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Paul M. Janicke*

I. INTRODUCTION

¶1 In the realm of human dispute resolution, including the small segment thereof occupied by judicial decisions in lawsuits, a number of benefits come from being able to predict how courts will act. Firms are aided in their business decisions relating to patents. Lawyers are better enabled to advise clients on the impact of a particular course of action. On the societal level, we feel a certain sense of added stability if we have a statutory legal system in which the outcome of disputed points is knowable, i.e., if we can tell which side is “right under the law.”

¶2 In the sub-segment of our legal system occupied by patent law, the creation in 1982 of the U.S. Court of Appeals for the Federal Circuit was intended to bring doctrinal harmony, and the predictability that was thought to come with it, to patent law by having all appeals in cases arising under the patent laws heard in a single court.¹ To some extent the court has been praised for having achieved the desired doctrinal consistency.² The level of predictability for particular cases, however, remains disappointing. The court has been increasingly criticized for inconsistency in applying the various rules of law it has promulgated. Some attribute this phenomenon to inter-panel philosophical differences.³ The critics complain that not enough respect is paid to a given precedent, and that various panels of the court have indulged in many devices by which to evade the impact of a

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¹ See, e.g., Rochelle Cooper Dreyfuss, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. REV. 1 (1989); Paul M. Janicke, *To Be Or Not To Be: The Long Gestation of the Court of Appeals for the Federal Circuit*, 69 ANTITRUST L.J. 645 (2001); Daniel J. Meador, *A Challenge to Judicial Architecture: Modifying the Regional Design of the U.S. Courts of Appeals*, 56 U. CHI. L. REV. 603, 611-12 (1989); Paul R. Michel, *The Challenge Ahead: Increasing Predictability in Federal Circuit Jurisprudence for the New Century*, 43 AM. U. L. REV. 1231, 1233 (1994); S. Jay Plager, *The United States Courts of Appeals, the Federal Circuit, and the Non-Regional Subject Matter Concept: Reflections on the Search for a Model*, 39 AM. U. L. REV. 853 (1990); Ellen E. Sward & Rodney F. Page, *The Federal Courts Improvement Act: A Practitioner's Perspective*, 33 AM. U. L. REV. 385 (1984); *The Ninth Annual Judicial Conference of the United States Court of Customs and Patent Appeals*, remarks of Frank P. Cihlar and Jack C. Goldstein, 94 F.R.D. 347, 392-412 (1982).

² See, e.g., Dreyfuss, *supra* note 1, at 74; Janicke, *supra* note 1, at 660.

³ See, e.g., Pasquale A. Razzano (Ed.), *Conflicts in Federal Circuit Patent Law Decisions*, 11 FED. CIR. B.J. 723 (2001); R. Polk Wagner & Lee Petherbridge, *Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance*, 152 U. PA. L. REV. 1105 (2004). *But see* Christian A. Chu, *Empirical Analysis of the Federal Circuit's Claim Construction Trends*, 16 BERKELEY TECH. L.J. 1075, 1113 (2001) (concluding authorship has little to do with reversal rate for claim construction issues); Paul R. Michel, *The Court of Appeals for the Federal Circuit Must Evolve to Meet the Challenges Ahead*, 48 AM. U. L. REV. 1177, 1191 (1999) (characterizing panel-dependency assertions as exaggerated).

prior decision.⁴ Professor Polk Wagner of the University of Pennsylvania ascribes much of the current unpredictability to the varying decisional approaches used by the court's judges, which he separates into the "procedural" approach (using fixed rules to reach a decision) or the "holistic" approach (general principles with few binding rules).⁵ He favors the former. Other commentators have expressed the inter-judge differences in various ways.⁶ Some now suggest that the court may actually have gone too far in adopting detailed rules of law in the name of an elusive certainty, and that such rules may be counterproductive to a just and sensible patent jurisprudence.⁷

This paper will present my own observations on this subject. They are principally these: (1) as a cause of unpredictability, the effect of doctrinal inconsistency at the Federal Circuit is relatively small; (2) the underlying causes of the perceived doctrinal inconsistencies at the Federal Circuit are too varied to be categorized in any single formulation; and (3) the breadth and generality of the patent statute are the largest factors making the outcomes of particular patent litigations unpredictable.

II. CAUSES OF INCONSISTENCIES

A. *The Patent Statute Contains Many General Standards*

Patent statutes in the United States have always been written in broad terms, leaving it to the courts to fill in details as cases arise. The price for this developmental freedom is that the main issues in patent litigation are laden with generality, such that outcomes of particular cases must be, to a large extent, subjectively determined. For example, a patent specification must enable a person skilled in the art to make and use the claimed subject matter.⁸ Enabled with how much effort, time, and cost? To this general requirement, the courts have engrafted a slightly more specific standard of enablement: the person skilled in the art must not be put to "undue" experimentation.⁹ What is "due"

⁴ See Matthew F. Weil & William C. Rooklidge, *Stare Un-Decisis: The Sometimes Rough Treatment of Precedent in Federal Circuit Decision-Making*, 80 J. PAT. & TRADEMARK OFF. SOC'Y 791 (1998) (delineating seven judicial devices used by the court to avoid following its own precedent).

⁵ See Wagner & Petherbridge, *supra* note 3, at 1176 (arguing that the procedural methodology is better than the holistic one for the objective of achieving uniformity in patent law decisions).

⁶ For example, Professor Craig Allen Nard of Marquette has addressed significant attention to what he calls "hyper-textualism" in some Federal Circuit claim construction decisions. See Craig Allen Nard, *A Theory of Claim Interpretation*, 14 HARV. J.L. & TECH. 1 (2000). See also Weil & Rooklidge, *supra* note 4 (setting out the many judicial devices the court's panels have used to reduce or eliminate the impact of a prior panel decision).

⁷ See, e.g., John R. Thomas, *Formalism at the Federal Circuit*, 52 AM. U. L. REV. 771 (2003) (arguing that rigid rules of decision are harmful to patent law development).

⁸ 35 U.S.C. § 112, first paragraph, provides:

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, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

⁹ See, e.g., *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988) ("The determination of what constitutes undue experimentation in a given case requires the application of a standard of reasonableness, having due regard for the nature of the invention and the state of the art."); *Enzo Biochem, Inc. v. Calgene, Inc.*, 188 F.3d 1362, 1371-72 (Fed. Cir. 1999) ("[A]n enablement determination is made retrospectively, i.e., by looking back to the filing date of the patent application and determining whether undue experimentation would have been required to make and use the claimed invention at that time.").

and “undue” is of course a judgment call, to be made by someone at some time.¹⁰ In another example of generality, only persons who made “an inventive contribution” to a claim should be named as inventors.¹¹ This sounds straightforward, but after all these years we still have no formulation of what an inventive contribution is, other than at the polar extremes: someone who first conceived every aspect of a claim *is* an inventor, and someone who had nothing to do with the conception *is not* an inventor.¹² A final example is that, according to the second paragraph of § 112, a claim must be definite in scope.¹³ The statute does not say how precise the boundary limits must be, other than that it be “particular” and “distinct.” The case law informs us only that the language should be as definite as possible under the circumstances.¹⁴ These types of provisions leave to the courts the difficult tasks of developing the patent law on a case-by-case basis, considering the evidence and the equities as shown by the record, as well as the intent behind the statutory provisions involved.

¶15 There are many other examples of similarly broad generality in the patent statute.¹⁵ Guidelines like these can hardly be expected to lead to predictability in the outcomes of

¹⁰ Enablement is a question of law, but amenable to jury resolution. *Allen Organ Co. v. Kimball Intn'l, Inc.*, 839 F.2d 1556, 1566 (Fed. Cir. 1988), *cert. denied*, 488 U.S. 850 (1988); *BJ Servs. Co. v. Halliburton Energy Servs.*, 338 F.3d 1368, 1372 (Fed. Cir. 2003).

¹¹ *See, e.g., Eli Lilly & Co. v. Aradigm Corp.*, 376 F.3d 1352, 1358-59 (Fed. Cir. 2004).

¹² *See Fina Oil & Chem. Co. v. Ewen*, 123 F.3d 1466, 1473 (Fed. Cir. 1997) (§ 116 “sets no explicit lower limit on the quantum or quality of inventive contribution required for a person to qualify as a joint inventor”).

¹³ The second paragraph of 35 U.S.C. § 112 provides in part: “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.”

¹⁴ We have actually seen from the court three different standards for compliance with this provision. First, the fixed boundaries standard: “Whether a claim is invalid for indefiniteness 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.” *N. Am. Vaccine, Inc. v. Am. Cyanamid Co.*, 7 F.3d 1571, 1579 (Fed. Cir. 1993), *cert. denied*, 511 U.S. 1069 (1994). Second, the looser, best-you-can standard: “If the meaning of the term is discernible, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree, we have held the claim sufficiently clear to avoid invalidity on indefiniteness grounds.” *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001). Third, the circular standard, i.e., if it complies, it complies: “Claims are often drafted using terminology that is not as precise or specific as it might be . . . As long as the result complies with the statutory requirement to ‘particularly point out and distinctly claim the subject matter which the applicant regards as his invention.’ 35 U.S.C. § 112, para. 2, that practice is permissible.” *PPG Indus. v. Guardian Indus. Corp.*, 156 F.3d 1351, 1355 (Fed. Cir. 1998).

¹⁵ For example, 35 U.S.C. § 101 provides that a “process” is eligible for patent protection, provided the other conditions of the statute are met. Until 1998 it was unclear whether that term included non-technical processes, such as financial ones. In that year, the Federal Circuit decided in *State Street Bank v. Signature Financial Group*, 149 F.3d 1368 (Fed. Cir. 1998), *cert. denied*, 525 U.S. 1093 (1999), that such methods could be useful and hence eligible for patenting. As another example, filing of a patent application is barred where the claimed subject matter was described in a “printed publication” more than one year prior to the application filing date, 35 U.S.C. § 102(b), but the statute does not give any guidance on whether or when various items, like typewritten or web-posted materials or documents of restricted distribution, would qualify as printed publications. *See John E. Vick, Jr., Publish and Perish: The Printed Publication Bar to Patentability*, 18 AIPLA Q.J. 235, 237 (1990) (discussing the treatment of typewritten materials, and noting the cases on printed publication in patent law “are inconsistent”); Frederick C. Williams, *Giving Inter Partes Patent Reexamination a Chance to Work*, 32 AIPLA Q.J. 265, 288-89 (2004) (taking the view that web-posted materials qualify as printed publications). A third example: “Using” a patented invention is one of the acts of infringement set out in 35 U.S.C. § 271(a), but the issue of whether experimental use would be within that proscription remains unsettled outside the context of clinical trials for FDA approval purposes. *See Madey v. Duke Univ.*, 307 F.3d 1351, 1361-63 (Fed. Cir. 2002) (there is no experimental

court resolutions of the issues, yet I am not sure we want to make the patent statute much more specific, or whether we could in fact do so in a way that would be more helpful than harmful. We probably will prefer the uncertainty.

B. Mental States

¶6 In addition to the pattern of generality in key terms of the patent statute, we have in the United States an extraordinary number of mental states built into both the statute and the case law. I have argued that many of them are unnecessary to a modern commercial law,¹⁶ but no one seems prepared to do away with them. Consider, to name just a few: mental conception and diligence as bearing on the date of invention;¹⁷ obviousness (an imaginary mental state, hence nearly always a subjective evaluation) of an invention as defeating patentability;¹⁸ willfulness as a trigger for enhanced damages;¹⁹ mental “error,” i.e., ignorance or oversight, needed for a patent to be reissued;²⁰ and the intent-to-mislead

use exemption from infringement in cases of universities using a patented invention for research). In *Integra Lifesciences I, Ltd. v. Merck KGaA*, 2003 U.S. App. LEXIS 27796 42-45 (Fed. Cir. 2003), Judge Newman in dissent indicated her continuing disagreement with the *Madey* holding.

¹⁶ See Paul M. Janicke, *Do We Really Need so Many Mental and Emotional States in United States Patent Law?*, 8 TEX. INTELL. PROP. L. J. 279 (2000).

¹⁷ See 35 U.S.C. § 102(g) (2005) (providing for establishing priority of invention by reference to conception date and, in some circumstances, by reference to diligence toward reducing to practice); *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 60 (1998) (listing conception date as the basic invention date).

¹⁸ See 35 U.S.C. § 103(a) (2005) (providing for unpatentability where the invention “would have been obvious at the time it was made to a person having ordinary skill in the art to which the said subject matter pertains.”). There are a few modern interpretations on the characteristics of this person of ordinary skill. See, e.g., *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 454 (Fed. Cir. 1985) (a person of ordinary skill in the art is “one who thinks along the line of conventional wisdom in the art and is not one who undertakes to innovate”); *Endress + Hauser, Inc. v. Hawk Measurement Sys. Pty. Ltd.*, 122 F.3d 1040, 1042 (Fed. Cir. 1997) (the person of ordinary skill in the art is “a theoretical construct . . . and is not descriptive of some particular individual”). Describing the level of skill in a workable manner for deciding cases is not easy. In some cases the courts have characterized the level merely as “high.” See, e.g., *In re Rouffet*, 149 F.3d 1350, 1356-57 (Fed. Cir. 1998). The often-mentioned Supreme Court three-part analysis of obviousness as given in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966) is really not a test, because it does not generate any particular answer. Rather, it is a methodology of thought that helpfully focuses the decider’s mind on the broad topics needing to be looked at in the course of reaching a decision. At the end of the day, a subjective evaluation is necessary.

¹⁹ The statutory provision, 35 U.S.C. § 284, states only that “the court may increase the damages up to three times the amount found or assessed.” The courts were left to work out suitable criteria for exercising that authority. Willful infringement has now become a prerequisite for a district court to increase damages. See *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 831 (Fed. Cir. 1992) (while other sanctions are available for litigation misconduct, “absent willful infringement there is no basis in this case for enhanced damages.”). Opinions of counsel are usually key in assessing absence of the mental state of willfulness. *Id.* The ramifications of opinions of counsel in this context were recently addressed in *Knorr-Bremse Systeme Fuer Nutzfahrzeuge GMBH v. Dana Corp.*, 383 F.3d 1337, 1344 (Fed. Cir. 2004), holding, *inter alia*, that no adverse inference could be drawn from a party’s reliance on attorney-client privilege in refusing to divulge its counsel’s opinion.

²⁰ Reissue is allowed where “through error and without any deceptive intent” a patent’s claims are too broad or too narrow. 35 U.S.C. § 251 (2005). The meaning of error in this context has been problematic. For example, in *In re Weiler*, 790 F.2d 1576 (Fed. Cir. 1986), timely filed reissue application claims were properly rejected on the ground that they had been presented in a parent application and cancelled pursuant to restriction requirement. A divisional application could have been filed at that time but was not. The court held this was not the kind of error that would support reissue. *Id.* at 1578. The decision is part of an entire body of case law that has grown up around the idea that subject matter that was at one time claimed and later cancelled cannot be recaptured by reissue, because only oversight types of errors are embraced in the statutory term. See T. Whitley Chandler, *Prosecution History Estoppel, the Doctrine of Equivalents*,

prong of inequitable conduct.²¹ These mental states consume a great deal of discovery time and cost, and on any given evidentiary record can come out either way depending on the assessment of the decider. Do we have any right to expect high predictability within such a system?

C. *Unresolved Issues about Claim Scope*

¶7 Adding to the endemic level of unpredictability built into the patent statute, we also have the seemingly endless problems involved with formulating rules of law for determining patent claim scope, the central issue in most litigation today. The court is currently addressing such formulations once again en banc in *Phillips v. AWH Corp.*²² The uncertainty in adjudications of claim scope arises not due to philosophical differences among judges, but rather, to a large extent, it is an expected byproduct of a legal system that tries to express technical exclusivity with words. Adjudication of claim scope is further complicated by lack of consensus about how much patent scope is good or just or right to grant. To say that it depends on the scope “of the invention”²³ is merely to restate the problem using even vaguer terms.

¶8 In my view, the presence of such a large number of judgment-call criteria in the patent statute, and in some instances in long-established case precedents, is the main cause of unpredictability in modern Federal Circuit decisions. That having been said, statutory generality and elusive mental states are not the whole story. There are, to be sure, some cases in which the court might have done better. We now address that subject.

III. CONTEXTS OF NON-ENDEMIC UNCERTAINTY PROBLEMS

A. *Precedent Volume*

¶9 There are undoubtedly a number of situations in which, even given the subjectivity of the patent statute and of many long-established case-law doctrines, the court has issued decisions and later failed to follow them. We now examine some cases where that has occurred. To put our examination in context, some statistics are in order. From its inception, the court has had twelve active judgeships.²⁴ There are also a small number of

and the Scope of Patents, 13 HARV. J. L. & TECH. 465, 514-19 (2000).

²¹ See, e.g., *Catalina Lighting, Inc. v. Lamps Plus, Inc.*, 295 F.3d 1277, 1288 (Fed. Cir. 2002) (intent to deceive cannot be inferred solely from the fact that information was not disclosed; there must be a factual basis for a finding of deceptive intent); *Kingsdown Med. Consultants, Ltd. v. Hollister Inc.*, 863 F.2d 867, 876 (Fed. Cir. 1988) (clarifying that intent to mislead is required for inequitable conduct defense and must be proved by clear and convincing evidence).

²² *Phillips v. AWH Corp.*, 376 F.3d 1382 (Fed. Cir. 2004) (order granting *en banc* rehearing). The court posed questions—some with several parts—on the correct methodology for interpreting claims, and a seventh question concerning whether some degree of deference should be given to the rulings of district courts on claim construction.

²³ See, e.g., *Smith v. Snow*, 294 U.S. 1, 14 (1935) (if a patent claim is susceptible to two constructions, “that should be adopted which will secure to the patentee his actual invention”); *Vehicular Techs. Corp. v. Titan Wheel Int’l Inc.*, 141 F.3d 1084, 1091 (Fed. Cir. 1998) (discussing party’s argument concerning “true invention”).

²⁴ See 28 U.S.C. § 44 (2005), allocating twelve judges to the Federal Circuit, a number that was inherited from the two courts that were merged to form the Federal Circuit in 1982. See Pub. L. 97-164, § 165.

senior judges, typically three or four, who function in the same manner as the fully active judges, sitting on panels and authoring opinions. In the beginning, the court adopted the patent-law precedents of its predecessor courts, the Court of Claims and the Court of Customs and Patent Appeals (“CCPA”).²⁵ By today’s standards, this was not very much material. The CCPA dealt mainly with the types of patentability issues that frequently came up from the PTO, i.e., rejections for obviousness or lack of novelty based on published references, double patenting, and inadequate disclosure, and with priority contests in the form of interference proceedings. It was seldom called upon to resolve issues of public use, the on-sale bar, or inequitable conduct, and it never adjudicated infringement issues, damages, or injunctions. The Court of Claims did handle some infringement and compensation issues where the government or its contractors were charged with infringing a patent, but the volume of such decisions was only about twenty-five per year.²⁶

¶10 From this modest base, patent law precedent began to grow rapidly after the new court was in operation. By 1988 the Federal Circuit was receiving 301 patent appeals from the district courts,²⁷ a number that has now risen to 467 as of the end of 2003.²⁸ Patent appeals from the PTO continued to arrive as before, including another seventy filings per year.²⁹ Professor Chisum’s cumulative digest of Federal Circuit patent cases has grown to the point where the case digests now occupy 2146 pages.³⁰

¶11 This is a lot of precedent, over two thousand patent cases. For the entire twenty-two year period just prior to the creation of the Federal Circuit, the largest patent output from a single circuit was 372 from the Seventh Circuit.³¹ Following one’s own precedent was easier then. Given this large volume of now-existing Federal Circuit precedent, it may be understandable if a panel of the court occasionally speaks inconsistently with another panel in another case.

B. *We Are Not Alone: Worries about Judicial Inconsistencies in Other Areas of Law*

¶12 Sometimes in studying a court’s output of judicial opinions one can easily lose a sense of context. Courts are, after all, human institutions. As such, we should not expect them to be perfect. Criticisms of other courts for inconsistency in other areas of law

²⁵ *South Corp. v. United States*, 690 F.2d 1368 (Fed. Cir. 1982) (adopting as precedent the decisions of the two predecessor courts).

²⁶ A Lexis search for Court of Claims patent decisions in the three-year period 1979-81 yielded seventy-five decisions.

²⁷ Administrative Office of U.S. Courts, *Judicial Facts and Figures*, Table 1.5, Federal Circuit Appeals Filed (By Agency), 1988-2003, available at <http://www.uscourts.gov/judicialfactsfigures/contents.html> (last visited Apr. 7, 2005).

²⁸ See Table B-8 *Statistical Tables for the Federal Judiciary*, at <http://www.uscourts.gov/judiciary2003/dectables/B08Dec03.pdf> (last visited Apr. 7, 2005). Not all of these appeals were disposed of by judicial action. The court’s report to the Administrative Office of U.S. Courts indicates that its judges disposed of 445 patent appeals from district courts in 2003, along with fifty appeals from the PTO, most of which were on the patent side. *Id.* Judicial action in the form of an opinion was seen in about 140 cases, 100 of them precedential. The court also issues approximately sixty summary affirmances each year.

²⁹ *Id.*

³⁰ See DONALD S. CHISUM, 2004 PATENT LAW DIGEST (Matthew Bender & Co. 2004).

³¹ LEXIS search, PATENT library, FEDCTS file, performed September 15, 2004. The search terms were designed to collect all reported appellate patent decisions in the period 1960-1981.

abound in the literature. One critic is the United States Supreme Court itself, which noted the need to remove tensions and discrepancies that had resulted from inconsistent application of the admiralty statutes.³² In a recent commentary on the doctrine of *forum non conveniens*, the authors note that Congress has never limited the doctrine, and as a result, “[t]he pervasiveness of the problem is marked not only by division among the circuits, but also by seemingly inconsistent decisions within individual circuits.”³³

¶13 In antitrust law, especially as applied to professional sports, inconsistency of judicial decision-making is an acknowledged problem:

Antitrust law has had an enormous influence on the evolution of the professional sports business over the last two decades. Haphazard and inconsistent decisions applying section 1 of the Sherman Act to league governance rules and practices, such as rules by which leagues control the ownership, number, and location of their member franchises, have left leagues confused.³⁴

¶14 In the realm of environmental law and its interface with corporate law, a recent casenote writer says:

The importance of a unified method of regulating the environment is self-evident. . . . If a corporation cannot accurately estimate its liabilities, it cannot adequately plan for the future. Inconsistent decisions are the result of state courts attempting to manipulate corporate law to cover an area that it was not designed to cover.³⁵

¶15 In the field of English criminal law as applied to physicians, we find this critique: “How should English criminal law treat well-meaning doctors who intentionally shorten the lives of suffering patients? The doctrine of double effect is irrational, impossible to reconcile with other aspects of criminal law, and produces inconsistent decisions.”³⁶

¶16 Clearly, inconsistent judicial results, or perceptions of them, are not unique to patent law administration. Still, it might be helpful if we could identify some of the ways that certain criticized patent litigation results have come to pass. We will consider four exemplar cases that have received commentator criticism, and will attempt to determine the extent to which the criticisms are justified.³⁷

³² See *Moragne v. States Marine Lines, Inc.*, 398 U.S. 375, 401-02 (1970).

³³ Lonny S. Hoffman & Keith A. Rowley, *Forum Non Conveniens in Federal Statutory Cases*, 49 EMORY L.J. 1137, 1140 (2000).

³⁴ Gary R. Roberts, *Reconciling Federal Labor and Antitrust Policy: The Special Case of Sports League Labor Market Restraints*, 75 GEO. L.J. 19, 20 (1986).

³⁵ Shawn R. Farrell, *Leo v. Kerr-McGee Chemical Corp.: Recognizing a Need for Congressional Reform in Toxic Tort Actions*, 7 VILL. ENVTL. L.J. 109, 126-27 (1996).

³⁶ Michael Watson, *A Case of Medical Necessity?*, 149 NEW LAW J. 863 (1999).

³⁷ For a larger selection of Federal Circuit cases involving conflicting precedents, see the analyses by Pasquale Razzano et al., *supra* note 3, at 762-64.

IV. FOUR CASE HISTORIES

A. *A Sensed Need to Provide a Remedy May Lead to an Unforeseen Result*

¶17 Many trial lawyers have observed that cases are won or lost primarily on the perceived equities, and that legal doctrines are often shoehorned to fit a perceived equitable need, especially where an individual plaintiff is litigating against a corporation of significant size.³⁸ Put another way, hard cases may make bad law. This sometimes happens at the Federal Circuit. An example is *Tronzo v. Biomet, Inc.*,³⁹ where the result would have to be classified as unpredictable.

¶18 Dr. Tronzo sued Biomet in the Southern District of Florida, alleging patent infringement, trade secret misappropriation, fraud, and unjust enrichment.⁴⁰ A jury found in his favor on all counts and awarded him \$3,805,000 for patent infringement, \$4,757,000 in compensatory and \$15,000,000 in punitive damages for the breach of a confidential relationship, \$7,134,000 in compensatory and \$20,000,000 in punitive damages for fraud, and \$4,750,000 in compensatory damages for unjust enrichment.⁴¹ The district judge enhanced the patent infringement award by fifty percent for willfulness, dismissed the unjust enrichment count, entered judgment on the verdict for trade secret misappropriation, and capped the total recovery at a little over \$7 million in compensatory damages and \$20 million in punitive damages (including the enhanced portion of the patent damages).⁴² Biomet appealed from the judgment, urging that all relevant claims of the patent were either invalid or not infringed, and that for the other counts the compensatory damages award was unsustainable on the evidence.⁴³ In the first appeal of the case (“*Tronzo I*”), the Federal Circuit agreed with Biomet and reversed as to the patent issues.⁴⁴ With respect to the state law claims, the court set aside the compensatory damage award as lacking any logical nexus to Dr. Tronzo’s legal injuries and remanded to determine what other damages amount might be appropriate.⁴⁵ On remand, the district judge found the evidence supported only \$520 in compensatory damages.⁴⁶ He then granted Biomet’s motion to set aside the \$20 million punitive damage award, now seen as excessive in light of the greatly reduced compensatory figure. He reset the punitive damages at 100 times the compensatory award, or \$52,000.⁴⁷ Tronzo appealed (“*Tronzo II*”).

¶19 On the new appeal, the Federal Circuit, in an opinion by Judge Archer, agreed with the district judge’s decisions on the meager compensatory damages,⁴⁸ but held that he

³⁸ See, e.g., Christopher S. Moffitt, *U.S. Contractors in Chapter 11 Create a Collision of Two Worlds*, THE NATIONAL LAW JOURNAL, May 23, 1988, at 5 (discussing how perceived equities influence outcomes of court cases); John E. Morris, *Weak Case, Strong Appeal*, THE RECORDER, Feb. 18, 1992, at 1 (discussing significance of a court’s perception of the equities).

³⁹ 236 F.3d 1342 (Fed. Cir. 2001), *cert. denied*, 534 U.S. 1035 (2001) [hereinafter *Tronzo II*].

⁴⁰ *Id.* at 1344.

⁴¹ *Id.*

⁴² *Id.* at 1344-45.

⁴³ *Id.* at 1345.

⁴⁴ *Id.*

⁴⁵ *Tronzo v. Biomet Inc.*, 156 F.3d 1154, 1160, 1162 (Fed. Cir. 1998) [hereinafter *Tronzo I*].

⁴⁶ *Tronzo II*, 236 F.3d at 1345.

⁴⁷ *Id.*

⁴⁸ *Id.* at 1346-47.

should not have touched the punitive damages because “by failing to appeal the award of punitive damages in *Tronzo I*, Biomet waived this issue and was barred from raising it on remand.”⁴⁹ This must have come as a startling result to Biomet, who undoubtedly thought that by successfully appealing the underlying issues of liability under the patent claim and compensatory damages under the other claims, the related punitive award must likewise be adjusted downward on the remand. The district judge certainly thought so.

¶20 Judge Archer explained the ruling by examining the issue of whether the amount of the punitive award “was an issue within the scope of the initial judgment of the district court,” because if it was, “it was necessarily incorporated within the scope of our mandate in *Tronzo I* and foreclosed from further review on remand.”⁵⁰ No doubt the punitive award was in the judgment being appealed in *Tronzo I*. But why should it have been beyond adjustment on remand? One would think the punitive award, being closely and logically connected to the compensatory award, would have inherently been involved in the appeal, even though it was the underlying compensatory award that was the explicit target. If one fell the other must fall. Biomet may well have thought attacking the punitive award before the correct compensatory figure had been set would have been premature and formalistic. This was not, however, the view of the Federal Circuit panel.

¶21 According to the court, the punitive award was ripe for appeal, but Biomet did not mention it. Therefore, any attack on that part of the judgment was waived.⁵¹ The opinion distinguished earlier cases where no waiver was found in situations where the district court had not yet ruled on a point. Here, the district court had ruled. Calling the appellate decision an application of “the mandate rule,” under which rulings not challenged on appeal are deemed waived, the court said Biomet could and should have challenged the punitive damages award as constitutionally excessive.⁵² The court pointed out that there was no strict numerical connection between the amount of the challenged compensatory damages and the amount of the punitive award; rather, the compensatory figure is only a guidepost to be considered in setting the punitive number.⁵³ Therefore, Biomet was not safe in believing its challenge to the punitive award was preserved by challenging the compensatory underpinnings. Thus, the \$20 million punitive damages award was reinstated.⁵⁴

⁴⁹ *Id.* at 1347.

⁵⁰ *Id.* at 1348.

⁵¹ *Id.* at 1348-50.

⁵² *Id.* at 1349.

⁵³ *Id.* For this, the court cited and discussed the Supreme Court’s decision in *BMW of North America Inc. v. Gore*, 517 U.S. 559 (1996). The case involved a purchaser of a new BMW who later found the car had been repainted prior to sale to correct for damage incurred in transportation from its manufacture location in Germany. Gore sued for fraud under an Alabama statute which made suppression of a material fact actionable. The jury returned a verdict against BMW for \$4000 in compensatory damages and \$4 million in punitive damages. *Id.* at 565. Judgment was entered on the verdict and was affirmed by the Alabama Supreme Court. Certiorari was granted to review the underlying Fourteenth Amendment issue of due process. The Supreme Court found the judgment unconstitutionally excessive. The main ground for the Court’s decision was the absence of extreme reprehensibility factors in the case. *See id.* at 576-80. A second ground discussed by the Court for judging unreasonableness was the ratio between the actual damages suffered and the punitive damages awarded, holding that the punitive portion must bear a reasonable relation to the actual harm suffered. *Id.* at 580-81.

⁵⁴ *Tronzo II*, 236 F.3d at 1532.

¶22 Earlier articulations of the mandate rule had been much narrower in their bite. For example, in *Pelletier v. Zweifel*,⁵⁵ the Eleventh Circuit (whose law was supposed to apply here since the appeal was from a Florida district), had just a few years earlier said the mandate rule “simply means that ‘a district court is not free to deviate from the appellate court’s mandate.’”⁵⁶ Biomet argued the district judge had not deviated. The court of appeals stated in the first appeal decision that “the damages awarded thereunder are not commensurate with Dr. Tronzo’s injury,”⁵⁷ meaning the district judge was to take whatever actions were needed to rectify that erroneous situation, which entailed resetting both types of damages. But the appellate court did not see it that way. It insisted Biomet should have attacked the punitive award even before knowing the legally correct amount of compensatory damages.

¶23 Biomet should have prevailed on this point. Until this time, the Federal Circuit had viewed its mandate simply as something to be complied with, i.e., a prohibition on the district court’s doing something inconsistent with the appellate court’s decision.⁵⁸ Similarly, the Eleventh Circuit and others had consistently held that the mandate rule did not impact matters not decided expressly or by necessary implication by the appellate tribunal.⁵⁹ Moore’s Federal Practice suggests the district court’s discretion on these undecided points goes so far as to allow it to reach the same result that was reversed by the appellate court on other grounds:

¶24 Although the district court owes obedience to the mandate of the appellate court, it retains discretion under the mandate rule to reconsider issues on remand that were not expressly or implicitly decided by the appellate court. A district court can, after remand, come to the same result as before remand by relying on grounds other than those specified in the appellate court’s mandate.⁶⁰

¶25 The Federal Circuit’s invocation of the mandate rule here was out of accord with the reported prior precedents. The amount of punitive damages had not been addressed by the court in the earlier appeal, either expressly or by necessary implication (except possibly the *opposite* implication, i.e., that it would need to be reset once the compensatory figure was known). Resetting that number was in no way inconsistent with the decision in the first appeal.

¶26 How to explain this result? The most likely explanation is that the panel wanted to help out Dr. Tronzo, who had been through many years of emotionally draining litigation with Biomet, had partially prevailed, but had been unable to quantify the harm done to

⁵⁵ 987 F.2d 716 (11th Cir. 1993) (*citing* Barber v. Int’l Bhd. of Boilermakers, 841 F.2d 1067, 1070 (11th Cir. 1988)).

⁵⁶ *Id.* at 718.

⁵⁷ *Tronzo I*, 156 F.3d at 1156.

⁵⁸ For example, in *Exxon Chem. Patents v. Lubrizol Corp.*, 137 F.3d 1475 (Fed. Cir. 1998), the court, having reversed and rendered against Exxon in the first appeal, on literal infringement, now was asked to decide whether that precluded a new trial on infringement under the doctrine of equivalents. The court held the mandate would not prevent such a trial, and that on remand “the district court is free to take any action that is consistent with the appellate mandate.” *Id.* at 1484. Similarly, in *Laitram Corp. v. NEC Corp.*, 115 F.2d 947, 951 (Fed. Cir. 1997), the court characterized its mandate as allowing the district court to “act on ‘matters left open by the mandate.’”

⁵⁹ See *Delong Equip. Co. v. Washington Mills Electro Minerals Corp.*, 990 F.2d 1186, 1196 (11th Cir. 1993) (an appellate decision at an earlier stage represents law of the case only for such issues as were decided expressly or by necessary implication).

⁶⁰ 18 JAMES. WM. MOORE ET AL., MOORE’S FEDERAL PRACTICE ¶ 134.23 [4] (2005).

him in any serious way—\$520. The perceived equities, equating to a basic sense of justice, often dictates how tribunals decide cases. I believe that is what happened, and the case provides an insight into one way unpredictable results can occur.

B. Longstanding Unresolved Differences among Judges over Written Description Bring an Unpredictable Outcome

¶27 In some instances, the facts given by the court demonstrate that the court did not reach its result by employing strict rules of law as announced in prior cases; rather that unresolved philosophical differences among the judges probably drove the result. An example is the holding of adequate supporting description in *Union Oil Co. of California v. Atlantic Richfield Co.*⁶¹ This case involved a gasoline additives patent held by the plaintiff Unocal, asserted to be infringed by the six refiner defendants.⁶² The claims defined the additive package in terms of six numerically limited parameters. For example, in multiple dependent claim 117, which the majority opinion of Judge Rader treated as representative, the parameters were Reid Vapor pressure, fifty percent D-86 distillation point [T50], ninety percent D-86 distillation point [T90], ten percent D-86 distillation point [T10], paraffin content, and olefin content.⁶³ The distillation points were recited as maxima (200 degrees F. for T50, 300 degrees F. for T90, and 158 degrees F. for T10) as were the Reid Vapor pressure (7.0) and the olefin content (less than four percent).⁶⁴ The paraffin content was recited as a minimum value (greater than eighty-five percent).⁶⁵ Based upon a jury verdict, the district court had held the claim was adequately supported by the written description in the specification.⁶⁶ The Federal Circuit affirmed in a panel decision, rehearing in banc was denied, and the Supreme Court denied certiorari.

¶28 The Federal Circuit majority opinion by Judge Rader tells us the patent specification described manipulating the above factors in various ways.⁶⁷ This is true. But nowhere in the description is there anything that could be called a description of the *combination*, a pulling together, of the six values grouped together in the claim under consideration, which had been added after the application filing date. For example, the court first notes that the specification teaches a desirable maintenance of T50 below 215 degrees, and preferably below 195 degrees, whereas the claim specifies a 200-degree maximum, and that the Reid pressure should be below 8.0, but the claim says below 7.0.⁶⁸

¶29 The court tries to fill this void by picking and choosing from other passages in the lengthy specification. Judge Rader tells us the T50 value of 200 degrees recited in the

⁶¹ 208 F.3d 989 (Fed. Cir. 2000), *cert. denied*, 531 U.S. 1183 (2001).

⁶² In addition to Atlantic Richfield, these were Chevron, Exxon, Mobil, Shell, and Texaco. *See id.*

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ 35 U.S.C. § 112 provides in pertinent part:

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

⁶⁷ *Union Oil*, 208 F.3d at 993.

⁶⁸ *Id.*

claim is described at a particular place in the specification, but when you look there you find the following litany of possibilities:

. . . the [T50] value usually is no greater than 215° F., e.g., no greater than 210° F. but preferably is no greater than 205° F., e.g., less than 203° F., or less than 200° F., or less than 198° F., more preferably less than 195° F., e.g., less than 193° F., or less than 190° F. or less than 187° F., and most preferably less than 185° F., e.g., less than 183° F. In general the fifty percent D-86 Distillation Point is above 170° F. and most often above 180° F.⁶⁹

¶30 Here the paragraph ends. It is true that 200 degrees is mentioned, but it is not combined with anything else. To find another parameter value recited in the claim, a similar haystack would need to be invaded, and so on for all the parameters recited in the claim. There was nothing pulling all the claimed elements together, i.e., no disclosure of the combination.

¶31 Nevertheless, the majority found substantial evidence supporting the jury's verdict of sufficient written description of a composition having the recited combination of properties. To reach that result, the majority began with the familiar rule that claimed subject matter – here a family of compositions having six specified parameters – does not have to be described exactly in the specification.⁷⁰ But if not exactly, what then? Here the majority fell back to the psychological “possessed the invention” phraseology of some earlier cases.⁷¹ The trial evidence of such possession was expert testimony that the patent taught how to manipulate two or more of the parameters “in the prescribed fashion . . .”⁷² This sounds more like enablement than written description, a point deserving mention because of the long disagreement between groups of Federal Circuit judges about whether there is any separate written description requirement, apart from enablement, in the statute. Judge Rader has been very outspoken on his view that there is no such requirement.⁷³ Judge Lourie, who dissented here, has been equally adamant that there is.⁷⁴

¶32 The philosophical disagreement could well have been what led Judge Rader to see in the Unocal patent specification an adequate description supporting claim 117, and to Judge Lourie's refusal to adopt that position. Judge Lourie's dissent pointed out that the

⁶⁹ U.S. Patent No. 5,288,393 (issued Feb. 22, 1994), col. 14 (Centigrade equivalents omitted).

⁷⁰ *Union Oil*, 208 F.3d at 997. The court stated: “Appellant refiners assert that the specification does not describe the exact chemical component of each combination that falls within the range claims of the ‘393 patent. However, neither the Patent Act nor the case law of this court requires such detailed disclosure.”

⁷¹ *See, e.g., Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991). One may question the thinking behind the “possession” cases. The written description does not have to tell us the scope of what the inventor personally developed. That scope is most often determined by others, viz., the patent attorney, in light not of what the client did but of what the prior art will allow. It therefore seems strange to judge claim scope by some sense of what the inventor in some sense possessed.

⁷² *Union Oil*, 208 F.3d at 999.

⁷³ *See, e.g., Judge Rader's concurrence in Moba v. Diamond Automation*, 325 F.3d 1306, 1322-24 (Fed. Cir. 2003), and his dissent from denial of rehearing *en banc* in *Univ. of Rochester v. G.D. Searle & Co.*, 375 F.3d 1303, 1307-12 (2004).

⁷⁴ *See, e.g., Univ. of Rochester*, 375 F.3d at 1305-07 (Lourie, J., concurring in the order denying rehearing).

majority was using enablement reasoning to decide a description question.⁷⁵ He also delved at length into the failure of the specification to lay out the combination of parameters as claimed and its failure to indicate psychological possession of the claimed subject matter as of the filing date.⁷⁶ His point was quintessentially simple: while it is true the description does not have to match the words of the claim precisely, “it must still describe the invention with all its claimed limitations in some manner.”⁷⁷ The case turned out the way it did because the third panel member, Chief Judge Mayer, joined with Judge Rader and not with Judge Lourie.

¶33 The majority and dissenting opinions in the *Union Oil* case, and the unpredictability of the outcome by traditional patent law analysis, illustrate the need to resolve these types of questions en banc. Eliminating a separate description requirement would permit a patentee to file broadened claims without regard to traditional support requirements at any time during pendency of a chain of applications, provided she can come up with evidence of enablement. On the other hand, those arguing for such a requirement should recognize the limitation it puts on patent applicants who want to change post-filing claim scope. Where we are now is in a loose truce zone, where the requirement is officially with us, but some cases are seemingly decided as though it weren't. That does not make for good predictability.

C. A Rule of Law May Take Some Time to Emerge

¶34 Some of the cases for which the Federal Circuit has been accused of being inconsistent in following its own precedents – and hence being unpredictable – involve rules of law that have taken time to develop. The example used here involves the mental state element needed to establish active inducement of infringement. Section 271(b) simply says that “whoever actively induces infringement of a patent shall be liable as an infringer.”⁷⁸ It leaves to the courts the job of fleshing out the provision, especially to determine exactly what mentality is involved in “actively inducing.”

¶35 The court has vacillated on this issue.⁷⁹ All the decisions seem to have agreed that the induced party must actually infringe. In other words, an unsuccessful inducement effort is not actionable.⁸⁰ It has also been agreed that some sort of mental state was needed to make the inducer liable. For example, the accused inducing person had at least to know of the existence of the patent and what the induced party would do if the inducement were successful. The more difficult question was whether she also had to know that what the induced party was about to do amounted legally to infringement. That question has proved more difficult to answer consistently.

⁷⁵ *Union Oil*, 208 F.3d at 1002 (Lourie, J., dissenting in part).

⁷⁶ *Id.* at 1002-03.

⁷⁷ *Id.* at 1003.

⁷⁸ 35 U.S.C. 271(b) (2005).

⁷⁹ See Razzano, *supra* note 3.

⁸⁰ See, e.g., *Moleculon Research Corp. v. CBS, Inc.*, 872 F.2d 407, 410 (Fed. Cir. 1989) (in the absence of direct infringement, defendant cannot be held liable for inducing infringement); *Everpure, Inc. v. Cuno, Inc.*, 875 F.2d 300, 302 (Fed. Cir. 1989) (there can be neither contributory nor induced infringement when there has been no direct infringement); *Arthur A. Collins, Inc. v. Northern Telecom Ltd.*, 216 F.3d 1042, 1048 (Fed. Cir. 2000) (to establish inducement liability plaintiff must show direct infringement of the patents involved).

¶36 In its 1988 decision in *Water Technologies*, the court indicated that the inducer must act knowingly in the sense that she must know not only what the induced party is going to do, but that it amounts to infringement of a patent.⁸¹ Two years later, in *Hewlett-Packard Co. v. Bausch & Lomb, Inc.*, the court's language hinted that a lesser showing might be sufficient, namely "actual intent to cause the acts which constitute the infringement."⁸² Later that same year, in *Manville Sales*, this was held not to be enough.⁸³ Finally, as of 2003, it appears the issue may have finally been ruled upon in a way that will stick. In *Ferguson Beauregard/Logic Controls v. Mega Systems LLC*, in which the patentee's contention for inducement liability of a corporate officer of the infringing company was succinctly held untenable based on *Manville Sales*, which makes clear that "it must be established that the defendant possessed specific intent to encourage another's infringement and not merely that the defendant had knowledge of the acts alleged to constitute infringement."⁸⁴

¶37 In the years prior to 2003, precedents on this issue did not seem to crystallize sufficiently to allow for a consistent rule. The issue was phrased too generally, not focusing on the kind of knowledge needed. I think it is fair to expect that, for any judicial tribunal, there are certain points that take time to develop, and we may have to live with inconsistencies of pronouncements in the meantime.

D. Sometimes the Ruling Is Doctrinally Right but Is Still Criticized as Wrong

¶38 For those who believe they favor detailed, consistently applied rules of law in all patent cases and eschew the holistic judicial approach as fostering unpredictability, consider the main ruling in *Exxon Chemical Patents Inc. v. Lubrizol Corp.*⁸⁵ Exxon's patent claim was to a composition useful as an engine-oil additive package. As set forth in a shorthand version by the court, representative claim 1 provided:

a lubricating oil composition suitable as a crankcase lubricant in internal combustion engines comprising (1) a major amount of lubricating oil, (2) an ashless dispersant (*i.e.* one that neither contains nor is complexed with metal) in specified amounts of about 1 to 10 wt. %, (3) from about 0.01 to 5.0 parts by weight of oil soluble ZDDP, (4) 5 to 500 parts per million by weight of added copper in the form of an oil soluble copper compound, and (5) magnesium or calcium detergent.⁸⁶

¶39 Thus, in addition to the oil, the claimed package had to contain four other ingredients. The difficulty was that, depending upon the order of addition, some of these ingredients can interreact and exhaust one another, so that there is never a moment in time when all the recited ingredients exist together, *i.e.*, were "com-posed." In other words, the claim calls for ingredients (1) through (5) to be in a composition; but if (2) and

⁸¹ *Water Technologies Corp. v. Calco, Ltd.*, 850 F.2d 660, 669 (Fed. Cir. 1988).

⁸² 882 F.2d 1556 (Fed. Cir. 1989).

⁸³ *See Manville Sales Corp. v. Paramount Sys., Inc.*, 917 F.2d 544, 551 (Fed. Cir. 1990).

⁸⁴ 350 F.3d 1327, 1342 (Fed. Cir. 2003).

⁸⁵ 64 F.3d 1553 (Fed. Cir. 1995).

⁸⁶ *Id.* at 1556 (internal quotation marks omitted).

(3) react prior to the addition of (4), such that (2) is consumed in the reaction, then ingredients (2), (3), and (4) are never present together. Lubrizol contended its manufacturing procedure was of that kind. At trial, Exxon took the view that the claim was like “a recipe,” referring to the ingredient list of a typical recipe rather than the recipe’s steps, regardless of whether they were all intermixed and present at a given moment in time.⁸⁷ The district court agreed. The jury found infringement and judgment was entered accordingly.⁸⁸ Lubrizol had contended, by contrast, that the claim required the ingredients to be physically present together in the finished product, a view rejected by the district court.⁸⁹

¶40 On appeal, the Federal Circuit adopted a claim construction similar to Lubrizol’s, except that the court said the ingredients did not have to exist together in the finished state. Their presence together at any moment in time during the patent’s term would suffice.⁹⁰ The problem was that the evidence apparently did not show there was any such moment. As implemented by Lubrizol, some of the ingredients interreacted before all were in place, so there was never a time when all were composed, i.e., placed together, in the quantities recited in the claim.⁹¹

¶41 The decision has been criticized,⁹² mainly on the ground that it placed too much stress on literalism of the claim language and not enough on the basic sense of injustice the decision generates. One does get the feeling that Lubrizol got a free ride because the Exxon claim was worded as a composition of starting ingredients, rather than, for example, a product by process (the product of mixing A, B, and C) or a method (process of preparing an oil additive package comprising the steps of introducing A into a container, introducing B, etc.).

¶42 Notwithstanding these problems, the majority were, in my view, on solid doctrinal ground in the claim interpretation. “Composition” derives from the Latin roots *com* and *ponere*, to place together. Robinson’s treatise tells us that “[a] composition of matter is an instrument formed by the intermixture of two or more ingredients”⁹³ In other

⁸⁷ *Id.* at 1555.

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ *Id.* at 1557-58. The court said:

This conclusion respects that which is claimed, namely a chemical composition. The chemical composition exists at the moment the ingredients are mixed together . . . [A]s properly interpreted, Exxon’s claims are to a composition that contains the specified ingredients at any time from the moment at which the ingredients are mixed together. This interpretation of Exxon’s claims preserves their identity as product claims, and recognizes as a matter of chemistry that the composition exists from the moment created.

Judge Nies dissented, taking the view that the district court’s broader interpretation was right.

⁹¹ *Id.* at 1560.

⁹² See Jason M. Okun, Note, *To Thine Own Claim Be True: The Federal Circuit Disaster in Exxon Chemical Patents, Inc. v. Lubrizol Corp.*, 21 CARDOZO L. REV. 1335 (2000); Kelly Ann Casey, *Recent Developments: Exxon Chemical Patents, Inc. v. Lubrizol Corp.: The Federal Circuit Sets Unreasonable Standards for Chemical Composition Inventions*, 31 GA. L. REV. 1223, 1230-57 (1997); James B. Altman et al., *The Law of Patent Claim Interpretation: The Revolution Isn’t Finished*, 8 FED. CIR. B.J. 93, 105 (1998); John E. Tsavaris II, Sixth Annual Patent Prosecution Workshop: *Advanced Claim and Amendment Writing: Claim Drafting in the Wake of Markman*, at 7, 15 (PLI Patents, Copyrights, Trademarks, & Literary Property Course Handbook Series No. G4-3977, 1996) (noting that after *Exxon Chemical* “[e]very practitioner would do well to heed [the *Exxon Chemical* holding] because precision—now more than ever—is the hallmark of claim drafting”).

⁹³ ROBINSON ON PATENTS, as quoted in A. Deller, WALKER ON PATENTS, 126-27 (1964).

words, it is what you get when you mix two things together, not the unmixed set of ingredients.⁹⁴

¶43 The decision has been criticized as too rule-bound. There were three opinions in the case, one from each panel member. The principal one, based upon seniority, was by Judge Clevenger, a strong proceduralist in claim interpretation in Professor Wagner's appraisal.⁹⁵ We would expect a judge whose judicial methodology tends to be strongly associated with rules of decision to reach the conclusion he did. Judge Plager, a swing judge leaning toward holistic in the Wagner-Petherbridge study, concurred in a separate opinion. He was predictably concerned that the ruling would cause practical problems, in that available analytical techniques may have rendered impossible the detection of all ingredients together at one time,⁹⁶ a concern one would expect from a holistically inclined judge. Judge Nies dissented, expressing the view that the district judge's interpretation was correct.⁹⁷ She is not included in the Wagner-Petherbridge study because she died prior to the relevant data-collection period for the study.

¶44 We are left with a highly criticized decision that is squarely in the center of established law from a rules-of-decision standpoint on the meaning of a composition claim,⁹⁸ but which might have worked both an injustice to the patent owner and a more general damage to the patent system by setting traps for the unwary claim drafter. The majority decision cannot, in my view, be categorized as a failure to follow precedent. Its result might have been unpredictable – it certainly was to the district judge – but not for the Federal Circuit's failure to apply traditional doctrine or precedent.

¶45 Another aspect of the case met with a similar fate of rigid rule application. Having found that Exxon's trial evidence did not, under the correct claim interpretation now announced by the court of appeals, make out literal infringement, the court followed tradition and chose not to remand for a new trial under the correct claim interpretation.⁹⁹

⁹⁴ See also, *Shell Devel. Co. v. Watson*, 149 F. Supp. 279, 280 (D.D.C. 1957) (the phrase composition of matter "covers all compositions of two or more substances and includes all composite articles") (quoted in *Diamond v. Chakrabarty*, 447 U.S. 303, 308 (1980)).

⁹⁵ See Wagner & Petherbridge, *supra* note 3, at 1160.

⁹⁶ *Exxon*, 64 F.3d at 1562-63 (Plager, J. dissenting). He gave the following thoughtful observation: There is testimony in the record that indicates that it is not known exactly how the chemical complexing, described in the opinion, actually works. If this is so, then Exxon's burden, to prove that the chemical ingredients exist at some point in the accused composition in the claimed proportions, may be impossible of accomplishment. That could be said to argue in favor of an alternative construction of the claims, that what was meant was a process or product-by-process claim.

⁹⁷ *Id.* at 1563-70.

⁹⁸ I express no view here about whether the claim had novelty over the prior art. The case has been criticized on that point as well. See Jeffrey J. Phillips, *Clean Air Never Smelled so Bad*, 38 HOUS. L. REV. 1557, 1573-76 (2002).

⁹⁹ *Exxon*, 64 F.3d at 1558-61. In *Jamesbury Corp. v. Litton Industrial Products, Inc.*, 756 F.2d 1556, 1560 (Fed. Cir. 1985), the court explained when remand was proper and when not:

Accordingly, we must determine whether there exists evidence of record upon which a jury might properly have returned a verdict in Litton's favor when the correct legal standard is applied. If there is not, Jamesbury was entitled to have the question removed from the jury and decided as a matter of law.

See also *Dana Corp. v. IPC Ltd. P'ship*, 860 F.2d 415, 419 (Fed. Cir. 1988). The problem, of course, is the clairvoyance and courage it expects of a litigant when the district court has adopted a claim construction as correct. The litigant must not only foresee trouble in the court of appeals. In order to avoid a reverse-and-render possibility, she must persuade the district judge

The court explained its refusal to remand by citing precedents that focused on the existing evidentiary record for making the decision whether a new trial is warranted.¹⁰⁰ The problem here was not inconsistency with prior decisions, but with the settled rule of law itself. It makes little sense to require litigants to foresee a claim interpretation that will, years later, emerge for the first time from the pens of judges of the court of appeals, and to put on their cases at trial under several alternate interpretations, under pain of reverse-and-render if they fail to do so.

¶46 The argument in favor of the traditional no-remand rule is that it promotes judicial efficiency by denying the parties a second day in court. The rule says, in effect, he should have seen and used the right interpretation in the first trial; he has been heard, and this case is over. Efficiency may be a desirable goal in general, but claim interpretation is so difficult to get right that the federal judiciary itself has been unequal to the task, with high reversal rates and even unresolved interpretative stances within the court of appeals itself. Under these conditions, it seems very unfair to reverse and render, saying, in effect, the litigant should have known the correct interpretation and tried her case accordingly.

¶47 *Exxon* is a case that has been criticized on both of the prongs discussed here, but is on solid precedential ground for both. This suggests there can be too much deference to precedent as well as too little.

V. CONCLUSION

¶48 Has the court achieved the uniformity in patent law decisions that was sought when the court was created? Most observers see a partial yes as the answer to that question. Achieving fine-point uniformity in patent law decisions might have been easier said in 1982 than done today. Back then, we had a poorly analyzed, sloganistic environment of patent case law.¹⁰¹ Now, while we have much more thoughtful analysis, we also have a rather large heap of Federal Circuit precedent in the form of thousands of decided cases with which to be consistent. The court's own developmental output has increased the chances for inconsistencies.

¶49 In my view, we have on the major doctrinal points a very admirable level of uniformity. Standards of review are uniform. The approach to obviousness, once the central source of non-uniformity troubles, while perhaps still developing in its detail, is largely uniform at the macro level. (The Supreme Court has not taken and decided an

to allow her to present evidence, perhaps lengthy and technical, under a framework different from, and possibly antithetical to, what the district court has adopted as correct.

¹⁰⁰ The court said:

When we determine on appeal, as a matter of law, that a trial judge has misinterpreted a patent claim, we independently construe the claim to determine its correct meaning, and then determine if the facts presented at trial can support the appealed judgment. If not, we reverse the judgment below without remand for a second trial on the correct law. . . . We ordinarily do the same thing in the appellate review of jury trial cases.

Exxon, 64 F.3d at 1560.

¹⁰¹ In Chief Judge Markey's testimony before the Senate Judiciary Committee's Subcommittee on Improvements in Judicial Machinery in 1979, he said the "fundamental problem in patent law in this country" lies in the decision-making approach illustrated in court opinions "wherein nonstatutory slogans are employed and grow into mindless decisional rules for all cases." Pat., Trademark & Copyright J. (BNA) No. 430 at A-1 (May 24, 1979).

obviousness case since the Federal Circuit was created.) The allocation of decisional roles between judge and jury in the district courts is, in its main aspects, uniform. We know the doctrine of equivalents is alive and well, and while we are wrestling with the finer points of what used to be called file wrapper estoppel as a brake on that doctrine, we all know there is such a brake and how it works in the most common prosecution situations. We know, uniformly, a lot more about patent damages, injunctions, and issue preclusion. We have a framework for analyzing inequitable conduct. In addition to those mentioned, there are also many other uniformity achievements.

¶150 The trouble, it seems to me, is that our appreciation of these achievements is obscured by diversity of thought about the new, finer questions invariably generated by those very achievements. Realistically, that is the way it should be. One can see the same developmental pattern with the Constitution, and even with the nation's history as a whole. The fact that new issues appear, and inconsistencies emerge at the micro level for a while, does not mean that the overall fabric is organically flawed. It means the system is making progress, albeit imperfectly.