

PATENT CLAIM CONSTRUCTION IN THE TRIAL COURTS: A STUDY SHOWING THE NEED FOR CLEAR GUIDANCE FROM THE FEDERAL CIRCUIT

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INTRODUCTION

The Court of Appeals for the Federal Circuit¹ (“CAFC”) held in 1995 that “the interpretation and construction of patent claims, which define the scope of the patentee’s rights under the patent, is a matter of law exclusively for the court.”² This definitive statement from *Markman v. Westview Instruments* (“*Markman I*”) affects nearly all patent infringement litigation in the United States, because claim construction must occur before an infringement or validity analysis can be performed.³ Claim construction involves “determining the meaning and scope of the patent claims.”⁴ In *Markman I*, a majority of the CAFC held that “[b]ecause claim construction is a matter of law, the construction given the claims is reviewed *de novo* on appeal.”⁵ An important result of *Markman I* has been the emergence of the “Markman Hearing”⁶ where the court construes the claims at issue in a hearing separate from the rest of the litigation to determine their meaning.⁷

¹ Congress established the CAFC in the Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, 96 Stat. 25 (creating the only federal appellate court based on jurisdiction rather than geography). The CAFC is responsible for appellate review of patent cases decided by the federal district courts. See 28 U.S.C. § 1295(a); see also CHISUM ON PATENTS, § 11.06[3][a].

² *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996) [hereinafter *Markman I*].

³ See *id.* at 976 (regarding claim construction prior to an examination of infringement); *Smiths Indus. Med. Sys., Inc. v. Vital Signs, Inc.*, 183 F.3d 1347, 1353 (Fed. Cir. 1999) (regarding claim construction before determining claim validity).

⁴ *Markman I*, 52 F.3d. at 976.

⁵ *Id.* at 979 (Majority opinion by Archer, C.J.); see also *Cybor Corp. v. FAS Technologies, Inc.*, 138 F. 3d 1448, 1456 (Fed. Cir. 1998); *Smiths*, 183 F.3d at 1353.

⁶ The Markman Hearing may be viewed as a useful tool to determine the correct claim construction. However, it may add additional time and cost to the litigation. Patent litigation has been cited as costing each side at least one million dollars. See John R. Allison & Mark A. Lemley, *Empirical Evidence on the Validity of Litigated Patents*, 26 AIPLA Q.J. 185, 187 (1998).

⁷ While typically performed by the trial court judge, the judge may appoint a magistrate or special master. See Robert C. Weiss et al., *Markman Practice, Procedure*

The United States Supreme Court affirmed the CAFC's holding in *Markman II*.⁸ Justice Souter stated that claim construction is "exclusively within the province of the court."⁹ A decisive factor in this determination was the special training of judges. This special training would make it more likely that the trial judge, and not the jury, would properly construe the claims.¹⁰ The critical policy rationale behind the Court's affirmance was the fear of uncertainty in patent litigation should juries perform claim construction.¹¹

A key issue coming out of *Markman I & II* is whether the "training and discipline" of federal district court judges allows them to properly construe patent claims.¹² As Judge Rader once pointed out, the CAFC reversed nearly forty percent of lower court claim construction decisions between the time of *Markman I* and November 24, 1997.¹³ Judge Rader maintained that "this reversal rate, hovering near fifty percent, is the worst possible. Even a rate that was much higher would provide greater certainty."¹⁴

In the years since Judge Rader's comments, reversal rates on claim construction have not improved.¹⁵ This Comment proposes that an understanding of claim format, which undoubtedly presents

and Tactics, in PATENT LITIGATION 2000, at 117, 134 n.13 (PLI Intellectual Prop. Course Handbook Series No. G-619, 2000); see also MANUAL FOR COMPLEX LITIGATION (THIRD) § 20.14 (1995). The judge may choose not to hold a separate hearing to construe the claims, but instead merely issue a claim construction ruling.

⁸ *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996) [hereinafter *Markman II*].

⁹ *Id.* at 372.

¹⁰ *Id.* at 388-89.

¹¹ *Id.* at 391 ("Uniformity would, however, be ill served by submitting issues of document construction to juries.").

¹² Judge Mayer, in a concurrence to *Markman I*, aptly noted that "there is simply no reason to believe that judges are any more qualified than juries to resolve the complex technical issues often present in patent cases." *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 993 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996) (Mayer, J., concurring).

¹³ *Cybor Corp. v. FAS Technologies, Inc.*, 138 F. 3d 1448, 1476 n.16 (Fed. Cir. 1998) (Rader, J., dissenting).

¹⁴ *Id.* at 1476 (Rader, J., dissenting). Reversal rates significantly higher (e.g., 90%) would give litigants the "certainty" that the claim construction will be reversed by the CAFC.

¹⁵ See Gretchen Ann Bender, *Uncertainty And Unpredictability In Patent Litigation: The Time Is Ripe For A Consistent Claim Construction Methodology*, 8 J. INTELL. PROP. L. 175, 203-07 (2001) (noting that from the time of *Markman I* through 2000, the CAFC reversed or modified 65 out of 160 district court claim construction decisions, approximately 40%). In 2001, the CAFC reversed 41.5% of lower court claim constructions. See *infra* at Part III.C. for a complete analysis of the CAFC cases decided in 2001.

one of the most bizarre sentence structures in the English language,¹⁶ is fundamental to performing a correct claim construction analysis. In addition to understanding claim format, trial judges need clear guidance from the CAFC. For example, the trial courts, in attempting to live up to the strictures of *Markman I*, perform Markman Hearings at every stage of litigation.¹⁷ There are no controlling standards for when (or if) to hold a Markman Hearing.¹⁸ Indeed, the lack of guidance from the CAFC may leave trial judges uncertain as to how best to conduct claim construction hearings.¹⁹ The CAFC should be clear about when (and how) to hold Markman Hearings. The CAFC should indicate which substantive resources²⁰ can help the judge perform claim construction. Furthermore, the CAFC should articulate when and how to apply canons of claim construction.²¹

This Comment will analyze trial courts' claim construction in light of subsequent CAFC review of those decisions.²² One goal is to determine whether the use of Markman Hearings increases the likelihood of affirmance. Another goal is to uncover what mistakes trial courts continue to make in spite of a vast body of CAFC decisions to guide them. Part I presents background information regarding patents generally and *Markman I* and its progeny. Part II discusses the Markman Hearing and related claim construction resources. Part III reviews all of the CAFC's claim construction decisions from 2001 to find what key mistakes trial judges continue to make when construing patent claims. Part III concludes with a summary of the

¹⁶ See The Honorable S. Jay Plager, *Symposium: Intellectual Property Challenges in the Next Century: Article Challenges for Intellectual Property Law in the Twenty-First Century: Indeterminacy and Other Problems*, 2001 U. ILL. L. REV. 69, 71 (2001) ("The writing of English this is not . . . reading claims is an art of sorts, involving half technology and half linguistics. To many trial judges it is a foreign art; understandably, they are not batting 1.000 (more like .500)").

¹⁷ See *infra* notes 142-146 and accompanying text.

¹⁸ See *infra* notes 140-141 and accompanying text.

¹⁹ See *infra* notes 139-146 and accompanying text.

²⁰ See *infra* Part II.B.2.

²¹ See *infra* Part II.B.3.

²² For purposes of this article, the author conducted a detailed study of all CAFC cases decided in 2001 where claim construction was an issue (i.e., where the CAFC issued a decision that included affirming or reversing a lower court's claim construction). The study analyzed ninety-four cases. The study examined whether Markman Hearings were held, whether the trial court granted summary judgment, whether the CAFC reversed summary judgment on appeal, and whether the CAFC reversed the claim construction on appeal. The analysis also looked at reasons why the CAFC reversed claim construction decisions, in the hope that such information will provide direction for trial courts to improve their claim constructions in the future. See *infra* note 271 for more details about this study.

findings and a proposal to improve trial court claim construction efficacy.

I. BACKGROUND

A. *The Patent Grant*

A patent is both a legal and technical document.²³ It provides the patentee with a limited monopoly²⁴ that allows him to prevent others from making, using, selling, offering to sell, or importing the patented invention into the United States.²⁵ The United States Constitution provides Congress the right to “promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”²⁶ Congress delegates this responsibility to the Patent and Trademark Office (“PTO”), a branch of the Department of Commerce.²⁷ After a patent examiner determines that the claims of a patent application are novel,²⁸ useful²⁹ and non-obvious,³⁰ and meet all other statutory requirements, the application is approved by the Director (formerly Commissioner) of Patents and Trademarks.³¹ The

²³ *Markman I* articulated the legal aspect of the patent: “The patent is a fully integrated written instrument . . . [and is] a government grant of rights to the patentee.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 978 (Fed. Cir. 1995) (*en banc*), *aff’d*, 517 U.S. 370 (1996) (referring to 35 U.S.C. § 154 (1994)). The technical aspect of the patent:

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.

35 U.S.C. § 112 (first paragraph) (1994).

²⁴ Utility patents (and plant patents) based on applications filed on or after June 8, 1995 are in force for twenty years from date of *filing*. 35 U.S.C. § 154(a)(2); *see also* MANUAL OF PATENT EXAMINING PROCEDURE § 2700 (“MPEP”) (U.S. Department of Commerce, United States Patent and Trademark Office, 8th ed. 2001). Design patents are valid for fourteen years from date of *issue*. 35 U.S.C. § 173 (1994). The CAFC cases from 2001, and hence the scope of this Comment, only involve utility patents.

²⁵ 35 U.S.C. §§ 154(a)(1), 271(a) (1994).

²⁶ U.S. CONST. art. I, § 8, cl. 8.

²⁷ 35 U.S.C. § 1 (1994).

²⁸ 35 U.S.C. § 102 (1994) (stating that a person “shall be entitled to a patent unless” the invention is precluded by any one (or more) of six types of events).

²⁹ 35 U.S.C. § 101 (1994) (identifying the types of inventions that are patentable if new and useful).

³⁰ 35 U.S.C. § 103 (1994) (denying patentability where prior art is not identical to the claims of the application but the differences between them are too small).

³¹ The official title of the person in charge of the USPTO is “Under Secretary of

PTO then issues the patent grant.³² The grant allows the patentee to enforce the patent *claims*, because only the claims constitute the metes and bounds of the limited monopoly.³³

Nearly anyone can apply for a patent.³⁴ An applicant may prepare the application *pro se*, or can enlist the aid of a patent agent or attorney.³⁵ Regardless of who prepares a non-provisional application,³⁶ it must contain a specification,³⁷ at least one claim,³⁸ a drawing (if necessary)³⁹ and the applicant's oath⁴⁰ (or declaration)

Commerce for Intellectual Property and Director of the United States Patent and Trademark Office." 35 U.S.C. § 3(a)(1) (1994). Unlike the first Commissioner, Thomas Jefferson (*see* Amy Harmon, *In the 'Idea Wars,' a Fight to Control a New Currency*, N. Y. TIMES, November 11, 2001, at BU 7), Directors of the USPTO no longer examine patent applications themselves. 35 U.S.C. § 6(a) (1994). There is a patent examination corps numbering several thousand, which has this duty (according to the PTO Information Directory (August 2000)); *see also* the on-line USPTO employee locator at http://pair.uspto.gov/cgi-bin/final/employee_loc.pl?action=querypg (last visited March 24, 2002). Two current members of the Court of Appeals for the Federal Circuit, Judge Gajarsa and Judge Linn, were patent examiners at one time. *See* U.S. Court of Appeals for the Federal Circuit, *Judicial Biographies, Judges of the Federal Circuit*, at <http://www.fedcir.gov/judgbios.html> (last revised Mar. 5, 2002).

³² 35 U.S.C. § 2 (1994) ("The Patent and Trademark Office shall have a seal which letters patent, certificates of trade-mark registrations, and papers issued from the office shall be authenticated").

³³ 35 U.S.C. § 112 (second paragraph) (1994); MPEP 2106(C) ("The claims define the property rights provided by a patent, and thus require careful scrutiny").

³⁴ 35 U.S.C. § 4 (1994) (excluding officers and employees of the PTO from applying for a patent during the course of employment and one year after employment).

³⁵ 35 U.S.C. § 2(b)(2)(D) (1994) (giving the PTO the power to establish regulations governing "the recognition and conduct of agents, attorneys, or other persons representing applicants"); *See also* 37 C.F.R. §§ 1.33-34; 10.5-10 (2000). An agent is a person not an attorney but who has a science or technical background meeting the requirements promulgated by the PTO. *See* 37 C.F.R. § 10.6(b) and GENERAL REQUIREMENTS BULLETIN FOR ADMISSION TO THE EXAMINATION FOR REGISTRATION TO PRACTICE IN PATENT CASES BEFORE THE UNITED STATES PATENT AND TRADEMARK OFFICE (for the April 17, 2002 exam), *available at* <http://www.uspto.gov/web/offices/dcom/olia/oed/index.html> (last modified May 22, 2002). The author of this Comment is a registered patent agent. The views expressed herein are the views of the author, and not necessarily those of his employers or their clients.

³⁶ 37 C.F.R. § 1.53(b) (2000) provides for a non-provisional application ("NPA"). The NPA is a complete application, including claims. Section 1.53(c) permits an applicant to file a provisional patent application ("PPA"). The PPA need not present claims. The PPA is not examined by the PTO. It merely acts as a placeholder, giving the applicant one year to further develop or market the invention, at which time an NPA can be filed claiming the benefit of the filing date of the PPA without fear of breaking a statutory bar. *See* 35 U.S.C. § 102(b) (1994).

³⁷ 35 U.S.C. §§ 111(a)(2)(A); 112 (1994).

³⁸ 35 U.S.C. § 112 (second paragraph).

³⁹ 35 U.S.C. §§ 111(a)(2)(B); 113 (1994).

stating “he believes himself to be the original and first inventor of the process, machine, manufacture, or composition of matter, or improvement thereof, for which he solicits a patent.”⁴¹

The specification provides a detailed presentation and explanation of the invention.⁴² “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.”⁴³ The purpose of the specification is 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.”⁴⁴ The person skilled in the art necessarily has some expertise and familiarity with the technology of the invention. Thus, the patent may be enabling and valid,⁴⁵ but may not provide enough information to make the technology understandable to a judge or a jury. As will be explained below, a correct claim construction requires the judge to perform the analysis from the point of view of a “person skilled in the art.”

B. Patent Prosecution

After it is filed, a patent examiner⁴⁶ reviews the application to ensure it meets the statutory requirements.⁴⁷ Notably, the examiner performs his or her own claim construction.⁴⁸ The examiner prepares an Office Action pointing out deficiencies in the application

⁴⁰ 35 U.S.C. § 111(a)(2)(C) (1994).

⁴¹ *Id.* § 115.

⁴² “The specification shall contain a written description of the invention, and of the manner and process of making and using it.” *Id.* § 112 (first paragraph); 37 C.F.R. § 1.71 (2000). The patent application also includes a title and an abstract. 37 C.F.R. § 1.72 (2000). The PTO cannot use the abstract when interpreting the scope of a claim. 37 C.F.R. § 1.72(b). However, the courts are not bound by this requirement. *See Hill-Rom Co., Inc. v. Kinetic Concepts, Inc.*, 209 F.3d 1337, 1341 n.* (Fed. Cir. 2000); *see also* 37 C.F.R. § 1.77 (2000) for a listing of application elements.

⁴³ 35 U.S.C. § 112, para. 2 (1994).

⁴⁴ *Id.* at para. 1.

⁴⁵ *Id.* § 282 (1994) (“A patent shall be presumed valid. . . . The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.”).

⁴⁶ Patent examiners are quasi-legal officials. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 986 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996).

⁴⁷ *See* 37 C.F.R. § 1.104 (2000) (Nature of examination).

⁴⁸ MPEP 2106(C) (“Office personnel must first determine the scope of a claim by thoroughly analyzing the language of the claim *before* determining if the claim complies with each statutory requirement for patentability.”). An overview of patent examiner claim construction is discussed *infra* Part II.B.2, which further explains MPEP §§ 2106(C) and 2111.

and often rejects most (if not all) of the claims.⁴⁹ The applicant (or his attorney or agent) has the opportunity to file an amendment responding to the Office Action.⁵⁰ The amendment must “distinctly and specifically point[] out the supposed errors in the examiner’s action and must reply to every ground of objection and rejection in the prior Office [A]ction.”⁵¹ Amendments often include changes to the claims so as to distinguish them from the prior art.⁵² This give and take between the examiner and the applicant continues until the examiner allows the claims or the applicant abandons the application.⁵³ The amendments and Office Actions form a critical part of the prosecution history⁵⁴ of the application, because they often explain or limit the scope of the claims.

C. Patent Litigation

Patent litigation is a federal matter, taking place almost exclusively in the district courts.⁵⁵ Plaintiffs can elect either a jury

⁴⁹ The author conducted an informal survey of twenty-five patent attorneys and agents, asking them what percentage of claims are typically rejected in a first office action. The survey provided four percentage ranges: 0-25%, 25-50%, 50-75%, and 75-100%. The practitioners unanimously responded with 75-100%. Survey results are on file with the author.

⁵⁰ 37 C.F.R. § 1.111.

⁵¹ *Id.* § 1.111(b).

⁵² The term “prior art” is actually a term of art unto itself. It includes items such as patents and publications available that predate the effective date of the instant patent application (the effective date is typically the date filed at the PTO). *See, e.g.*, 35 U.S.C. § 102(b) (1994). Note that changes made to claim elements during prosecution that narrow the scope of the claim may give rise to prosecution history estoppel. *See Festo Corp. v. Shokatsu Kinzoku Kogyo Kabushiki Co.*, 187 F.3d 1381 (Fed. Cir. 1999), *vacated and remanded*, 535 U.S. 722 (2002).

⁵³ The applicant has the option of continuing prosecution by filing continuing applications under 37 C.F.R. section 1.53(b) or (d), or by filing a request for continuing examination under 37 C.F.R. section 1.114 (2000). A final rejection may be appealed to the Board of Patent Appeals and Interferences. *See* 35 U.S.C. § 134 (1994); 37 C.F.R. § 1.191 (2000). *See generally* MPEP ch. 1200.

⁵⁴ The written record of a patent application was formerly known as the “file wrapper,” *see Knorr-Bremse Systeme Fuer Nutzfahrzeuge GMBH v. Dana Corp.*, 133 F. Supp. 2d 833, 837 (E.D. Va. 2001), and is now usually referred to as the “prosecution history.” *See* Karen Millane Whitney, *Sources of Patent Prosecution History Must Not Violate Public Notice Requirement*, 32 SETON HALL L. REV. 266, 268 n.6 (2001) (“Prosecution history is synonymous with the file wrapper of the patent.”).

⁵⁵ *See* 28 U.S.C. § 1338(a) (1994). “The district courts shall have original jurisdiction of any civil action arising under any Act of Congress relating to patents, plant variety protection, copyrights, and trademarks. Such jurisdiction shall be exclusive of the courts of the states in patent, plant variety protection and copyright cases.” *Id.* Note that while district courts have patent case jurisdiction to the exclusion of state courts, the PTO’s Board of Patent Appeals and Interferences, the Court of Federal Claims and the International Trade Commission may all hear

trial or a bench trial.⁵⁶ Unlike patent attorneys and agents, there is no requirement that judges have any specific expertise with regard to patent-related matters.⁵⁷ Thus, the judge may not have any practical experience regarding claims or patent prosecution. However, the judge should have some understanding of patents generally and the patent at issue, in order to effectively handle the litigation.⁵⁸

Three CAFC decisions discuss some general guidelines for claim construction. *Markman I* provides a foundation for district court claim construction. *Vitronics v. Conception*⁵⁹ explains how to deal with different types of patent-related evidence. *Cybor v. FAS Technologies* explains why the CAFC performs *de novo* review of claim construction.⁶⁰ These cases will be examined in turn.

patent cases under their respective jurisdictional scopes. 28 U.S.C. § 1498 (1994); 19 U.S.C. § 1337(a)(1) (1994).

⁵⁶ FED. R. CIV. P. 38; see also Kimberly A. Moore, *Judges, Juries, and Patent Cases – an Empirical Peek Inside the Black Box*, 99 MICH. L. REV. 365, 367-68 (2000) (extensively analyzing 1411 patent cases that went to trial over a seventeen year period, from 1983 through 1999 to determine whether there was any disparity between decisions rendered by judges as opposed to juries).

⁵⁷ 35 U.S.C. § 2(b)(2)(D) (1994) permits the Commissioner to recognize and regulate patent attorneys and agents. See also 37 C.F.R. §§ 10.5-10.6 (2000). Prior to becoming a patent attorney or agent, the individual must pass a rigorous examination known as the “Patent Bar.” See 37 C.F.R. § 10.7(b) (2000). The examination tests “an applicant’s knowledge of patent law and United States Patent and Trademark Office rules, practice and procedure; understanding of claim drafting and ability to properly draft claims.” GENERAL REQUIREMENTS BULLETIN FOR ADMISSION TO THE EXAMINATION FOR REGISTRATION TO PRACTICE IN PATENT CASES BEFORE THE UNITED STATES PATENT AND TRADEMARK OFFICE 6 (for the April 17, 2002 exam), available at <http://www.uspto.gov/web/offices/dcom/olia/oed/index.html> (last modified May 22, 2002). The Patent Bar is believed to be the only specialty exam an attorney must pass to practice in a particular area of law. See also Mark L. Austrian & Shaun Mohler, *Timing is Everything in Patent Litigation – Fulfilling the Promise of Markman*, 9 FED. CIR. B.J. 227, 229 (1999) (noting that trial judges generally have no patent experience); see also Moore, *supra* note 56, at 374 (“Most judges have no special knowledge, education or training in the technology that is at issue in a patent case.”).

⁵⁸ Under the adversarial system the litigants should educate the judge because it is not the judge’s role to perform her own fact-finding. However, without a proper foundation, claim construction (like other specialized areas of law) is very difficult to perform correctly, as the 40% reversal rate cited by Judge Rader illustrates. See *supra* text accompanying note 13. It is also important to note that patent litigation attorneys, unless practicing before the USPTO in an appeal or interference, are not required to be licensed to practice patent law before the PTO. See 37 C.F.R. §§ 10.5 (individuals recognized to represent applicants before the USPTO “in the preparation and prosecution of applications”), 10.7 (dealing with registration to practice before the USPTO).

⁵⁹ 90 F.3d 1576 (Fed. Cir. 1996).

⁶⁰ 138 F.3d 1448 (Fed. Cir. 1998).

1. *Markman I*: Claim Construction as Determined by the CAFC

In *Markman I*, plaintiff Herbert Markman held a patent for an “Inventory Control and Reporting System for Drycleaning Stores.”⁶¹ Markman sued Westview Instruments and Althon Enterprises for allegedly infringing claims 1, 10, and 14 of the patent.⁶²

The focal point of the litigation became the meaning of the term “inventory” as used in the claims. The trial court “charged the jury on infringement, instructing it to ‘determine the meaning of the claims . . . using the relevant patent documents including the specifications, the drawings and the file histories.’”⁶³ The jury determined that the defendants infringed claims 1 and 10, but not 14.⁶⁴ The judge then construed the meaning of the claims.⁶⁵ The judge ruled that the term “‘inventory’ meant ‘articles of clothing’ and not simply transaction totals or dollars.”⁶⁶ Under such an interpretation, the court held that defendants did not infringe the claims at issue, and granted defendants’ motion for judgment as a matter of law.⁶⁷

Markman appealed the district court decision.⁶⁸ The CAFC began its claim construction analysis by noting that it (the CAFC) had not consistently held that claim construction is a matter of law.⁶⁹ In order to resolve the inconsistency, the CAFC stated that the Supreme Court had “repeatedly held that the construction of a patent claim is a matter of law exclusively for the court.”⁷⁰ Furthermore, the CAFC stated that written documents are exclusively construed by the court.⁷¹

Next, the CAFC analyzed the types of evidence available to aid a judge in construing the claims. The three intrinsic sources of evidence are “the claims, the specification, and the prosecution history.”⁷² All other evidence is extrinsic, including dictionaries,⁷³

⁶¹ 52 F.3d at 971. (The patent was a reissue patent, No. 33,054. Positek, a licensee of the patent, was also a plaintiff in the litigation.)

⁶² *Id.* at 972.

⁶³ *Id.* at 973.

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 973 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996).

⁶⁷ *Id.*

⁶⁸ *Id.* at 970.

⁶⁹ *Id.* at 976-77.

⁷⁰ *Id.* at 977.

⁷¹ *Markman I*, 52 F.3d at 978.

⁷² *Id.* at 979. The prosecution history includes all documents filed in conjunction

treatises, sales literature, and inventor and expert testimony.⁷⁴

Not all evidence is created equal. The *sole* purpose of examining evidence besides the claims themselves is to help the judge interpret the claims. The written description of the specification and the prosecution history “can and should be used to understand the language used in the claims.”⁷⁵ Use of extrinsic evidence is even more limited. It “is to be used for the court’s understanding of the patent, not for the purpose of varying or contradicting the terms of the claims.”⁷⁶ Thus, a judge should use extrinsic evidence to educate herself on the technology pertaining to the patent such that she can correctly apply intrinsic evidence in claim construction.⁷⁷

In *Markman I*, the CAFC noted that the intrinsic evidence supported the district court’s claim construction, finding that “the language of the claim itself suggests the conclusion that the dry-cleaner’s ‘inventory’ includes clothing. The patent specification confirms this . . . [T]he prosecution history is also in accord.”⁷⁸ The CAFC discounted testimony and sales literature pointing at alternative constructions, giving it no deference.⁷⁹ Although they might have “in fact used ‘inventory’ to mean other than articles of clothing, Westview’s sales literature and the testimony of its president do not dissuade us from our legal construction of the claim, based on the patent and prosecution history.”⁸⁰

After examining the various types of evidence available, the court went on to weigh how best to analyze the claims. The court compared patents to contracts and statutes, finding that they are more closely equated with the latter.⁸¹ A contract is a private agreement between two parties,⁸² whereas the patent is a limited

with the patent. For example, applicants may file an invention disclosure statement (“IDS”) containing listings of relevant material. See 37 C.F.R. §§ 1.56 (2000) (“Duty to disclose information material to patentability”), 1.97 (2000) (“Filing of information disclosure statement”), and 1.98 (2000) (“Content of information disclosure statement”).

⁷³ Dictionaries are really a hybrid of intrinsic and extrinsic evidence. See *infra* Part III.D for a discussion on this somewhat problematic form of evidence.

⁷⁴ *Markman I*, 52 F.3d at 980.

⁷⁵ *Id.* The abstract may also be used by the court to determine the scope of the invention. See *supra* note 42.

⁷⁶ *Markman I*, 52 F.3d at 981.

⁷⁷ *Id.* (stating that the court should look “to the extrinsic evidence to assist in its construction of the written document”).

⁷⁸ *Id.* at 982.

⁷⁹ *Id.* at 983.

⁸⁰ *Markman I*, 52 F.3d at 983.

⁸¹ *Id.* at 987.

⁸² *Id.*

monopoly obtained from the federal government.⁸³ The parol evidence rule may act to exclude certain information and documentation when analyzing a contract.⁸⁴ In contrast, patent examiners evaluate patent applications in *ex parte* proceedings.⁸⁵ The parol evidence rule does not apply to patents.⁸⁶

On the other hand, the court stated that “statutes are written instruments that all persons are presumed to be aware of and are bound to follow. Statutes, like patents, are enforceable against the public, unlike private agreements between contracting parties.”⁸⁷ The judge tasked with interpreting a statute “looks to the language of the statute and construes it according to the traditional tools of statutory construction.”⁸⁸ The judge may review the legislative history of a statute if necessary.⁸⁹ Legislative history is much like a patent’s prosecution history, because both are available to the public.⁹⁰ The final factor tipping the scales in favor of a statute-like analysis by the court was intent. As with statutes, the “subjective meaning that a patentee may ascribe to claim language is also not determinative. Thus, it is from the public record that a court should seek in a patent infringement case to find the meaning of claim language.”⁹¹ Therefore, the CAFC concluded that judges must perform claim construction.⁹²

2. *Vitronics*: Evidence Used In Claim Construction

More than a year after deciding *Markman I*—and only a few months after the Supreme Court affirmed *Markman I*⁹³—the CAFC expanded upon its discussion of patent evidence in *Vitronics v.*

⁸³ U.S. CONST. art. 1, § 8, cl. 8.

⁸⁴ U.C.C. § 2-202 (1998) (providing that “a final expression of [the agreement] with respect to such terms as are included therein may not be contradicted by evidence of any prior agreement or of a contemporaneous oral agreement but may be explained or supplemented”); see also RESTATEMENT (SECOND) OF CONTRACTS § 213 (1978).

⁸⁵ *Markman I*, 52 F.3d at 985.

⁸⁶ *Id.*

⁸⁷ *Id.* at 987.

⁸⁸ *Id.* The CAFC also briefly mentioned cannons of construction regarding statutes. *Id.* Cannons of construction also exist in patent law, and will be discussed *infra* Part II.B.2.

⁸⁹ *Markman I*, 52 F.3d at 987.

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² *Id.* at 970-71.

⁹³ *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996).

Conceptronics.⁹⁴ *Vitronics* dealt with a patent for a method of reflowing solder during the manufacture of printed circuit boards (“PCBs”).⁹⁵ Both plaintiff and defendant manufactured ovens used to make the PCBs.⁹⁶

Typically, a circuit board is designed and fabricated with contact areas (e.g., pads) to receive surface mounted devices such as resistors, capacitors, integrated circuits and other electronic components.⁹⁷ A solder paste is applied before the surface mounted devices are placed on the pads.⁹⁸ After the devices are put on the circuit board, the board goes through an oven.⁹⁹ The heat from the oven melts the solder paste.¹⁰⁰ Once the circuit board cools, the surface mounted devices are securely attached to the board via the solder.¹⁰¹

The only issue in the case dealt with a term in claim 1, regarding a “method for reflow soldering.”¹⁰² The question was what did the term “solder reflow temperature” mean.¹⁰³ The trial court held that the term meant specifically a liquidus temperature of 183°C, as defendant *Conceptronics* maintained.¹⁰⁴ In construing the term, the trial court relied not only on intrinsic evidence, but also on “expert testimony, prior testimony and writings of *Vitronics* and its employees, and technical references.”¹⁰⁵

In reversing the judgment as a matter of law against the plaintiff, the CAFC analyzed the extrinsic evidence relied on by the trial court.¹⁰⁶ The Court stated that the testimony and documents presented by the defendant supported its contention that solder reflow occurred at the liquidus temperature of 183°C.¹⁰⁷ However, a

⁹⁴ *Vitronics Corp. v. Conceptronics, Inc.*, 90 F.3d 1576 (Fed. Cir. 1996).

⁹⁵ *Id.* at 1579.

⁹⁶ *Id.* at 1578-79.

⁹⁷ *Id.* at 1579; *see also* VERN SOLBERG, DESIGN GUIDELINES FOR SURFACE MOUNT TECHNOLOGY 10, 34-49 (1990).

⁹⁸ 90 F.3d at 1579.

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² *Vitronics*, 90 F.3d 1579.

¹⁰³ *Id.* at 1579-80. At trial, the judge performed claim construction of the term at the end of testimony. *Id.* at 1580.

¹⁰⁴ *Id.* at 1580.

¹⁰⁵ *Id.*

¹⁰⁶ *Id.* at 1581, 1585. The CAFC noted that while the trial court did not specify which evidence it used in rendering its claim construction, it “must have relied on the testimony presented by *Conceptronic* that ‘solder reflow temperature’ and ‘liquidus temperature’ were synonymous.” *Id.* at 1585 n.7.

¹⁰⁷ *Id.* at 1581.

review of the intrinsic evidence clearly showed that solder reflow temperature meant “peak reflow temperature.”¹⁰⁸

The CAFC found the intrinsic evidence dispositive and was clear to point out that intrinsic evidence will be sufficient in most cases.¹⁰⁹ Only after a review of the intrinsic evidence, if “some genuine ambiguity [exists] in the claims,” should the court look at extrinsic evidence.¹¹⁰ Extrinsic evidence should be used to educate the judge so that she can sufficiently interpret the intrinsic evidence.¹¹¹ However, not all extrinsic evidence is created equal.

The CAFC lumped all forms of testimony regarding claim construction together. Whether from “an attorney, a technical expert, or the inventor,”¹¹² it is equally suspect. Such “expert testimony . . . often only indicates what a particular expert believes a term means.”¹¹³ Furthermore, “opinion testimony on claim construction should be treated with the utmost caution for it is no better than opinion testimony on the meaning of statutory terms.”¹¹⁴

Documents predating the patent, including other patents, technical literature, treatises and dictionaries are “to a lesser extent . . . more objective and reliable guides” than testimony.¹¹⁵ That is because these documents “are accessible to the public in advance of litigation.”¹¹⁶ As will be seen later, the CAFC has a special fondness for dictionaries.¹¹⁷ Contrary to its caution against using extrinsic information, the CAFC in *Vitronics* pointed out that dictionaries and treatises:

are worthy of special note. Judges are free to consult such resources at any time in order to better understand the underlying technology and may also rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a

¹⁰⁸ *Vitronics*, 90 F.3d at 1583. The peak reflow temperature was between 210°C and 218°C. *Id.*

¹⁰⁹ “In most situations, an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term. In such circumstances, it is improper to rely on extrinsic evidence.” *Id.* at 1583. Almost as an aside, near the very end of the decision the court stated that situations where extrinsic evidence is needed “will rarely, if ever, occur.” *Id.* at 1585.

¹¹⁰ *Id.* at 1584.

¹¹¹ *Id.*

¹¹² *Vitronics*, 90 F.3d 1585.

¹¹³ *Id.* at 1584.

¹¹⁴ *Id.* at 1585.

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ *See infra* Part III.D.

reading of the patent documents.¹¹⁸

To sum up, dictionaries and treatises may be employed at any time unless the intrinsic evidence explicitly defines a claim element in a specific way. The trial court may admit other extrinsic evidence at its discretion.¹¹⁹ Prior art references may be used when the intrinsic evidence is unclear. A court should attempt to use prior art before admitting testimony, because “prior art references may . . . be more indicative of what all those skilled in the art generally believe a certain term means.”¹²⁰ When all else fails, the court *may* consider testimony to help clear up any remaining confusion. And the judge must remember that the extrinsic evidence is merely a tool to help him or her construe the claims in light of the intrinsic evidence. Extrinsic evidence must not be employed to contradict what the intrinsic evidence teaches.

3. *Cybor v. FAS*: the Standard of Review

The Supreme Court held in *Markman II* that claim construction was a matter of law for the courts to decide.¹²¹ The Supreme Court acknowledged that claim construction involved both law and facts, but made a pragmatic decision to place this “mongrel practice” in the hands of the judiciary.¹²² Less than two years later, in *Cybor v. FAS Technologies*, the CAFC applied a generous logic to *Markman II* and declared *en banc* that it had the authority to review claim construction decisions *de novo*.¹²³ The decision in *Cybor* was aimed at reaffirming the CAFC’s earlier enunciation of the *de novo* standard, while pointing out that some of its cases post-*Markman I* had applied a clearly erroneous standard.¹²⁴

The *Cybor* majority criticized the idea that facts played a role in claim construction. “[W]e therefore reaffirm that, as a purely legal question, we review claim construction [*de novo*] on appeal including

¹¹⁸ *Vitronics*, 90 F.3d at 1584 n.6.

¹¹⁹ *Id.* at 1584. In contrast, the parol evidence rule prevents the admission of certain evidence with respect to contractual agreements. U.C.C. § 2-202; *see also* RESTATEMENT (SECOND) OF CONTRACTS § 213 (1978).

¹²⁰ *Vitronics*, 90 F.3d at 1584.

¹²¹ *See supra* text accompanying note 9.

¹²² 517 U.S. 370, 388-89.

¹²³ 138 F.3d 1448, 1451. “[W]e conclude that the Supreme Court’s unanimous affirmance in *Markman v. Westview Industries, Inc.*, of our [*en banc*] judgment in that case fully supports our conclusion that claim construction, as a *purely legal issue*, is subject to [*de novo*] review on appeal.” *Id.* (emphasis added).

¹²⁴ *Id.* at 1454.

any allegedly fact-based questions relating to claim construction.”¹²⁵ By totally ignoring the findings of the trial court in its claim construction, arguably the CAFC will reverse a higher percentage of cases than had it chosen a more deferential standard of review.¹²⁶

The concurring and dissenting opinions in *Cybor* present insights into the turmoil within the CAFC regarding appellate claim construction. Judge Plager stated that the CAFC should not wholly disregard the analysis of the trial court when performing its own claim construction. “Common sense dictates that the trial judge’s view will carry weight.”¹²⁷ The judge acknowledged that the important question to keep in mind is “what do the claims mean?”¹²⁸ Judge Bryson was also of the mind to rely on the trial court’s legwork. Merely because “claim construction is an issue of law does not mean that we intend to disregard the work done by district courts in claim construction or that we will give no weight to a district court’s conclusion as to claim construction.”¹²⁹

Judge Mayer, while concurring, was even more outspoken against the non-deferential standard enunciated by the majority. The judge first noted that the Supreme Court’s decision in *Markman II* to place the burden of claim construction on the judge instead of the jury “was a perilous decision of last resort.”¹³⁰ Next, the judge correctly pointed out that the Supreme Court could have, but did not, “accept our formulation of claim construction[] as a pure question of law to be decided [*de novo*] in all cases on appeal.”¹³¹ Judge Mayer stated that a pure *de novo* standard of review “would transform [the CAFC] into a trial court of first and usually last

¹²⁵ *Id.* at 1456. The CAFC also noted that certain comments by the Supreme Court in *Markman II* “do not support the view that . . . while construction is a legal question for the judge, there may also be underlying fact questions.” *Id.*

¹²⁶ See Moore, *supra* note 56, at 396-97 (“[D]eferential standards of review should result in a greater number of overall affirmances (lower reversal rates) by the CAFC than in cases resolved on dispositive motions (such as summary judgment), where the standard of review would be *de novo*.”). On the other hand, one could argue that even if the standard of review were more deferential to trial courts, the CAFC would still overturn claim constructions at the same rate because the Court could find that any claim construction error was “clear error.”

¹²⁷ 138 F.3d at 1462 (Plager, J., concurring).

¹²⁸ *Id.*

¹²⁹ *Id.* at 1463 (Bryson, J., concurring).

¹³⁰ *Id.* at 1464 (Mayer, J., concurring).

¹³¹ *Id.* The judge also averred that because the Supreme Court chose judges to determine the meaning of claims rather than juries, the standard of review should reflect some deference. “[W]hen the judge finds facts or accepts the factual determination of a jury, those facts are entitled to greater deference than [*de novo*] fact findings on appeal.” *Id.*

resort.”¹³² Notably, Judge Mayer commented that the CAFC was sending a terrible message to trial courts, subliminally recommending them to not clearly articulate their claim construction because they stood a better chance of being affirmed on appeal.¹³³

The most blistering criticism of the majority opinion came in a dissent by Judge Rader. The judge commented that blind indifference to the work of the trial court would “undermine, if not destroy, the values of certainty and predictability sought by [*Markman I.*]”¹³⁴ Judge Rader presented an extensive list of procedural problems created by the CAFC’s decision in *Markman I.*¹³⁵ Furthermore, the judge stated that the majority had “sub silentio redefined the claim construction inquiry” because the decisions in *Markman I.* and *Vitronics* sought to mitigate the use of expert testimony.¹³⁶

With the benefit of three years of case law post-*Markman I.*, Judge Rader pointed out in a footnote that *de novo* review resulted in “reversal, in whole or in part, of almost 40% of all claim construction since *Markman I.*”¹³⁷ Four years after *Cybor*, the question that remains is whether those involved in patent litigation:

have enough experience with “*Markman* Hearings” and with appellate review under the [*de novo*] regime to draw any empirically sound conclusions. In such circumstances there is much to be said for refraining from premature and argumentative judgments about what it all means, and for allowing sufficient time to actually see how it works.¹³⁸

As Part III.C. will demonstrated later, there is sufficient evidence to conclude that *Markman* Hearings do not promote correct claim construction.

¹³² *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d 1448, 1466 (Fed. Cir. 1998).

¹³³ *Id.* at 1471.

¹³⁴ *Id.* at 1474 (Rader, J., dissenting). Judge Rader also noted that appropriate deference to trial judges would “restore the trial court’s prominence in the claim interpretation function and bring again more certainty at an earlier stage of the judicial process.” *Id.* at 1478 (Rader, J., dissenting).

¹³⁵ *Id.* at 1475, n14 (Rader, J., dissenting). Judge Rader listed eight “procedural deviations.” Two dealt with claim interpretation, two with multiple trials, and another cautioned against a bias in favor of summary judgment. The summary judgment problem will be examined more fully *infra* Part III.B.

¹³⁶ *Id.* “In any event, it seems a contradiction to bar those of skill in the art at the time of invention from a search for the meaning of terms to one of skill in the art at the time of the invention.” *Id.* (Rader, J., dissenting).

¹³⁷ See *supra* text accompanying note 13.

¹³⁸ 138 F.3d at 1476 (Plager, J., concurring).

II. MARKMAN HEARINGS AND CLAIM CONSTRUCTION GENERALLY

A. *The Markman Hearing: What it is and How it Works*

The Markman Hearing, or claim construction hearing, is a hearing in which the parties present evidence bearing on the meaning of the patent claims at issue.¹³⁹ There are no requirements as to procedures the judge must follow.¹⁴⁰ In fact, the judge need not even hold a Markman Hearing before construing the claims.¹⁴¹

Because there are no rules or guidelines, it is not surprising that trial judges perform Markman Hearings at every stage of litigation prior to charging the jury.¹⁴² The hearing can take place before, during or after discovery.¹⁴³ It can occur at summary judgment or right before opening arguments.¹⁴⁴ It can also happen during trial, either before or after closing arguments.¹⁴⁵ It may be a separate hearing or may be combined with a summary judgment motion.¹⁴⁶

Each alternative has its own benefits and drawbacks. Holding the hearing at some point before trial promotes efficiencies in both cost and time at the expense of fully exploring all the evidence.¹⁴⁷ Hearings performed during the trial may allow the judge to examine all the relevant evidence, but with the increased expense of putting on a trial.¹⁴⁸ Alternatively, efficiency-minded litigants may attempt some form of an expedited appeal.¹⁴⁹ However, the CAFC rarely (if

¹³⁹ ROBERT C. KAHRL, PATENT CLAIM CONSTRUCTION § 12.02 (2001) (“[S]hortly after [*Markman I*], some district courts began to hold separate hearings to hear arguments and take testimony concerning disputed meanings of claim terms.”).

¹⁴⁰ *Ballard Med. Products v. Allegiance Healthcare Corp.*, 268 F.3d 1352, 1358 (Fed. Cir. 2001) (“Contrary to Ballard’s contention, *Markman I* does not require a district court to follow any particular procedure in conducting claim construction.”).

¹⁴¹ *Id.* at 1358. “There is nothing unique about claim construction that requires the court to proceed according to any particular protocol. As long as the trial court construes the claims to the extent necessary to determine whether the accused device infringes, the court may approach the task *in any way that it deems best.*” *Id.* (emphasis added). However, because appellate courts have reversed trial courts at such a high rate, one suggestion is for the CAFC to prepare formal guidelines that judges may follow should they choose to hold a Markman Hearing.

¹⁴² See William F. Lee & Anita K. Krug, *Still Adjusting to Markman: A Prescription for the Timing of Claim Construction Hearings*, 13 HARV. J.L. & TECH. 55 (1999). Lee and Krug posit that the timing of the Markman Hearing is “[o]ne of the most intractable issues created by *Markman I*.” *Id.* at 56.

¹⁴³ *Id.* at 73.

¹⁴⁴ *Id.*

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ KAHRL, *supra* note 139, § 12.02[A].

¹⁴⁸ See Allison & Lemley, *supra* note 6.

¹⁴⁹ See John B. Pegram, *Markman and its Implications*, 78 J. PAT. TRADEMARK OFF.

ever) accepts interlocutory appeals of claim interpretation.¹⁵⁰ Since there is no consistency among trial courts as to the timing of Markman Hearings, the obvious, though unanswered, question is whether timing impacts claim construction reversal rates.¹⁵¹

B. Patent Litigation Resources Available to Aid the Trial Judge

Various procedural, legal and substantive resources exist to help the trial judge in the claim construction task. Procedural resources include magistrate judges, special masters, court-appointed experts and local patent rules that lay out templates for case management. Substantive resources include patent-related literature that provides claim construction guidance. Legal resources comprise the canons of claim construction.

1. Procedural Resources

The judge may decide to “farm out” the Markman Hearing to a special master under the Federal Rules of Civil Procedure.¹⁵² The special master, such as a patent attorney, performs the hearing and issues a claim construction report, which the trial judge may choose to adopt.¹⁵³ Alternatively, the trial judge may employ a magistrate

SOCY 561, 567 (1996) (discussing various methods including summary judgment, certification, preliminary injunction, and a separate judgment under Federal Rule of Civil Procedure 54(b)).

¹⁵⁰ Lee & Krug, *supra* note 142, at 68 (citing *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d 1448, 1479 (Fed. Cir. 1998)). However, litigants have begun to stipulate as to claim construction rulings in order to expedite an appeal. See *Generation II Orthotics Inc. v. Medical Tech., Inc.*, 263 F.3d 1356, 1363 (Fed. Cir. 2001). In that case, Generation II sued Medical Technology over a patent for an orthopedic knee brace. *Id.* at 1362. The trial court construed the claims in such a way that Medical Technology did not infringe. *Id.* Generation II stipulated as to entry of a judgment of non-infringement and then appealed to the CAFC. *Id.* at 1363.

¹⁵¹ In order to perform such an analysis, one would likely have to examine the trial court records for every claim construction decision appealed to the CAFC. Unfortunately, the records may not reflect when (or if) hearings were held, the evidence presented, or the evidence relied upon by the judge. Thus, reliable statistical information regarding this question will be left for another day.

¹⁵² FED. R. CIV. P. 53(a) (“The court in which any action is pending may appoint a special master therein.”).

¹⁵³ See Thomas L. Creel & Thomas McGahren, *Use of Special Masters in Patent Litigation: A Special Master’s Perspective*, 26 AIPLA QJ. 109, 117 n.20 (1998) (“Special masters make findings that may then be offered in evidence.”); see also *Crystal Semiconductor Corp. v. Tritech Microelectronics Int’l, Inc.*, 246 F.3d 1336, 1344 (Fed. Cir. 2001). The district court appointed a special master and adopted the special master’s claim construction. *Id.* The district court granted summary judgment based upon the claim construction. *Id.* On appeal, the CAFC affirmed the claim construction. *Id.* at 1362.

judge in lieu of a special master.¹⁵⁴ If the judge is unwilling to cede construction to a special master or magistrate, she may decide to appoint an expert to help explain technology requiring special expertise.¹⁵⁵

Whether or not a trial judge relies on a special master, magistrate or an expert, she may find it helpful to follow some preset procedure such as a pretrial conference under Federal Rule of Civil Procedure 16.¹⁵⁶ While some district courts may be testing their own local rules, to date only the United States District Court for the Northern District of California has promulgated “Patent Local Rules” specifically for patent infringement cases.¹⁵⁷ These patent rules are directed mainly to case management, setting out timelines for the management of the suit,¹⁵⁸ disclosures of asserted claims and contentions,¹⁵⁹ and claim construction proceedings.¹⁶⁰ The judge “may accelerate, extend, eliminate, or modify the obligations or deadlines . . . based on the circumstances of any particular case.”¹⁶¹

These Patent Local Rules set forth five steps leading up to the Markman Hearing. First, the parties exchange proposed terms and claim elements.¹⁶² Next, the litigants exchange their preliminary claim constructions and lists of extrinsic evidence.¹⁶³ The third step is a Joint Claim Construction and Prehearing Statement.¹⁶⁴ Discovery

¹⁵⁴ FED. R. CIV. P. 53(f); 28 U.S.C. § 636(b)(2) (1994). A magistrate judge may be chosen under Section 636(b)(2) without the consent of the parties, but under Rule 53(f) the magistrate may be chosen without the consent of the litigants only upon some exceptional circumstances. *See* FED. R. CIV. P. 53(f) advisory committee’s note (1983 Amendments).

¹⁵⁵ FED. R. EVID. 706; *see also* *Mediacom Corp. v. Rates Tech., Inc.*, 4 F. Supp. 2d 17, 29-30 & n.11 (D. Mass. 1998) (ordering the parties to “agree on an appropriate artisan” who understood the technology in order to educate the judge).

¹⁵⁶ FED. R. CIV. P. 16.

¹⁵⁷ N.D. C.A. USDC Patent L.R. 1-1 to 4-6 (2001) (formerly Civil Local Rules 16-6 to 16-11 (1997) [hereinafter “Patent L.R.”]).

¹⁵⁸ Patent L.R. 2-1.

¹⁵⁹ Patent L.R. 3-1 to 3-7.

¹⁶⁰ Patent L.R. 4-1 to 4-6.

¹⁶¹ Patent L.R. 1-2.

¹⁶² Patent L.R. 4-1. This step takes place “[n]ot later than [ten] days after service of the ‘Preliminary Invalidity Contentions’ pursuant to Patent L.R. 3-3.” Patent L.R. 4-1(a).

¹⁶³ Patent L.R. 4-2. This takes place within twenty days of the events from L.R. 4-1. Patent L.R. 4-2(a). The parties must exchange “a preliminary identification of extrinsic evidence, including . . . dictionary definitions, citations to learned treatise and prior art, and testimony of percipient and expert witnesses.” Patent L.R. 4-2(b).

¹⁶⁴ Patent L.R. 4-3. This takes place within sixty days of step 2. The statement includes the “construction of those claim terms, phrases, or clauses on which the parties agree.” Patent L.R. 4-3(a). The statement also includes each party’s

necessary for claim construction is performed within thirty days of serving and filing the Joint Claim Construction and Prehearing Statement.¹⁶⁵ Next, claim construction briefs are submitted.¹⁶⁶ Finally, the Markman Hearing begins within two weeks of the submission of any reply briefs.¹⁶⁷ Unfortunately, that is where the Patent Local Rules end.

Some commentators contend that the Northern District of California's patent rules improve the litigation process.¹⁶⁸ At the very least, the Patent Local Rules provide the trial court with *some* procedure to follow. While the Northern District's patent rules may be beneficial from a procedural standpoint, the true test is whether the CAFC reverses or affirms claim construction decisions made by the trial court. Part III.C. will analyze the CAFC's reversal rate for 2001, including the cases from the Northern District of California presumably following the Patent Local Rules.

2. Substantive Resources

There is surely no shortage of patent-related literature available to assist a trial court judge. One patent text specifically for trial judges is *Patent Law: A Primer for Federal District Court Judges* ("Primer").¹⁶⁹ The *Primer* spends only two pages discussing the implications of *Markman I and II*,¹⁷⁰ and another page and a half discussing appeals to the CAFC, contrasting certification of claim construction with entry of final judgment after claim construction.¹⁷¹ Unfortunately, the *Primer* gives no guidance for actually conducting Markman Hearings.¹⁷²

construction of claims upon which they do not agree. Patent L.R. 4-3(b).

¹⁶⁵ Patent L.R. 4-4.

¹⁶⁶ An opening brief shall be submitted within forty-five days of the Joint Claim Construction and Prehearing Statement. Patent L.R. 4-5(a). Responsive briefs are due within fourteen days of service of the opening brief. Patent L.R. 4-5(b). Any brief in reply to the responsive briefs are due within seven days. Patent L.R. 4-5(c).

¹⁶⁷ Patent L.R. 4-6 ("Subject to the convenience of the Court's calendar, two weeks following submission of the reply brief . . . the Court shall conduct a Claim Construction Hearing, to the extent the parties or the Court believe a hearing is necessary.").

¹⁶⁸ Lee & Krug, *supra* note 142, at 79. (referring to the Northern District of California's 1997 rules, which have been superceded by the 2001 Patent Local Rules) ("Because, under these rules, the parties must adhere to a variety of mandatory initial disclosures, the discovery process is more productive.").

¹⁶⁹ JAMES M. AMEND, *PATENT LAW: A PRIMER FOR FEDERAL DISTRICT COURT JUDGES* (1998).

¹⁷⁰ *Id.* at 15-16.

¹⁷¹ *Id.* at 17-18.

¹⁷² "It is beyond the scope of this Primer to discuss how the Markman [H]earing

The Federal Judicial Center provides three publications touching on relevant areas of patent law: the *Manual for Complex Litigation* (“*Manual*”), *Patent Law and Practice*, and the *Reference Manual on Scientific Evidence*.¹⁷³ Notably, the *Manual* cautions against the use of a special master for pretrial management.¹⁷⁴ Although the 1995 edition of the *Manual* does not discuss Markman Hearings, the section on patents takes care to point out that “primary attention must be directed to the management of the technical aspects of patent cases.”¹⁷⁵ In particular, the *Manual* provides that to “ensure a fair trial, whether it is by the court or a jury, comprehension of the issues and the evidence is critical.”¹⁷⁶

Comprehension of the issues starts with some education in the underlying technology of the patent at issue. As former Judge McKelvie of the District of Delaware recently stated, education “starts with the trial judge, who even in cases that will be tried by a jury will need to understand the technology to handle and resolve matters such as discovery disputes, claim construction and pretrial motions.”¹⁷⁷ Interestingly, the judge stated that “most judges do not take any particular or special steps to educate themselves on the technology in these cases. They do not, for example, read scientific texts or literature in the field. They rely on the lawyers to educate them.”¹⁷⁸ The judge identified multiple ways to educate the trial judge, including general seminars on science, briefs and exhibits, tutorials by the litigants, video tapes on the technology, court appointed experts, and even law clerks.¹⁷⁹

should be conducted.” *Id.* at 16.

¹⁷³ MANUAL FOR COMPLEX LITIGATION, THIRD (1995); PATENT LAW AND PRACTICE (1995); REFERENCE MANUAL ON SCIENTIFIC EVIDENCE (1994). Hopefully, newer editions will reflect the changes in patent litigation brought on by *Markman I* and its progeny. For more up to date information on claim construction, see HERBERT F. SCHWARTZ, PATENT LAW AND PRACTICE § 5 (Bureau of National Affairs 2001).

¹⁷⁴ MANUAL FOR COMPLEX LITIGATION, THIRD § 20.14.

¹⁷⁵ *Id.* § 33.6. The subsection on technology states that the “judge will often need some general explanation of the substance and terminology of the science . . . involved . . . before attempting to deal with the issues in the case or develop a plan for discovery and trial.” *Id.* § 33.61.

¹⁷⁶ *Id.* § 33.66.

¹⁷⁷ Roderick R. McKelvie, *Problems of Complex Litigation*, 9 FED. CIR. B.J. 529, 531 (2000). Judge McKelvie was a United States District Court Judge for the District of Delaware.

¹⁷⁸ *Id.* at 532.

¹⁷⁹ *Id.* at 531-33. The judge noted that some judges “will hire a law clerk who has a background or interest in science and intellectual property. . . . These law clerks can be very helpful, even if the cases are not in the area he or she has studied.” *Id.* at 532.

Even if the trial judge understands the technology that is the subject of the claims, it would also be helpful for the judge to familiarize himself with resources used by patent practitioners. For instance, if the judge understands how patent examiners perform claim construction, it cannot hurt when performing construction during litigation. The place to start is the *Manual of Patent Examining Procedure*, colloquially known as the *MPEP*.¹⁸⁰ As the forward to the *MPEP* notes, “[t]his Manual is published to provide [PTO] patent examiners, applicants, attorneys, agents, and representatives of applicants with a reference work on the practices and procedures relative to the prosecution of patent applications before the” PTO.¹⁸¹ While the *MPEP* does not have the force of law,¹⁸² it is in accordance with Title 35 of the United States Code, Title 37 of the Code of Federal Regulations and relevant caselaw.¹⁸³

To put it mildly, the *MPEP* is a voluminous tome including twenty-five chapters covering over 1300 pages,¹⁸⁴ which does not include more than 600 pages of appendices and indices. Many of the chapters are unrelated to claim construction issues.¹⁸⁵ Other chapters provide helpful background material.¹⁸⁶ The one chapter critical to an understanding of claim construction is chapter 2100, which covers patentability.¹⁸⁷ Therefore, trial judges should be familiar with this particular chapter.

For example, section 2106(C) explains generally how patent

¹⁸⁰ See generally MANUAL OF PATENT EXAMINING PROCEDURE (8th ed. 2001) [hereinafter *MPEP*].

¹⁸¹ Forward to *MPEP*.

¹⁸² *In re Portola Packaging, Inc.*, 110 F.3d 786, 788 (Fed. Cir. 1997) (“although [the *MPEP*] does not have the force of law, [it] provides guidance and instruction to examiners”); see also *In re Beigel*, 7 Fed. App. 959, 965 n.1 (Fed. Cir. 2001) (“We note that the *MPEP* is not binding on this court . . . although it does not have the force of law, [the *MPEP*] is well known to those registered to practice in the PTO and reflects the presumptions under which the PTO operates.”) (citing *Critikon, Inc. v. Becton Dickinson Vascular Access, Inc.*, 120 F.3d 1253, 1257 (Fed. Cir. 1997)); *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1180 (Fed. Cir. 1995) (“While the *MPEP* does not have the force of law, it is entitled to judicial notice as an official interpretation of statutes or regulations as long as it is not in conflict therewith”); Forward to *MPEP* (“The Manual does not have the force of law or the force of the rules in Title 37 of the Code of Federal Regulations.”).

¹⁸³ Introduction to *MPEP*.

¹⁸⁴ *MPEP* §§ 100-2500.

¹⁸⁵ See, e.g., *MPEP* §§ 500 (Receipt and Handling of Mail and Papers), 1100 (Statutory Invention Registration) and 1500 (Design Patents).

¹⁸⁶ See, e.g., *MPEP* §§ 600 (Parts, Form, and Content of Application) and 700 (Examination of Application).

¹⁸⁷ *MPEP* § 2100.

examiners should evaluate the claims.¹⁸⁸ “Office personnel should begin claim analysis by identifying and evaluating each claim limitation. . . . [They] are to correlate each claim limitation to all portions of the disclosure that describe the claim limitation. This is to be done in all cases . . . [t]he correlation step will ensure that Office personnel correctly interpret each claim limitation.”¹⁸⁹ The language of a claim must be carefully evaluated.¹⁹⁰ Suggestive or optional language is not to be used to limit the scope of a claim.¹⁹¹

Section 2111 examines the policy of providing claims their broadest reasonable interpretation.¹⁹² While seemingly in conflict with the narrow interpretation performed by a judge, both methods of claim construction further important policies.¹⁹³ The broad reading by the examiner helps to “fashion claims that are precise, clear, correct, and unambiguous.”¹⁹⁴ The narrow interpretation by the judge, as stated above, maintains the validity of the claim if possible.¹⁹⁵

Although claim terms should be given their plain meaning, the “applicant may be his or her own lexicographer as long as the meaning assigned to the term is not repugnant to the term’s well known usage.”¹⁹⁶ Any non-standard definition should be clearly spelled out in the specification.¹⁹⁷ Additionally, the preamble, or opening statement of the claim, is generally non-limiting. In order to limit the claim, the preamble must be “‘necessary to give life, meaning, and vitality’ to the claim.”¹⁹⁸ On the other hand, a transitional phrase linking the preamble to the body of the claim may

¹⁸⁸ MPEP § 2106(C) tracks many of the canons of claim construction explained earlier.

¹⁸⁹ MPEP § 2106(C).

¹⁹⁰ *Id.* (“As a general matter, the grammar and intended meaning of terms used in a claim will dictate whether the language limits the claim scope.”).

¹⁹¹ *Id.* (A non-exhaustive list of such language includes “(A) statements of intended use or field of use, (B) ‘adapted to’ or ‘adapted for’ clauses, (C) ‘wherein’ clauses, or (D) ‘whereby’ clauses”).

¹⁹² MPEP § 2111.

¹⁹³ *Id.* (referring to *In re Morris*, 127 F.3d 1048 (Fed. Cir. 1997) for the proposition “that the PTO is not required, in the course of prosecution, to interpret claims in applications in the same manner as a court would interpret claims in an infringement suit”); see also *In re Etter*, 756 F.2d 852, 858-59 (Fed. Cir. 1985).

¹⁹⁴ MPEP § 2106; see also *Etter*, 756 F.2d at 858.

¹⁹⁵ See Weiss, *supra* note 7; see also *Etter*, 756 F.2d at 859.

¹⁹⁶ MPEP § 2111.01 (relying on *In re Hill*, 161 F.2d 367 (C.C.P.A. 1947)).

¹⁹⁷ *Id.*

¹⁹⁸ *Id.* § 2111.02 (quoting *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999)).

limit the claim if it is not open-ended.¹⁹⁹

Another suitable reference that may aid claim interpretation is a treatise entitled *Landis on Mechanics of Patent Claim Drafting* (“*Landis*”).²⁰⁰ Landis first discusses claim forms generally,²⁰¹ followed by in-depth analysis of apparatus,²⁰² method,²⁰³ article of manufacture,²⁰⁴ chemical,²⁰⁵ and biotechnology claims.²⁰⁶ Afterward, the author presents a chapter entitled “Thoughts on Writing a Claim,”²⁰⁷ including a subsection reviewing some claim drafting basics.²⁰⁸ The goal in suggesting *Landis* as a useful reference is not to turn trial court judges into patent attorneys, but rather to allow judges to become familiar with and understand claim format.²⁰⁹

3. Rules of Law—Canons of Claim Construction

In addition to understanding the technology of the patent, the judge should apply some basic principles akin to statutory interpretation. These are known as canons of claim construction, which generally comport with PTO guidelines for patent

¹⁹⁹ MPEP § 2111.03. The term ‘comprising’ is open-ended, and is “synonymous with ‘including,’ ‘containing,’ or ‘characterized by’ . . . and does not exclude additional, unrecited elements or method steps.” ‘Comprising’ means ‘at least.’ *Id.*; see *Bradford Co. v. Jefferson Smurfit Co.*, 2001 U.S. App. LEXIS 25205 *17 (Fed. Cir. Oct. 30, 2001) (stating that “because the claims here contain the language ‘comprising,’ the presence of additional [elements] in the accused device does not remove that device from the scope of the . . . patent claims”). On the other hand, the “transitional phrase ‘consisting of’ excludes any element, step or ingredient not specified in the claim.” MPEP § 2111.03. “‘Consisting essentially of’ is a hybrid of these two terms, and “limits the scope of a claim to the specified materials or steps,” plus other materials or steps “not *materially* affect[ing] the *basic* and *novel* characteristic(s)’ of the invention.” MPEP § 2111.03 (quoting *In re Herz*, 537 F.2d 549, 551-52 (C.C.P.A. 1976) (emphasis in original). Other terms, for example “‘composed of,’ ‘having,’ or ‘being’ must be interpreted in light of the specification to determine whether” the claim is open-ended or closed. MPEP § 2111.03.

²⁰⁰ FABER, *LANDIS ON MECHANICS OF PATENT CLAIM DRAFTING* (4th ed. Release no. 5, Nov. 2001). Other patent claim reference materials exist, such as KAYTON, *1 PATENT PRACTICE* (6th ed. 1995), cited by *Smith and Nephew, Inc. v. Ethicon, Inc.*, 276 F.3d 1304, 1310 (Fed Cir. 2001)), and KAHRL, *supra* note 139. However, because *LANDIS* particularly focuses on claim drafting, it is a more apt reference than general texts.

²⁰¹ FABER, *supra* note 200, §§ 4-13.

²⁰² *Id.* §§ 14-35.

²⁰³ *Id.* §§ 36-44.

²⁰⁴ *Id.* §§ 45-48A.

²⁰⁵ *Id.* §§ 49-59.

²⁰⁶ FABER, *supra* note 200, §§ 70-81.

²⁰⁷ *Id.* at X-1 to X-55.

²⁰⁸ *Id.* at X-44 to X-55 (subsection written by Myron Cohen).

²⁰⁹ See Plager, *supra* note 16.

examiners.²¹⁰ For instance, one canon states that unambiguous intrinsic evidence controls claim construction.²¹¹ Again, the purpose of extrinsic evidence is to help give the judge a foundation so that she may properly analyze the intrinsic evidence.²¹² Another important principle is that a claim term should be given its ordinary meaning unless the specification expressly uses the term in a different way.²¹³ The ordinary meaning is actually the meaning that a person skilled in the art at the time of the invention would attribute to the term.²¹⁴

Limitations disclosed in the specification should not be imported into a claim.²¹⁵ Patents often include “preferred embodiments” in order to comport with the best mode requirement of 35 U.S.C. Section 112, first paragraph.²¹⁶ If the specification provides broader support than a preferred embodiment, it is improper to limit a claim to the scope of the preferred embodiment.²¹⁷ On the other hand, a claim should not be construed to exclude a preferred embodiment.²¹⁸ A preferred embodiment can therefore be viewed as a floor as to claim scope—claims should generally be construed at least broadly enough to encompass a preferred embodiment, but are not necessarily limited to the preferred embodiment. As the CAFC stated in *Vitronics*, a claim construction excluding a preferred embodiment “is rarely, if ever, correct and would require highly persuasive evidentiary support.”²¹⁹

²¹⁰ See Weiss, *supra* note 7, at 151-59. One canon in conflict with PTO guidelines of the *MPEP* is for the judge to read a claim narrowly (if possible) in order to preserve validity. See *Rhine v. Casio, Inc.*, 183 F.3d 1342, 1345 (Fed. Cir. 1999). In contrast, patent examiners must give claims their broadest reasonable construction. *In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997); see also *MPEP* § 2106(C).

²¹¹ Weiss, *supra* note 7, at 151.

²¹² *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996).

²¹³ Weiss, *supra* note 7, at 152; see also *Hoechst Celanese Corp. v. BP Chemicals Ltd.*, 78 F.3d 1575, 1578 (Fed. Cir. 1996); *Renishaw PLC v. Marposs Societa' Per Azioni*, 158 F.3d 1243, 1249 (Fed. Cir. 1998).

²¹⁴ Weiss, *supra* note 7, at 152.

²¹⁵ *Id.* at 154.

²¹⁶ 35 U.S.C. § 112, para. 1 (1994). “The specification shall . . . set forth the best mode contemplated by the inventor of carrying out the invention.”

²¹⁷ Weiss, *supra* note 7, at 155 (citing *Ekchian v. Home Depot, Inc.*, 104 F.3d 1299, 1303 (Fed. Cir. 1997)). However, when the specification is limited to a preferred embodiment, the scope of the claims should not exceed that of the preferred embodiment. *Id.* (citing *Modine Mfg. Co. v. ITC*, 75 F.3d 1545, 1551 (Fed. Cir. 1996); *Wang Labs v. America Online, Inc.*, 197 F.3d 1337, 1383 (Fed. Cir. 1999)).

²¹⁸ *Id.* at 155.

²¹⁹ *Vitronics Corp. v. Conceptionics, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) (rejecting the trial court’s construction of the term ‘solder reflow temperature’ because it excluded the only preferred embodiment in the specification).

Patent claims are presumed valid.²²⁰ Therefore, claims should be construed so as to maintain validity if possible.²²¹ Given a choice between two possible constructions, one that would preserve validity and another that would render the claim invalid, the judge should choose the one preserving validity absent a compelling reason not to.²²² This may require interpreting the claim narrowly, which is the opposite of what is done by the patent examiner.²²³

Another helpful canon deals with claim differentiation.²²⁴ A patent will often include sets of claims of varying scope.²²⁵ For example, a “picture claim” may cover a specific embodiment, or species, of the invention, while a genus claim may include all embodiments presented in the specification.²²⁶ In that situation, the language of the picture claim should not limit the scope of the genus claim.²²⁷

Many of the cases from 2001 involved one or more canons of claim construction.²²⁸ The discussion above provides an initial look at the canons of claim construction, but an exhaustive analysis of them is beyond the scope of this Comment. However, since many claim constructions were reversed because of an error involving a canon, the CAFC should provide clearer guidance so that trial judges can avoid such pitfalls in the future.

III. CAFC REVERSAL RATES: TRIAL JUDGES ARE NOT GETTING BETTER AT CLAIM CONSTRUCTION

Collecting statistical data concerning patent litigation is not straightforward. While the Administrative Office of the United States Courts compiles statistics on cases by subject matter, it does not provide in-depth reporting of the cases.²²⁹ For example, the reports do not indicate whether judges actually conduct Markman Hearings.

²²⁰ 35 U.S.C. § 282 (1994) (stating that “[a] patent shall be presumed valid”).

²²¹ Weiss, *supra* note 7, at 156.

²²² Karsten Mfg. Corp. v. Cleveland Golf Co., 242 F.3d 1376, 1384 (Fed. Cir. 2001).

²²³ MPEP Section 2106(C) provides that “[o]ffice personnel are to give claims there broadest reasonable interpretation in light of the supporting disclosure.” MPEP § 2106(C).

²²⁴ Weiss, *supra* note 7, at 159.

²²⁵ Karsten, 242 F.3d at 1385 (noting that “it is customary for patentees to present claims of varying scope or stated in a variety of ways”).

²²⁶ FABER, *supra* note 200, § 60.

²²⁷ Weiss, *supra* note 7, at 159.

²²⁸ See *infra* Part III.D; see also *infra* app. B.

²²⁹ See Moore, *supra* note 56 (providing an exhaustive statistical analysis of 1411 patent cases from 1983-1999). The purpose of the article was to examine whether it mattered if the fact-finder was either the judge or the jury. *Id.*

Also, the reports do not show how often trial judges are reversed on claim construction decisions. This section attempts to answer these questions. In doing so, the hope is to illuminate at least a part of the patent litigation process, with an eye towards improving the effectiveness of trial judge claim construction.

As an initial matter, it is relevant to put patent litigation in perspective with regard to other kinds of litigation. For instance, it has been reported that from 1994 through 1998, approximately 243,000 civil cases were filed annually in the federal district courts, including a yearly average of about 1,700 patent cases.²³⁰ This averages out to patent litigation representing about 0.7% of all civil litigation filed during those years. One study found that over a recent five-year period, trial judges averaged less than one patent case per year.²³¹ During the same time span, the CAFC heard approximately 800 patent cases on appeal.²³²

Even the average number of patent cases per judge is misleading. From 1989 through 1996, only seven district courts heard at least ten patent cases.²³³ The District Court for the Southern District of New York led the list with twenty-three patent cases over the seven-year span.²³⁴ Even the Northern District of California only had ten patent cases.²³⁵ Thus, trial judges are simply not afforded an opportunity to hear a significant number of patent cases.²³⁶ This lack of exposure, combined with complex technology and confusing claim language, is a recipe for improper claim construction.²³⁷

²³⁰ McKelvie, *supra* note 177, at 530 (citing statistics for criminal cases, civil cases, and patent-related cases filed in the U. S. district courts).

²³¹ See Plager, *supra* note 16, at 77 (Judge Plager and a law clerk examined 1250 published district court cases over a five-year period, finding that “each trial judge heard three plus cases over the five year period”).

²³² *Id.* (“[E]ach [CAFC] judge hears about a fourth of the court’s caseload”); see also Judge Richard Linn, Judge Richard Linn Speaks at 2001 Annual Meeting (Oct. 19, 2001), in *AIPLA BULLETIN – 2001 ANNUAL MEETING ISSUE*, December 2001, at 7:

In the last fiscal year, the [CAFC] decided 900 cases . . . of which about 1/3 were patent cases. Of the patent cases appealed from the district courts (308 cases), 12 percent were reversed; 18 percent were affirmed in part or reversed in part. Of the cases on appeal from the PTO (58 cases), 12 percent were reversed; 3 percent were affirmed in part or reversed in part.

Id.

²³³ Allison & Lemley, *supra* note 6, at 247.

²³⁴ *Id.*

²³⁵ *Id.*

²³⁶ Out of the ninety-four cases heard on appeal in 2001, only four trial court judges had been part of more than one decision (J. Dimitrouleas, S.D. Fl. (two); J. McKelvie, D. Del. (three); J. Van Sickle, D. Az. (two); J. Wright, W.D. Mo. (two)).

²³⁷ Two out of the four judges involved in more than one claim construction had

According to the CAFC's own statistics, the reversal rates for patent cases appealed from the district courts and the PTO over a recent four-year period breaks down as shown in table 1.

TABLE 1: CAFC REVERSAL RATES FOR SELECTED COURTS,

10/1/96 TO 9/30/00²³⁸

YEAR	District Courts	PTO
10/1/96 – 9/30/97	27%	0%
10/1/97 – 9/30/98	19%	23%
10/1/98 – 9/30/99	21%	17%
10/1/99 – 9/30/00	16%	17%

One detailed study of patent cases from 1983-1999 by Kimberly Moore found that, of the 1209 cases resolved by a fact finder, 51%

all of their constructions affirmed (J. Dimitrouleas and J. McKelvie), one judge had one of the two cases reversed (J. Van Sickle), and one judge had both constructions reversed (J. Wright). While the sample size is too small to make firm predictions, as judges perform more claim constructions they will likely have more success (i.e., claim constructions affirmed by the CAFC). It should come as no surprise that J. McKelvie's decisions were all affirmed on appeal. *See* William J. Marsden, Jr., *Delaware District is Top Choice for Patent Disputes*, NAT'L L.J., Mar. 27, 2000, at C3 (stating that "Judge McKelvie has spurred many reforms in the way patent cases are prepared and tried and has championed the Delaware District Court as a patent trial court"); *see also* The Honorable Roderick R. McKelvie, *Side Bar: Markman v. Westview and Procedures for Construing Claims*, in *PRINCIPLES OF PATENT LAW: CASES AND MATERIALS* 1065, 1067 (Donald S. Chisum et al. eds., 1998):

Recently, one of our district judges left me a problem that may turn out to be the solution . . . I scheduled the pretrial conference for two weeks before trial and a separate hearing on claim construction pursuant to Fed. R. Civ. P. 42(b), to be held one week before trial. . . . We avoided additional delay getting the case to the jury. And after reading the draft pretrial order submitted by the parties, I felt comfortable that I could put the claim construction disputes in context.

Id.

²³⁸ Table B-8 U.S. Court of Appeals for the Federal Circuit-Appeals Filed, Terminated, and Pending During the Twelve-Month Period Ending September 30, 1997, at <http://www.fedcir.gov/pdf/b08sep97.pdf> (last visited Mar. 21, 2002); Table B-8 U.S. Court of Appeals for the Federal Circuit-Appeals Filed, Terminated, and Pending During the Twelve-Month Period Ending September 30, 1998, at <http://www.fedcir.gov/pdf/b08sep98.pdf> (last visited Mar. 21, 2002); Table B-8 U.S. Court of Appeals for the Federal Circuit-Appeals Filed, Terminated, and Pending During the Twelve-Month Period Ending September 30, 1999, at <http://www.fedcir.gov/pdf/b08sep99.pdf> (last visited Mar. 21, 2002); Table B-8 U.S. Court of Appeals for the Federal Circuit-Appeals Filed, Terminated, and Pending During the Twelve-Month Period Ending September 30, 2000, at <http://www.fedcir.gov/pdf/b08sep00.pdf> (last visited Mar. 21, 2002).

(620) of the decisions were appealed.²³⁹ Of those cases, the CAFC reversed 22% (282) in some form.²⁴⁰ The Moore study focused on judge versus jury fact-finding and did not analyze claim construction decisions.²⁴¹ On the other hand, much scholarly work has been devoted to the effects of *Markman I*, particularly with respect to the timing of Markman Hearings.²⁴²

A. *Claim Construction and Markman Hearings: The ABA Surveys*

The American Bar Association (ABA) Section of Intellectual Property, Committee 601, is one group that attempts to track some of the elements of Markman Hearings.²⁴³ Committee 601, dealing with federal practice and procedure, surveyed its own members in 1997 and 1998 regarding “practices and timing adopted by trial courts to interpret patent claims” in 1996 and 1997, respectively.²⁴⁴ In 2000, Committee 601 surveyed the entire ABA Section of Intellectual Property with similar questions covering 1999.²⁴⁵

While the sample sizes of the various surveys were small, they illustrate the activities of various trial courts. The 1997 survey covered nineteen cases through the end of 1996.²⁴⁶ The 1998 survey included twenty-six cases from 1997.²⁴⁷ The 2000 survey “yielded seventy-one responses about practices in thirty-three different district court jurisdictions from ten different federal circuits (all but the First

²³⁹ Moore, *supra* note 56, at 397.

²⁴⁰ *Id.*

²⁴¹ *Id.* at 368.

²⁴² See generally Austrian & Mohler, *supra* note 57, at 229-46 (1999) (explaining various approaches to the Markman Hearing, ground rules for the hearing, preparing the judge for the hearing, and arguing that Markman Hearings should be held separately from summary judgment motions); David H. Binney & Toussaint L. Myricks, *Patent Claim Interpretation After Markman – How Have the Trial Courts Adapted?*, 38 IDEA 155 (1997) (reviewing cases where the trial courts have held Markman Hearings at various stages of litigation, but not evaluating the resulting CAFC decisions, if any. The article provides a useful table of cases including the evidence considered by the trial court); John B. Pegram, *Markman and Its Implications*, 78 J. PAT. & TRADEMARK OFF. SOC'Y 560 (1996) (an early article presenting various alternatives that district courts have regarding Markman Hearings); Lee & Krug, *supra* note 142, at 70-85 (reviewing the timing of Markman Hearings at various points in litigation).

²⁴³ American Bar Association Section of Intellectual Property Law 1999 Markman Survey, IPL NEWSLETTER, Spring 2000, vol. 18, no. 3, 12 (2000).

²⁴⁴ *Id.*

²⁴⁵ *Id.*

²⁴⁶ *Markman Proceedings Survey Update*, IPL NEWSLETTER, Spring 1998, vol. 16, no. 3, 28-32 (1998).

²⁴⁷ *Id.* at 33-37.

Circuit)” concerning cases from 1999.²⁴⁸ As the following table indicates, trial courts predominantly performed claim construction after the close of discovery.

TABLE 2: ABA SURVEY RESULTS ON CLAIM CONSTRUCTION TIMING

Year	Before or During Discovery	After Discovery
Pre-1997 ²⁴⁹	39 %	61%
1997 ²⁵⁰	15%	85%
1999 ²⁵¹	29.7%	70.3%

The 2000 survey noted that courts often admitted extrinsic evidence while performing claim construction, and that such evidence was ultimately relied on in 48.9% of the decisions.²⁵² Notably, 81.5% of the judges held some sort of Markman Hearing.²⁵³ The 2000 ABA survey noted that six cases were appealed to the CAFC.²⁵⁴ The CAFC reversed five out of the six appealed cases.²⁵⁵ In contrast, of the ninety-four cases decided by the CAFC involving claim construction in 2001, the trial courts held approximately forty-one Markman Hearings.²⁵⁶ Seventeen, or 41.5%, of the cases having

²⁴⁸ *American Bar Association Section of Intellectual Property Law 1999 Markman Survey*, IPL NEWSLETTER, Spring 2000, vol. 18, no. 3, at 12.

²⁴⁹ *Markman Proceedings Survey Update*, IPL NEWSLETTER, Spring 1998, vol. 16, no. 3, at 29 (presented as part of a pie chart).

²⁵⁰ *Id.*

²⁵¹ *American Bar Association Section of Intellectual Property Law 1999 Markman Survey*, IPL NEWSLETTER, Spring 2000, vol. 18, no. 3, 14 (aggregating separate answers to question 4 of the survey). In particular, 7.8% of the courts performed claim construction prior to discovery, 21.9% during discovery, 57.8% after discovery but before trial, 6.25% during trial, but before closing arguments, and 6.25% during trial, but after closing arguments. *Id.*

²⁵² *Id.* (question 11). The results from question 11 came from subparts to question 10. *Id.* Question 10 listed extrinsic evidence types that included technical and legal expert testimony, inventor and non-inventor factual testimony, and prior patents or publications. *Id.* However, the question did not include dictionaries or treatise. *Id.*

²⁵³ *Id.* (Question 12).

²⁵⁴ *Id.* (Questions 24 and 25). Results of both questions were presented with a caution because of the extremely small sample size. *Id.* Later in this section, the article will examine the overall reversal rates of the CAFC. *See infra* Parts III.B & C.

²⁵⁵ *American Bar Association Section of Intellectual Property Law 1999 Markman Survey*, IPL NEWSLETTER, Spring 2000, vol. 18, no. 3, 14.

²⁵⁶ *See infra* app. A, column “MH Held?” (identifying which trial courts held Markman Hearings). The analysis identified cases as holding a Markman Hearing only when the CAFC or lower court decision expressly stated that a Markman Hearing, claim construction hearing or evidentiary hearing took place (in *DoorKing, Inc. v. Sentex Sys. Inc.*, 19 Fed. Appx. 872 (Fed. Cir. 2001), the trial judge heard oral arguments as to claim-related evidence. This was counted as a Markman Hearing).

Markman Hearings had their claim construction reversed on appeal.²⁵⁷ This rate is no better than the overall claim construction reversal rate for all cases in 2001.²⁵⁸

Some of the practitioners who responded to the 2000 ABA survey provided constructive recommendations. For example, in response to a question about whether the court limited discovery before holding a Markman Hearing, one practitioner stated that “[e]arly hearing after some discovery works well, but will not always be outcome determinative on [sic] cause settlement often, the battle is merely shifted to ‘interpreting’ the court’s ‘interpretation.’”²⁵⁹ Another attorney stated that “some substantive guidance and requirements have to be placed upon judges in order to maximize the usefulness of the Markman procedure.”²⁶⁰

More than one practitioner commented on the technical expertise of the court (or lack thereof). For example, one attorney noted that the use of a special master²⁶¹ (in this case a patent attorney) by the court was very useful. “He sat side-by-side with the judge and asked a number of intelligent questions.”²⁶² Whether the use of the special master helped formulate a correct claim construction is unknown. On the other hand, a different practitioner stated that “[f]requently district courts are unable to cope with the subject matter and fail to understand the claims. Also, they may be confused between the [role] of the specification, original claims as filed and as finally allowed. The law clerks typically are ignorant of patent law, science and technology.”²⁶³ A lack of familiarity of the

It is likely that at least a few trial courts held a Markman Hearing without this fact being identified in an opinion. At least one court held multiple Markman Hearings, see for example *Generation II Orthotics, Inc. v. Medical Techn., Inc.*, 263 F.3d 1356, 1363 (Fed. Cir. 2001) (claim construction reversed. See *infra* note 271 for a fuller discussion of the research methodology.

²⁵⁷ See *infra* app. A, columns “MH Held?” and “Rev’d CC” (identifying which trial courts held Markman Hearings and which claim constructions based upon Markman Hearings were reversed).

²⁵⁸ See *infra* Table 4 and accompanying text.

²⁵⁹ ABA Section of Intellectual Property, Committee 601, 1999 Markman Survey Practitioner Response No. 106, Comment to Question 7 (on file with author).

²⁶⁰ ABA Section of Intellectual Property, Committee 601, 1999 Markman Survey Practitioner Response No. 118, Comment to Question 18 (on file with author). A main goal of this Comment is to help provide some substantive guidance the practitioner sought.

²⁶¹ See *supra* notes 152-153 and accompanying text.

²⁶² ABA Section of Intellectual Property, Committee 601, 1999 Markman Survey Practitioner Response No. 130, Comment to Question 6 (on file with author).

²⁶³ ABA Section of Intellectual Property, Committee 601, 1999 Markman Survey Practitioner Response No. 164. (on file with author).

subject matter may encourage the use of summary judgment proceedings to expedite the case to the CAFC.

B. Summary Judgment in Claim Construction Cases

The ABA surveys were fairly thorough, but did not ask practitioners how often judges ruling on cases involving claim construction granted summary judgment. As the article by Weiss noted, “[g]iven the apparent reluctance of some courts to schedule [Markman] [H]earings, parties often resort to filing summary judgment motions in the hope that the court will hold a *Markman* hearing to decide the claim construction issue, even if the overall summary judgment motion is unsuccessful.”²⁶⁴ The authors of the Weiss article found that trial judges decided more patent cases by summary judgment after *Markman I* than before.²⁶⁵ In particular, the authors discovered that in 24% of about 930 cases from *Markman I* to June 26, 2000 the trial judge granted by summary judgment, as compared with 12% of a comparable number of cases pre-*Markman I*.²⁶⁶ The same survey found that summary judgment resulted in a finding of non-infringement 87% of the time post-*Markman I*, while only 77% of the time pre-*Markman I*.²⁶⁷

Of the ninety-four cases decided by the CAFC involving claim construction in 2001, fifty-four cases involved summary judgment decisions by the lower court.²⁶⁸ The CAFC overturned more than half of the summary judgment decisions on appeal.²⁶⁹ Such a high reversal rate suggests that motions for summary judgment are merely used as a mechanism to allow an early appeal and have the CAFC deduce a “correct” claim construction. However, if the trial judge correctly performed claim construction at the outset, the time delays and additional costs of the summary judgment appeal process would

²⁶⁴ Weiss, *supra* note 7, at 149; *see also* Linn, *supra* note 232, at 7 (“The [CAFC] continues to hear a large percentage of cases involving claim construction issues. Many of the cases come to us on summary judgment following a *Markman* hearing or on appeal from the grant of a preliminary injunction.”).

²⁶⁵ Weiss, *supra* note 7, at 148-49.

²⁶⁶ *Id.* at 149.

²⁶⁷ *Id.* at 149 n.62.

²⁶⁸ *See infra* app. A, column “Rev’d SJ” (identifying which cases involving summary judgment at the trial court were reversed). “Yes” indicates reversal of summary judgment. “No” indicates affirmance of summary judgment. No marking indicates there was no summary judgment. *See infra* note 271 for a fuller discussion of the research methodology.

²⁶⁹ The CAFC reversed twenty-eight of the fifty-four summary judgment decisions, or 51.85%, on appeal. Any summary judgment reversed in whole or in part counted as a reversal of summary judgment.

be eliminated. Table 3 presents the claim construction cases heard by the CAFC that also involved summary judgment.

TABLE 3: SUMMARY JUDGMENT DECISIONS INVOLVING CLAIM CONSTRUCTION IN 2001²⁷⁰

Trial Court	# of Appealed Cases Involving Summary Judgment	# of Summary Judgments Reversed	% of Summary Judgments Reversed
N.D. Cal.	8	2	25.0%
C.D. Cal.	6	4	66.7%
N.D. Ill.	4	3	75.0%
S.D.N.Y.	3	1	33.3%
Top 4 Courts	21	10	47.6%
Other Courts	33	18	54.5%
Total	54	28	51.9%

C. Study of Claim Construction Cases Heard by the CAFC in 2001

This author evaluated all claim construction cases examined by the CAFC (published and unpublished) during the calendar year 2001.²⁷¹ The CAFC ruled on claim constructions by lower courts in

²⁷⁰ Table 3 is excerpted from app. A. The four courts that had the most appeals (not necessarily the most summary judgments) heard by the CAFC are shown individually, and the overall total for all courts is shown in the last row.

²⁷¹ The author researched CAFC decisions from 2001 using the LEXIS and Westlaw computerized databases. Published and unpublished cases were both included in the analysis. Any case discussing or mentioning “Markman Hearing” or “claim construction” was evaluated to determine whether claim construction was at issue on appeal. Claim construction decisions that were reversed in whole, in part or implicitly (e.g., the CAFC provided a claim construction different than that of the trial court) were counted as reversing the lower court’s claim construction. The collected data include: date, case name, citation, trial court, trial court judge, whether the trial judge held a Markman Hearing, whether the trial court ruling came at summary judgment, whether the CAFC reversed summary judgment, whether the CAFC reversed the claim construction of the trial court, the evidence examined by both the trial court and the CAFC (e.g., types of intrinsic and extrinsic evidence examined) (not shown in the appendices), and the reason(s) (if any was articulated) why the CAFC reversed the claim construction and/or summary judgment. Not all of this data appeared in every decision by the CAFC. When possible, the omitted data was obtained by analyzing the trial court decision. Appendix A includes the case name, citation, whether a Markman Hearing was held (“Yes” = held), whether claim construction was reversed (“Yes” = reversed), and whether summary judgment was reversed (“Yes” = reversed). Appendix B includes the case name and key points noted by the author from the CAFC decision. Appendix C includes the case name, the lower court, and the trial judge (including whether a magistrate was employed). For data that is missing or unclear, the appendices represent it with either an empty box or with “??” The author takes full responsibility for any errors in analyzing the cases.

ninety-four cases.²⁷² The next question is how do trial court claim construction decisions hold up on appeal overall.

One article that did analyze CAFC claim construction decisions came up with somewhat surprising findings. In contrast to the 40% reversal quoted by the dissent in *Cybor*, Thad Adams III and Derel Monteith, Jr. found that for 1998 and part of 1999 the CAFC reversed only 25% of claim construction decisions.²⁷³ However, the survey only examined thirty-four cases.²⁷⁴ The survey excluded six cases from the analysis because the lower court decisions were either pre-*Markman I* or were not from district courts.²⁷⁵ In part, this may be attributed to the fact that post-*Markman I* appeals from district court cases were slowly working their way to the CAFC in 1998. The sample size of only twenty-eight cases may hint that trial courts are getting better at claim construction, or it may be too small to be statistically reliable.

A more detailed study by Christian A. Chu came up with similar results.²⁷⁶ Chu analyzed 179 cases wherein the CAFC provided an express review of claim construction.²⁷⁷ Chu found that the CAFC reversed 29.6% of these cases.²⁷⁸ Another study by Kimberly A. Moore found that the district courts erred in their claim construction in 28% of the cases prior to 2001.²⁷⁹ A detailed study by Gretchen Ann Bender found that the CAFC reversed approximately 40% of 160 trial court claim constructions from the time of *Markman I* through 2000.²⁸⁰ These reversal rates, ranging between 28% and 40%, suggest that the trial courts have not improved the quality of their claim constructions.

In the study conducted for purposes of this Comment, the CAFC reversed thirty-nine of the ninety-four claim construction decisions by

²⁷² See Appendix A for a complete listing of all the cases from 2001 in which the CAFC ruled on claim construction issues.

²⁷³ W. Thad Adams, III & J. Derel Monteith, Jr., *The Continuing Saga of Federal Circuit Patent Claim Construction Jurisprudence: Extrinsic Evidence and Other Stories*, 8 FED. CIR. B.J. 83 (1999).

²⁷⁴ *Id.* at 100 (Appendix: Summaries of Claim Construction Decisions in 1998-99 Reported Federal Circuit Cases).

²⁷⁵ *Id.* at 99.

²⁷⁶ Christian A. Chu, *Empirical Analysis of the Federal Circuit's Claim Construction Trends*, 16 BERKELEY TECH. L.J. 1075 (2001).

²⁷⁷ *Id.* at 1104.

²⁷⁸ *Id.* (noting that the CAFC modified the claim interpretation for 78 of the 179 cases, and reversed 53 of those 78 cases).

²⁷⁹ Kimberly A. Moore, *Are District Court Judges Equipped to Resolve Patent Cases?*, 15 HARV. J. LAW & TECH. 1, 11 (2001). Moore tabulated 323 cases appealed to the CAFC between April 23, 1996 and December 31, 2000.

²⁸⁰ Bender, *supra* note 15, at 205-07.

lower courts (41.5%) in 2001, either in whole or in part.²⁸¹ This analysis did not exclude courts besides the federal district courts. Thus, cases from the Board of Patent Appeals and Interferences (two), the Court of Federal Claims (one), and the International Trade Commission (two) were all evaluated and included.²⁸² Such a high reversal rate clearly suggests that in general the trial courts are not performing any better than at a time just after *Markman I*.²⁸³

The following table presents the results for appeals from the four district courts that had the most claim construction decisions reviewed by the CAFC, with a minimum of five cases. It also presents overall results for the combined trial courts.

²⁸¹ See Appendix A. Notably, this reversal rate matches the percentage of cases wherein the lower court performed some sort of Markman Hearing but the claim construction was reversed on appeal; see *supra* notes 256-257 and accompanying text (forty-one cases in 2001 held some form of Markman hearing, yet seventeen cases were found to have faulty claim construction). Such a result—coupled with the reversal rate for cases from the Northern District of California, see *infra* Table 4—clearly shows that the procedural requirements of *Markman I* have, at best, minimal affect on the correctness of the trial court claim constructions.

²⁸² Of the five cases from these three courts, the CAFC reversed three of five claim construction decisions. *In Re Roemer*, 258 F.3d 1303, 1311 (Fed. Cir. 2001) (claim construction reversed); see also *Rapoport v. Dement*, 254 F.3d 1053, 1060 (Fed. Cir. 2001) (claim construction affirmed); *Oak Tech., Inc. v. Int'l Trade Comm'n*, 248 F.3d 1316, 1331 (Fed. Cir. 2001) (claim construction affirmed); *Winbond Electronics Corp. v. Int'l Trade Comm'n*, 4 Fed. App. 832, 843 (Fed. Cir. 2001) (claim construction reversed); *Exxon Research and Engineering Co. v. United States*, 265 F.3d 1371, 1382-83 (Fed. Cir. 2001) (claim construction reversed).

²⁸³ See *supra* text accompanying note 13. This reversal rate runs contrary to an impression of Judge Richard Linn of the CAFC, who recently noted that “[t]he district courts are now quite familiar with the analytical rules of claim construction, and claim construction decisions are now admirably focused and on point . . . [t]he increasing familiarity of the district courts with the claim construction process is being reflected in their decisions, and reversal rates are going down.” Linn, *supra* note 232, at 9 (emphasis added).

TABLE 4: CLAIM CONSTRUCTION CASES

DECIDED BY THE CAFC IN 2001²⁸⁴

Trial Court	# of Claim Construction Cases Heard by CAFC	# of Claim Constructions Reversed	% Claim Construction Reversed
N.D. Cal.	11	6	54.5%
C.D. Cal.	9	3	33.3%
N.D. Ill.	7	2	28.6%
S.D.N.Y.	5	1	20.0%
Top 4 Courts	32	12	37.5%
Other Courts	62	27	43.5%
Total	94	39	41.5%

The Northern District of California, the Central District of California, the Northern District of Illinois and the Southern District of New York originally heard thirty-two of the ninety-four cases. While their reversal rate was lower than the overall claim construction reversal rate of 41.5%, one would hope that the courts getting the greatest number of patent cases would have more experience, resulting in better claim construction and distinctly lower reversal rates. Particularly distressing is that the Northern District of California, with its Patent Local Rules, had more than half of its claim construction decisions reversed on appeal.²⁸⁵ The procedural patent

²⁸⁴ Table 4 is a much abbreviated version of the complete table of cases presented in Appendix A.

²⁸⁵ *Asyst Technologies, Inc. v. Empak, Inc.*, 268 F.3d 1364, 1366 (Fed. Cir. 2001) (claim construction reversed); *see also* *Globetrotter Software, Inc. v. Elan Computer Group, Inc.*, 236 F.3d 1363, 1369 (Fed. Cir. 2001) (claim construction affirmed); *Amphenol Corp. v. Maxconn Inc.*, 4 Fed. App. 928, 929 (Fed. Cir. 2001) (claim construction affirmed); *SciMed Life Sys. v. Advanced Cardiovascular Systems, Inc.*, 242 F.3d 1337, 1339 (Fed. Cir. 2001) (claim construction affirmed); *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1332 (Fed. Cir. 2001) (claim construction affirmed); *Lockheed Martin Corp. v. Space Systems/Loral Inc.*, 249 F.3d 1314, 1324, 1327 (Fed. Cir. 2001), *vacated and remanded*, 122 S. Ct. 2349 (2002) (claim construction reversed, but the summary judgment ruling was affirmed); *Budde v. Harely-Davidson, Inc.*, 250 F.3d 1369, 1382 (Fed. Cir. 2001) (claim construction reversed); *Semitool, Inc. v. Novellus Sys.*, 12 Fed. App. 918, 925-26, 928 (Fed. Cir. 2001), *vacated and remanded*, 122 S. Ct. 2323 (2002) (claim construction reversed, but the summary judgment ruling was affirmed); *S3 Inc. v. NVIDIA Corp.*, 259 F.3d 1364, 1365 (Fed. Cir. 2001) (reversing the lower court ruling that the claims were indefinite—counted as reversing claim construction); *MSM Investments Co., LLC v. Carolwood Corp.*, 259 F.3d 1335, 1341 (Fed. Cir. 2001) (holding that although the district court's claim construction was incomplete, it was at most

rules merely lead up to Markman Hearings in an efficient manner but do not direct the district court how to properly perform claim construction. Therefore, to have any hope of improving reversal rates, it is critical to examine why the CAFC is reversing the trial courts' claim construction.

The CAFC decided six cases in 2001 in which a magistrate judge conducted the claim construction.²⁸⁶ Notably, the CAFC reversed only one of the six claim constructions.²⁸⁷ While it is too small a sample size, these results suggest that the use of magistrate judges might improve claim constructions.

D. Reasons Why the CAFC Reversed Trial Court Claim Constructions

One of the leading reasons²⁸⁸ the CAFC reversed trial court claim construction decisions in 2001 was the trial court's improper importation of limitations from the specification into the claims, which occurred in eight cases.²⁸⁹ For instance, unless the patentee acted as his own lexicographer and defined a claim element in a specific manner, the person performing claim construction should construe the element "according to its ordinary and accustomed meaning, rather than importing a characteristic of a disclosed or

harmless error—counted as reversing the claim construction); *Advanced Cardiovascular Systems, Inc. v. Medtronic, Inc.*, 265 F.3d 1294, 1297, 1306 (Fed. Cir. 2001) (claim construction affirmed). Note that these cases were presumably conducted under the 1997 local rules. However, being procedural in nature, it is unlikely that the newer 2001 Patent Local Rules will result in reduced reversal rates.

²⁸⁶ *Sandt Tech. v. Resco Metal and Plastics*, 264 F.3d 1344, 1354 (Fed. Cir. 2001) (claim construction affirmed); *see also Day Int'l, Inc. v. Reeves Bros., Inc.*, 260 F.3d 1343, 1345 (Fed. Cir. 2001) (claim construction affirmed); *Circle R, Inc. v. Trail King Industries, Inc.*, 21 Fed. App. 894, 898 (Fed. Cir. 2001) (claim construction reversed); *Smith & Nephew, Inc. v. Ethicon, Inc.*, 276 F.3d 1304, 1308-11 (Fed. Cir. 2001) (claim construction affirmed); *Schoell v. Regal Marine Industries, Inc.*, 247 F.3d 1202, 1208-09 (Fed. Cir. 2001) (claim construction affirmed); *Newell Window Furnishings v. Springs Window Fashions Div., Inc.*, 15 Fed. App. 836, 840-41 (Fed. Cir. 2001) (claim construction affirmed).

²⁸⁷ *Circle R*, 21 Fed. App. at 898 (claim construction reversed).

²⁸⁸ See *infra* Appendix B for a listing of key points from the cases, including reasons why the trial court erred in its claim construction and relevant topics discussed in the cases.

²⁸⁹ See *Generation II Orthotics, Inc. v. Medical Tech.*, 263 F.3d 1356, 1367 (Fed. Cir. 2001); *Dow Chem. Co. v. Sumitomo Chem. Co., Ltd.*, 257 F.3d 1364, 1379 (Fed. Cir. 2001); *Dayco Products, Inc. v. Total Containment, Inc.*, 258 F.3d 1317, 1327 (Fed. Cir. 2001); *Interactive Gift Express Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1338 (Fed. Cir. 2001); *Circle R, Inc., v. Trail King Indus., Inc.*, 21 Fed. App. 894, 898 (Fed. Cir. 2001); *Turbocare Div. of Demag Delaval Turbomachinery Corp. v. General Electric Co.*, 264 F.3d 1111, 1123 (Fed. Cir. 2001); *Innovad Inc. v. Microsoft Corp.*, 260 F.3d 1326, 1331-33 (Fed. Cir. 2001); *Gart v. Logitech, Inc.*, 254 F.3d 1334, 1342-43 (Fed. Cir. 2001).

preferred embodiment.”²⁹⁰ One way to avoid this critical error is to evaluate the specification as a whole, rather than to choose bits and pieces of the specification to support a given claim construction.²⁹¹ As the CAFC noted in *Budde v. Harley-Davidson*, “it is necessary to consider the specification as a whole, and to read all portions of the written description, if possible, in a manner that renders the patent internally consistent.”²⁹² Merely looking at the “summary” and “objects of the invention” sections of the specification can lead to an incorrect claim construction.²⁹³ However, “clear guidance” from the specification does not lead to improper importation.²⁹⁴

A more subtle error occurs when the trial court performs claim construction from a perspective other than one of ordinary skill in the art. Because the statutory requirement is for the patent to teach one of ordinary skill to practice the invention,²⁹⁵ employing a different viewpoint may lead to improper construction.²⁹⁶ The ordinary skill viewpoint can be particularly troublesome because it represents a hypothetical person who may have a combination of qualities not found in any real person.²⁹⁷ Because it is often an elusive

²⁹⁰ *Generation II Orthotics*, 263 F.3d at 1367.

²⁹¹ *Interactive Gift Express*, 256 F.3d at 1335 (citing *Digital Biometrics, Inc. v. Identix, Inc.*, 149 F.3d 1335, 1345 (Fed. Cir. 1998) for the proposition that claim construction should be derived from the entire written description although an isolated passage was in conflict with the rest of the written description).

²⁹² *Budde*, 250 F.3d at 1379-80.

²⁹³ *Id.* at 1377.

²⁹⁴ *Unique Coupons, Inc. v. Northfield Corp.*, 12 Fed. App. 928, 935 (Fed. Cir. 2001) (“Although there is a fine line between interpreting claim language in light of the specification and reading a limitation . . . into the claim . . . we do not improperly cross that line when we interpret [a claim term] consistently with the clear guidance in the specification.”).

²⁹⁵ 35 U.S.C. § 112, para. 1 (1994).

²⁹⁶ *Budde*, 250 F.3d at 1380 (stating that “it is important to construe claim language through the ‘viewing glass’ of a person skilled in the art”); *see also* MPEP § 2141.03 (“The examiner must ascertain what would have been obvious to one of ordinary skill in the art at the time the invention was made, and not to the inventor, a judge, a layman, those skilled in remote arts, or to geniuses in the art at hand.”) (citing *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693 (Fed. Cir. 1983), *cert. denied*, 464 U.S. 1043 (1984); *see also* *Dow Chem. Co. v. Sumitomo Chem. Co.*, 257 F.3d 1364, 1376 (Fed. Cir. 2001) (in reversing the lower court’s claim construction, Judge Gajarsa posited “the question before us is not whether the ‘255 patent teaches that the boiling point should be measured in the vapor phase; as discussed above, one of ordinary skill in the art would understand that the ordinary meaning of a codistillate boiling point involves measuring the temperature in the vapor phase”).

²⁹⁷ MPEP § 2141.03. Factors may include the education levels of the inventor and others in the field, problems in the art, solutions previously employed in the art to resolve the problems, the innovation level in the art, and the technological complexity of the art. *Id.* (citing *Environmental Designs*, 713 F.2d at 696).

standard, extrinsic evidence related to ordinary skill should be considered by the trial judge when performing claim construction. Alternatively, the judge may turn to a special master or court appointed expert with an appropriate background in the technology at issue.

Dictionaries are another source of potential confusion and error. When a claim term is not viewed as a term of art, the CAFC may rely on a non-technical dictionary for a definition.²⁹⁸ However, should the claim term be viewed as a term of art, a non-technical dictionary is the wrong choice.²⁹⁹ Sometimes the CAFC states that it will analyze the intrinsic evidence, while at the same time relying on a general-purpose dictionary.³⁰⁰ The study for this Comment found that the CAFC reversed thirteen out of the twenty cases relying on a dictionary definition (either by the trial court or the CAFC) on appeal.³⁰¹

²⁹⁸ *Winbond Electronics Corp. v. Int'l Trade Comm'n*, 4 Fed. App. 832, 840 (Fed. Cir. 2001) (“‘Adjacent’ is not a term of art and thus should receive its ordinary and accustomed meaning: close to; next to; adjoining. WEBSTER’S II NEW RIVERSIDE UNIVERSITY DICTIONARY 79 (1988).”).

²⁹⁹ *AFG Industries, Inc. v. Cardinal IG Co.*, 239 F.3d 1239, 1247-48 (Fed. Cir. 2001) (“This court has repeatedly cautioned against using non-scientific dictionaries for defining technical words. . . . This case provides a good example of why definitions from general usage dictionaries may fail to provide satisfactory constructions of technical claim terms in dispute. . . . A trial court, when construing a term of art, must define the term in a manner consistent with the scientific and technical context in which it is used in the patent.”). Therefore, it is important first to determine if a claim element is a term of art.

³⁰⁰ *Tapco Int'l Corp. v. Van Mark Products Corp.*, 18 Fed. App. 865, 868 (Fed. Cir. 2001) (“In interpreting an asserted claim, the court first looks to the intrinsic evidence of record. . . . Turning to the language of claim 3, we first look to the ordinary meaning of the disputed claim terms. . . . ‘Project’ is defined as ‘causing to protrude.’”) (internal citation omitted).

³⁰¹ *Hemphill v. McNeil-PPC, Inc.*, 25 Fed. App. 915, 918 (Fed. Cir. 2001) (claim construction affirmed); *see also* *Rexnord Corp. v. The Laitram Corp.*, 274 F.3d 1336, 1344 (Fed. Cir. 2001) (claim construction reversed); *Circle R, Inc. v. Trail King Industries, Inc.*, 21 Fed. Appx. 894, 898 (Fed. Cir. 2001) (claim construction reversed); *DoorKing Inc. v. Sentex Sys. Inc.*, 19 Fed. App. 872, 876-77 (Fed. Cir. 2001) (claim construction reversed); *Fin Control Sys. Pty, Ltd. v. OAM, Inc.*, 265 F.3d 1311, 1316 (Fed. Cir. 2001) (claim construction affirmed); *Kopykake Enterprises, Inc. v. The Lucks Co.*, 264 F.3d 1377, 1382 (Fed. Cir. 2001) (claim construction affirmed); *Ecolab Inc. v. Envirochem Inc.*, 264 F.3d 1358, 1367 (Fed. Cir. 2001) (claim construction reversed); *Kustom Signals, Inc. v. Applied Concepts, Inc.*, 264 F.3d 1326, 1330-31 (Fed. Cir. 2001) (claim construction affirmed); *Bell Atlantic Network Servs., Inc. v. Covad Communications Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001) (claim construction affirmed); *Generation II Orthotics Inc. v. Medical Technology Inc.*, 263 F.3d 1356, 1367 (Fed. Cir. 2001) (claim construction reversed after two Markman Hearings); *Tapco Int'l Corp. v. Van Mark Products Corp.*, 18 Fed. App. 865, 868 (Fed. Cir. 2001) (claim construction reversed); *MSM Investments Co., LLC v. Carolwood Corp.*, 259 F.3d 1335, 1339 (Fed. Cir. 2001)

Probably one of the trickiest areas relating to patents is the use of “means plus function” language in the claims.³⁰² This language, often expressed as “a means for doing X,”³⁰³ “must be construed to cover the corresponding structure, material, or acts described in the specification *and equivalents thereof*.”³⁰⁴ The *MPEP* provides an excellent reference for detailed analysis of means plus function claim limitations.³⁰⁵ As a preliminary matter, the judge must decide if section 112, sixth paragraph applies.³⁰⁶ After deciding that means plus function applies, the judge must “identify the function explicitly recited in the claim.”³⁰⁷ Next, the judge identifies “the corresponding structure set forth in the written description that performs the particular function set forth in the claim.”³⁰⁸ Then the judge determines equivalents to this structure.³⁰⁹ It should be evident that

(claim construction reversed); *Dow Chem. Co. v. Sumitomo Chem. Co.*, 257 F.3d 1364, 1369, 1372-73 (Fed. Cir. 2001) (claim construction affirmed); *Gart v. Logitech, Inc.*, 254 F.3d 1334, 1343 (Fed. Cir. 2001) (claim construction reversed); *Scholle Corp. v. Packaging Sys., LLC*, 2001 U.S. App. LEXIS 11772, *11-12 (Fed. Cir. June 6, 2001) (claim construction reversed); *Transonic Sys., Inc. v. Non-Invasive Med. Techs. Corp.*, 10 Fed. App. 928, 930-31 (Fed. Cir. 2001) (claim construction reversed); *DeMarini Sports, Inc. v. Worth, Inc.*, 239 F.3d 1314, 1324 (Fed. Cir. 2001) (claim construction affirmed); *AFG Industries, Inc. v. Cardinal IG Co., Inc.*, 239 F.3d 1239, 1247-48 (Fed. Cir. 2001) (claim construction reversed); *Wenger Mfg., Inc. v. Coating Machinery Sys., Inc.* 239 F.3d 1225, 1233 (Fed. Cir. 2001) (claim construction reversed); *Winbond Electronics Corp. v. Int’l Trade Comm’n*, 4 Fed. App. 832, 840-41 (Fed. Cir. 2001) (claim construction reversed). In some cases, the trial court did not rely on a dictionary but the CAFC did. *See, e.g., Ecolab Inc. v. Envirochem Inc.*, 264 F.3d 1358, 1367 (Fed. Cir. 2001); *AFG Industries, Inc. v. Cardinal IG Co., Inc.*, 239 F.3d 1239, 1247-48 (Fed. Cir. 2001). In other cases, the trial court used a dictionary while the CAFC relied on intrinsic evidence only. *See, e.g., Fin Control Sys. Pty, Ltd. v. OAM, Inc.*, 265 F.3d 1311, 1316 (Fed. Cir. 2001). However, in some cases it was not clear what evidence either court examined, so detecting any useful patterns is not possible.

³⁰² Means plus function claim elements are provided for by 35 U.S.C. Section 112, paragraph six (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.”).

³⁰³ *See MPEP* § 2181 (stating that “the claim limitations must use the phrase ‘means for’ or ‘step for’”).

³⁰⁴ 35 U.S.C. § 112, para. 6 (emphasis added).

³⁰⁵ *See MPEP* §§ 2181–2186.

³⁰⁶ Use of “means” creates a presumption that Section 112 (sixth paragraph) applies, but if too much structure provided in the claim element, Section 112 (sixth paragraph) will not apply. Also, Section 112 (sixth paragraph) can apply even without use of “means” language.

³⁰⁷ *Asyst Techs., Inc. v. Empak, Inc.*, 268 F.3d 1364, 1369 (Fed. Cir. 2001).

³⁰⁸ *Id.*

³⁰⁹ An equivalence examination under Section 112 (sixth paragraph) is more limited than an equivalence examination under the doctrine of equivalents. *See Chiuminatta Concrete Concepts, Inc. v. Cardinal Industries, Inc.*, 145 F.3d 1303,

such language can be very powerful. It allows the person drafting the application to avoid “claim[ing] in a patent every device required to enable the invention to be used.”³¹⁰

In 2001, fifteen cases included means plus function claims.³¹¹ Out of the fifteen cases, the CAFC reversed seven (46.7%) on appeal.³¹² What is surprising is that the CAFC did not reverse a greater percentage of these cases. The CAFC pointed out a few of the pitfalls in construing means plus function claim language. The judge must determine the structure of the “means” element.³¹³ Also, “a court may not import functional limitations that are not recited in the claim, or structural limitations from the written description that are unnecessary to perform the claimed function.”³¹⁴ Another comment was that “[a]s an aid in determining whether sufficient structure is recited by a term used in a [means plus function] claim limitation, this court has inquired into whether the ‘term, as the name for the structure, has a reasonably well understood meaning in

1310 (Fed. Cir. 1998).

³¹⁰ *Asyst Techs.*, 268 F.3d at 1371 (quoting *Hughes Aircraft Co. v. United States*, 640 F.2d 1193, 1197 (Ct. Cl. 1980)).

³¹¹ *Kudlacek v. DBC, Inc.*, 25 Fed. App. 837, 840 (Fed. Cir. 2001) (claim construction affirmed); *J & M Corp. v. Harley-Davidson, Inc.*, 269 F.3d 1360, 1364 (Fed. Cir. 2001) (claim construction affirmed); *Asyst Techs. v. Empak, Inc.*, 268 F.3d 1364, 1368 (Fed. Cir. 2001) (claim construction reversed); *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1346 (Fed. Cir. 2001) (claim construction affirmed); *Mollhagen v. Witte*, 18 Fed. App. 846, 848 (Fed. Cir. 2001) (claim construction affirmed); *Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1371 (Fed. Cir. 2001) (claim construction reversed); *Bernard Dalsin Mfg. Co. v. RMR Products, Inc.*, 10 Fed. App. 882, 885 (Fed. Cir. 2001) (claim construction reversed); *Lockheed Martin Corp. v. Space Systems/Loral, Inc.*, 249 F.3d 1314, 1323 (Fed. Cir. 2001), *vacated and remanded*, 122 S. Ct. 2349 (2002) (claim construction reversed); *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1324 (Fed. Cir. 2001) (claim construction affirmed); *Somfy, S.A. v. Springs Window Fashions Div., Inc.*, 6 Fed. App. 895, 896 (Fed. Cir. 2001) (claim construction affirmed); *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1308 (Fed. Cir. 2001) (claim construction affirmed); *Optimal Recreation Solutions LLP v. Leading Edge Techs., Inc.*, 6 Fed. App. 873, 875 (Fed. Cir. 2001) (claim construction reversed); *Wenger Mfg., Inc. v. Coating Mach. Sys., Inc.*, 239 F.3d 1225, 1230 (Fed. Cir. 2001) (claim construction reversed); *Winbond Electronics Corp. v. Int’l Trade Comm’n*, 4 Fed. App. 832, 841 (Fed. Cir. 2001) (claim construction reversed); *Globetrotter Software, Inc. v. Elan Computer Group, Inc.*, 236 F.3d 1363, 1364 (Fed. Cir. 2001) (claim construction affirmed).

³¹² See *supra* note 311.

³¹³ *Winbond Electronics*, 4 Fed. App. at 842 n.2 (Fed. Cir. 2001) (“The Commission did not determine any structure for the ‘access means’ in its opinion.”).

³¹⁴ *Wenger Mfg., Inc.*, 239 F.3d at 1233; see also *Lockheed Martin*, 249 F.3d at 1324 (“In this case, the District Court erred by improperly broadening the scope of the claimed function by ‘reading out’ the limitations contained in the claim language.”).

the art.”³¹⁵

A combination of solutions can substantially reduce these and other errors in trial court claim construction. Foremost, as the court with the best understanding of how to perform claim construction, the CAFC should provide clear guidance on claim construction issues. For example, the CAFC should clearly explain how to use dictionaries.³¹⁶ Because reversal rates are so abysmal for cases in which the trial court conducted a Markman Hearing,³¹⁷ the CAFC should attempt to provide some guidelines or standards for these hearings. Furthermore, the CAFC should identify references that it uses and expressly recommend that trial courts use them as well.³¹⁸ Also, the CAFC should more clearly explain how to properly apply the canons of claim construction.

Whether or not the CAFC takes any of these steps, trial judges should also make changes on their own. In most cases, trial judges do not hear enough patent cases to become proficient in interpreting claims. Therefore, each district court should designate a judge to handle patent cases, or at least use an experienced special master or magistrate judge to perform claim construction.³¹⁹ However, the onus should not be placed solely on trial judges and the CAFC. Patent attorneys and patent agents who draft applications can sidestep many problems by clearly defining terms, including claim elements, in the specification. Without the concerted efforts of the CAFC, trial judges and practitioners, the CAFC will continue to reverse claim constructions at an unacceptable level, costing litigants millions of dollars just to get back to the starting gate.

³¹⁵ *Optimal Recreation Solutions*, 6 Fed. App. at 877 (quoting *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996)).

³¹⁶ By way of example, in *Vitronics*, the court stated that extrinsic evidence will rarely be needed. *Vitronics Corp. v. Conceptiontronics, Inc.*, 90 F.3d 1579, 1585; *see also supra* note 109. However, the same court stated that dictionaries, a form of extrinsic evidence, should be consulted at nearly any time. *Id.* at 1584 n.6; *see also supra* text accompanying note 118. Another issue arises in the choice between technical and non-technical dictionaries. *See supra* note 298-99 and accompanying text.

³¹⁷ *See supra* note 257.

³¹⁸ *See supra* Part II.B.2.

³¹⁹ *See* Paul D. Rheingold, *Prospects for Managing Mass Tort Litigation in the State Courts*, 31 SETON HALL L. REV. 910, 912 n.10 (noting that Judge Marina Corodemus handles all mass tort litigation in the New Jersey state trial courts).

CONCLUSION

Markman I and its progeny have spawned a whole new era of patent litigation. Trial judges are required to perform claim construction as a matter of law. While the trial judges have a lot of leeway in how they conduct Markman Hearings, the CAFC is still reversing claim constructions at an alarming rate. Seven years after *Markman I*, one can now draw the “empirically sound conclusion” that the “training and discipline” of trial judges does not result in reliable claim construction. The reversal rate is still around 40%. Procedural rules, such as the Patent Local Rules from the Northern District of California, may provide structure to patent litigation, but cannot directly improve the quality of claim construction. However, several actions can reduce the reversal rate. In addition to special masters, magistrate judges and court appointed experts, trial judges can rely on widely used references to improve claim construction skills. Resources that may prove most helpful are tools that have been long used by patent practitioners. For example, the *MPEP* is a vital resource and, when combined with a claim drafting text, should provide sufficient support for a trial judge so that the CAFC will uphold more claim constructions. Furthermore, the CAFC must take a more proactive role in providing clear guidance to the trial judges. Otherwise, the uncertainty generated by *Markman I* will continue.

APPENDIX A:
TABLE OF APPELLATE LEVEL CLAIM CONSTRUCTION CASES IN 2001

	Case Name	Citation	MH held?	Rev'd CC?	Rev'd SJ?
1	LNP Engineering Plastics, Inc. v. Miller Waste Mills, Inc.	275 F.3d 1347	??	No	
2	Kudacek v. DBC, Inc.	25 Fed. App. 837	??	No	No
3	Intermatic Inc. v. Lamson & Sessions Co.	273 F.3d 1355	Yes	No	
4	Smith & Nephew, Inc. v. Ethicon, Inc.	276 F.3d 1304	Yes	No	Yes
5	Hemphill v. McNeil-PPC, Inc.	25 Fed. App. 915	No	No	No
6	Rexnord Corp. v. Laitram Corp.	274 F.3d 1336	??	Yes	Yes
7	J&M Corp. v. Harley-Davidson, Inc.	269 F.3d 1360	??	No	No
8	Superior Fireplace Co. v. Majestic Products Co.	270 F.3d 1358	Yes	No	No
9	Bradford Co. v. Jefferson Smurfit Co.	2001 U.S. App. LEXIS 25205	??	No	
10	Asyst Technologies, Inc. v. Empak, Inc.	268 F.3d 1364	??	Yes	Yes
11	Xerox Corp. v. 3COM Corp.	267 F.3d 1361	??	No	Yes
12	Circle R, Inc. v. Trail King Industries, Inc.	21 Fed. App. 894	??	Yes	No
13	Exxon Research & Engineering Co. v. U.S.	265 F.3d 1371	No	Yes	Yes
14	Hilgraeve Corp. v. Symantec Corp.	265 F.3d 1336	No	No	Yes
15	DoorKing, Inc. v. Sentex Sys., Inc.	19 Fed. App. 872	Yes: Briefs + oral argument	Yes	Yes
16	Fin Control Sys. Pty, Ltd v. OAM, Inc.	265 F.3d 1311	Yes	No	Yes
17	Advanced Cardiovascular Sys. v. Medtronic, Inc.	265 F.3d 1294		No	No
18	Kopykake Enterprises, Inc. v. Lucks Co.	264 F.3d 1377	??	No	

19	Ecolab, Inc. v. Envirochem, Inc.	264 F.3d 1358	No	Yes	Yes
20	Sandt Technology, Ltd. v. Resco Metal and Plastics Corp.	264 F.3d 1344	??	No	Yes
21	Kustom Signals, Inc. v. Applied Concepts, Inc.	264 F.3d 1326	Yes	No	No
22	TurboCare Div. of Demag Delaval Turbomachinery Copr. v. General Electric Co.	264 F.3d 1111	??	Yes	Yes
23	CIVIX-DDI, LLC v. Microsoft Corp.	18 Fed. App. 892	Yes	No	No
24	McGinley v. Franklin Sports, Inc.	262 F.3d 1339	Yes	No	
25	Glaxo Group Ltd. V. Ranbaxy Pharmaceuticals, Inc.	262 F.3d 1333	??	Yes	
26	Bell Atlantic Network Services, Inc. v. Covad Communications Group, Inc.	262 F.3d 1258	??	No	No
27	Generation II Orthotics Inc. v. Medical Tech Inc.	263 F.3d 1356	Yes: Held two Markman Hearings	Yes	
28	KX Indus., L.P. v. Pur Water Purification Prods.	18 Fed. App. 871	Yes	No	No
29	Tapco Int'l Corp. v. Van Mark Prods. Corp.	18 Fed. App. 865	Yes:Hearing	Yes	Yes
30	MSM Investments Co., LLC v. Carolwood Corp.	259 F.3d 1335	??	Yes, but harmless error	No
31	Day Int'l, Inc. v. Reeves Bros., Inc.	260 F.3d 1343	??	No	No
32	Masimo Corp. v. Mallinckrodt, Inc.	18 Fed. App. 852	??	No	No
33	Pall Corp. v. PTI Technologies, Inc.	259 F.3d 1383	Yes: Evidentiary Hearing	Yes	Yes

34	Advanced Cardiovascular Systems, Inc. v. Scimed Life Systems, Inc.	261 F.3d 1329	Yes	Yes	Yes
35	Innovad, Inc. v. Microsoft Corp.	260 F.3d 1326	??	Yes, but not for relevant claim	No
36	S3 Inc. v. NVIDIA Corp.	259 F.3d 1364	??	Yes	Yes
37	Viskase Corp. v. American Nat'l Can Co.	261 F.3d 1316	Yes	Yes	Yes
38	Mollhagen v. Whitte	18 Fed. App. 846		No	No
39	Pannu v. Storz Instruments, Inc.	258 F.3d 1366		No	No
40	Dow Chemical Co. v. Sumitomo Chem. Co., Ltd.	257 F.3d 1364	??	Yes	Yes
41	<i>In re</i> Roemer	258 F.3d 1303		Yes	
42	Dayco Products, Inc. v. Total Containment, Inc.	258 F.3d 1317	Yes	Yes	Yes
43	Avery Dennison Corp. v. Flexcon Co., Inc.	15 Fed. App. 882		No	No
44	Tegal Corp. v. Tokyo Electronic America, Inc.	257 F.3d 1331	Yes	Yes	
45	Interactive Gift Express, Inc. v. Compuserve, Inc.	256 F.3d 1323	No	Yes	
46	Applied Concepts, Inc. v. Olympia Indus., Inc.	15 Fed. App. 793	??	Yes	
47	Datastrip (IOM) Ltd. V. Symbol Techs., Inc.	15 Fed. App. 843	Yes	No	
48	Newell Window Furnishings, Inc. v. Springs Window Fashions Div., Inc.	15 Fed. App. 836		No	
49	Rapoport v. Dement	254 F.3d 1053		No	
50	Durel Corp. v. Osram Sylvania Inc.	256 F.3d 1298		Yes	
51	Gart v. Logitech, Inc.	254 F.3d 1334		Yes	Yes
52	K&K Jump Start/Chargers, Inc. v.	13 Fed. App. 982	Yes	Yes	

	Schumacher Electric Corp.				
53	Unique Coupons, Inc. v. Northfield Corp.	12 Fed. App. 928		Yes	
54	Semitool, Inc. v. Novellus Sys., Inc.	12 Fed. App. 918	Yes	Yes	No
55	Acromed Corp. v. Sofamor Danek Group	253 F.3d 1371		No	
56	Scholle Corp. v. Packaging Systems, LLC	2001 U.S. App. LEXIS 11772	Yes	Yes	Yes
57	Transonic Sys. Inc. v. Non-Invasive Med. Techs. Corp.	10 Fed. App. 928	Yes	Yes	
58	Budde v. Harely-Davidson, Inc.	250 F.3d 1369	Yes	Yes	
59	Biotech Biologishce Naturverpackungen GmbH & Co. KG v. Biocorp., Inc.	249 F.3d 1341		No	
60	Bernard Dalsin Mfg. Co. v. RMR Products, Inc.	10 Fed. App. 882		Yes	Yes
61	Oak Tech., Inc. v. ITC	248 F.3d 1316		No	
62	Lockheed Martin Corp. v. Space Systems/Loral, Inc.	249 F.3d 1314	Yes	Yes	No
63	Telemac Cellular Corp. v. Topp Telecom, Inc.	247 F.3d 1316		No	No
64	Somfy, S.A. v. Springs Window Fashions Div., Inc.	6 Fed. App. 895	Yes	No	Yes
65	Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.	248 F.3d 1303	Yes	No	
66	Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc.	246 F.3d 1368	Yes	No	Yes
67	Schoell v. Regal Marine Industries, Inc.	247 F.3d 1202		No	No
68	Mentor H/S, Inc. v. Medical Device Alliance, Inc.	244 F.3d 1365		No	
69	Optimal Recreation Solutions LLP v. Leading Edge Techs., Inc.	6 Fed. App. 873		Yes	

70	Medical Device Technologies. v. C.R. Bard, Inc.	7 Fed. App. 945	Yes	No	Yes
71	Pandrol USA, LP v. Airboss Railway Products, Inc.	10 Fed. App. 837	Yes	Yes	Yes
72	Research Corp. Techs. v. Gensia Labs., Inc.	10 Fed. App. 856	Yes	No	
73	Karsten Mfg. Corp. v. Cleveland Golf Co.	242 F.3d 1376		No	Yes
74	Netword, LLC v. Centraal Corp.	242 F.3d 1347		No	No
75	SciMed Life Sys. v. Advanced Cardiovascular Sys.	242 F.3d 1337	Yes	No	No
76	Polymer Indus. Prods. Co. v. Bridgestone/Firestone, Inc.	10 Fed. App. 812		No	
77	Mycogen Plant Science v. Monsanto Co.	243 F.3d 1316	Yes	No	
78	Senior Techs., Inc. v. R.F. Techs., Inc.	2001 U.S. App. LEXIS 4179		Yes	
79	Herman v. William Brooks Shoe Co.	7 Fed. App. 941	Yes	No	No
80	Maltezos v. AT&T Corp.	6 Fed. App. 850		No	No
81	Crystal Semiconductor Corp. v. Trittech Microelectronics Int'l, Inc.	246 F.3d 1336	Yes	No	No
82	Kimberly-Clark Corp. v. Tyco Int'l, Inc.	4 Fed. App. 946		No	
83	Amazon.com, Inc. v. Barnesandnoble.com, Inc.	239 F.3d 1343	Yes: Evidentiary Hearing	No	
84	Forest Labs., Inc. v. Abbott Labs.	239 F.3d 1305	Yes	Yes	
85	Biovail Corp. Int'l v. Andrx Pharms., Inc.	239 F.3d 1297		No	
86	DeMarini Sports, Inc. v. Worth, Inc.	239 F.3d 1314	Yes	No	
87	Amphenol Corp. v. Maxconn Inc.	4 Fed. App. 928	Yes	No	

88	Collett v. Piper's Saw Shop, Inc.	4 Fed. App. 904	Yes	No	
89	AFG Indus., Inc. v. Cardinal IG Co., Inc.	239 F.3d 1239	Yes	Yes	Yes
90	Wenger Mfg., Inc. v. Coating Mach. Sys., Inc.	239 F.3d 1225		Yes	Yes
91	Purdue Pharma L.P. v. Boehringer Ingelheim GMBH	237 F.3d 1359		No	
92	Winbond Electronics Corp. v. ITC	4 Fed. App. 832		Yes	
93	Globetrotter Software, Inc. v. Elan Computer Group, Inc.	236 F.3d 1361	Yes	No	
94	Union Pacific Resources Co. v. Chesapeake Energy Corp.	236 F.3d 684	Yes	No	

APPENDIX B:
KEY POINTS TO NOTE FROM THE CAFC OPINIONS

	Case Name	Key Points to Note from the CAFC Decision
1	LNP Engineering Plastics, Inc. v. Miller Waste Mills, Inc.	
2	Kudacek v. DBC, Inc.	Discussion of claim differentiation
3	Intermatic Inc. v. Lamson & Sessions Co.	
4	Smith & Nephew, Inc. v. Ethicon, Inc.	Excluding a reasonable practice of a method is rarely correct; discussion of the transitional term “comprising”; The CAFC referred to the Kayton text.
5	Hemphill v. McNeil-PPC, Inc.	
6	Rexnord Corp. v. Laitram Corp.	A discussion of the cannons of claim construction and the ordinary meaning of terms; The CAFC used the MPEP.
7	J&M Corp. v. Harley-Davidson, Inc.	A discussion of means plus function claims with regard to structure and the Doctrine of Equivalents
8	Superior Fireplace Co. v. Majestic Products Co.	Noting that a patent is presumed valid
9	Bradford Co. v. Jefferson Smurfit Co.	Explains the term “comprising” to mean “at least.”
10	Asyst Technologies, Inc. v. Empak, Inc.	Deals with means plus function
11	Xerox Corp. v. 3COM Corp.	The trial court improperly applied its own claim construction.
12	Circle R, Inc. v. Trail King Industries, Inc.	The trial judge (not the magistrate) should have used the ordinary meaning of the term.
13	Exxon Research & Engineering Co. v. U.S.	The trial court improperly imported a condition from the specification into a claim.
14	Hilgraeve Corp. v. Symantec Corp.	
15	DoorKing, Inc. v. Sentex Sys., Inc.	
16	Fin Control Sys. Pty, Ltd v. OAM, Inc.	

17	Advanced Cardiovascular Sys. v. Medtronic, Inc.	
18	Kopykake Enterprises, Inc. v. Lucks Co.	Dictionary definitions “may always be relied on by the court.” 264 F.3d 1377, 1382 (Fed. Cir. 2001).
19	Ecolab, Inc. v. Envirochem, Inc.	
20	Sandt Technology, Ltd. v. Resco Metal and Plastics Corp.	“All claims are presumed valid independently” 264 F.3d 1344, 1356 (Fed. Cir. 2001).
21	Kustom Signals, Inc. v. Applied Concepts, Inc.	
22	TurboCare Div. of Demag Delaval Turbomachinery Copr. v. General Electric Co.	Trial court misread a preferred embodiment into a claim.
23	CIVIX-DDI, LLC v. Microsoft Corp.	
24	McGinley v. Franklin Sports, Inc.	Discussion of a means & function interpretation
25	Glaxo Group Ltd. V. Ranbaxy Pharmaceuticals, Inc.	An error in the trial court claim construction was an abuse of discretion in granting a preliminary injunction.
26	Bell Atlantic Network Services, Inc. v. Covad Communications Group, Inc.	
27	Generation II Orthotics Inc. v. Medical Technology Inc.	Trial court improperly imported a limitation into a claim; several claims were improperly construed together.
28	KX Indus., L.P. v. Pur Water Purification Prods.	
29	Tapco Int’l Corp. v. Van Mark Prods. Corp.	
30	MSM Investments Co., LLC v. Carolwood Corp.	
31	Day Int’l, Inc. v. Reeves Bros., Inc.	
32	Masimo Corp. v. Mallinckrodt, Inc.	
33	Pall Corp. v. PTI Technologies, Inc.	Trial court’s error was in reading the plain language of the claims.
34	Advanced Cardiovascular Systems, Inc. v. Scimed Life Systems, Inc.	

35	Innovad, Inc. v. Microsoft Corp.	Trial court improperly imported limitations from the specification into claims.
36	S3 Inc. v. NVIDIA Corp.	The trial court ignored testimony showing information commonly known in the field.
37	Viskase Corp. v. American Nat'l Can Co.	
38	Mollhagen v. Whitte	
39	Pannu v. Storz Instruments, Inc.	
40	Dow Chemical Co. v. Sumitomo Chem. Co., Ltd.	The trial court performed two claim constructions, but was still reversed.
41	In re Roemer	
42	Dayco Products, Inc. v. Total Containment, Inc.	The trial court improperly imported limits into claims.
43	Avery Dennison Corp. v. Flexcon Co., Inc.	
44	Tegal Corp. v. Tokyo Electronic America, Inc.	The preamble is not necessarily limiting
45	Interactive Gift Express, Inc. v. Compuserve, Inc.	
46	Applied Concepts, Inc. v. Olympia Indus., Inc.	The trial court failed to properly find structure in the specification for a means plus function claim
47	Datastrip (IOM) Ltd. V. Symbol Techs., Inc.	
48	Newell Window Furnishings, Inc. v. Springs Window Fashions Div., Inc.	
49	Rapoport v. Dement	
50	Durel Corp. v. Osram Sylvania Inc.	The trial court failed to give meaning to an established term and the specification's use of the term.
51	Gart v. Logitech, Inc.	The trial court improperly imported a limitation from the specification into a claim.
52	K&K Jump Start/Chargers, Inc. v. Schumacher Electric Corp.	
53	Unique Coupons, Inc. v. Northfield Corp.	Clear guidance in the specification is not improper importation of a claim limit.

54	Semitoool, Inc. v. Novellus Sys., Inc.	
55	Acromed Corp. v. Sofamor Danek Group	
56	Scholle Corp. v. Packaging Systems, LLC	The trial court misconstrued the type of seal used.
57	Transonic Sys. Inc. v. Non-Invasive Med. Techs. Corp.	The trial court improperly used intrinsic evidence to narrow the scope of the claims.
58	Budde v. Harely-Davidson, Inc.	The CAFC provided a discussion of the level of the skill in the art.
59	Biotech Biologishce Naturverpackungen GmbH & Co. KG v. Biocorp., Inc.	
60	Bernard Dalsin Mfg. Co. v. RMR Products, Inc.	
61	Oak Tech., Inc. v. ITC	
62	Lockheed Martin Corp. v. Space Systems/Loral, Inc.	The trial court improperly broadened the scope of the claims.
63	Telemac Cellular Corp. v. Topp Telecom, Inc.	
64	Somfy, S.A. v. Springs Window Fashions Div., Inc.	
65	Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.	
66	Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc.	Discussion of the preamble
67	Schoell v. Regal Marine Industries, Inc.	
68	Mentor H/S, Inc. v. Medical Device Alliance, Inc.	
69	Optimal Recreation Solutions LLP v. Leading Edge Techs., Inc.	A discussion of means plus function and structure.
70	Medical Device Technologies. v. C.R. Bard, Inc.	A discussion of means plus function claims.
71	Pandrol USA, LP v. Airboss Railway Products, Inc.	The trial court claim construction was in direct conflict with the plain language of another claim; the trial court claim construction would reject a preferred embodiment.
72	Research Corp. Techs. v. Gensia	Improper use of extrinsic evidence by

	Labs., Inc.	trial court
73	Karsten Mfg. Corp. v. Cleveland Golf Co.	Discussion of a canon of claim construction: construe claim elements so as to preserve validity.
74	Netword, LLC v. Centraal Corp.	
75	SciMed Life Sys. v. Advanced Cardiovascular Sys.	The trial court properly read claims in view of the specification without reading in a limitation.
76	Polymer Indus. Prods. Co. v. Bridgestone/Firestone, Inc.	
77	Mycogen Plant Science v. Monsanto Co.	
78	Senior Techs., Inc. v. R.F. Techs., Inc.	The trial court was not clear in its claim construction analysis.
79	Herman v. William Brooks Shoe Co.	
80	Maltezos v. AT&T Corp.	
81	Crystal Semiconductor Corp. v. Tritech Microelectronics Int'l, Inc.	Discussion of 'a', 'an', 'comprising', and 'having'
82	Kimberly-Clark Corp. v. Tyco Int'l, Inc.	
83	Amazon.com, Inc. v. Barnesandnoble.com, Inc.	
84	Forest Labs., Inc. v. Abbott Labs.	Extrinsic evidence is no good when used to vary or contradict the language of the claim.
85	Biovail Corp. Int'l v. Andrx Pharms., Inc.	
86	DeMarini Sports, Inc. v. Worth, Inc.	Should look at all intrinsic evidence to do claim construction.
87	Amphenol Corp. v. Maxconn Inc.	
88	Collett v. Piper's Saw Shop, Inc.	A discussion of the all elements rule
89	AFG Indus., Inc. v. Cardinal IG Co., Inc.	A discussion of transitional phrases: closed/open, 'composed of'; the CAFC cautioned against the use of non-technical dictionaries
90	Wenger Mfg., Inc. v. Coating Mach. Sys., Inc.	The trial court improperly restricted a means element.
91	Purdue Pharma L.P. v. Boehringer Ingelheim GMBH	

92	Winbond Electronics Corp. v. ITC	The CAFC cited <i>Landis</i> ; the trial court failed to determine the structure for a means plus function claim
93	Globetrotter Software, Inc. v. Elan Computer Group, Inc.	
94	Union Pacific Resources Co. v. Chesapeake Energy Corp.	

APPENDIX C:
INFORMATION CONCERNING THE DISTRICT COURTS

	Case Name	Lower Ct	Trial Ct. Judge
1	LNP Engineering Plastics, Inc. v. Miller Waste Mills, Inc.	D. Del.	McKelvie
2	Kudacek v. DBC, Inc.	N.D. Iowa	Bennett
3	Intermatic Inc. v. Lamson & Sessions Co.	N.D. Ill.	Reinhard
4	Smith & Nephew, Inc. v. Ethicon, Inc.	D. Ore.	Magistrate Claim Construction
5	Hemphill v. McNeil-PPC, Inc.	D. Md.	Chasanow
6	Rexnord Corp. v. Laitram Corp.	W.D. Wisc.	Crabb
7	J&M Corp. v. Harley-Davidson, Inc.	D. Az.	Broomfield
8	Superior Fireplace Co. v. Majestic Products Co.	C.D. Cal.	Baird
9	Bradford Co. v. Jefferson Smurfit Co.	W.D. Mich.	
10	Asyst Technologies, Inc. v. Empak, Inc.	N.D. Cal.	
11	Xerox Corp. v. 3COM Corp.	W.D.N.Y.	Telesca
12	Circle R, Inc. v. Trail King Industries, Inc.	D. Neb.	Magistrate & Trial Judge
13	Exxon Research & Engineering Co. v. U.S.	Ct. Fed. Cl.	Damich
14	Hilgraeve Corp. v. Symantec Corp.	E.D. Mich.	Gadola
15	DoorKing, Inc. v. Sentex Sys., Inc.	C.D. Cal.	Paez
16	Fin Control Sys. Pty, Ltd v. OAM, Inc.	C.D. Cal.	Snyder
17	Advanced Cardiovascular Sys. v. Medtronic, Inc.	N.D. Cal.	Jensen
18	Kopykake Enterprises, Inc. v. Lucks Co.	C.D. Cal.	
19	Ecolab, Inc. v. Envirochem, Inc.	D.N.J.	Greenaway, Jr.
20	Sandt Technology, Ltd. v. Resco Metal and Plastics Corp.	S.D.N.Y.	Magistrate
21	Kustom Signals, Inc. v. Applied Concepts, Inc.	D. Kan.	Vratil

22	TurboCare Div. of Demag Delaval Turbomachinery Copr. v. General Electric Co.	D. Mass.	Ponsor / Neiman?
23	CIVIX-DDI, LLC v. Microsoft Corp.	D. Colo.	Babcock
24	McGinley v. Franklin Sports, Inc.	D. Kan.	Lungstrum
25	Glaxo Group Ltd. V. Ranbaxy Pharmaceuticals, Inc.	D.N.J.	Cooper
26	Bell Atlantic Network Services, Inc. v. Covad Communications Group, Inc.	E.D. Va.	Friedman
27	Generation II Orthotics Inc. v. Medical Technology Inc.	W.D. Wash.	Coughnour
28	KX Indus., L.P. v. Pur Water Purification Prods.	D. Del.	McKelvie
29	Tapco Int'l Corp. v. Van Mark Prods. Corp.	E.D. Mich.	Zatkoff
30	MSM Investments Co., LLC v. Carolwood Corp.	N.D. Cal.	Infante
31	Day Int'l, Inc. v. Reeves Bros., Inc.	D.S.C.	Magistrate
32	Masimo Corp. v. Mallinckrodt, Inc.	C.D. Cal.	
33	Pall Corp. v. PTI Technologies, Inc.	E.D.N.Y.	Trager
34	Advanced Cardiovascular Systems, Inc. v. Scimed Life Systems, Inc.	S.D. Ind.	Hamilton
35	Innovad, Inc. v. Microsoft Corp.	N.D. Tex.	McBryde
36	S3 Inc. v. NVIDIA Corp.	N.D. Cal.	Armstrong
37	Viskase Corp. v. American Nat'l Can Co.	N.D. Ill.	Bucklo
38	Mollhagen v. Whitte	D. Neb.	
39	Pannu v. Storz Instruments, Inc.	S.D. Fl.	Dimitrouleas
40	Dow Chemical Co. v. Sumitomo Chem. Co., Ltd.	E.D. Mich.	Roberts
41	In re Roemer	BPAI	
42	Dayco Products, Inc. v. Total Containment, Inc.	W.D. Mo.	Wright
43	Avery Dennison Corp. v. Flexcon Co., Inc.	N.D. Ill.	Anderson
44	Tegal Corp. v. Tokyo Electronic	E.D. Va.	Spencer

	America, Inc.		
45	Interactive Gift Express, Inc. v. Compuserve, Inc.	S.D.N.Y.	Jones
46	Applied Concepts, Inc. v. Olympia Indus., Inc.	W.D. Pa.	
47	Datastrip (IOM) Ltd. V. Symbol Techs., Inc.	D. Del.	
48	Newell Window Furnishings, Inc. v. Springs Window Fashions Div., Inc.	N.D. Ill.	Magistrate
49	Rapoport v. Dement	BPAI	
50	Durel Corp. v. Osram Sylvania Inc.	D. Az.	Van Sickle
51	Gart v. Logitech, Inc.	C.D. Cal.	Marshall
52	K&K Jump Start/Chargers, Inc. v. Schumacher Electric Corp.	W.D. Mo.	Sachs
53	Unique Coupons, Inc. v. Northfield Corp.	N.D. Ill.	Leinenweber
54	Semitool, Inc. v. Novellus Sys., Inc.	N.D. Cal.	
55	Acromed Corp. v. Sofamor Danek Group	N.D. Oh.	
56	Scholle Corp. v. Packaging Systems, LLC	C.D. Cal.	
57	Trasonic Sys. Inc. v. Non-Invasive Med. Techs. Corp.	D. Utah	Benson
58	Budde v. Harely-Davidson, Inc.	N.D. Cal.	Fogel
59	Biotech Biologishce Naturverpackungen GmbH & Co. KG v. Biocorp., Inc.	C.D. Cal.	Rafeedie
60	Bernard Dalsin Mfg. Co. v. RMR Products, Inc.	D. Minn.	Tunheim
61	Oak Tech., Inc. v. ITC	ITC	
62	Lockheed Martin Corp. v. Space Systems/Loral, Inc.	N.D. Cal.	Illston
63	Telemac Cellular Corp. v. Topp Telecom, Inc.	N.D. Cal.	Wilken
64	Somfy, S.A. v. Springs Window Fashions Div., Inc.	N.D. Ill.	Castillo
65	Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.	D. Minn.	Rosenbaum
66	Bristol-Myers Squibb Co. v. Ben	D.N.J.	Walls

	Venue Labs., Inc.		
67	Schoell v. Regal Marine Industries, Inc.	M.D. Fl.	Baker, Magistrate
68	Mentor H/S, Inc. v. Medical Device Alliance, Inc.	C.D. Cal.	Keller
69	Optimal Recreation Solutions LLP v. Leading Edge Techs., Inc.	D. Az.	
70	Medical Device Technologies. v. C.R. Bard, Inc.	N.D. Ill.	Grady
71	Pandrol USA, LP v. Airboss Railway Products, Inc.	W.D. Mo.	Wright, Scott
72	Research Corp. Techs. v. Gensia Labs., Inc.	D.N.J.	Brown, Garrett
73	Karsten Mfg. Corp. v. Cleveland Golf Co.	D. Az.	Van Sickle
74	Netword, LLC v. Centraal Corp.	E.D. Va.	Brinkema
75	SciMed Life Sys. v. Advanced Cardiovascular Sys.	N.D. Cal.	Jenkins
76	Polymer Indus. Prods. Co. v. Bridgestone/Firestone, Inc.	N.D. Oh.	
77	Mycogen Plant Science v. Monsanto Co.	D. Del.	McKelvie
78	Senior Techs., Inc. v. R.F. Techs., Inc.	D. Neb.	Kopf
79	Herman v. William Brooks Shoe Co.	S.D.N.Y.	Leisure
80	Maltezos v. AT&T Corp.	S.D.N.Y.	McKenna
81	Crystal Semiconductor Corp. v. Tritech Microelectronics Int'l, Inc.	W.D. Tex.	Sparks
82	Kimberly-Clark Corp. v. Tyco Int'l, Inc.	W.D. Wisc.	
83	Amazon.com, Inc. v. Barnesandnoble.com, Inc.	W.D. Wash.	Pechman
84	Forest Labs., Inc. v. Abbott Labs.	W.D.N.Y.	Arcara
85	Biovail Corp. Int'l v. Andrx Pharms., Inc.	S.D. Fl.	Dimitrouleas
86	DeMarini Sports, Inc. v. Worth, Inc.	D. Or.	King
87	Amphenol Corp. v. Maxconn Inc.	N.D. Cal.	Williams
88	Collett v. Piper's Saw Shop, Inc.	E.D. Tex.	Brown

89	AFG Indus., Inc. v. Cardinal IG Co., Inc.	E.D. Tenn.	Hull
90	Wenger Mfg., Inc. v. Coating Mach. Sys., Inc.	S.D. Iowa	Pratt
91	Purdue Pharma L.P. v. Boehringer Ingelheim GMBH	S.D.N.Y.	Stein
92	Winbond Electronics Corp. v. ITC	ITC	
93	Globetrotter Software, Inc. v. Elan Computer Group, Inc.	N.D. Cal.	
94	Union Pacific Resources Co. v. Chesapeake Energy Corp.	N.D. Tex.	Means