a year—is that Judge Rader is somewhat more likely than his colleagues to request that the panel publish its disposition, which a single judge may do under Circuit Rule 47.6(b). (We posit this as theory, not fact.)

The third column ("# separate opinions") lists the number of separate opinions (concurrences and dissents) that each Federal Circuit judge filed in 2000. Two observations about this column are in order. First, these numbers reflect a high degree of unanimity in reasoning and result—only twenty-one separate opinions were filed in 2000 (and in only fifteen cases—the *en banc* Festo case alone generated six separate opinions aside from the majority opinion, and another case, *Caterpillar, Inc. v. Deere & Co.*[^224] generated both a concurring and a dissenting opinion in addition to the majority opinion). Second, three judges—Judges Newman, Lourie, and Rader—are most likely to write separately in patent cases, far more than their colleagues, statistically speaking.

Because of the small number of separate opinions issued by Federal Circuit judges in 2000, the fourth column ("# authored

generating separate opinions”) may not prove much at all. It is meant to indicate the authoring judge for the majority in the fifteen cases where separate opinions were filed. Here, Judge Gajarsa led the way, with three opinions that occasioned a separate statement from another judge.

The final column (“% author (3-judge panel”) on Table 1 indicates, based on the published patent opinions from 2000, how likely it was that a particular Federal Circuit judge would be the author of the resulting opinion in a particular case argued before a three-judge panel. (For purposes of this column only, we have excluded the court’s en banc decision in Festo.) In a hypothetical world where opinions are randomly and evenly assigned, one would expect that each judge on a three-judge panel would wind up writing 33.3% of the opinions. What stands out as significant (if not entirely surprising) is that Judges Linn, Newman, Gajarsa and Lourie each authored over 40% of the opinions in patent cases in which they were involved. Of course, those four judges also are the four active judges who came to the Federal Circuit already having a significant patent background prior to their appointments.
### TABLE 2

SEPARATE OPINIONS IN PATENT CASES 2000

<table>
<thead>
<tr>
<th>Judge</th>
<th>Concur in Opinion</th>
<th>Concur in Judgment</th>
<th>Concur in part, Dissent in part</th>
<th>Dissent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mayer</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Newman</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Michel</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Plager</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lourie</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Clevenger</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rader</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Schall</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Bryson</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Gajarsa</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Linn</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Dyk</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cowen</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Skelton</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Friedman</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Smith</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Archer</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Court</td>
<td>5</td>
<td>3</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 2 sets forth a breakdown of the twenty-one separate opinions by type and by authoring judge. Again, because of the relative paucity of separate opinions, these statistics may not carry much meaning. It is worth noting that these figures again include the six separate opinions in Festo, two of which were styled as concurrences, and four of which were styled as partial concurrences and partial dissents. Again, these numbers illustrate the Federal Circuit’s largely unanimous nature—only seven dissents, and six partial dissents, were filed all year, with Judges Lourie (three dissents), Newman (one dissent, two partial dissents), Mayer (two dissents), and Rader (one of
(each) leading the way.

### TABLE 3: DISPOSITION TIME BY JUDGE (IN DAYS)

**JANUARY 1, 2000 - DECEMBER 31, 2000**

<table>
<thead>
<tr>
<th>Judge</th>
<th>Avg. time per opinion authored</th>
<th>Avg. time Per unanimous Opinion authored</th>
<th>Avg. time when writing separately</th>
<th>Avg. time when on panel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mayer</td>
<td>83</td>
<td>81</td>
<td>203</td>
<td>138</td>
</tr>
<tr>
<td>Newman</td>
<td>318</td>
<td>329</td>
<td>289</td>
<td>250</td>
</tr>
<tr>
<td>Michel</td>
<td>131</td>
<td>115</td>
<td>245</td>
<td>164</td>
</tr>
<tr>
<td>Plager</td>
<td>204</td>
<td>204</td>
<td>172</td>
<td>184</td>
</tr>
<tr>
<td>Lourie</td>
<td>138</td>
<td>145</td>
<td>167</td>
<td>139</td>
</tr>
<tr>
<td>Clevenger</td>
<td>208</td>
<td>109</td>
<td>—</td>
<td>169</td>
</tr>
<tr>
<td>Rader</td>
<td>143</td>
<td>139</td>
<td>167</td>
<td>163</td>
</tr>
<tr>
<td>Schall</td>
<td>163</td>
<td>147</td>
<td>—</td>
<td>189</td>
</tr>
<tr>
<td>Bryson</td>
<td>101</td>
<td>101</td>
<td>137</td>
<td>128</td>
</tr>
<tr>
<td>Gajarsa</td>
<td>131</td>
<td>110</td>
<td>150</td>
<td>137</td>
</tr>
<tr>
<td>Linn</td>
<td>187</td>
<td>187</td>
<td>245</td>
<td>155</td>
</tr>
<tr>
<td>Dyk</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>112</td>
</tr>
<tr>
<td>Cowen</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Skelton</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>200</td>
</tr>
<tr>
<td>Friedman</td>
<td>67</td>
<td>67</td>
<td>—</td>
<td>175</td>
</tr>
<tr>
<td>Smith</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>273</td>
</tr>
<tr>
<td>Archer</td>
<td>704</td>
<td>704</td>
<td>—</td>
<td>217</td>
</tr>
<tr>
<td>Rich</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1007</td>
</tr>
<tr>
<td>Per Curiam</td>
<td>159</td>
<td>95</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Court</td>
<td>170</td>
<td>154</td>
<td>205</td>
<td>170</td>
</tr>
</tbody>
</table>
Table 3 sets forth average statistical information regarding the length of time it takes the Federal Circuit and its judges to dispose of published Federal Circuit patent appeals. This table is at the same time the most interesting of these statistics, and also perhaps the one most subject to the criticism that every case is unique and demands unique treatment, and thus cannot be “averaged” together with other cases to yield meaningful results.

Because the Federal Circuit does not publish the date of argument on the face of its opinions, we obtained from the public docket records available in the Federal Circuit clerk’s office the date of argument for each of the ninety-two published patent opinions. We then calculated the difference, in days, between oral argument and decision, and utilized those calculated figures in our statistics. (For the insatiably curious, leap day—February 29, 2000—was counted when the argument took place prior to that date and the decision rendered afterward.)

The first column on Table 3 (“Avg. time per opinion authored”) lists, in days, the average time from argument to decision for each judge of the Federal Circuit. Thus, for the seven published patent opinions Chief Judge Mayer authored in 2000, the average amount of time from argument to decision was eighty-three days (slightly less than three months), while for the nine published patent opinions authored by Judge Newman, the average time from argument to decision was 318 days (about ten and a half months). The average time of disposition for all ninety-two Federal Circuit published patent opinions was 170 days, or a bit less than six months. It should be noted that outliers can have a disproportionate impact on the statistical averages in this and other columns on Table 3. Thus, to use an extreme example, Judge Archer’s average of 704 days from argument to decision is affected greatly by his authoring of *Dow Chemical Co. v. United States*,2112 which was argued on December 4, 1997. The publication of this decision was quite possibly delayed by the intervening death of panel member Judge Rich (on June 9, 1999), but was ultimately issued by the remaining two judges on the panel on September 6, 2000. Taking away the *Dow* case—which was 1007 days from argument to judgment—Judge Archer’s average time per opinion authored would drop from 704 to 401, which is the number of days from argument to disposition for the only other case he authored in 2000.

The second column on Table 3 (“Avg. time per unanimous
opinion authored”) is meant to account for one type of delay in publication not attributable to the author of the majority opinion—the authoring and issuance of a separate concurring, or dissenting, opinion. In most—but not all—cases, limiting the relevant data set to unanimous opinions decreases the average disposition time per judge. The most notable effect can be seen in the average disposition time for Judge Clevenger, whose 208-day overall average dropped to 109 days when one non-unanimous opinion—which took 505 days from argument to disposition—is removed from the calculus. The average time for the entire court for issuance of unanimous published patent opinions was 154 days after argument, or about five months.

The third column (“Avg. time when writing separately”) supplies the average time from argument to disposition when the judge in question has written a separate opinion. This data may suffer from some inadequacies: first, it is based solely on the limited number of separate opinions in published patent cases in 2000. Second, it cannot account for the unknown factor of how long the author of the majority opinion took to prepare the draft opinion which occasioned the separate concurrence or dissent. Here, the overall court average is 205 days, or about seven months.

The fourth and final column on Table 3 (“Avg. time when on panel”) supplies the average time from argument to disposition whenever a certain judge is on the panel hearing the case. We have supplied this statistic on the assumption that the time a non-authoring judge spends reviewing one of his or her colleagues’ draft opinion, even if it does not ultimately occasion a separate opinion, may have some influence on the disposition time. For active judges, the results range from 112 days for Judge Dyk (on limited data, since he took the bench in June 2000) to 250 days for Judge Newman. The court average, as earlier noted, was 170 days from argument to decision for published patent cases.