Procedural Uncertainty in Markman Hearings: When Will the Federal Circuit Show the Way

Timothy M. Salmon
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I. INTRODUCTION

The grant of a patent confers upon the patentee the right to exclude others from making, using or selling that which is the subject matter of that patent. However, the inventor's right to exclude is limited by the scope of the claims in the patent. Thus, in prosecuting patent applications, inventors try to employ broad claim language that will give them the most protection against potential infringers. The claim language, however, is usually

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1 See U.S. CONST. art. I, § 8, cl. 8 ("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."); see also Sears, Roebuck & Co. v. Stiffel Co., 376 U.S. 225, 229 (1964) (stating that a patent grant is that of a statutory monopoly); RONALD B. HILDRETH, PATENT LAW – A PRACTITIONER’S GUIDE 8 (2d ed. 1993) (discussing the constitutional source and economic nature of patent law).

2 See Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 29-30 (1997). The Supreme Court held that each element of a claim is material to defining its scope. Id. The Court in Warner Jenkinson also affirmed the concept that the Court is without authority to broaden the rights conferred by grant of a patent beyond the scope of its claims. Id. In constructing patent law, Congress sought to achieve the dual purpose of providing inventors with sufficient incentive to create while allowing the public to make use of and improve upon inventions. See generally Matthew J. Conigliaro et al., Foreseeability in Patent Law, 16 BERKELEY TECH. L.J. 1045, 1046 (2001). However, others argue that granting narrowly defined patents fosters competition and advancement in the patent market. Jay Kesan & Marc Banik, Administrative Law Issues: Patents as Incomplete Contracts: Aligning Incentives for R&D Investment with Incentives to Disclose Prior Art, 2 WASH. U. J.L. & POL’Y 23, 24 (2000).

3 See Paul M. Janicke, When Patents are Broadened Midstream: A Compromise Solution to Protect Competitors and Existing Users, 66 U. CIN. L. REV. 7, 10-11 (1997) (stating that the inventor, advised by his patent attorney, initially tries to employ broad language designed to cover an infinite number of possibilities); Michael J. Mauriel, Patent Reexamination’s Problem: The Power to Amend, 46 DUKE L.J. 135, 140 (1996) (noting that patent applications are drafted with broad patent language which is narrowed in response to Patent and Trademark Office rejections).
narrowed during the prosecution process to avoid rejections based on prior art. If a patent issues based on the narrowed claim language, the right to exclude will necessarily be restricted. In an infringement action, the patent owner will be limited to enforcing the claim language as narrowed in the issued patent, not the broad language that began the application process. Hence, the terms used in drafting and amending the claims must be carefully chosen, because the language will be subject to interpretation in infringement litigation.

The issue of claim construction was definitively decided by the Supreme Court in Markman v. Westview Instruments, Inc. In Markman, the Supreme Court held that the interpretation of

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4 See Mauriel, supra note 3, at 140-41 (describing the patent prosecution process with regard to narrowing of claim language to overcome rejections based on prior art); see also Jay I. Alexander, Cabining the Doctrine of Equivalents in Festo: A Historical Perspective on the Relationship Between the Doctrines of Equivalents and Prosecution History Estoppel, 51 AM. U. L. REV. 553, 583 (2002) (discussing the Supreme Court's ruling in Exhibit Supply Co. v. Ace Patents Corp. that patent language amended to avoid further rejection based on prior art was to be strictly construed); John Romary & Arie Michelsohn, Patent Claim Interpretation After Markman: How the Federal Circuit Interprets Claims, 46 AM. U. L. REV. 1887, 1892-95 (1997) (discussing the process of narrowing a patent claim and noting that claim language is often narrowed to avoid ambiguity).

5 See Wang Lab v. Mitsubishi Elecs. Am., 103 F.3d 1571, 1578 (Fed. Cir. 1997) (noting that a narrowed claim will have a better chance of allowance but restricts the applicant's rights); see also Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki, 535 U.S. 722, 741 (2002) (stating that claim language narrowed during patent prosecution triggered prosecution history estoppel and that the patentee had the burden of proving that the amendment was not made for a purpose that would give rise to such estoppel). But see Laura A. Handley, Refining the Graver Tank Analysis with Hypothetical Claims: A Biotechnology Exemplar, 5 HARV. J.L. & TECH. 31, 33 (1991) (explaining that when a patent is inadequate to protect the author's intent due to narrow language, courts often interpret the language broadly for purposes of equity).

6 See Festo Corp., 535 U.S. at 722 (holding that prosecution history estoppel arose when amendments were made to secure a patent and it narrowed the patent's scope); Alexander, supra note 4, at 583-84 (stating that settled law prevented the doctrine of equivalents from "recapturing claims which the patentee has surrendered by amendment"). See generally Romary & Michelsohn, supra note 4, at 1888-90 (noting that the quality of drafting for the patent language is the source of protection against later infringers).

7 See Kenneth Muhammad, An Analysis of Patent Claim Construction for Newly Invented Monoclonal Anti-bodies, Johns Hopkins University v. CellPro, Inc., 152 F.3d 1342 (Fed Cir. 1998), 18 TEMP. ENVT'L. L. & TECH. J. 95, 108 (1999) (remarking that choice of claim language is of utmost importance in the prosecution process). See generally Janicke, supra note 3, at 10-17 (discussing the balance of constructing patent language narrow enough to avoid prior art and broad enough to ensure that subsequent inventors cannot easily design around it); Romary & Michelsohn, supra note 4, at 1888-89 (noting that a while the patentee needs to identify the invention in its best mode, he may be permitted to add many more embodiments in order to preclude a wider range of potential infringers).

8 517 U.S. 370 (1996) (affirming the federal circuit's ruling that claim construction is within the authority of the court rather than the jury).
patent claims, including terms of art used therein, is a question of law to be decided by the court, not one of fact reserved for the jury.\textsuperscript{9} The decision was based on the concept that patents are legal documents similar to contracts, which have traditionally been interpreted by the court.\textsuperscript{10} Guided by that rationale, the Supreme Court felt that judges were better suited to construe claim language, because they have been trained to interpret legal documents.\textsuperscript{11} Finally, the Court felt that its holding in \textit{Markman} would foster intrajurisdictional uniformity in patent infringement suits.\textsuperscript{12}

\textsuperscript{9} See \textit{Markman}, 517 U.S. at 372 (noting that certiorari was granted to determine the Seventh Amendment claim of right to a jury trial on all issues of fact, claim construction allegedly being an issue of fact); William Lee & Anita Krug, \textit{Still Adjusting to Markman: A Prescription for the Timing of Claim Construction Hearings}, 13 \textit{Harv. J.L. & Tech} 55, 56 (1999) (discussing the Supreme Court's reasoning in ruling that claim construction is an issue to be decided by judges rather than jury); see also John F. Duffy, \textit{Administrative Law Issues: On Improving the Legal Process of Claim Interpretation: Administrative Alternatives}, 2 \textit{Wash. U. J.L. & Pol'y} 109, 117-19 (2000) (stating that the Supreme Court's ruling in \textit{Markman} provided a clear message that juries are not to be involved in claim interpretation).

\textsuperscript{10} See \textit{Markman}, 517 U.S. at 387 (explaining that “[q]uestions of construction are questions of law for the judge, not questions of fact for the jury.”); John Lane & Christine Pepe, \textit{Living Before, Through, and With Markman: Claim Construction as a Matter of Law}, 1 \textit{Buff. Intell. Prop. L.J.} 59, 62 (2001) (noting that the Supreme Court’s decision to affirm the Federal Circuit was unanimous); see also Duffy, supra note 9, at 117 (stating that the Court in \textit{Markman} determined that the jury’s competence in determining credibility was outweighed by the judges expertise and relative competence in textual interpretation of legal documents).

\textsuperscript{11} See \textit{Markman}, 517 U.S. at 388 (stating “[t]he construction of written instruments is one of those things that judges often do and are likely to do better than jurors”); see also Duffy, supra note 9, at 117 (explaining that the Supreme Court in \textit{Markman} determined that judges are more properly suited to interpret legal documents and to find and determine the meaning of patent terms); Lee & Krug, supra note 9, at 57-58 (noting that the Supreme Court affirmed the Federal Circuit’s rationale that a patent, as a written document, is exclusively in the province of the court and is to be determined as a matter of law).

\textsuperscript{12} See \textit{Markman}, 517 U.S. at 390-91. At the end of his opinion in \textit{Markman}, Justice Souter recalled that the time-limited monopoly that is granted to inventors is meant to encourage invention. \textit{Id.} The promotion of invention through the grant of temporary monopolistic rights would ultimately benefit the public by “foster[ing] technological growth and industrial innovation.” \textit{Id.} at 390 (quoting H.R. REP. NO. 97-312 (1981)). See also Arthur R. Miller, \textit{The Pretrial Rush to Judgment: Are the “Litigation Explosion,” “Liability Crisis,” and Efficiency Clichés Eroding Our Day in Court and Jury Trial Commitments?}, 78 N.Y.U. L. REV. 982, 1111-12 (2003). Professor Miller noted that uniformity in patent treatment and the promotion of intrajurisdictional certainty were distinct goals of the Court’s ruling in \textit{Markman}. \textit{Id.} at 1111-12. The Court reasoned that judges were better suited as the interpreters of patent claims. See Joan E. Schaffner, \textit{The Seventh Amendment Right to Civil Jury Trial: The Supreme Court Giveth and the Supreme Court Taketh Away}, 31 \textit{U. Balt. L. Rev.} 225, 244 (2002). As opposed to juries, the Court expected that judges were more likely to foster uniformity in review and precedent in the construction of patent documents. \textit{Id.} at 244.
The holding in Markman inspired the creation of the "Markman hearing," a judicial proceeding dedicated solely to claim construction. However, with the creation of this new proceeding came many issues that were not commented on, nor decided in Markman. One of the main ramifications of the Markman decision was that claim construction, now done as a matter of law by trial courts, would be reviewed de novo by the Federal Circuit on appeal. The de novo standard of review had the potential to promote an increase in the number of reversals. Courts and legal commentators have taken notice of the significant reversal rate of Markman orders by the Federal Circuit. 

13 See Markman v. Westview Instruments, Inc., 52 F.3d 967, 1008 n.5 (Fed. Cir. 1995) (en banc) (Newman, J., dissenting) (suggesting that the interpretation of claims by the court may require a 'mini-trial' dedicated solely to that purpose); see also Lane & Pepe, supra note 10, at 63-64 (discussing the development, by district courts, of independent proceedings employed to determine claim construction known as Markman hearings); Kimberly A. Moore, Are District Court Judges Equipped to Resolve Patent Cases?, 15 HARV. J.L. & TECH 1, 7 (2001) (explaining that district court judges lacking in scientific and technological expertise can develop an enhanced understanding of the issues through the introduction of evidence and argument during Markman hearings).

14 See Cybor Corp. v. FAS Techs., 138 F.3d 1448, 1475 n.14 (Fed. Cir. 1998) (Rader, J., dissenting) (listing eight problems that have been created by the Federal Circuit's ruling in Markman); Markman, 52 F.3d at 999 (Newman, J., dissenting) (stating "[t]he jury is eliminated, and new and uncertain procedures are imposed on trial judges."); see also Lee & Krug, supra note 9, at 60-61 (arguing that "the timing and procedures that judges are to follow in interpreting claims are far from settled, and courts' practices in interpreting claim language have varied wildly.").

15 See Markman, 52 F.3d at 999-1000 (Newman, J., dissenting). Judge Newman opined that the complex subject matter of patent infringement suits is not suited to a fact-finding process conducted under constraints of the appellate procedure. Id. Judge Newman also asserted doubts about the technological accuracy of appellate court fact-finding when the trial court's decision has been made after a full trial. Id. at 1005. See also Jay Kesan & Thomas Ulen, Intellectual Property Challenges in the Next Century, 2001 U. ILL. L. REV. 57, 65-66 (2001). Despite the Supreme Court's intent in Markman to ensure greater uniformity and certainty in patent litigation, the author notes Professor Craig Nard's contention that the Federal Circuit must begin to accept interlocutory appeals in order to ensure such goals. Id at 65-66. Nard argues that the refusal to accept interlocutory appeals only fosters inefficiency and a lack of uniformity and certainty. Id at 66; see also Moore, supra note 13, at 8. Moore notes that the Supreme Court decision in Markman assigns the duty of claim construction to the judges. The Federal Circuit held that such claim construction, as a matter of law, is subject to de novo review on appeal. Id.

16 See John W. Shaw, Markman Hearings – When is the Best Time? (July 31, 2002) (observing that studies have shown that the Federal Circuit reverses one-third of all appeals involving claim construction issues), at http://www.ycst.com/PDF/shaw_markman.pdf (last visited Mar. 28, 2004); see also Moore, supra note 13, at 14 (noting that the Federal Circuit disagrees with one in every three claim constructions by the district courts, leading to many reversals and much uncertainty in this area of patent law); Arti K. Rai, Patent System Reform: Specialized Trial Courts: Concentrating Expertise on Fact, 17 BERKELEY TECH. L.J. 877, 884 (2002) (commenting that two recent empirical studies indicate that the Federal Circuit, on appeal, has disagreed with the lower court on the issue of claim construction in at least one-third of cases).
Circuit.\textsuperscript{17} One study done in 1997 reported that the Federal Circuit reversed 38.3\% of cases involving claim construction.\textsuperscript{18}

Relatively little guidance was offered as to the extent extrinsic evidence (i.e., expert testimony, dictionaries, technological treatises) should be used by the trial court when construing the language of patent claims.\textsuperscript{19} Though the evidentiary debate was a prevalent issue soon after \textit{Markman}, the controversy surrounding it has subsided after the Federal Circuit's holding in \textit{Vitrionics Corp. v. Conceptronic, Inc.}\textsuperscript{20} In \textit{Vitrionics}, the Federal Circuit held, "only if there were still some genuine ambiguity in the claims, after consideration of all the available intrinsic evidence, should the trial court have resorted to extrinsic evidence."\textsuperscript{21} In subsequent decisions, the Federal Circuit has given trial court judges flexibility in using extrinsic evidence to provide assistance for background technical knowledge.\textsuperscript{22}

\textsuperscript{17} See Theodore H. Davis, Jr., \textit{Directing Traffic: A Comment on the Construction and Application of Utility Patent Claims in Trade Litigation}, 54 FLA. L. REV. 229, 283-84 (2002) (emphasizing that the increased level of appellate scrutiny employed by the Federal Circuit in characterizing claim construction has led to a reversal rate of near 40\% at certain times); Lane & Pepe, \textit{supra} note 10, at 72 (remarking that in one case the Federal Circuit reversed its own prior claim construction of the same claim language); Moore, \textit{supra} note 13, at 14-17 (concluding that, possibly in part to the less deferential standard of review accorded to claim construction, the reversal rate for claim construction is higher than that of any other patent issue).

\textsuperscript{18} See \textit{Cybor Corp.}, 138 F.3d at 1476 n.16 (citing study done by Federal Circuit of cases with claim construction issues arising out of BPAI, district courts, and Court of Federal Claims); see also Gretchen Ann Bender, \textit{Uncertainty and Unpredictability in Patent Litigation: The Time is Ripe for a Consistent Claim Construction Methodology}, 8 J. INTELL. PROP. L. 175, 207 (2001) (noting statistics claiming Federal Circuit changes claim construction in approximately 40\% of cases); Moore, \textit{supra} note 13, at 4 (explaining empirical results suggesting district courts make reversible claim constructions one-third of time).

\textsuperscript{19} See Lee & Krug, \textit{supra} note 9, at 62 (arguing that Federal Circuit in \textit{Markman} instructed trial courts to rely on extrinsic evidence for claim construction but did not offer direction as to the function of extrinsic evidence in that capacity); see also Romary & Michelsohn, \textit{supra} note 4, at 1896 (stating that \textit{Markman} made court's reliance on extrinsic evidence entirely discretionary); Lawrence M. Sung, \textit{Echoes of Scientific Truth in the Halls of Justice: The Standards of Review Applied by the United States Court of Appeal for the Federal Circuit in Patent-Related Matters}, 48 AM. U. L. REV. 1233, 1260 (1999) (stating that \textit{Markman} allows for extrinsic evidence to assist court's understanding of patent but not to clarify ambiguity in claim language).

\textsuperscript{20} 90 F.3d 1576 (Fed. Cir. 1996).

\textsuperscript{21} Id. at 1584.

\textsuperscript{22} See \textit{Cybor Corp.}, 138 F.3d at 1455 (maintaining that judges should use extrinsic evidence only for aid in background knowledge, not for fact-finding); see also IGC-Med. Advances, Inc. v. USA Instruments, Inc., 34 Fed. Appx. 715, 718. (Fed. Cir. 2002) (holding that extrinsic evidence may be used to assist in determining scope of technical terms in claims); Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1309 (Fed. Cir. 1999) (reasoning that extrinsic evidence may be used for aiding interpretation so long as it does not conflict with intrinsic evidence).
However, a problem persists when the judge accepts one expert's claim construction because he or she necessarily rejects the other expert's opinion, which adds a credibility-deciding issue into the fray.23

Arguably the most prominent issue with regard to *Markman* hearings has been the time during the litigation process at which they are held.24 The timing issue remains prevalent because trial courts have been given complete discretion as to when to hold these hearings.25 Without guidance from the Federal Circuit, district courts have employed a spectrum of policies regarding the timing of *Markman* hearings.26 Such intrajurisdictional uncertainty27 represents precisely what the Supreme Court was trying to prevent. Two separate districts have gone so far as to promulgate local rules, which speak to brief content, discovery, and hearings in claim construction proceedings.28

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23 See Cybor Corp., 138 F.3d at 1475 (Rader, J., dissenting) (reminding the majority that district courts have complained about judging the credibility of expert witnesses in *Markman* hearings); see also Lane & Pepe, supra note 9, at 69 (observing the Federal Circuit has been careful to avoid endorsement of expert testimony evidence, since it requires the court to make credibility determinations).

24 See Lee & Krug, supra note 9, at 56 (noting that *Markman* decision focused only on who should interpret claims, not when it should occur); see also Mark R. Malek, *Markman Exposed: Continuing Problems with Markman Hearings*, 7 J. TECH. L. & POL'Y 195, 198 n.28 (2002) (observing that Supreme Court has provided no guidelines as to timing of claim interpretation, resulting in inconsistency both within and between jurisdictions). See generally David H. Binney & Touissaint L. Myricks, *Patent Claim Interpretation After Markman: How Have the Trial Courts Adapted?*, 38 IDEA 155, 161 (1997) (commenting on variability of timing in *Markman* hearings).

25 See Sofamar Danek Group, Inc. v. DePuy-Unitech, Inc., 74 F.3d 1216, 1221 (Fed. Cir. 1996) (stating that trial courts should interpret claims when they feel they have sufficient knowledge of the dispute claims and prior art); see also Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc., 200 F.3d 795, 803 (Fed. Cir. 1999) (rejecting a per se rule that discovery must precede claim construction); Lane & Pepe, supra note 10, at 63-64 (noting the only limitation on discretion in determining timing of *Markman* hearing is that it must occur in jury trials prior to jury instruction).

26 See HP Intellectual Corp. v. Sunbeam Prods., 1999 U.S. Dist. LEXIS 9569, at *11 n.6 ("Markman hearing[s] may be conducted at almost any time in the legal proceeding"). See generally Binney & Myricks, supra note 24, at 161 (commenting on variability of timing in *Markman* hearings); Malek, supra note 24, 198 at n.28 (observing that district courts have received no guidelines with respect to timing of *Markman* hearings).

27 See Frank M. Gasparo, Note, *Markman v. Westview Instruments, Inc. and Its Procedural Shock Wave: The Markman Hearing*, 5 J.L. & POL'Y 723, 740 (1997) (commenting that district courts have formulated different options available for when claims can be construed); see also Lane & Pepe, supra note 8, at 63-64 (noting that timing of claim construction has been inconsistent among district courts); Malek, supra note 24, at 198 n.28 (observing that lack of guidelines has resulted in inconsistency both within and between jurisdictions).

This Note will attempt to discern whether the Federal Circuit has given any indication as to a preferred timing of Markman hearings. Part II reviews the potential times that trial court judges may conduct Markman hearings within the litigation framework. Part III will review recent decisions of the Federal Circuit, specifically focusing on the Federal Circuit's comments on the respective district court's procedure and timing for claim construction. Part IV concludes by collating the aforementioned decisions in an attempt to discover if the Federal Circuit has any intentions of guiding the district courts. This Note concludes that, while most courts have conducted Markman hearings at summary judgment, the availability of complete discretion allows uncertainty to develop, which is contrary to Supreme Court's goal of intrajurisdictional certainty. Complete discretion at the district court level has lead neither to efficient resolution nor increased settlements—instead, it has further mired the complex arena of patent litigation.

II. POTENTIAL TIMES FOR MARKMAN HEARINGS

The issue of claim construction is central in patent infringement litigation; thus, the time at which the claims are construed can be incorporated into each party's strategy. From the court's viewpoint, Markman hearings should make the litigation process more efficient, temporally and monetarily. Additionally, the court views Markman hearings in conjunction

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29 See Markman, 517 U.S. at 384 ("The two elements of a simple patent case [are] construing the patent and determining whether infringement occurred").

30 See Lee & Krug, supra note 9, at 59-60 (suggesting that an effect of Markman will be increased summary judgment motions predicated on claim construction and infringement); see also Lane & Pepe, supra note 8, at 65 (arguing that parties place more emphasis on getting claim construction by Federal Circuit rather than on trial court's ruling). But see Christopher J. Harnett et al., Analysis Courts Placing Increasing Reliance on Public Notice Function of Intrinsic Evidence, 3 PAT. STRATEGY & MGMT. 1 (2002) (contending that Markman hearing is most significant time in litigation process).

31 See Cybor Corp. v. FAS Techs., 138 F.3d 1448, 1475 (Fed. Cir. 1998) (Rader, J., dissenting) ("Once the parties know the meaning of the claims, they can predict with some reliability the likelihood of a favorable judgment, factor in the economics of the infringement, and arrive at some settlement to save the costs of litigation."); see also Lane & Pepe, supra note 10, at 60 (observing that rationales for placing claim construction with court was increased efficiency and predictability in patent claims). But see Moore, supra note 13, at 31-38 (arguing that any efficiency gains are overwhelmed by district court errors in claim construction).
with a movement to increase the likelihood of settlement. Construing claims would assist the trial judge in immersing him- or herself in the technological intricacies of the subject matter of the patent. Presumably, the litigants would prefer not to have the judge rush into claim construction without gaining background knowledge regarding the technological context of the dispute. The optimal time at which to conduct a *Markman* hearing depends upon a weighing of the above factors: efficiency, settlement and technology at issue.

A. Pre-discovery

The main advantages of conducting *Markman* hearings prior to discovery are limiting the time and decreasing the costs associated with a lengthy discovery process. Early claim construction will allow the parties to base their discovery on the court's interpretation and may encourage settlement or

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32 See *Cybor Corp.*, 138 F.3d at 1475 (Rader, J., dissenting) (positing that the certainty goal of *Markman* was meant to promote early settlement in most patent suits). But see *Lee & Krug*, supra note 9, at 69-70 (suggesting that intended settlement effect of district court claim construction has yet to materialize); *Moore*, supra note 13, at 28 (arguing that district court claim construction actually prolongs litigation, rather than promotes settlement, because parties hold out for Federal Circuit review).

33 See *Allen Eng'g Corp. v. Bartell Indus.*, 299 F.3d 1336, 1356 (Fed. Cir. 2002) (noting that patent infringement actions are complex and litigants should assist court on technological matters when requested to do so); see also *Moore*, supra note 13, at 28 (describing how judge construing claims must attempt to "step in the shoes" of person skilled in technical field of patented invention to determine what patent language means); Jennifer Urban, *Intellectual Property: B. Patent: 1. Claim Construction: b) Extrinsic Evidence: Bell & Howell v. Altek*, 14 BERKELEY TECH. L.J. 103, 118 (1999) (observing that accurately construing patent claims is complex process, involving understanding underlying technology, language used to describe underlying technology, state of the art in which claimed invention exists, and parameters of presumably unique place occupied within field by claimed invention).

34 See Joseph B. Hosteny, *Litigators Corner: Markman Redux*, INTELL. PROP. TODAY (April 2000) (remarking that claims should only be construed when court is comfortable with its technological background), available at http://www.hosteny.com/archive/hosteny%2004-00.pdf (last visited Mar. 28, 2004); see also *Gasparo*, supra note 27, at 763 (asserting that judges must "carefully ascertain the nature and operation of the allegedly infringing device").

35 See *Lee & Krug*, supra note 9, at 80 (claiming focused discovery is the most important aspect of pre-discovery claim interpretation); *Malek*, supra note 24, at 195.
prompt adjudication. Additionally, pre-discovery claim construction will prevent litigants from offering superfluous claim interpretation theories at trial.

In a context outside of the litigation process, some courts have enacted local rules for patent infringement cases. Particularly, the Northern District of California has instituted a Claim Construction Hearing, which is held prior to trial. The local rules set forth a timeline of conferences, mandatory disclosures, and brief submissions pertaining solely to claim construction issues. The litigants initially decide the claim terms that are determinative. Then, each party sets forth its

(explaining claim interpretation hearings are a question of law for the judge, not a question of fact for the jury).


38 See Luke L. Dauchot, Claim Interpretation Proceedings and Appellate Review, 1999 A.B.A. SEC. INTELL. PROP. 601, 601-1(B) (noting defendants usually wants construction without any discovery to set up a motion for summary judgment of non-infringement); Malek, supra note 24, at 195 (suggesting shortened discovery process leads to early rulings on claim interpretation).

39 See Lee & Krug, supra note 9, at 78 (“Discovery into various ‘validity defenses and the preparation of ‘alternative’ cases, depending on which interpretation is adopted, can be deferred and perhaps avoided altogether.”) (quoting David H. Binney & Toussaint L. Myricks, Patent Claim Interpretation After Markman – How Have the Trial Courts Adapted?, 38 IDEA 155, 162 (1997)).

40 See PATENT L.R. 2-1 (2001) (United States District Court for Northern District of California) (requiring the parties to consider certain topics during their initial conference pursuant to FED. R. CIV. P. 26(f)). See generally Gasparo, supra note 27, at 754-56 (clarifying these local patent rules supplement the Federal Rules).

41 See PATENT L.R. 2-1 (2001) (United States District Court for Northern District of California) (stating that parties must discuss certain topics at the Case Management Conference); see also Gasparo, supra note 27, at 754-56 (establishing rules create a rigid time frame).

42 See PATENT L.R. 3-1 (2001) (United States District Court for Northern District of California) (explaining information must be disclosed to each party within ten days of the Case Management Conference). See generally Malek, supra note 24, n. 115 (stating that mandatory disclosure efficiently provides “parties with forward view of the patent litigation”); Gasparo, supra note 27, at 754-56 (recognizing rules require mandatory disclosure).


44 See PATENT L.R. 3-1 (2001) (United States District Court for Northern District of California) (clarifying party claiming infringement must set forth the claims it feels are being infringed). See generally Malek, supra note 24, n.115 (explaining that parties must exchange a list of terms which they believe need to be interpreted by the court); Gasparo,
interpretation in accordance with the intrinsic evidence and any extrinsic evidence it feels is proper.\textsuperscript{45} Finally, a hearing date is set at which the claims are construed by the court.\textsuperscript{46} Despite the fact that these local rules focus discovery through mandatory disclosure and hold litigants to strict time requirements, the Federal Circuit has not consistently upheld the Northern District's claim constructions.\textsuperscript{47}

Only a small number of district court judges have employed pre-discovery claim construction,\textsuperscript{48} because the disadvantages associated with pre-discovery construction can be overcome by interpreting the claims at a different time in the litigation process.\textsuperscript{49} Without any discovery, judges are forced to analyze the claim language in a vacuum, before they know which terms will be critical.\textsuperscript{50} Also, after only a short time for discovery, one claim term may be dispositive of the entire issue, thus making the pre-discovery claim construction of many terms a waste of precious time.\textsuperscript{51} Furthermore, if the claimant is alleging infringement

\textsuperscript{45} See \textit{PATENT L.R. 4-2} (2001) (United States District Court for Northern District of California) ("[parties] shall also provide a preliminary identification of extrinsic evidence, including without limitation, dictionary definitions, citations to learned treatises and prior art, and testimony of percipient and expert witnesses"). \textit{See generally} \textsuperscript{Malek, supra} note 24, n.115 (arguing parties submitting their own interpretations of terms effectively reduces costs associated with discovery).

\textsuperscript{46} See \textit{PATENT L.R. 4-6} (2001) (United States District Court for Northern District of California) (noting hearing is necessary to extent litigants believe it to be).


\textsuperscript{48} See \textsuperscript{Dauchot, supra} note 38, at 601-1(E) (noting 7.8\% of judges surveyed conducted conducted claim construction proceedings prior to discovery).

\textsuperscript{49} See \textsuperscript{Lee & Krug, supra} note 9, at 85-86 (claiming optimal time for claim construction is upon summary judgment motion); Shaw, \textit{supra} note 16, at 10-11 (contending post discovery, pre-trial claim construction corrects the problems prevalent if done pre-discovery).

\textsuperscript{50} See \textsuperscript{Lee & Krug, supra} note 9, at 80 (explaining pre-discovery construction negatively affects litigants because they do not have a clear picture of the litigation); Shaw, \textit{supra} note 16, at 6 (recalling judges may be uncomfortable interpreting claims outside the case context).

\textsuperscript{51} See \textsuperscript{Lee & Krug, supra} note 9, at 80 (pointing out one claim term may be dispositive of an entire case); Shaw, \textit{supra} note 16, at 7 (recognizing litigants may change strategies or new terms may become important as the case progresses).
under the doctrine of equivalents, full discovery may be needed to resolve the case.52

B. Summary Judgment

A majority of courts conduct *Markman* hearings after discovery but before trial.53 Pre-trial claim construction allows the parties to focus their trial strategies on the claim interpretations handed down by the court.54 More specifically, courts are conducting *Markman* hearings upon motion for summary judgment.55 The notion of construing claims in the context of summary judgment originated in the Federal Circuit's opinion in *Markman*, when the majority stated that an understanding of the claim language "may also be done in the context of dispositive motions such as those seeking judgment as a matter of law."56 One benefit of claim construction at summary judgment is that some of the disputed claims may not be relevant to the motion, while others will be dispositive.57 Similarly, upon summary judgment the litigants will have focused their efforts on the claims they feel are

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53 See Dauchot, *supra* note 38, at 601-1(E) (ascertaining that 57.8% of judges surveyed interpreted claims after discovery but before trial); Lee & Krug, *supra* note 9, at 73 (stating that most courts conduct a Markman hearing prior to trial). See generally Lane & Pepe, *supra* note 10, at 64 (stating that many courts conduct the hearing after discovery but before trial).

54 See Loral Fairchild Corp. v. Victor Co. of Japan, 911 F. Supp. 76, 79 (E.D.N.Y. 1996) (stating that a conscientious court will conduct the claim construction hearing before trial); Gasparo, *supra* note 27, at 743 (noting that a *Markman* hearing will give the litigants guidance and allow them to focus their attention on one claim interpretation for trial); see also Binney & Myricks, *supra* note 24, at 184-85 (stating that pre-trial claim construction allows the parties to clearly articulate their positions).


56 *Markman* v. Westview Instruments, Inc., 52 F.3d 967, 981 (Fed. Cir. 1995).

57 See Lee & Krug, *supra* note 9, at 83 (commenting that non-essential claims should not be construed if unnecessary to resolve the dispute); Binney & Myricks, *supra* note 24, at 161-62 (stating that early claim interpretation can lead to earlier dispositions of cases). *But see* George Badenoch, *Proceeding in the Gray Area After Markman*, INTELL. PROP. STRATEGIST, at 3-4 (June 1996) *available* at http://www.kenyon.com/pdf/23190.pdf (last visited Feb. 2, 2004) (arguing that presentation of evidence at a *Markman* hearing may be limited by the court because it wants to limit duplication of evidence that must be presented again at trial).
central to the case.\(^{58}\) Hence, if the case proceeds to trial, the litigants can concentrate their expert testimony on the relevant claim language.\(^{59}\) Additionally, the court can subsume claim construction into normal motions practice by interpreting the claims in conjunction with summary judgment motions, which presents an efficient, if not certain, solution.\(^{60}\)

Another advantage of claim construction at summary judgment is that the judge will likely have the benefit of some discovery to provide a technical background sufficient enough to interpret the claims consistent with one skilled in the art.\(^{61}\) While settlement has been stressed as a benefit to early claim construction, that connection has not materialized.\(^{62}\) Yet another advantage arises due to the *de novo* standard\(^{63}\) with which claim constructions are reviewed on appeal.\(^{64}\) One commentary has noted "there is little

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58 See Lee & Krug, *supra* note 9, at 83 n.154 (noting that litigants will have had the time and information necessary for focused claim construction upon summary judgment). *See generally* Binney & Myricks, *supra* note 24, at 184-85 (stating that the parties will be able to focus their arguments accordingly); Lane & Pepe, *supra* note 10, at 65-7 (discussing claim construction and summary judgment).

59 See Lee & Krug, *supra* note 9, at 85 (speculating that focused expert testimony will save time and money for parties and the court); Lane & Pepe, *supra* note 10, at 66-70 (discussing expert testimony generally); Shaw, *supra* note 16, at 10-15 (noting that pretrial claim construction allows focused expert testimony).

60 See Utah Med. Prods. Inc. v. Clinical Innovations Assocs., Inc., 79 F. Supp. 2d 1290, 1299 (D. Utah 1999) (suggesting that combining claim construction and summary judgment is logical as a practical matter); Lee & Krug, *supra* note 9, at 83-86 (discussing the benefits of combining summary judgment and *Markman* hearing); *see also* Shaw, *supra* note 16, at 11 (contending that a single hearing can be used to address claim construction and summary judgment).

61 See Interactive Gift Express, Inc. v. CompuServe Inc., 231 F.3d 859, 866 (Fed. Cir. 2000) ("Throughout the [claim] construction process, it is important to bear in mind that the viewing glass through which the claims are construed is that of a person skilled in the art."); Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1309 (Fed. Cir. 1999) ("[c]onsultation of extrinsic evidence is particularly appropriate to ensure that his or her understanding of the technical aspects of the patent is not entirely at variance with the understanding of one skilled in the art."); *see also* Shaw, *supra* note 16, at 11-14 (discussing the importance if a judge understanding the technical aspects of the case).

62 See Shaw, *supra* note 16, at 13 (suggesting that there is no difference in settlement figures between pre-discovery and summary judgment claim constructions); *see also* Lee & Krug, *supra* note 8, at 69-71 (stating that *Markman* has not increased settlements in claim construction cases). *But see* Cybor Corp., 138 F.3d at 1475 (Rader, J., dissenting) (stating that early *Markman* hearings would promote settlement).

63 See Markman v. Westview Instruments, Inc., 517 U.S. 370, 372 (1996) (holding that claim construction is a matter of law reviewed *de novo* on appeal); Lee & Krug, *supra* note 9, at 67 (stating that review of claim construction is *de novo*). *But see* Lane & Pepe, *supra* note 10, at 71 (suggesting that claim construction issues have "factual underpinnings," which would suggest an appellate standard other than *de novo*).

64 See Lee & Krug, *supra* note 9, at 85 (arguing that *de novo* review suggests that the trial court should not construe claims any later than summary judgment); *see also* Gasparo, *supra* note 27, at 743-46 (reasoning that the appellate process will be more efficient if parties can appeal summary judgment and claim construction simultaneously).
reason for a district court to hear the entirety of evidence in the case before determining the meaning of the claim terms.\textsuperscript{65}

The one prevalent disadvantage associated with post-discovery claim construction involves the \textit{de novo} review by the Federal Circuit.\textsuperscript{66} As some cases illustrate, the district court may grant summary judgment based on erroneous claim interpretations;\textsuperscript{67} thus, the parties will incur the expense of refocusing their efforts on the new claim constructions handed down by the Federal Circuit.

\textbf{C. During/After Trial, Before Jury Instruction}

The Eastern District of Pennsylvania employed a post-trial claim construction in deciding \textit{Markman}.\textsuperscript{68} A key advantage associated with claim construction at or after trial is that the vacuum-factor related to pre-discovery construction is essentially gone.\textsuperscript{69} In addition, the judge will also have a better grasp on the technology, which will yield a better understanding of the file history and prior art.\textsuperscript{70} By the end of trial, a judge will have heard all of the relevant evidence, effectively eliminating the

\textit{See generally} Malek, \textit{supra} note 24, at 201 n.80-81 (noting the problems with the elimination of the \textit{de novo} review).

\textsuperscript{65} Lee & Krug, \textit{supra} note 9, at 85.

\textsuperscript{66} See Pieper, \textit{supra} note 35, at 177-78 (suggesting that the \textit{de novo} appellate standard may be troublesome). \textit{But see} Lee & Krug, \textit{supra} note 9, at 83-6 (stating that post-discovery is the optimal time for claim construction).


\textsuperscript{68} See \textit{Markman}, 52 F.3d at 973-74 ("While in appropriate circumstances, claims may be interpreted as a matter of law by the court, in this case the jury was asked to and did interpret the patent as part of reaching its finding of infringement.").

\textsuperscript{69} See Shaw, \textit{supra} note 16 (explaining that before jury instruction, at close of trial, judge will have full knowledge of all relevant information, and will know which claim term or terms are decisive.); \textit{see also} Lee & Krug, \textit{supra} note 9, at 71 (reflecting on the beneficial exposure of the court to arguments and expert testimony to aid in understanding patent terms); Gasparo, \textit{supra} note 27, at 745 (referring to court's usual election to hear expert testimony during the \textit{Markman} hearing, whereby a judge can more accurately interpret a claim).

\textsuperscript{70} See Badenoch, \textit{supra} note 57, at 4 (intimating that the judge will become more familiar with the technological aspects of the arguments as the trial progresses); Gasparo, \textit{supra} note 27, at 745 (providing that after hearing all evidence, a judge can better understand the patent claim). \textit{See generally} Lee & Krug, \textit{supra} note 9, at 71 (commenting that testimony provides the court with meaning of certain terms in patent claims).
need for a *Markman* hearing as a separate proceeding.\(^{71}\) If counselors argue every plausible claim interpretation, it is doubtful that the court will want to hear scientifically tenuous arguments from the litigants after experts have testified.\(^{72}\)

There are a significant number of disadvantages associated with post-trial claim construction. One obvious weakness is the delay the jury must endure while waiting for the court to decide which claims are on-point and to construe those claims.\(^{73}\) A second problem exists in that the jury may have been listening to testimony and viewing evidence with a particular claim construction in mind, and the court may deliver a different construction after trial. Consequently, the court may have to reopen the proceeding to enable the jury to view evidence under the judge's construction.\(^{74}\) Finally, contrary to one of the advantages proffered above, a late claim construction will force parties to argue under a number of potential claim interpretations. Multiple arguments under multiple interpretations have the potential to evolve into a confusing, inefficient, and overly lengthy litigation.\(^{75}\)

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71 See Gasparo, *supra* note 27, at 745 (noting that the judge will be faced with the entire record at the end of trial and will not need to receive additional evidence as to claim construction); see also Badenoch, *supra* note 57, at 3 (referring to *Markman* hearing as "adding a mini-trial" to an already costly litigation process). See generally Lee & Krug, *supra* note 9, at 71 (referring to negative effect of separate evidentiary trial, whereby court effectively holds two separate trials, increasing both litigation costs and scheduling burdens on courts).

72 See Shaw, *supra* note 16, at 16 (suggesting that most judges will want experts, not lawyers, to offer interpretations of claim language); see also Badenoch, *supra* note 57, at 3 (arguing that separate hearings for claim construction will encourage defendants "to present a multitude of claim construction arguments, no matter how strained"); Lee & Krug, *supra* note 9, at 76 (citing the possibility that post-trial claim construction may cause litigants to either "roll the dice" on their desired claim interpretation or to set forth alternate claim theories).

73 See Lee & Krug, *supra* note 9, at 75-76 (implying that the evidence "loses its freshness in [the juror's] minds."); see also Gasparo, *supra* note 27, at 746 (remarking that the record for complex patent infringement cases can be voluminous).

74 See Pieper, *supra* note 35, at 185 (mentioning that contrasting constructions between judge and jury will only lead to confusion and delay); see also Lee & Krug, *supra* note 9, at 76 (indicating that the re-showing of evidence to the jury draws out an already exhausting proceeding); Shaw, *supra* note 16, at 17-18 (commenting on the possibility of creating bias in jurors as result of judge's claim construction).

75 See Shaw, *supra* note 16, at 18 (positing that a judge may not give claim construction its due attention if he or she feels that the jurors are waiting with the evidence fresh in their minds); see also Lee & Krug, *supra* note 9, at 76 (suggesting that confusion and complication can be limited by an earlier construction to focus the trial upon). See generally Badenoch, *supra* note 57, at 3 (referring to the presentation of additional evidence as creating confusion).
III. FEDERAL CIRCUIT’S OPINION AS TO TIMING

Though the Federal Circuit has not clearly offered any guidance with respect to the timing of Markman hearings, the court may be impliedly acquiescing to certain times by upholding claim constructions and taking note of the procedure employed by the district court. However, the Federal Circuit has made no attempt since Markman to restrict the broad discretion of the trial courts in conducting claim construction. The focus of this article will center on two questions: (1) when did the district court conduct its Markman hearing, and (2) what did the Federal Circuit say about that court’s claim construction.

A. Markman Hearing at Motion for Summary Judgment

In one of its first decisions in 2003, the Federal Circuit reviewed Amgen, Inc. v. Hoechst Marion Roussel, Inc., which was on appeal from the District Court for the District of Massachusetts. At the district court level, Chief Justice Young issued an exhaustive 244-page opinion expounding upon issues of claim construction, validity, enforceability, and infringement. Chief Justice Young’s opinion was thorough and informative, especially with regard to his methodology and position on claim construction.

In Amgen, the district court was faced with a complex biotechnology matter dealing with recombinant DNA techniques.

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76 See Lee & Krug, supra note 9, at 59 (commenting that many aspects of Markman hearings remain unsettled, such as timing); see also Badenoch, supra note 57, at 4 (concluding that since Markman various procedural concerns still require clarification). See generally Pieper, supra note 35, at 184-87 (discussing the court’s various timing options for claim interpretation).

77 314 F.3d 1313 (Fed. Cir. 2003).


79 See Amgen, 126 F. Supp. 2d at 290-92 (rendering the court’s holding as to each claim of validity, enforceability, and infringement). See generally Randy Morin, Note: Legal Update: Recent Federal Circuit Decision Concerning Erythropoetin (EPO): Amgen v. TKT, 9 B.U. J. SCI. & TECH. L. 490, 491-98 (highlighting the holding of Chief Justice Young).

80 See Amgen, 126 F. Supp. 2d at 80-84 (elaborating on the method and timing of claim construction); see also Morin, supra note 79, at 492 (commenting on Judge Young’s discretion used in conducting Markman hearing in order to assure a meticulous opinion).
used to manufacture a synthetic form of erythropoietin, a protein that initiates red-blood cell production in bone marrow. At the onset of the litigation process, the parties were instructed to formulate a list of mutually agreed upon experts that the court could confer with for technical assistance. The court chose an expert from the list and referred to him regularly, while making every consultation of record. Near the end of discovery, Amgen, the patent holder, moved for summary judgment. Chief Justice Young remarked, "[a] motion for summary judgment is, of course, an excellent vehicle to frame the essential questions of patent claim construction." Because Amgen's motion for summary judgment was granted on one claim but denied on all others, the case proceeded to trial.

Chief Justice Young seized the opportunity to accentuate the particular claim construction methodology used by the court in its Markman hearing. In view of the disparity in timing of Markman hearings in the district courts, Chief Justice Young stated, "I have consistently taken the procedural approach of conducting the Markman hearing at the summary judgment stage of litigation or at the point when discovery has closed and trial is approaching." However, emphasis was placed on conducting the Markman hearing prior to and separate from the summary judgment proceeding. This distinction was

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81 See Amgen, 126 F. Supp. 2d at 77 (noting that synthetic erythropoietin developed by Amgen was the biggest-selling biotechnology drug ever developed, with sales exceeding $1.2 billion in 1997).
83 See Amgen, 126 F. Supp. 2d at 78 n.3 (mentioning that the record would remain sealed but would be available upon appellate review).
84 See id. at 78 (indicating that Amgen moved for summary judgment on the issue of infringement).
85 Id. at 78 n.4.
86 See id. at 78 (granting summary judgment on only one claim out of five patents at issue, thus requiring other issues to go to trial).
87 See id. at 80 (noting that courts have taken different procedural approaches when conducting Markman hearings to analyze claims and that the judge has consistently held them at either summary judgment stage of litigation or at point when discovery ends and trial is near).
88 Id.
89 See id. (emphasizing importance of keeping issues in summary judgment motion separate from trial issues to avoid unnecessarily burdening jury with additional complex information that is unrelated to jury's fact finding function). But see Biogen v. Berlex Labs., Inc., 318 F.3d 1132, 1140 (Fed. Cir. 2003) (upholding the district court's claim
accentuated, because infringement, not claim interpretation, should be decided at summary judgment. Additionally, the court stated that a claim of invalidity of the patent due to statutory description requirements is an issue of fact for the jury.

As an important aside in his opinion, Chief Justice Young challenged the Federal Circuit to place some restrictions on the discretion given to district courts with respect to the timing of Markman hearings. A lack of procedural boundaries not only "deprives the litigants of the benefit of consistent treatment among districts (or even among specific judges), but also risks descending a slippery slope toward the erosion of the role of the fact finder in patent litigation." It seems that Chief Justice Young was alluding to the goal of intrajurisdictional certainty that the Supreme Court proffered in Markman. More notably, the Supreme Court's goal has not been met, or even considered.

Procedurally, the Markman hearing began with pre-selected claim terms that were critical to Amgen's motion for summary judgment. The court then heard oral argument from each party regarding each of the selected terms. Both parties supported their claim interpretations with intrinsic evidence, specifically relying on the specification and prosecution history.

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90 See Amgen, 126 F. Supp. 2d at 80 (considering claim interpretation separate from summary judgment to avoid blending issues of law with fact finding which is to be done by the jury).
91 If the Court were to select a construction that it believed was more consistent with the written description of the patent but contorted the language of the claim terms in order to do so, the jury, in effect, would be preempted from making the invalidity determination, which is within its province. See id. at 84.
92 See id. Chief Justice Young asked the Federal Circuit to issue a ruling which would have a similar procedural effect as Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576 (Fed. Cir. 1996). See Amgen, 126 F. Supp. 2d at 80. In Vitronics, the Federal Circuit seemingly settled the hotly debated issue of the use of extrinsic evidence in claim interpretation. See Vitronics, 90 F.3d at 1582-83.
93 Amgen, 126 F. Supp. 2d at 80.
94 See id. at 81.
95 See id. The Court noted that each party's position with respect to claim interpretation was typical: Amgen supporting an "ordinary meaning" approach to give itself broad protection, and Hoechst reading limitations into the claims for narrowing purposes. Id.
96 See id.; see also Motorola, Inc. v. Interdigital Tech. Corp., 121 F.3d 1461, 1470 (Fed. Cir. 1997) (holding that use of a demonstrative exhibit to facilitate presentation at Markman hearing is not improper evidence); Vitronics., 90 F.3d at 1583 (emphasizing how intrinsic evidence is sufficient to resolve ambiguities in claim terms over extrinsic evidence in patent disputes).
Demonstrative exhibits were employed, but evidence was not admitted. The court announced its claim constructions after each party’s presentations.  

Amgen’s motion for summary judgment was granted with respect to one claim out of the ten construed by the court and denied with respect to the remaining nine claims. After laboring over an infringement analysis of twelve claims in five separate patents, the court issued its ruling. Both parties appealed the ruling of the district court, but only Hoechsht asserted that the claim constructions were erroneous.

The Federal Circuit began its opinion by affirming in toto the district court’s claim construction. However, the de novo standard of review meant that the Federal Circuit had to review the same claim interpretations from Hoechsht that were already heard and rejected by the district court. The Federal Circuit conspicuously noted that Hoechsht “reviv[ed] the same argument that the district court rejected below.” Furthermore, the Federal Circuit seemed to track the reasoning of the district court closely, synthesizing the lower court’s analysis into a less voluminous record. After agreeing with the district court’s claim construction, the Federal Circuit reviewed the lower court’s infringement analysis, which it ultimately vacated.

Noticeably absent from the Federal Circuit’s opinion was a response to Chief Justice Young’s suggestion that the Federal Circuit impose some procedural guidelines on the timing of Markman hearings. The Federal Circuit made reference to the Markman hearing only once, noting that it was three days long. Two conclusions can be drawn from the Federal Circuit’s silence on the propositions offered by Chief Justice Young. First,

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97 See Amgen, 126 F. Supp. 2d at 81.
98 See id. at 96.
99 See id. at 165-66. In the appendix to the opinion, the court provided an infringement chart for each claim of each patent. See id. at 166.
100 See Amgen, 314 F.3d at 1320 (describing the claims of each party on appeal).
101 See id.
102 See id. at 1324 (“We consider the trial court’s claim construction – a matter of law – afresh on appellate review.”).
103 Id. at 1327.
104 See id. at 1326 (agreeing with the district court that the plain meaning of the terms should be used).
105 See id. at 1358 (summarizing what the district court should do upon remand).
106 See id. at 1320 (describing the temporal aspects of the district court proceedings).
the Federal Circuit may have impliedly vouched for the procedure and timing of the district court’s Markman hearing. This implication is evidenced by the Federal Circuit’s silence to what Chief Justice Young obviously felt strongly about. Secondly, the Federal Circuit immediately noted that the district court’s claim constructions were affirmed in toto. The phrase “in toto” comes from the Latin meaning “in whole.” A question is raised as to whether the Federal Circuit affirmed solely the claim constructions or the entire procedural method that lead to those constructions. Regrettably, one is left only with conjecture, because the Federal Circuit has remained tight-lipped.

B. Markman Hearing at Motion for a Preliminary Injunction

In Boehringer Ingelheim Animal Health, Inc. v. Schering-Plough Corp., the Federal Circuit reviewed an infringement action in which claim construction occurred at a motion for a preliminary injunction. The patent at issue related to a method for developing a vaccine to cure a devastating disease for the swine industry known as Porcine Reproductive Respiratory Syndrome (PRRS). The fact that the disease has multiple names and no known cure alerted the district court

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107 See id. (discussing the three-day Markman hearing and commending the district court).
108 See id. (citing the district court's correct claim construction first in its ruling).
110 320 F.3d 1339 (Fed. Cir. 2003).
111 See id. at 1342-43.
113 See Boehringer, 984 F. Supp. at 243 (referring from a letter to swine industry professionals, calling PRRS “the most challenging infectious disease facing the swine industry today”); see also Armbrrecht, supra note 112 (stating PRRS is a major health concern). See generally Maria Hand, Bringing Home the Bacon may be Restricted, PRESS (CHRISTCHURCH), Aug. 23, 2001, at 4 (describing PRRS as a horrendous disease and the most significant disease in pigs in recent years).
114 See Boehringer, 984 F. Supp. at 243 (referring to PRRS as Mystery Swine Disease and Swine Infertility and Respiratory Syndrome); see also Miniclier, supra note 112 (acknowledging Mystery Pig Disease as another name for PRRS).
that the principles of virology involved in the case would be extremely complex.\textsuperscript{115}

At the onset of litigation, Boehringer moved for a preliminary injunction to stop Schering-Plough from selling a PRRS swine vaccine that was allegedly manufactured according to Boehringer's patented method.\textsuperscript{116} To obtain a preliminary injunction, the patentee alleging infringement must establish a likelihood of success on the merits.\textsuperscript{117} The district court stated, "[i]n a preliminary injunction context, a court may, in exercising its discretion, decide to interpret the claim conclusively."\textsuperscript{118} The district court held its Markman hearing in concurrence with the preliminary injunction hearing.\textsuperscript{119}

In the beginning of the district court's opinion, Judge Ackerman mentioned the procedure employed for holding a Markman hearing in connection with a preliminary injunction hearing.\textsuperscript{120} Prior to the hearing, each party submitted briefs arguing claim constructions and the merits of a preliminary injunction.\textsuperscript{121} After trial, Judge Ackerman asked the parties for their findings of fact, conclusions of law, and assessments of their adversary's position.\textsuperscript{122} The judge then asked for one final submission from each party regarding the definition of a term,

\textsuperscript{115} See Boehringer, 984 F. Supp. at 243 (reciting basic principles of virology used by the court for a low-level understanding of the methodology in the patent); see also Armbrecht, supra note 112 ("There is still a lot we don't know about the PRRS virus. Each strain appears to have different levels of virulence or ability to cause disease.").

\textsuperscript{116} See Boehringer, 984 F. Supp. at 245 (noting that Boehringer claimed literal infringement and infringement under the doctrine of equivalents).

\textsuperscript{117} See id. (stating that success on the merits must be established for validity, enforceability, and infringement); see also Nutrition 21 v. United States, 930 F.2d 867, 869 (Fed. Cir. 1991) (noting the standard for obtaining preliminary injunction); Pretty Punch Shoppettes, Inc. v. Hauk, 844 F.2d 782, 783 (Fed. Cir. 1988) (describing four factors for consideration in issuing a preliminary injunction, including the probability that the movant will succeed on the merits).

\textsuperscript{118} Boehringer, 984 F. Supp. at 245.

\textsuperscript{119} See id. (considering claim construction "in conjunction" with the motion for a preliminary injunction). But see Amgen, 126 F. Supp. 2d at 80 (proposing that courts should hold Markman hearings prior to and separate from motions for summary judgment or preliminary injunctions).

\textsuperscript{120} See Boehringer, 984 F. Supp. at 243 n.1 (noting that the Markman hearing was eight days long).

\textsuperscript{121} See id. (suggesting that the Markman hearing may have been decided solely on a paper record).

\textsuperscript{122} See id. (remarking that the pre-hearing and post-trial briefs would be cited in the opinion).
and whether the term could be used for the obviousness analysis.123

The district court's opinion contained a brief summary of the court's views on how Markman hearings should proceed.124 The court seemed more concerned with the use of intrinsic and extrinsic evidence than with the time at which a Markman hearing should be held. The claim language was analyzed beginning with the "ordinary meaning," followed by the specification, and ending with the prosecution history.125 The court reasoned that if the intrinsic evidence unambiguously provides a term's meaning, then contradictory extrinsic evidence should not be heard.126 However, extrinsic evidence in the form of technical treatises and dictionaries could be relied upon to provide the judge with a better understanding of the technology.127

The district court's opinion cited the parties' briefs extensively in the portion regarding claim construction.128 While it is evident that there was expert testimony and evidence was admitted into the record, it seems that the court construed the claims primarily from the briefs. There is no indication in the opinion that the district court heard oral argument at the Markman hearing. Given judges increasing familiarity with the procedure of claim

123 See id. (signifying that the court needed further information regarding a claim term for its infringement analysis).
124 See id. at 246 (reciting claim construction procedure in a relatively brief segment of the opinion).
125 See id. (reviewing the use of intrinsic and extrinsic evidence in a Markman hearing).
126 See id. ("There exists one small exception to the rule disfavoring extrinsic evidence: a court may consult technical treatises and dictionaries"); see also Peter H. Kang & Kristin A. Snyder, A Practitioner's Approach to Strategic Enforcement and Analysis of Business Method Patents in the Post-State Street Era, 40 IDEA 267, 295 (2000) (stressing that unambiguous intrinsic evidence cannot be contradicted by any extrinsic evidence); Jennifer Urban, Bill & Howell v. Altek, 14 BERKELEY TECH. L.J. 103, 116 (1999) (noting that reliance on expert testimony as extrinsic evidence to contradict unambiguous intrinsic evidence was in error).
128 See Boehringer, 984 F. Supp. at 247-53 (observing the numerous references to briefs, findings of fact, and conclusions of law of the parties).
construction, some commentators have been prompted to endorse
the exclusive use of a paper record in Markman hearings.129

On appeal, the Federal Circuit reviewed the three construed
claim terms de novo.130 Affirming the district court's construction
two of the claim terms, the Federal Circuit noted that each of
the court's constructions were at a middle-ground between the
parties' interpretations.131 The Federal Circuit determined that
the third claim term was erroneously interpreted by the district
court, because a limiting term was wrongly interposed into the
claim.132 However, the Federal Circuit noted that the district
court's incorrect construction of the third term was harmless
because the jury found that the claim was infringed under the
doctrine of equivalents.133 An interesting statement by the
Federal Circuit appeared at the end of its review of the district
court's claim construction, when it referred to the district court's
procedure as “thorough and skillful management of the case.”134
However, without further explanation, a question similar to that
in Amgen remains: whether the Federal Circuit is noting the
procedure and timing of the Markman hearing to endorse them.

C. Markman Hearing at the Onset of Litigation

The Central Division of the District Court of Utah held a
Markman hearing at the initiation of litigation in Altiris, Inc. v.

(contending that familiarity with claim construction will lead to Markman hearings based
more on paper records and less on oral argument), at http://www.bannerwitcoff.com
Technologies: Part I: Administrative Law Issues: On Improving The Legal Process Of
Claim Interpretation: Administrative Alternatives, 2 WASH. U. J.L. & POL'Y 109, 123
(2000) (noting that Federal Circuit judges have become more familiar with “highly
technical” claim drafting); Andrew T. Zidel, Patent Claim Construction in the Trial
Courts: A Study Showing the Need for Clear Guidance From The Federal Circuit, 33
SETON HALL L. REV. 711, 746 n.283 (2003) (suggesting that district courts are currently
“quite familiar with the analytical rules of claim construction”).

130 See Boehringer, 320 F.3d at 1344 (mentioning the de novo standard of review for
claim construction).

131 See id. at 1347 (“We conclude that the district court again correctly chose the
middle ground between the parties' contentions”).

132 See id. at 1349 (observing that the district court introduced a limiting word into
the claim to make its interpretation consistent with the embodiments in the patent).

133 See id. at 1350 (noting that even though the claim was narrowed by the district
court's construction the jury still found infringement).

134 Id.
Symantec Corp. The subject matter of Altiris's patent was a fairly sophisticated area of computer network administration. The court noted that two independent claims were central to the action, even though the patent incorporated a total of twelve claims. Written submissions were required regarding each party's claim construction and oral arguments were heard, as well.

The court began its discussion by setting forth the availability of intrinsic and extrinsic evidence in a Markman hearing. Throughout the Markman hearing, the court seemed intent on relying solely on the intrinsic evidence to construe the claim terms. However, during the Markman hearing, Altiris requested that the court use computer industry dictionaries to assist it in defining the claim terms, because the terms were commonly known in the industry. The court rejected Altiris's plea, and decided that though the terms "may be commonly understood in the computer industry," they would be subject to construction by the court. For one claim phrase in particular, the court found that it was uncommon to the industry and should...

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136 See id. at 1278-79 (reviewing procedure that computer uses to boot).
137 See id. at 1279 (reciting independent claims and dependent claims of each).
138 See id. at 1278 (mentioning that each written submission was offered only in regards to claim construction, not infringement).
140 See Altiris, 160 F. Supp. 2d at 1281 (holding order of evidence to be used is as follows: ordinary meaning of term, specification, and prosecution history). See generally Markman, 52 F.3d at 980 (defining extrinsic evidence as all evidence external to patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises, all of which are useful in explaining scientific principles, meanings of technical terms, and terms of art, as well as demonstrating state of prior art at time of invention).
141 See Altiris, 160 F. Supp. 2d at 1286-87 (supporting claim constructions with specification).
142 See id. at 1285 (explaining that Altiris had combined commonly used words into uncommon phrases). See generally Markman, 52 F.3d at 980 (defining dictionaries as part of extrinsic evidence).
143 See Altiris, 160 F. Supp. 2d at 1285 (rationalizing use of each word to form phrases); see also Borgwarner, Inc. v. New Venture Gear, Inc., 237 F. Supp. 2d 919, 935 (N.D. Ill. 2002) (reviewing commonly known theories in one specific art).
144 Altiris, 160 F. Supp. 2d at 1285 (holding that claim construction is court's responsibility).
145 See id. at 1285 (reasoning terms were combined in uncommon ways).
be interpreted as by one skilled in the art.\textsuperscript{146} However, the court did not explain how it reached its construction, and it never disclosed where the interpretation of one skilled in the art came from.\textsuperscript{147} It seems that the court felt it had the knowledge of one skilled in the art by construing the claim “based upon the information and embodiment contained in the claim specification.”\textsuperscript{148} There appears to be a contradiction in the court’s procedure, because it relied exclusively on intrinsic evidence for all the other claim constructions.

After the claims were interpreted by the district court, the parties stipulated to Symantec’s non-infringement.\textsuperscript{149} Summary judgment of non-infringement was granted, and Altiris appealed to the Federal Circuit alleging that the district court erroneously construed the claims.\textsuperscript{150} The Federal Circuit noted the \textit{de novo} standard of review, and made a point of saying that dictionaries could be consulted to discern a term’s ordinary meaning.\textsuperscript{151} Also, the opinion noted that there is a “heavy presumption” that claims should be viewed as by one with ordinary skill in the art.\textsuperscript{152} Furthermore, the court may use extrinsic evidence to aid in understanding how one with ordinary skill in the art would interpret the claim language.\textsuperscript{153}

The Federal Circuit held that the district court erred in each of its claim constructions.\textsuperscript{154} The Federal Circuit noted that the district court applied the right line of precedent but also commented that, “as with much of our [Federal Circuit’s] case law on claim construction, careless application of so \textit{ambivalent} a standard can be a recipe for error.”\textsuperscript{155} This statement is very

\textsuperscript{146} See id. at 1288 (concluding that uncommon phrases should be construed by one skilled in art in view of information in specification).
\textsuperscript{147} See id. (holding claim should be interpreted by one skilled in art, and then, court interpreted claim in subsequent sentence).
\textsuperscript{148} Id. (showing court’s claim construction).
\textsuperscript{149} See Altiris, Inc. v. Symantec Corp., 318 F.3d 1363 (Fed. Cir. 2003) (reviewing exactly what parties stipulated to after \textit{Markman} hearing).
\textsuperscript{150} See id. at 1368 (explaining specific challenges Altiris made on appeal).
\textsuperscript{151} See id. at 1369 (citing Tex. Digital Sys., Inc. v. Telegenix, Inc., 254 F.3d 1193 (Fed. Cir. 2002)) (explaining ordinary meaning).
\textsuperscript{152} See id. (stating that evaluation of claim language begins with the ordinary meaning given of the terms).
\textsuperscript{153} See id. (recalling that courts may use extrinsic evidence for background knowledge as long as it does not contradict language in the claims or specification).
\textsuperscript{154} See id. at 1378 (vacating the grant of summary judgment and remanding for reconsideration under the newly construed claims).
\textsuperscript{155} Id. at 1369 (emphasis supplied).
peculiar because the Federal Circuit acknowledged that district courts are conflicted about how to apply the little precedent they have in the area of claim construction.\textsuperscript{156} The court then went on to say, "[t]he appropriate use of the rest of the specification in claim construction has not always been clear."\textsuperscript{157} Again, the Federal Circuit commented on the lack of confidence in application of the law on the district court level.\textsuperscript{158}

After deciding that the district court unnecessarily limited the scope of all the disputed claims except one,\textsuperscript{159} the Federal Circuit went on to offer its own construction.\textsuperscript{160} Altiris, again, offered to define the terms of the uncommon phrase with a technical dictionary.\textsuperscript{161} The Federal Circuit allowed the dictionary definitions,\textsuperscript{162} and noted, "[those] particular arguments [were] unchallenged [on] appeal."\textsuperscript{163} The district court seemed to err by reading the claims on the preferred embodiment in the patent. The Federal Circuit noted several times, "the description of the preferred embodiment is not a sufficient reason to limit the claims."\textsuperscript{164}

The opinion of the Federal Circuit in this case is significant for several reasons. First, the court took notice of the difficulty the district court encountered in trying to apply precedent in conducting its Markman hearing.\textsuperscript{165} Also, the lack of clarity and guidance from the Federal Circuit was acknowledged.\textsuperscript{166} Finally,

\textsuperscript{156} See, e.g., Allen Eng'g Corp. v. Bartell Indus., Inc., 299 F.3d 1336, 1345-46 (Fed. Cir. 2002) (concluding that the district court failed to construe the claim limitations at issue); Key Mfg. Group, Inc. v. Microdot, Inc., 925 F.2d 1444, 1448 (Fed. Cir. 2001) (establishing that the district court's improper claim construction distorted the entire infringement analysis).

\textsuperscript{157} Altiris, 318 F.3d at 1370.

\textsuperscript{158} See id. (noting that many claim construction principles developed by the courts "apply with equal force").

\textsuperscript{159} See id. at 1374 (affirming the construction of one claim term, which was not relevant to summary judgment).

\textsuperscript{160} See id. at 1373 (stating that the district court erroneously read the claim preamble and order of the claimed steps as narrowing the scope of the claims).

\textsuperscript{161} See id. (rehearing the claim constructions from the district court provided by Altiris).

\textsuperscript{162} See id. (agreeing with defining the claim terms with dictionary definitions).

\textsuperscript{163} Id. Symantec did not challenge the use of a dictionary to define the claim terms, although the district court would not allow it. Id.

\textsuperscript{164} Id. at 1377.

\textsuperscript{165} See id. at 1370 (referring to the lack of clarity of applying the specification in claim construction).

\textsuperscript{166} See id. (explaining that principles which are all afforded the same weight cannot be applied without some difficulty).
the Federal Circuit vacated all of the constructions issued by the district court and had wade back through the record of the Markman hearing to determine the correct constructions.\textsuperscript{167} It seems that the Federal Circuit realized that there is a problem with consistency in the Markman hearing procedure on the district court level. However, rather than addressing the issues by insisting on, or even suggesting, a procedure for claim construction, the court re-construed the claims and remanded for consideration based on those constructions.\textsuperscript{168} It seems as if Altiris, Inc. v. Symantec Corp. is a perfect example of what the Supreme Court did not want when it issued its ruling in Markman.

D. No Markman Hearing

The Federal Circuit considered an infringement action based on a patent for a device used to smooth the surface of freshly poured concrete in Allen Engineering Corp. v. Bartell Industries, Inc.\textsuperscript{169} The District Court for the Eastern District of Arkansas considered, in a bench trial, many issues in a noticeably succinct opinion.\textsuperscript{170} As for claim construction, the district court did not hold a Markman hearing. The court simply concluded that Bartell infringed directly on one claim and by the doctrine of equivalents on a second claim.\textsuperscript{171} The Court does not explain what findings lead to this decision, only that the conclusion was "based upon this Court's findings of fact."\textsuperscript{172}

On appeal, the Federal Circuit held that the district court incorrectly construed the claims and failed to make adequate factual findings with respect to infringement.\textsuperscript{173} The Federal Circuit criticized the district court's method of claim

\textsuperscript{167} See id. at 1377 (holding that the district court erred in each of its attempts at claim construction).

\textsuperscript{168} See id. (determining that the district court's grant of summary judgment should be vacated and remanding the case for further proceedings based on the correct claim constructions set forth by the Federal Circuit).

\textsuperscript{169} 299 F.3d 1336 (Fed. Cir. 2002).


\textsuperscript{171} See id. at 873 (basing decision on findings of fact set forth in the opinion).

\textsuperscript{172} Id.

\textsuperscript{173} See Allen Eng'g Corp., 299 F.3d at 1342 (finding district court missed the mark and "did not construe the claims in suit").
construction, noting that the district court failed “in its only attempt at claim construction”\textsuperscript{174} and gave “little consideration to the claim limitations.”\textsuperscript{175} It seems that the district court was mistaken in its application of the proper claim construction procedure, although that procedure is unknown. The Federal Circuit stated, “[t]he district court’s failure to construe the claim limitations at issue, and its inadequate factual findings on infringement, compel this court to remand for further proceedings consistent with this opinion.”\textsuperscript{176} The opinion of the Federal Circuit then listed the topics that would be at issue on remand and indicated the proper evaluation methods the district court should employ.\textsuperscript{177}

Towards the end of the Federal Circuit’s opinion, the court asked the attorneys to remember that, along with being zealous advocates, they are officers of the court.\textsuperscript{178} In this capacity, they have an obligation to “assist the court in the administration of justice, particularly in difficult cases involving complex issues of law and technology.”\textsuperscript{179} It appeared that the Federal Circuit claimed that the counselors were presenting ambiguous views of the technology to the court in efforts to undermine its claim construction.\textsuperscript{180} Oddly, the Federal Circuit did not suggest that the district court hold a Markman hearing to adequately acquaint itself with the relevant technology in order to accurately interpret the claims.

In \textit{Leoutsakos v. Coll’s Hospital Pharmacy, Inc.},\textsuperscript{181} a case heard three months after \textit{Allen Engineering Corp.}, the Federal Circuit was again confronted with an appeal from a district court that did not hold a Markman hearing. Leoutsakos initiated the infringement action in the District of New Hampshire as the owner of a patent for an apparatus designed to help persons with

\textsuperscript{174} Id. at 1345.
\textsuperscript{175} Id.
\textsuperscript{176} Id. at 1346.
\textsuperscript{177} See id. at 1346-56 (explaining multiple issues that would be encountered upon remand).
\textsuperscript{178} See id. at 1356 (describing counselor’s obligation to client and court).
\textsuperscript{179} Id. 1356.
\textsuperscript{180} See id. at 1356-57. The Federal Circuit stated that counsel had misinformed the district court regarding the technology and applicable precedent. \textit{Id.}
\textsuperscript{181} 51 Fed. Appx. 310 (Fed. Cir. 2002).
limited mobility transport themselves into and out of bed.\textsuperscript{182} After describing the evidence to be used when interpreting claim language, the district court stated,

Claim construction often entails a Markman hearing, the purpose of which is to provide the court with guidance on the interpretation of complex technical information. But where, as here, neither party has requested such a hearing, and the subject matter of the patent is not highly technical, the patent claims may be construed without benefit of a Markman hearing.\textsuperscript{183}

The district court performed the claim construction with relative ease because the patented device was akin to a support railing on a bed.\textsuperscript{184} Summary judgment of non-infringement was granted to the alleged infringer.\textsuperscript{185}

Leoutsakos appealed, claiming that the district court erroneously interpreted the claim language,\textsuperscript{186} or in the alternative, that the failure to hold a Markman hearing was reversible error.\textsuperscript{187} The Federal Circuit affirmed the claim construction by the district court.\textsuperscript{188} With regard to Leoutsakos's argument about the lack of a Markman hearing, the Federal Circuit reinforced its grant of discretion to the trial court by stating, “this court has held that a district court may approach claim construction in any way it deems best.”\textsuperscript{189} This statement by the Federal Circuit suggests that the discretion granted to the district courts regarding the timing of Markman hearings will not be restricted—even to the point that a court need not holding a Markman hearing if it feels that the claims can be interpreted without one.

\textsuperscript{183} \textit{Id. at *15.}
\textsuperscript{184} \textit{See id. at *17 (instructing that claim terms should be given their ordinary meaning).}
\textsuperscript{185} \textit{See id. at *31 (noting that the alleged infringer's claim of invalidity was moot because summary judgment of non-infringement was granted).}
\textsuperscript{186} \textit{See Leoutsakos, 51 Fed. Appx. at 311 (explaining that Leoutsakos was arguing erroneous interpretation of only one claim limitation).}
\textsuperscript{187} \textit{See id. (pointing out that Leoutsakos's claim for a Markman hearing was a subordinate argument).}
\textsuperscript{188} \textit{See id. at 312 (stating that the district court was correct in giving the claim term its ordinary meaning).}
\textsuperscript{189} \textit{Id. (demonstrating considerable deference to the discretion of the trial court).}
E. Markman Hearings in Accordance With Promulgated Rules

The District Court for the Northern District of California has enacted local rules for use in patent infringement cases. The patent local rules apply to issues of infringement, validity, and claim construction, with a claim construction hearing as the end result. The Northern District employed its patent local rules in *Genentech, Inc. v. Amgen, Inc.* Genentech brought suit alleging that Amgen had infringed three of its patents relating to the use of cloning vehicles for the introduction and expression of genetic information, which does not naturally occur in the host. The parties progressed through the requirements posed by the patent local rules, and subsequently, the Northern District issued its claim construction order. However, the district court procedure contained an anomaly in that one judge, Judge Smith, presided over the claim construction hearing, while another judge, Judge Alsup, ruled on the motion for summary judgment. The Federal Circuit opinion does not note why different judges decided these issues, and the patent local rules of the Northern District do not speak to this practice.

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190 See *PATENT L.R. 1-2* (2001) (United States District Court for Northern District of California) (explaining that the patent local rules apply only to infringement actions based on utility patents). See generally Brenda Sandburg, *Court May Tweak Patent Rules With Help of Survey*, RECORDER, June 9, 1999, at 7 (discussing a survey conducted to determine how effective the rules have been); *District Court Borrows Another Court's Discovery Rules for Patent Infringement Suit*, FED. DISCOVERY NEWS, July 16, 2001 (indicating the U.S. District Court for Oregon applied the patent infringement rules of the U.S. District Court for the Northern District of California).

191 See *PATENT L.R. 3-1* (2001) (United States District Court for Northern District of California) (setting forth the contents of the "Disclosure of Asserted Claims and Preliminary Infringement Contentions"). See generally Justin Beck, *A Poorly Oiled Machine*, RECORDER, April 2, 2003 (asserting that a trial date is usually not set until after a claim construction order is entered).

192 See *PATENT L.R. 4-6* (2001) (United States District Court for Northern District of California) (stating that the hearing will be conducted two weeks after the reply briefs have been filed).

193 289 F.3d 761 (Fed. Cir. 2002).

194 See *id.* (reviewing the background of gene expression).

195 See *id.* (citing the district court's claim construction order and the relevant interpretations).

196 See *id.* (revealing the multi-judge approach to deciding various different stages of the adjudicative process).

197 See *id.* (lacking an explanation within the opinion as to why this particular multi-judge approach was used).
In the course of his consideration of summary judgment, Judge Alsup read an additional claim limitation on to Judge Smith's interpretation. The Federal Circuit noted, "Judge Alsup's later interpretation of Judge Smith's claim construction order...is incorrect." The court indicated that the claim construction order given by Judge Smith would have been affirmed on appeal, stating "[t]his court therefore adopts Judge Smith's original construction." The grant of summary judgment by Judge Alsup was vacated and the case was remanded for an infringement determination in accordance with the claim constructions of the Federal Circuit, which were essentially Judge Smith's constructions.

The appeal to the Federal Circuit also challenged one of the Northern District's local rules. The Northern District required each party to submit a claim chart in which each theory of infringement claimed would be set forth. Here, the district court prohibited Genentech from proceeding under a certain theory of infringement because the theory was not listed in its claim chart. The Federal Circuit upheld the ruling of the district court and reasoned that "unlike the liberal policy for amending pleadings, the philosophy behind amending claim charts under Rule 16-9 is decidedly conservative and designed to

198 See id. (explaining Judge Alsup's narrowing interpretation of Judge Smith's claim construction order).
199 Id. (indicating Judge Rader of the Third Circuit concluded that Judge Alsup's review of Judge Smith's claim construction order was erroneous).
200 Id. (stating that Judge Smith's original construction of the claim construction order was proper).
201 See id. (vacating for the reason of erroneous claim construction).
202 See id. (stating that to determine where Judge Alsup had incorrectly added limitations to properly construed claims, the Federal Circuit had to look back through Judge Alsup's constructions to Judge Smith's claim construction).
203 See id. at 31 (reviewing local patent rules); see also PATENT L.R. 16-9 (2001) (United States District Court for Northern District of California) (requiring claim charts be submitted by each party).
205 See Genentech, 289 F.3d at 29 (stating that "[p]atentee may amend its claim chart: (1) on stipulation of the parties; (2) upon a showing of excusable subsequent discovery of new information; or (3) upon a showing of clearly excusable neglect.")
prevent the 'shifting sands' approach to claim construction."\(^{206}\) Clearly, the Northern District wished to prevent parties from arguing infringement under questionable claim constructions. The Federal Circuit also noted that it "defers to the district court when interpreting and enforcing local rules so as not to frustrate local attempts to manage patent cases."\(^{207}\)

The Northern District of California has taken efforts to add an amount of certainty to the process of claim construction by promulgating rules to deal with such. However, *Genentech* points out a flaw in those rules. The certainty added to the claim construction procedure by the briefs, claim charts, conferences, and hearings is dashed when another judge must preside over the ensuing motion for summary judgment. The Federal Circuit noted that Judge Smith's claim construction was correct.\(^{208}\) Judge Alsup did not have the benefit of a claim construction proceeding to familiarize himself with the complex subject matter and parties' arguments over claim interpretation.\(^{209}\) Thus, for the claim construction order to make sense, Judge Alsup read in additional limitations and ruled on motion for summary judgment.\(^{210}\) A subsequent judge adding limitations to a claim construction order is certainly not what the Northern District had in mind when it enacted the patent local rules.

IV. DISCRETION...THE ROOT OF UNCERTAINTY

The recent opinions of the Federal Circuit regarding claim construction and the timing of *Markman* hearings have, if nothing else, reinforced one principle: district courts will have complete discretion on how, when and if, they will conduct...
Markman hearings. In one opinion, the Federal Circuit referred to its own line of precedent concerning claim construction as "ambivalent." Then, in another opinion, the Federal Circuit did not respond to a district court judge's plea for some guidance with respect to the procedure that lower courts should use in conducting Markman hearings. Finally, in separate opinions, the Federal Circuit ruled that the district court does not have to conduct a Markman hearing at all.

From the analysis performed in this Note, it is apparent that district courts should conduct Markman hearings in accordance with standard motion practice. Commentators have advocated that Markman hearings conducted on motions for summary judgment or preliminary injunction would be the most effective use of the court's and the parties' time and money. It is senseless to construe claims after trial because the parties may have argued infringement based on incorrect claim interpretations. Thus, when the case comes back from the appellate court, the parties must reengineer their strategy based on new claim constructions. Additionally, patent infringement actions that do not incorporate Markman hearings seem unproductive. Should the technology of the patent be relatively simple, a court would be better off carrying out a Markman hearing, if solely for the purpose of getting more familiar with the claim interpretation process. Uncomplicated subject matter will also provide for a quicker claim construction process because the need for extrinsic evidence will lessen. Also, parties may stipulate to infringement based on the Markman order,


212 See supra notes 135-155 and accompanying text.

213 See supra notes 77-109 and accompanying text.

214 See J.G. Peta, Inc., v. Club Protector, Inc., 65 Fed. Appx. 724, 727 (Fed. Cir. 2003) (expressing that district courts are not required to follow any particular procedure in conducting claim construction); see also Firegear, Inc. v. Morning Pride Mfg., Inc., 1999 U.S. App. LEXIS 14812, at *4 (Fed. Cir. 1999) (stating that there is no legal requirement that the Markman hearing be held prior to trial).

215 See Lane & Pepe, supra note 10, at 63 (arguing that combined hearings held in the context of formal motions for summary judgment or for preliminary injunctions allow judges to "construe the claims in the context of the ultimate factual issue of infringement disputed by the parties"); see also Lee & Krug, supra note 9, at 57 (stating that optimal time for claim construction hearing is after discovery but before trial, specifically concordant with summary judgment motions).
eliminating the need for a trial.\textsuperscript{216} Finally, in the districts that have enacted local rules for claim construction, the Federal Circuit may want to devote a portion of a future opinion to an analysis of the procedure employed by the rules.

V. CONCLUSION

The Patent Litigation Committee of the American Intellectual Property Law Association will soon be issuing its ‘Markman White Paper.’ Expectantly, the paper will set forth a recommended procedure for district courts to follow in conducting \textit{Markman} hearings. Almost certainly, the paper will include a review of any Federal Circuit opinion that has shed light on the subject. An analysis of methods employed by different courts will surely be incorporated, as will, more importantly, what the Federal Circuit said on appeal about the claim constructions.

In \textit{Markman}, the Supreme Court stated, “we see the importance of uniformity in the treatment of a given patent as an independent reason to allocate all issues of construction to the court.”\textsuperscript{217} The ruling in \textit{Markman} was intended to create regularity in the patent litigation arena, which combines complex legal issues and complicated technology subject matter. The Supreme Court’s goal has not come to fruition, and relatively little guidance has been offered. Since \textit{Markman}, the district courts have been stumbling in the dark, awaiting the Federal Circuit to show them the light.

