

A SURVEY OF POST-*PHILLIPS* CLAIM CONSTRUCTION CASES

By Michael Saunders

The rehearing *en banc* of *Phillips v. AWH Corp.* was a highly anticipated decision: oral arguments were standing room only¹ and some commentators claimed that it would “likely change the face of patent litigation.”² The court’s order granting rehearing *en banc* and presenting seven questions for additional briefing likely provoked this reaction. These questions included the relative importance of dictionaries versus specifications in claim construction, as well as how much deference appeals courts should give to district court claim constructions.³ Given the anticipation, the resulting opinion was disappointing. The court refused to address the issue of *de novo* review of district court claim constructions.⁴ Furthermore, the court acknowledged that the decision did not resolve the major difficulties of claim construction in at least “some cases.”⁵ *Phillips* is best characterized as a surgical decision: it excises certain portions of disfavored case law⁶ while reaffirming the basic structure of claim construction in which the Federal Circuit decides.⁷

This Note analyzes *Phillips* and its effects. Specifically, Part I explains the history of claim construction cases leading up to *Phillips*. Part II explains the *Phillips* decision and its reasoning. Part III examines several subsequent cases to see how panels of the Federal Circuit and district courts have applied *Phillips*. Part IV presents an empirical analysis of

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1. Oscar J. Llorin, Note, *Phillips v. AWH Corp.: What’s a Word’s Worth?*, MD. INTELL. PROP. ELECTRONIC NEWSLETTER 1 (2005), available at http://www.law.umaryland.edu/studentorg/mipsa/documents/IP_Newsletter_Spring_2005.pdf.

2. De Novo Claim Construction, Posting of Dennis Crouch to Patently-O: Patent Law Blog, http://patentlaw.typepad.com/patent/2004/07/de_novo_claim_c.html (Jul. 22, 2004).

3. *Phillips v. AWH Corp. (Phillips I)*, 376 F.3d 1382 (Fed. Cir. 2004).

4. *Phillips v. AWH Corp. (Phillips II)*, 415 F.3d 1303, 1328 (Fed. Cir. 2005) (*en banc*).

5. *Id.* at 1323-24 (“In the end, there will still remain some cases in which it will be hard to determine whether a person of skill in the art would understand the embodiments to define the outer limits of the claim term or merely to be exemplary in nature.”).

6. See *id.* at 1319-24 (disapproving of the *Texas Digital* line of cases).

7. See *id.* at 1324, 1328 (reaffirming *Markman* and *Cybor* methodology and *de novo* review standard).

post-*Phillips* claim construction appeals in the Federal Circuit and builds an overall explanation of the effect of *Phillips* on claim construction.

I. CASES CREATE A FRACTURED CLAIM CONSTRUCTION SYSTEM

All United States patents must have a specification, which contains a written description of the invention and which “conclude[s] with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.”⁸ To determine if an accused device infringes a patent, the district court must first interpret the claims of the patent, in a process called claim construction, and then compare the construed claims to the characteristics of the accused device.⁹ The following Section details the major cases that have established the modern system of judicial claim construction.

A. *Markman v. Westview Instruments, Inc.* and Its Progeny: Claim Construction is a Matter of Law to be Decided by a Judge

The importance of the issues presented to the court in *Phillips* dramatically increased after a series of claim construction cases. In *Markman v. Westview Instruments, Inc.*, the Federal Circuit sitting *en banc* reviewed a line of conflicting authority on the submission of claim construction to the jury.¹⁰ The *Markman I* court held that, even though a judge may admit extrinsic evidence in the form of expert testimony “to assist” in interpreting the construction of claims, claim construction is a matter of law to be decided by a judge, through jury instructions or dispositive motions, and to be reviewed *de novo* by the court of appeals.¹¹

The Supreme Court affirmed the Federal Circuit’s holding against a Seventh Amendment challenge.¹² Although the Court approved of claim construction by judges, it introduced confusion on the issues of whether claim construction was a pure issue of law and the propriety of *de novo* review.¹³ The Court explicitly reserved the question of “the extent to which the Seventh Amendment can be said to have crystallized a law/fact

8. 35 U.S.C. § 112 (1975).

9. 5A DONALD S. CHISUM, CHISUM ON PATENTS § 18.03 (2006) [hereinafter CHISUM].

10. *Markman v. Westview Instruments, Inc.*, (*Markman I*), 52 F.3d 967 (Fed. Cir. 1995) (*en banc*).

11. *Id.* at 980-81.

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

13. *Id.* at 384 n.10.

distinction.”¹⁴ It also did not explain if claim construction was a matter of law in some or all instances. Rather, the Court stated that claim construction was a “mongrel practice” which “falls somewhere between a pristine legal standard and a simple historical fact.”¹⁵ The Court acknowledged that claim construction involves at least some of the characteristics of fact-finding, such as assessing the credibility of witnesses,¹⁶ but it also quoted a great deal of authority that specifically stated that such interpretation was a legal issue.¹⁷ The Court concluded by touting the benefits of “treating interpretive issues as purely legal,” stating that the application of *stare decisis* to claim construction issues would “promote intrajurisdictional certainty” prior to Federal Circuit review.¹⁸

Subsequent to *Markman II*, panels of the Federal Circuit again split on the issue of claim construction, some following *Markman I*'s *de novo* standard while others followed a more deferential standard implied in *Markman II*.¹⁹ The Federal Circuit revisited this question in *Cybor Corp. v. FAS Technologies, Inc.* and reaffirmed the *de novo* standard, finding that *Markman II* supported, rather than undermined the holding that claim construction was a pure issue of law subject to *de novo* review, dismissing contradictory language as “prefatory” and acknowledging that the *Markman II* decision was, on its face, limited to the Seventh Amendment issue.²⁰

The *Markman* decisions have been described as a “revolution” in claim construction, indicating that they have fundamentally changed how

14. *Id.*

15. *Id.* at 378, 389 (quoting *Miller v. Fenton*, 474 U.S. 104, 114 (1985)).

16. *Id.* at 389.

17. *Id.* at 383 n.8, 388.

18. *Id.* at 391. The implication of this comment is that district court judges would follow each other's rulings in interpreting the same or similar patents in cases against different defendants. Such rulings would of course be subject to review of the “interjurisdictional” Court of Appeals for the Federal Circuit. See 28 U.S.C. § 1295(a)(1) (2000). It also indicates that the Supreme Court did not realize that the *Markman* decision would portend a system where the Federal Circuit would play such a prominent role in claim construction as to make “intrajurisdictional certainty” largely irrelevant in claim construction. *But see* *Kollmorgen Corp. v. Yaskawa Elec. Corp.*, 147 F. Supp. 2d 464, 468 (W.D. Va. 2001) (discussing *Markman*, the court noted that “[t]he [Supreme] Court appeared to value the role of the Federal Circuit as the final interpreter of patent claim construction.”).

19. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454-55 (Fed. Cir. 1998) (en banc).

20. *Id.* at 1455-56.

litigators and courts approach patent infringement cases.²¹ With the judge as the sole interpreter of claim language, *Markman* hearings, in which the litigants argue solely about the meaning of the claim terms, have become common.²² However, by holding claim construction to be a matter of law to be reviewed *de novo*, the Federal Circuit thrust itself into a dominant position in patent infringement suits, creating many of the problems discussed below.

B. *Vitronics* through *Texas Digital*: Claim Construction Methodology Diverges

Subsequent to *Markman I* and prior to the issuance of *Markman II*, the Federal Circuit in *Vitronics Corp. v. Conceptoronic, Inc.* clarified the process through which judges should exercise their newly strengthened role in claim construction. The court divided the evidence of claim construction into two categories: intrinsic evidence, which includes the claims, specification, and prosecution history; and extrinsic evidence, which primarily consisted of dictionaries, inventor testimony, expert testimony, and prior art that the parties introduce, such as technical treatises and articles.²³ The court then set forth the necessary analytical steps: first a court should determine the ordinary meaning of the word, which controls unless it is inconsistent with the specification.²⁴ However, because of the

21. See Craig Allen Nard, *A Theory of Claim Interpretation*, 14 HARV. J.L. & TECH. 2, 14-18 (2000) (“[T]he respective roles of the trial judge and the expert witness have been greatly marginalized, while the influence of the Federal Circuit, in turn, has been significantly augmented.”).

22. See David H. Binney & Toussaint L. Myricks, *Patent Claim Interpretation After Markman—How Have the Trial Courts Adapted?*, 38 IDEA 155, 163-66 (1997) (surveying the hearings in which courts have interpreted patent claims).

23. *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582-84 (Fed. Cir. 1996). The distinction between extrinsic and intrinsic evidence has been contentious and ambiguous. See *Nystrom v. Trex (Nystrom I)*, 37 F.3d 1105, 1120 n.3 (Fed. Cir. 2004) (Gajarsa, J., dissenting). Although a patent has always been considered intrinsic evidence and expert testimony extrinsic, other evidence such as prosecution history and dictionaries are difficult to categorize. Compare *Johnson v. IVAC Corp.*, 885 F.2d 1574, 1579 (Fed. Cir. 1989) (“[T]he prosecution history or other extrinsic evidence.”), with *Vitronics*, 90 F.3d at 1582 (“[T]he court should look first to the intrinsic evidence of record [including] . . . the prosecution history.”). Compare *Markman I*, 52 F.3d at 980 (“Extrinsic evidence consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.”), with *Tex. Digital Sys. v. Telegenix, Inc.*, 308 F.3d 1193, 1203 (Fed. Cir. 2002) (“[C]ategorizing [dictionaries] as ‘extrinsic evidence’ or even a ‘special form of extrinsic evidence’ is misplaced and does not inform the analysis.”). To clarify this ambiguity, this Note uses the *Markman I* classification.

24. *Id.* at 1582. The court stated that:

clarity and completeness required of the disclosure in specifications, the specification was to be the “single best guide” to the meaning of a disputed term.²⁵ The court might use prosecution history, both for its prior art references and any disclaimer of claim scope.²⁶ The court should only use extrinsic evidence when the term was ambiguous in light of the intrinsic evidence.²⁷

For example,²⁸ if a patent’s sole claim was for “a board for use in constructing a flooring surface having a convex top surface which sheds water and at the same time is comfortable to walk on,” a court might be called to construe the term “board.” One party might advocate the term board to mean “a piece of sawed lumber of little thickness but a large surface area, usually being rectangular and longer than wide.” Another might advocate the term to be construed as “a flat piece of wood or similarly rigid material adapted for a special use.” Since the term board seems to be ambiguous with respect to these definitions, under *Vitronics*, the court would first have to look to the specification and prosecution history to determine if the inventor meant one or the other. If the inventor claimed in the specification or prosecution history that the invention, as a whole, had benefits over other “woodworking techniques,” the first definition would likely prevail. This is because such language would imply that the invention required woodworking techniques and thus the board must be material that can be manipulated by woodworking techniques, such as a sawed piece of lumber. If the inventor’s specification indicated that wood was only one

Although words in a claim are generally given their ordinary and customary meaning, a patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history . . . Thus . . . it is always necessary to review the specification to determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning.

Id.

25. It is not clear if the court in *Vitronics* realized the contradictory nature of the statements: “First, we look to the words of the claims themselves” and “the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Id.* It cannot “always” be relevant only on the grounds of an explicit lexicography because not all specifications contain such explicit lexicography. Likely the court envisioned either a broad role for the implicit definition of words or, possibly, that the selection effect in disputing terms would be such that primarily those ambiguous in light of the claims alone would be disputed.

26. *Id.* at 1583.

27. *Id.* at 1583-84.

28. This example is based on *Nystrom v. Trex Co.*, (*Nystrom I*), 374 F.3d 1105 (Fed. Cir. 2004).

embodiment of the invention, but plastic could also be used, the second definition would likely prevail because it would indicate that the type of material was not limited to only wood. In some cases, however, the inventor may have language that promotes wood as a feature of the embodiment of the invention, but specifically says that there are other unnamed embodiments of the invention. In such a case, a court, under *Vitronics* would likely have to turn to extrinsic evidence to settle the dispute.

The Federal Circuit in *Renishaw PLC v. Marposs Societa per Azioni* seemed to ignore the mandate in *Vitronics* that extrinsic evidence only be used when the meaning of a claim term was ambiguous in light of the intrinsic evidence.²⁹ Taking this notion even further, the court in *Texas Digital* emphasized that because dictionaries and like sources were created by unbiased third parties and available equally to the courts and the parties, they were superior forms of evidence for use in claim construction.³⁰ The court even held that rather than first looking to the specification, the judge should search such sources for “dictionary meanings” and then find the meaning or meanings most consistent with the intrinsic evidence.³¹

From these cases emerged two co-existing branches of claim construction jurisprudence, each employing a different methodology of claim construction largely dependent on the panel of judges selected at the Federal

29. See *Renishaw PLC v. Marposs Societa per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998) (holding that both intrinsic evidence and, “in some cases,” extrinsic evidence can be used in claim construction “either by confirming the ordinary meaning of the claim terms or by providing special meaning for the claim terms”). The *Renishaw* court compared a variety of dictionary definitions for a generic word to the intrinsic evidence, the opposite of the *Vitronics* method. *Id.* at 1250-53. Later, in *Teleflex, Inc. v. Ficosa North America Corp.*, 299 F.3d 1313, 1324, 1326-27 (Fed. Cir. 2002), the Federal Circuit did not limit the use of dictionaries and similar sources.

30. *Tex. Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1202-05 (Fed. Cir. 2002):

Dictionaries, encyclopedias and treatises . . . are objective resources that serve as reliable sources of information on the established meanings that would have been attributed to the terms of the claims by those of skill in the art. Such references are unbiased reflections of common understanding not influenced by . . . events subsequent to the fixing of the intrinsic record by the grant of the patent . . . Indeed, these materials may be the most meaningful sources of information to aid judges in better understanding both the technology and the terminology used by those skilled in the art to describe the technology.

Id.

31. *Id.* at 1203-05.

Circuit.³² The cases following *Texas Digital* have been called “procedural,” “hypertextualist,” and “formalistic.”³³ These cases are characterized by the application of formal rules and hierarchies of evidence in determining claim language, focusing heavily on the dictionary definitions of the terms at issue while eschewing reliance on contextual sources of evidence.³⁴ The other line of cases, called “holistic” and “pragmatic textualist,” eschew formal rules and embrace a variety of sources for claim construction, especially the specification and procedural history, to determine the meaning of the claim term in a broader context.³⁵ This division of methodologies led some observers to question whether claim construction should be an issue of law reviewed *de novo* and whether the Federal Circuit could bring uniformity to patent law.³⁶

II. THE PHILLIPS DECISION: TRYING TO SAVE CLAIM CONSTRUCTION

A. Facts & Procedural History

Edward Phillips (“Phillips”) invented “modular, steel-shell panels that can be welded together to form vandalism-resistant walls,” patented the technology, and entered into a marketing agreement with AWH Corporation (“AWH”).³⁷ The arrangement ended, but Phillips alleged that AWH continued to the patented technology.³⁸ Phillips sued in the United States District Court for the District of Colorado, alleging infringement of claim 1 and five other claims of U.S. Patent No. 4,677,798 (“the ’798 patent”).³⁹ The relevant limitation of claim 1, on which the district court focused, teaches a “further means disposed inside the shell for increasing its load

32. R. Polk Wagner & Lee Petherbridge, *Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance*, 152 U. PA. L. REV. 1105, 1112, 1130-36 (2004).

33. *See id.*; Ruoyu Roy Wang, Note, *Texas Digital Systems v. Telegenix, Inc.: Toward A More Formalistic Patent Claim Construction Model*, Note, 19 BERKELEY TECH. L.J. 153, 153 (2004); Nard, *supra* note 21, at 4.

34. *See* Wagner & Petherbridge, *supra* note 32, at 1133-36; Wang, *supra* note 33, at 162-67; Nard, *supra* note 21, at 4-5.

35. *See* Wagner & Petherbridge, *supra* note 32, at 1134-36; Nard, *supra* note 21, at 6.

36. *See, e.g.*, Wagner & Petherbridge, *supra* note 32, at 1108; Gregory D. Leibold, *In Juries We Do Not Trust: Appellate Review of Patent-Infringement Litigation*, 67 U. COLO. L. REV. 623 (1996).

37. *Phillips v. AWH Corp. (Phillips II)*, 415 F.3d 1303, 1309 (Fed. Cir. 2005) (en banc).

38. *Id.* at 1303.

39. *Id.*; U.S. Patent No. 4,677,798 (filed Apr. 14, 1986).

bearing capacity comprising internal steel baffles extending inwardly from the steel shell walls.”⁴⁰

The district court construed the critical term “baffles” in Phillips’ patent and held that it invoked the means-plus-function claim format and therefore was limited by the specification.⁴¹ Because the specification did not include any embodiments or descriptions of baffles at ninety-degree angles, the district court concluded that the means did not include baffles at ninety-degrees. Accordingly, the court issued summary judgment in AWH’s favor.⁴² The Federal Circuit affirmed the district court’s finding on separate grounds, holding that the baffles limitation of claim 1 was not in means-plus-function form.⁴³ The court held that the term baffles, as interpreted in light of the specification which emphasized the bullet-deflecting properties of the baffles, did not include those at ninety-degree angles.⁴⁴ Judge Dyk dissented, claiming that the decision improperly limited the claims by importing limitations from the preferred embodiment in the specification. Judge Dyk asserted that using a dictionary definition, which disclosed no relevance of the degree of the structures, would be the more appropriate method of analysis.⁴⁵

One might analogize this methodology to the “board” example from Section I.B, *supra*. Assume that the specification in the example simply listed many different embodiments, with diagrams, in each case made of wood, and the specification emphasized that the curvature of the top surface was calibrated so as to permit a user to apply wood stain to it. Following the methodology of the *Phillips* panel decision, a court would likely conclude that word board in the claim meant boards of wood, because all the diagrams showed wood and because one of the purported benefits of the invention could only be achieved if the board was made of wood.

B. Issues for Rehearing *En Banc*

The Federal Circuit granted rehearing *en banc*, requested additional briefing on several issues: (1) the use of dictionaries as opposed to the specification, including permissibility and order of importance; (2) if one is made more important than the other, how and when would the court use potential secondary sources in light of the primary sources; (3) if dictionaries are primary, which dictionaries should the court use and how should

40. *Phillips II*, 415 F.3d at 1303.

41. *Id.*

42. *Id.*

43. *Phillips v. AWH Corp. (Phillips I)*, 363 F.3d 1207, 1212 (Fed. Cir. 2004).

44. *Id.* at 1213-14.

45. *Id.* at 1216-18.

the court resolve the problem of multiple definitions; (4) if the specification is primary, to what extent should the specification limit the breadth of the claims; and (5) should claim construction be limited to the intersection of the dictionary-first and specification-first methods.⁴⁶ It also asked for briefing regarding to what extent should courts construe claims to avoid invalidity; how should a court use prosecution history and expert testimony; and what deference, if any, should trial court claim construction decisions merit.⁴⁷

C. Majority Opinion: No Perfect Method, but the Specification is Better Than a Dictionary

The court overruled the *Texas Digital* series of cases, holding that dictionaries were not intrinsic evidence and emphasizing the importance of the specification, claims, and prosecution history in determining the meaning of the words in the claims.⁴⁸ The court also specifically disavowed the *Texas Digital* holding that claims are presumptively entitled to the “full range” of compatible dictionary definitions.⁴⁹

Addressing the issue of how to avoid reading limitations from the specification into the claims, the court simply stated “it is important to keep in mind that the purposes of the specification are to teach and enable those of skill in the art to make and use the invention and to provide a best mode for doing so” and that “[m]uch of the time, upon reading the specification in that context it will become clear” whether or not the invention was limited to the embodiment in the specification.⁵⁰ The court specifically rejected a uniform rule limiting the claims to the specific embodiments described in the patent. The court reasoned that this flexibility would “increase the likelihood that a court will comprehend how a person of ordinary skill in the art would understand the claim terms.”⁵¹ To emphasize the difficulty of this solution, the court reiterated “that there is no magic formula or catechism for conducting claim construction.”⁵² Addressing the use of extrinsic evidence, the court reiterated the *Vitronics* approach of evaluating extrinsic evidence in light of the claims as long as it is weighed by “keep[ing] in mind the flaws inherent in” such evidence, such as the potential bias in the creation or selection of extrinsic evidence for use in

46. *Phillips v. AWH Corp. (Phillips II)*, 415 F.3d 1303, 1382-83 (Fed. Cir. 2005) (en banc).

47. *Id.* at 1383.

48. *Id.* at 1318, 1320-23.

49. *Id.* at 1320.

50. *Id.* at 1323.

51. *Id.* at 1323-24.

52. *Id.* at 1324.

litigation, the “virtually unbounded universe” of available extrinsic evidence, and the effect that the use of extrinsic evidence has in “undermining the public notice function of patents.”⁵³

The court also rejected the notion that claims should be construed to preserve validity, except as a last resort after applying “all the available tools of claim constructions” to the claims.⁵⁴ Lastly, the court specifically refused to revisit the issue of *de novo* review of claim construction.⁵⁵ However, after applying essentially the same methodology as the panel decision, it reversed and remanded.⁵⁶ The court used claim differentiation to point out that the dependent claims would be redundant if the term ‘baffles’ was given the construction provided by the panel decision and emphasizing that, since the restrictive language appeared in the embodiment, it was not dispositive in construing the claim.⁵⁷

Following the “board” example from above,⁵⁸ if the language about woodworking was in the embodiment portion of the specification, and there was second claim in the patent, dependent on the first claim, but only differing in that it claimed “said boards being made of wood,” a court mimicking *Phillips* would likely find those facts to be dispositive in interpreting the word “board” to not be limited to wood. This is because the woodworking language, being in the embodiment, should not limit claim scope and thus would not be dispositive in interpreting the word “board.” Resorting to claim differentiation, the court would not find “board” to be limited to wood, as that would make the second claim redundant to the first claim because the second claim’s only additional limitation is the board being made of wood.

III. EARLY POST-PHILLIPS DECISIONS SHOW LITTLE CHANGE

Although the heart of this Note is an empirical analysis of the Federal Circuit’s claim construction rulings after *Phillips* presented in Part IV, this

53. *Id.* at 1318-19, 1324.

54. *Id.* at 1327.

55. *Id.* at 1328.

56. *Id.* at 1324-28; *see id.* at 1328-30 (Lourie, J., concurring).

57. *See id.* at 1324-25; CHISUM, *supra* note 9, § 18.03; *see also* Comark Commc’ns v. Harris Corp., 156 F.3d 1182, 1187 (Fed. Cir. 1998) (holding that claim differentiation “create[s] a presumption that each claim in a patent has a different scope” to “preserve the distinction” between claims and to avoid making another claim “superfluous” and “redundant,” such as by interpreting claim language in one claim to include limitations which are made explicit in a claim dependent to it).

58. *See supra* Section I.B.

Part provides some subjective context to understand how specific courts have actually explained the significance of the *Phillips* decision soon after the decision was filed. The first case, *Nystrom v. Trex Co.*, is a Federal Circuit case that was granted rehearing in light of *Phillips*, reversing the panel's prior decision. The remaining opinions are district court claim construction decisions issued shortly after *Phillips*.

A. *Nystrom v. Trex Co.*: A Federal Circuit Panel Reverses Judgment, but With Substantially the Same Opinion

Since the *Phillips* decision discredited the *Texas Digital* line of cases, some recent decisions in that line were at risk for reversal upon rehearing, such as *Nystrom v. Trex Co.*, which the *Phillips* decision specifically cited in disapproving of its methodology.⁵⁹ In *Nystrom*, the Federal Circuit, used a non-technical dictionary to construe the term “board” in a patent on an improvement to the floor of exterior decks to include not only wooden boards sawn from logs, but also any “similarly-shaped item made of a rigid material.”⁶⁰

The dissent disagreed with the majority's reliance on the arbitrary choice of a broad dictionary definition when the specification repeatedly referred to wood flooring, woodworking techniques, and elements having been cut from a log.⁶¹ Additionally, the dissent cited to the prosecution history, where the applicant overcame an obviousness rejection on the ground that the invention was “a unique and significant advance in the art of exterior wood flooring” and that the prior art was not related to woodworking techniques.⁶² The dissent also disagreed with the majority on the proper line of authority to follow, implying that *Texas Digital* was an improper deviation from the precedent established in *Vitronics*.⁶³

Subsequent to the decision in *Phillips*, the court granted rehearing of *Nystrom*⁶⁴ and issued a revised opinion.⁶⁵ In this unanimous opinion, the court, following the dissent in *Nystrom I*, held that the proper construction of “board” was wood cut from a log as that was the “ordinary meaning” of board in the context of the specification and prosecution history.⁶⁶ Largely

59. See *Phillip II*, 415 F.3d at 1320.

60. *Nystrom v. Trex Co.*, (*Nystrom I*), 374 F.3d 1105, 1110-13 (Fed. Cir. 2004).

61. *Id.* at 1120-21 (Gajarsa, J., dissenting).

62. *Id.* at 1122.

63. *Id.* at 1120 n.3.

64. *Nystrom v. Trex Co.*, No. 03-1092, 2005 U.S. App. LEXIS 19749 (Fed. Cir. Sept. 14, 2005) (order granting rehearing in light of *Phillips*).

65. *Nystrom v. Trex Co.*, (*Nystrom II*), 424 F.3d 1136 (Fed. Cir. 2005).

66. *Id.* at 1145-46.

substituting *Phillips* for the *Texas Digital* line of authority,⁶⁷ the court interpreted *Phillips* as dictating that:

[I]n the absence of something in the written description and/or prosecution history to provide . . . notice to the [relevant] public . . . that the inventor intended a disputed term to cover more than the ordinary and customary meaning revealed by the context of the intrinsic record, it is improper to read the term to encompass a broader definition simply because it may be found in a dictionary, treatise, or other extrinsic source.⁶⁸

The court in *Nystrom II* distinguished the outcome from that in *Phillips*, because both parties agreed that the ordinary meaning of the term board was wood cut from a log and that *Nystrom* was simply trying to expand the term using an “obscure” definition.⁶⁹ The court contrasted that situation with *Phillips* where the court used the dictionary to construe the ordinary meaning of the term “baffle,” because both parties in *Phillips* stipulated to the ordinary meaning of “baffle” as defined by the dictionary and that meaning was consistent with the specification.⁷⁰ However, the *Nystrom II* court gave no insight to how to approach claim construction when the parties did not agree to the “ordinary meaning” of the term or a dictionary definition, or what definition counts as “obscure.”

B. Judge Whyte’s Claim Construction Decisions Have Big Changes in Form, Little Change in Substance⁷¹

To show the effect of the *Phillips* decision on district court judges, this Section contrasts a pre-*Phillips* claim construction decision by Judge Whyte of the United States District Court for the Northern District of California with one of his post-*Phillips* claim construction decisions. In *Hynix*

67. Compare *Nystrom II*, 424 F.3d at 1136-46, with *Nystrom I*, 374 F.3d at 1110-14.

68. *Nystrom II*, 424 F.3d at 1145.

69. *Id.* at 1145-46.

70. *Id.* at 1145.

71. Judge Whyte is a frequent speaker on patent law and has been mentioned as a possible nominee to the Federal Circuit. See J. Ronald M. Whyte, *Remarks on Patent Reform: Reaction from the Judiciary*, 19 BERKELEY TECH. L.J. 1049 (2004); The Hon. Kathleen M. O’Malley, The Hon. Patti Saris & The Hon. Ronald H. Whyte, *A Panel Discussion: Claim Construction from the Perspective of the District Judge*, 54 CASE W. RES. L. REV. 671 (2004); Choosing the Next Judicial Appointment for the Court of Appeals for the Federal Circuit, Posting of Dennis Crouch to Patently-O: Patent Law Blog, http://patentlaw.typepad.com/patent/2005/07/choosing_the_ne.html (July 6, 2005) (“In a preemptive move, the Federal Circuit Bar Association has put its weight behind District Court Judge Ronald Whyte of San Jose who, for his part, is reportedly not dead-set against the idea.”).

Semiconductor, Inc. v. Rambus Inc., the court cited *Texas Digital* for the proposition that it was improper to use the specification or prosecution history, instead of dictionaries, in determining the ordinary meaning of claim limitations.⁷² In applying that rule, the court construed more than half of the disputed terms based on dictionary definitions and similar extrinsic sources.⁷³ For example, in construing the term “synchronous” in the context of a “synchronous memory device,” the court cited to Webster’s Ninth New Collegiate Dictionary, the Oxford English Dictionary, and two different editions of the Authoritative Dictionary of the Institute of Electrical and Electronics Engineering before concluding that not all functions in a “synchronous memory device” need be synchronous.⁷⁴

In *Zoran Corp. v. Mediatek, Inc.*, a post-*Phillips* decision, Judge Whyte construed several claims in patents relating “to controllers for optical disk drives capable of playing both CDs and DVDs.”⁷⁵ The court cited *Phillips* for the proposition that determining ordinary meaning of a claim term requires a court to use “those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean.”⁷⁶ Those sources include the claims, specification, and prosecution history, as well as “extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.”⁷⁷ Facially, the claim construction methodology employed in *Zoran* differed significantly from that of *Hynix*. In *Zoran*, the court repeatedly used the specification and prosecution history to construe every term at issue, only invoking a dictionary to determine the ordinary meaning of one word in one term that was not mentioned in the specification or prosecution history.⁷⁸ However, Judge Whyte still heeded the Federal Circuit’s suggestion that, in handling the “fine line between reading a claim in light of the specification, and reading a limitation into the claim from the speci-

72. *Hynix Semiconductor, Inc. v. Rambus Inc.*, No. CV-00-20905 RMW, 2004 U.S. Dist. LEXIS 23230, at *14-15 (N.D. Cal. Nov. 15, 2004).

73. *See id.* at *16-66.

74. *Id.* at *26-29.

75. *Zoran Corp. v. Mediatek, Inc.*, No. C-04-02619 RMW, 2005 U.S. Dist. LEXIS 34454, at *4 (N.D. Cal. Sept. 9, 2005).

76. *Id.* at *9-10 (quoting *Phillips v. AWH Corp.*, (*Phillips II*), 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc)).

77. *Zoran Corp.*, 2005 U.S. Dist. LEXIS 34454, at *10 (quoting *Phillips II*, 415 F.3d at 1314).

78. *Id.* at *15-58.

fication”⁷⁹ a court should “focus . . . on understanding how a person of ordinary skill in the art would understand the claim terms.”⁸⁰

For example, the court construed the term “data error detection and correction circuitry,” so as to reject limiting it to only “circuitry that first performs Reed-Solomon error correction, followed by error detection with a cyclic redundancy checker.”⁸¹ Although the intrinsic evidence supported the broader interpretation, Judge Whyte also found extrinsic evidence relevant in reaching this construction.⁸² Specifically, a text published prior to the patent’s filing date supported the conclusion that other error correction techniques were known at that time.⁸³ Similarly, rather than consulting a technical dictionary, the court used the specification and prosecution history to determine that the terms “sequentially” and “contiguous” refer to how a buffer stores data.⁸⁴

Therefore, there seemed to be a general shift in Judge Whyte’s methodology of claim construction. However, that difference was mainly superficial such as what sources are cited rather than reflecting a substantial change in how Judge Whyte construed terms. In both *Hynix* and *Zoran*, Judge Whyte relied in part on his knowledge and understanding of extrinsic evidence. For example, Judge Whyte could not base his construction of “synchronous memory device” in *Hynix* simply on the definitions used as a basis for the parties’ proposed constructions, as both parties cite similar sources for contradictory definitions.⁸⁵ Because the specification was not held to be probative, the only other relevant evidence was the claim language’s use of the open comprising transition and a witness’s declaration that similar devices during the relevant period which excluded any asynchronous functions were labeled “fully synchronous,” rather than synchronous.⁸⁶ In holding that the absence of a clear disclaimer of all asynchronous functions suggested limited synchronicity, Judge Whyte analogized to the Federal Circuit’s ruling in *Rambus Inc. v. Infineon Technologies AG*,⁸⁷ that “bus” in the patents at issue was not limited to a multip-

79. *Phillips*, 415 F.3d at 1323 (quoting *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1186-87 (Fed. Cir. 1998)).

80. *Id.* at 1323.

81. *Zoran Corp.*, 2005 U.S. Dist. LEXIS 34454, at *15-35.

82. *Id.* at *22-23.

83. *Id.*

84. *Id.* at *46-49.

85. *Hynix Semiconductor, Inc. v. Rambus Inc.*, No. CV-00-20905 RMW, 2004 U.S. Dist. LEXIS 23230, at *26-31 (N.D. Cal. Nov. 15, 2004).

86. *Id.* at *25-30.

87. 318 F.3d 1081, 1088 (Fed. Cir. 2003).

lexed bus.⁸⁸ Yet, the question Judge Whyte answered is more analogous to whether a claim for a “wooden board” would exclude boards that were predominantly made of wood but have some non-wood material. Judge Whyte had to balance the inferences from the comprising transition, which would allow asynchronous functions, the testimonial evidence, that indicated that the term synchronous does not exclude devices with some asynchronous functions, and the dictionary definitions, which imply that a synchronous device must have some essential functions that are synchronous. This is essentially a technology and fact specific threshold question, asking how many asynchronous operations could be preformed in a synchronous memory device before it became synchronous. Thus, Judge Whyte’s decision to accept Hynix’s construction that did not require any specific functions to be synchronous showed a willingness to employ a flexible system of claim construction, even before *Phillips*.

Similarly, in interpreting “Sequentially . . . Contiguous” in *Zoran*, Judge Whyte examined the claim language, the prosecution history, and the specification, but explicitly stated that the construction was “based primarily on the function of the controller.”⁸⁹ That was his understanding of how the device worked in light of the intrinsic and extrinsic evidence.⁹⁰ Therefore, even though there has been a large change in the language used and the sources cited in Judge Whyte’s claim construction rulings, the judge still employs a flexible claim construction methodology, relying on his understanding of the nature of the invention, the intrinsic and extrinsic evidence, and his own technical experience and knowledge.

C. Judge Ward’s Pre- and Post-*Phillips* Claim Construction Decisions Are Largely Unchanged⁹¹

In *Kamatani v. BenQ Corp.*, a pre-*Phillips* claim construction ruling, Judge Ward of the Eastern District of Texas, acknowledged both *Markman*’s command that the three primary sources for claim construction are the claims, the specification, and the prosecution history, as well as the *Texas Digital* proclamation that “dictionaries, encyclopedias and treatises are particularly useful resources . . . in determining the ordinary and cus-

88. *Hynix Semiconductor*, 2004 U.S. Dist. LEXIS 23230, at *30.

89. *Zoran Corp.*, 2005 U.S. Dist. LEXIS 34454, at *48-49.

90. *Id.*

91. Judge Ward is well known as a district judge who hears many patent cases in the “Rocket Docket” of the Eastern District of Texas. See Julie Creswell, *So Small a Town, So Many Patent Suits*, N.Y. TIMES, Sep. 24, 2006, <http://www.nytimes.com/2006/09/24/business/24ward.html?ex=1316750400&en=65001ada21beb03a&ei=5088&partner=rssnyt&emc=rss>.

tomary meaning of claim terms.”⁹² However, Judge Ward did not cite to the broader rule established in *Texas Digital* and its progeny: that the terms should encompass all dictionary definitions that are not clearly disclaimed by the intrinsic sources.⁹³

This reasoning is reflected in *Kamatani*, where Judge Ward frequently decided between different proposed constructions based primarily on different dictionary definitions.⁹⁴ For example, although the court acknowledged that the ordinary meaning of “collate” was “to compare and to merge two similarly-ordered sets,” the court construed “collate” to only include comparing because that interpretation was more compatible with the specification.⁹⁵ Even when intrinsic data were used, Judge Ward focused on the term as would be understood by one of ordinary skill in the art by focusing on the details of the technology. For example, when construing the term “processing,” the defendants advocated a construction that did not include processing the optical signal from the portion of the disk containing certain summary information about the disk.⁹⁶ Judge Ward rejected this construction because the invention would not actually read that summary information, but rather would use certain properties of the optical signal to deduce the summary information and it did not matter what part of the disk was used for that.⁹⁷

In *Gobeli Research, Ltd. v. Apple Computer Inc.*, Judge Ward emphasized that *Phillips* simply “set forth several guideposts that courts should follow” in claim construction.⁹⁸ Specifically, the court should determine the ordinary meaning as how a person of ordinary skill in the art would understand the term, which is to read the claim term in light of the specification and prosecution history.⁹⁹ Dictionaries are assigned a subordinate

92. *Kamatani v. BenQ Corp.*, No. 2:03-CV-437, 2005 U.S. Dist. LEXIS 42764, at *6-7 (E.D. Tex. June 29, 2005) (quoting *Tex. Digital*, 308 F.3d at 1202).

93. *See Tex. Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1202-1204 (Fed. Cir. 2002).

94. *See Plaintiff's Opening Brief Regarding Claim Construction Issues, Kamatani v. BenQ Corp.*, No. 2:03-CV-437, U.S. Dist. LEXIS 42764 (E.D. Tex. Mar. 14, 2005); *Responsive Claim Construction Brief of Defendants, Kamatani v. BenQ Corp.*, No. 2:03-CV-437, U.S. Dist. LEXIS 42764 (E.D. Tex. Mar. 28, 2005).

95. *Kamatani*, 2005 U.S. Dist. LEXIS 42764, at *17-18.

96. *See Responsive Claim Construction Brief of Defendants* at 32, *Kamatani v. BenQ Corp.*, No. 2:03-CV-437 (E.D. Tex. Mar. 28, 2005).

97. *Kamatani*, 2005 U.S. Dist. LEXIS 42764, at *11-16.

98. *Gobeli Res., Ltd. v. Apple Computer Inc.*, 384 F. Supp. 2d 1016, 1020 (E.D. Tex. 2005).

99. *Id.* at 1020-21.

role.¹⁰⁰ This explanation somewhat contrasts with Judge Ward's previous description of the law of claim construction.¹⁰¹

Judge Ward construed several terms relating to "interrupt" and "interrupt handler" technology, which related to operating system software for processing signals from peripheral devices, such as printers.¹⁰² In construing the term "assigned to each of said processes," the court used the specification to reject both parties' proposed constructions, finding evidence that every memory allocation involved in the claim must assign both permanent and transient storage in the memory stack.¹⁰³ Similarly, in construing a term containing "concurrently, but independently, processing," Judge Ward used his knowledge of extrinsic evidence about the nature of computer operation,¹⁰⁴ as well as the specification, to inform the conclusion that "concurrently" requires that the relevant instructions not be executed serially.¹⁰⁵

Like Judge Whyte, Judge Ward has primarily changed his claim construction decisions in form rather than substance. Although Judge Ward's pre-*Phillips* decisions frequently involved selecting constructions from competing dictionary definitions,¹⁰⁶ his method of claim construction reflected a willingness to use the specification and the prosecution history to determine claim language without explicit disavowals of claim scope.¹⁰⁷ In the post-*Phillips* context, the parties have changed their approach to making claim construction arguments, citing dictionaries far more sparingly,¹⁰⁸

100. *Id.* at 1022.

101. *Compare Katamani*, 2005 U.S. Dist. LEXIS 42764, at *7 ("[D]ictionaries, encyclopedias and treatises are particularly useful resources to assist the court in determining the ordinary and customary meaning of claim terms.") (citing *Tex. Digital*, 308 F.3d at 1202), *with Gobeli*, 384 F. Supp. 2d at 1022 ("*Phillips* does not preclude all uses of dictionaries in claim construction proceedings. Instead, the court assigned dictionaries a role subordinate to the intrinsic record.>").

102. *Gobeli*, 384 F. Supp. 2d at 1018.

103. *Id.* at 1025-26.

104. *See id.* at 1026 ("Contrary to the Plaintiff's argument, serial processing does not comport with the specification or the general understanding of the term "concurrently."). The phrase "serial processing" does not appear in either party's brief, but is a term of art in computing. Serial processing, *The American Heritage New Dictionary of Cultural Literacy*, 3d ed., Houghton Mifflin Co., 2005, available at [http://dictionary.reference.com/browse/serial processing](http://dictionary.reference.com/browse/serial%20processing).

105. *Gobeli*, 348 F. Supp. 2d at 1026.

106. *See Kamatani*, 2005 U.S. Dist. LEXIS 42764, at *17, *21.

107. *See id.* at *15, *18, *21.

108. *Compare* Plaintiff's Opening Brief Regarding Claim Construction, *supra* note 94 (citing forty-one dictionary and encyclopedia definitions for fifteen terms), *with* Defendant Sun Microsystems, Inc.'s Opening Brief in Support of Its Proposed Claim Con-

but Judge Ward seems to rule largely the same, having already used intrinsic evidence and his understanding of the nature of the technology to determine claim language.¹⁰⁹

Examining the post-*Phillips* cases, at least some decisions will come out differently as *Nystrom* demonstrates. Furthermore, the methodology employed has changed, at least facially, as courts will no longer use dictionaries to apply the widest possible construction of a disputed term that is not obviously disavowed by the specification or in the prosecution history. Additionally, the method of briefing for claim construction hearings, as well as the format of claim construction opinions, has changed somewhat: neither parties nor the courts cite dictionaries as often. However, courts were willing before *Phillips* to use their understanding of the technology, as supplied by the specification, the prosecution history, and extrinsic sources, to determine the meaning of claim terms, and this continues after *Phillips*. So it appears that *Phillips* has had substantial effect on the form, but only a minor effect on the substance of claim construction decisions.

IV. EMPIRICAL ANALYSIS OF THE FEDERAL CIRCUIT: FINDINGS AND METHODOLOGIES

A significant number of researchers have applied quantitative and qualitative methods to empirically analyze the Federal Circuit claim construction jurisprudence, especially with regard to reversal rates. The following Sections will review some of these works, particularly describing their methodologies and results.

A. Studies of Reversal Rates Find Problems in the Federal Circuit's Claim Construction Rulings

Christian Chu's Empirical Analysis of Federal Circuit Claim Construction Trends evaluated all patent decisions by the Federal Circuit filed be-

structions, *Gobeli*, 384 F. Supp. 2d 1016 (No. 2:04-CV-00149-TJW) (citing only two dictionary definitions eighteen terms).

109. See *Kamatani*, 2005 U.S. Dist. LEXIS 42764, at *11-16 (using understanding of how laser read information off of optical disk to preclude a literal but otherwise seemingly valid claim interpretation); *Kamatani*, 2005 U.S. Dist. LEXIS 42764, at *17-18. (relying on the specification to resolve dispute over definitions supported by dictionary sources); *Gobeli*, 384 F. Supp. 2d at 1025-26 (using the specification to reject both parties proposed constructions); *supra* note 100 (showing that Judge Ward used a term of art not mentioned in either party's brief in his analysis of a claim term, evidence of independent knowledge and understanding of the technology).

tween January 1, 1998, and April 30, 2000.¹¹⁰ In addition to collecting basic information such as case name and panel composition, the author collected information regarding claim construction decisions: the number of claims addressed and/or construed, whether the Federal Circuit made any change to the lower tribunal's claim construction, whether such changes were outcome determinative, and whether claims reviewed involved means-plus-function claims.¹¹¹ The author only addressed instances where the court explicitly reviewed claim language,¹¹² and therefore he could only estimate the effect that including Rule 36 summary affirmances would have on his results.¹¹³

Chu found an overall reversal rate of 47.3% excluding Rule 36 affirmances and 36.6% including such affirmances.¹¹⁴ On claim construction issues, Chu found that the Federal Circuit changed at least one claim construction in 44% of cases.¹¹⁵ Furthermore, Chu found that 29.6% of cases were reversed due to claim construction.¹¹⁶ Chu concluded that such high reversal rate numbers undermine the trial courts, dooming most litigation to a subsequent appeal with a substantial chance of a reversal.¹¹⁷ The seemingly obvious result of the uncertainty and protracted length of litigation would be higher costs and greater difficulty in resolving patent disputes.¹¹⁸ Chu recommended removing the *de novo* standard of review for claim construction decisions, as well as issuing more consistent rulings on specific claim language.¹¹⁹

Professor Kimberley Moore's claim construction study focused on the Federal Circuit's reversal rates, especially on claim construction issues.¹²⁰ This study analyzed all patent decisions in the Federal Circuit after the Supreme Court's *Markman* decision until 2003, including individualized analyses of Rule 36 summary affirmances.¹²¹ Moore analyzed the briefs

110. Christian A. Chu, *Empirical Analysis of the Federal Circuit's Claim Construction Trends*, 16 BERKELEY TECH. L.J. 1075, 1092 (2001).

111. *Id.* at 1093.

112. *Id.* at 1094.

113. See FED. CIR. R. 36 (allowing the court to enter judgment of affirmance without a written opinion if the opinion would have no precedential value and at least one additional condition is met).

114. Chu, *supra* note 110, at 1098-1100.

115. *Id.* at 1104.

116. *Id.*

117. *Id.* at 1143.

118. *Id.*

119. *Id.*

120. Kimberly A. Moore, *Markman Eight Years Later: Is Claim Construction More Predictable?*, 9 LEWIS & CLARK L. REV. 231, 233 (2005).

121. *Id.* at 234-37.

submitted in the Rule 36 cases to determine whether the litigants argued claim construction and how many terms were at issue.¹²² Assuming that all Rule 36 cases approved all claim constructions at issue, Moore found that the Federal Circuit found error in 34.5% of constructions, with at least one term held to have been incorrectly construed by the lower court in 37.5% of cases. This resulted in 29.7% of such cases being reversed.¹²³ Furthermore, Moore found that 39.3% of terms that either the district court or the Federal Circuit considered to be means-plus-function claims were reversed.¹²⁴ Moore also criticized the current *de novo* standard of review, as well as the absence of clear standards for claim construction from the court.¹²⁵

B. Methodological Studies Show Lack of Consensus in the Federal Circuit

Wagner and Petherbridge's study focused on the methodology of the Federal Circuit's claim construction rulings.¹²⁶ The authors developed a system by which claim construction rulings were coded into "holistic" or "procedural" groups, with a degree of strength assigned to each such coding.¹²⁷ Procedural approaches were those primarily involving strict presumptions, formulistic application of a hierarchy of source, and frequent use of dictionaries and similar extrinsic sources.¹²⁸ The holistic approaches were defined as those avoiding an abstract concept of "ordinary meaning" and looking at terms within the context of the invention, drawing more on the specification and prosecution history.¹²⁹

Analyzing opinions decided from April 23, 1996 through November 1, 2002, the authors found that 63.1% of cases showed a procedural approach and 36.9% of cases showed a holistic approach.¹³⁰ Furthermore, the authors linked six of the twelve active judges with an identifiable methodology, and could accurately determine the likelihood of approach used by a specific panel of judges.¹³¹ The authors recommended, among other

122. *Id.*

123. *Id.* at 238.

124. *Id.* at 242.

125. *Id.* at 245-47.

126. Wagner & Petherbridge, *supra* note 32, at 1110-11.

127. *See id.* at 1130-39.

128. *Id.* at 1133-34.

129. *Id.*

130. *Id.* at 1148.

131. *Id.* at 1159-68.

things, the standardization of the methodologies in the Federal Circuit, as well as taking methodology more seriously.¹³²

In Miller and Hilsenteger's study, the authors use a database search-based methodology to determine the frequency at which Federal Circuit and district court claim construction decisions employ dictionary and dictionary-like sources.¹³³ Searching the Westlaw database for decisions by both the Federal Circuit and the district courts, the authors revealed that there has been a significant increase in the use of dictionaries in claim construction decisions since *Markman I.*¹³⁴ The authors, supporting the use of dictionaries, propose the selection process for dictionaries be standardized by the Patent Office.¹³⁵

C. Methodology Compared to the Previous Studies

This study adopts many of the approaches of those in previous studies. Opinions were analyzed from July 13, 2005, immediately after the *Phillips* decision until September 13, 2006. Data were collected regarding the outcome of the case, number of terms at issue, and the number of constructions changed. This study only examines explicit claim constructions by the Federal Circuit, thereby excluding Rule 36 affirmances. Additionally, each claim construction was coded based on the primary source of authority that the Federal Circuit claimed to cite in its construction: dictionaries, specifications, prosecution history, the claims (including the form of claim differentiation, "ordinary meaning" of the claims, or "the language of the claims themselves"), extrinsic factual evidence, other, or not clear. These methods are designed to be comparable with Chu's results.¹³⁶ Additionally, this study employs Miller and Hilsenteger's methodology to compare pre- and post-*Phillips* datasets.¹³⁷

132. *Id.* at 1174-79.

133. Joseph Scott Miller & James A. Hilsenteger, *The Proven Key: Roles and Rules for Dictionaries at the Patent Office and the Courts*, 54 AM. U. L. REV. 829, 835-36 (2005).

134. *See id.* at 845-51. The authors use the following search strings: Narrow Search—"patent! /s claim! /s (constru! or interpret!) /s (dictionar! or encyclopedia! or treatise! or handbook!) and date([re-strictor])". Broad Search—"patent! /p claim! /p (constru! or interpret!) /p (dictionar! or encyclopedia! or treatise! or handbook!) and date([re-strictor])". Baseline Search—"patent! /p claim! /p (constru! or interpret!) and date([restrictor])". *See id.* at 845.

135. *Id.* at 896-904.

136. *See supra* Section IV.A.

137. *See* Miller & Hilsenteger, *supra* note 133.

D. The Empirical Results: Reversal Rates Remain High, Methodology is Less Clear

The Federal Circuit interpreted at least one claim term or limitation in a total of eighty-six applicable cases. The overall reversal rate for these cases was 53.5%. Additionally, the Federal Circuit changed 33.3% of the district courts' claim constructions, resulting in 39.5% of these cases having one or more terms reversed. Based on the previously described coding method, 44.4% of terms were decided on the specification, 29.6% on claim language, 8.6% on the prosecution history, 7.4% on factual extrinsic evidence, 6.2% explicitly based on a dictionary definition, and 3.7% on other or undetermined grounds.

The results indicate that *Phillips* has not reduced reversal rates.¹³⁸ Compared to the results of Chu's study, the overall reversal rate in claim construction cases, excluding summary affirmances, is 53.5%, slightly up from 47.3% for Chu's study. Similarly, the percent of cases where at least one construction changed is 39.5%, only slightly down from 44% from Chu's study.

On the other hand, at first glance it seems that *Phillips* had more of an effect on methodology than previously thought, with only 6% of cases explicitly based on dictionary definitions and 45% based on the specification. However, the search-based methodology of Miller and Hilsenteger gives results that show almost no change in the rates of dictionary-like extrinsic evidence before and after *Phillips*.¹³⁹ These contradictory results may seem confusing at first, but looking more closely at these post-*Phillips* cases, it becomes clear that the basic substance of claim construction methodology has not changed, even though the form has. As described below, cases in the category where issues of construction were decided by referring to the claims themselves often relied on the "ordinary meaning" of the claims as a replacement for dictionaries. Adding this category along with explicit dictionary references yields 35.8%. This is significantly lower than Wagner and Petherbridge's 63.1% proceduralist rat-

138. See *infra* Appendix A.

139. Using the Miller & Hilsenteger method, see *supra* note 133, for the Federal Circuit, one gets 13.8% for a broad search between *Markman* and *Phillips* and 13.7% for a broad search between *Phillips* and Sept. 13, 2006. For narrow searches in the Federal Circuit, the results are 3.8% pre-*Phillips* and 4.6% post-*Phillips*. For the district courts, a broad search is 20.5% pre-*Phillips* and 24.3% post-*Phillips*. The narrow search returns 7.8% pre-*Phillips* and 8.6% post-*Phillips*. Although this may reflect an increase in language related to the legal standard section of decisions post-*Phillips* to include the words "dictionary," "encyclopedia," "treatise," or "handbook," the results show at least no significant change.

ing, most likely due to *Phillips* doing what it professed to do, causing a shift away from *Texas Digital*'s strict dictionary definition approach and toward a more holistic method.¹⁴⁰ However, the results still reflect that a substantial number of litigants will face great uncertainty in the methodology of claim construction that the court will employ, as claim construction decisions will still frequently rely on dictionaries, and often in the more obtuse form of "ordinary meaning."¹⁴¹

E. Post-*Phillips* Claim Construction Cases Hide *Texas Digital*-Style Analysis Under the Guise of "Ordinary Meaning"

Many Federal Circuit decisions now cite directly to the claims as a source of authority to establish that the "ordinary" meaning of the claim term controls. In many cases, this action simply masks the fact that the court uses "ordinary" meaning to avoid intrinsic sources. For example, in *Grayzel v. St. Jude Medical, Inc.*, the Federal Circuit responded to the patentee's claim that "the district court erroneously relied on a dictionary definition to trump both the intrinsic and extrinsic record" in construing the term "sheath" in a medical device patent by stating that the "patent uses the term 'sheath' in the ordinary sense of the word."¹⁴² After the court examined the specification and prosecution history, it concluded that statements in them were "consistent with an ordinary definition for the term as accorded by the district court."¹⁴³

Similarly, in *Cross Medical Products, Inc. v. Medtronic Sofamor Danek, Inc.*, the Federal Circuit derived the "ordinary meaning" of the term "bone interface" using a complex dictionary analysis, breaking the term apart into its constituent words, to conclude "the anchor seat has a 'lower' portion that may share a 'common boundary' with 'bone.'"¹⁴⁴ Only then did the court refer to the intrinsic evidence to confirm this definition.¹⁴⁵ These decisions demonstrate that the Federal Circuit is willing to continue to perform *Texas Digital*-like analyses, substituting explicit references to dictionaries with references to the "ordinary meaning" of the claim language.

In other cases, the Federal Circuit simply rubber-stamps the district court definitions based on dictionaries, as being part of the "ordinary

140. See *supra* Section IV.B.

141. See *infra* Section IV.E; Wagner & Petherbridge, *supra* note 32, at 1176.

142. *Grayzel v. St. Jude Med., Inc.*, 162 Fed. Appx. 954, 959 (Fed. Cir. 2005).

143. *Id.* at 959-60.

144. *Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1305 (Fed. Cir. 2005).

145. *Id.*

meaning” of the claims. In *Philips Electronics North America Corp. v. Contec Corp.*, the Federal Circuit affirmed the definition “information (data) that identifies a signal structure” as the “plain and ordinary meaning” of the claim term “signal structure identification data.”¹⁴⁶ However, the Federal Circuit did not mention that the district court derived this “plain and ordinary meaning” of the claim language from multiple dictionary definitions.¹⁴⁷ Similarly, in *Sorensen v. International Trade Commission*, the Federal Circuit overruled the administrative law judge’s holding that a “different characteristic” in a claim related to plastic injection molding did not include color.¹⁴⁸ The judge had held that the alternate interpretation would require “an open-ended concept that could encompass every type of measurement possible and every type of measurable characteristic,” and, after carefully investigating the specification and prosecution history, one of ordinary skill in the art would not interpret the term so broadly.¹⁴⁹ However, the Federal Circuit dismissively overturned the decision, stating:

The claim does not limit these differences to any particular subset of the broad term ‘characteristics.’ In other words, according to the claim language any difference in characteristics between the two injected materials would satisfy the claim language. Thus, a difference in color alone would satisfy the ‘different characteristics’ limitation. The color would be the characteristic that differs.¹⁵⁰

This statement simply reiterated the complainant’s argument that the ordinary meaning of the word “characteristic” included color, which was based on dictionary definitions.¹⁵¹ These cases illustrate that the Federal Circuit will continue to hold that dictionary definitions take precedence over intrinsic evidence in some cases, but will no longer be as overt in doing so.¹⁵²

146. *Philips Elecs. N. Am. Corp. v. Contec Corp.*, 177 Fed. Appx. 981, 986 (Fed. Cir. 2006).

147. *See Philips Elecs.*, 177 Fed. Appx. at 986; *Philips Elecs. N. Am. Corp. v. Contec Corp.*, 312 F. Supp. 2d 592, 601 (D. Del. 2004).

148. *Sorensen v. Int’l Trade Comm’n*, 427 F.3d 1375, 1378, 1381 (Fed. Cir. 2005).

149. *In re Certain Automobile Tail Light Lenses & Prods. Incorporating Same*, USITC Pub. 210941, Inv. No. 337-TA-502, at 18-30 (July 2004).

150. *Sorensen*, 427 F.3d at 1379, 1381.

151. *Certain Automobile Tail Light Lenses*, USITC Pub. 210941, at 17.

152. For a good example of an overt use of dictionary in the pre-*Phillips* context, see *Nystrom v. Trex Co.*, (*Nystrom I*), 374 F.3d 1105, 1110-13 (Fed. Cir. 2004).

V. CONCLUSION

When the *en banc* court in *Phillips* reversed the panel decision that purportedly used the same methodology,¹⁵³ it was a clear message that the *Phillips* decision was not going to redeem the Federal Circuit's claim construction jurisprudence. It should not therefore be surprising that *Phillips* has had some effect on claim construction reasoning, but has not resolved the underlying disputes and problems with claim construction. This Note's empirical study shows that reversal rates remain substantially the same as shown in previous studies, but Federal Circuit panels in the post-*Phillips* world are now more willing to rely on specifications than dictionaries to interpret claims. However, to the extent the Federal Circuit's methodology has changed, it has largely shifted from a somewhat transparent but haphazard use of dictionaries into an even less predictable system where the court will often use dictionary definitions under the guise of "ordinary meaning" without indicating what sources to which it will refer. This Note's empirical study reveals this subterfuge, showing a high number of claim terms decided by referring simply to claim language, rather than to dictionaries. By including this category with the category representing other sources of extrinsic evidence, it appears that extrinsic evidence still contends with intrinsic evidence as a significant source for claim construction rulings, undermining the public-notice function of claims and resulting in uncertain decision-making and perpetuating a fractured system of claimed construction.¹⁵⁴ Because of this, the promise that "much of the time . . . it will be clear"¹⁵⁵ whether the court should read a limitation from the specification into the claims has proven largely hollow. The primary reason for these failures, as many other suggest, is the *de novo* standard of review of claim construction.

There is however, a glimmer of hope. Professor Moore is now Judge Moore of the Federal Circuit, and her detailed and insightful criticisms of the Federal Circuit's claim construction jurisprudence¹⁵⁶ will, with any luck, influence her colleagues on the bench.¹⁵⁷ The recent *Amgen Inc. v. Hoechst Marion Roussel, Inc.* decision seems to reflect Judge Moore's influence: counting up the multitude of concurrences and dissents to this pe-

153. See *Phillips v. AWH Corp. (Phillips II)*, 415 F.3d 1303, 1328-30 (Fed. Cir. 2005) (*en banc*) (Lourie, J., concurring).

154. See *supra* Sections I.B and IV.E.

155. *Phillips II*, 415 F.3d at 1323.

156. See generally Moore, *supra* note 120.

157. See The White House Judicial Nominations: Judge Kimberly A. Moore,, <http://www.whitehouse.gov/infocus/judicialnominees/moore.html> (last visited Dec. 12, 2006).

tition for rehearing *en banc* shows that no fewer than eight out of the twelve sitting Federal Circuit judges are willing to revisit the standard of review,¹⁵⁸ at least if the “appropriate case” arises.¹⁵⁹ Until then, litigants should simply endeavor to expect the unexpected.

Appendix

% Dictionary	% Specification	% Procedural Hist.	% Claim language	% Other extrinsic evidence	% Other / Not Clear
6.17%	44.44%	8.64%	29.63%	7.41%	3.70%
Overall Reversal Rate for Fed. Cir. Decisions Containing Claim Constructions					
			% Terms Reversed	% Cases with 1 or more Terms Reversed	
53.49%			33.33%	39.53%	

158. *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 469 F.3d 1039 (Fed. Cir. 2006).

159. *Id.* at 1045.