COMMENT

PHILLIPS v. AWH CORP.: REEMPHASIZING CONTEXT IN PATENT CLAIM CONSTRUCTION

ABSTRACT

This comment discusses a case that was much anticipated by the patent bar and resolved issues as to the proper method for interpreting the meaning of patent claims, a key issue in patent litigation. In an en banc decision, the Court of Appeals for the Federal Circuit chose between various prior inconsistent approaches to patent claim construction. Specifically, the court "reaffirmed" the principle that patent claims should be interpreted primarily by reference to the context provided by the patent specification, rather than to external sources such as dictionaries. This aspect of the decision likely focuses claim interpretation properly on the meaning from the point of view of the person skilled in the art. Despite this clarification, an opportunity was missed to improve the certainty, finality, and possibly the overall quality of claim construction decisions, when the court declined to reconsider its prior holding that claim interpretation decisions are reviewed de novo on appeal.

I. INTRODUCTION

Horse racing has long been regarded as the "sport of kings." The high stakes, high cost of participation, and perhaps, uncertainty of outcome have caused the same label to be applied to patent litigation. The claims of a patent define the claimed invention. Under the Patent Act determining the validity and infringement of patents requires a comparison

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1See, e.g., 2 SHORTER OXFORD ENGLISH DICTIONARY 2972 (5th ed. 2002). The expression has also been used to refer to warfare.


between the claimed invention and the prior art\(^5\) (in the case of validity) or the allegedly infringing device or process (in the case of infringement).\(^6\) Thus, interpreting a patent's claims is often an early and decisive hurdle in patent litigation.

In *Markman v. Westview Instruments, Inc.*,\(^7\) the United States Supreme Court affirmed the Court of Appeals for the Federal Circuit ("CAFC"), which held that courts should decide the issue of claim construction as a matter of law.\(^8\) The Court reasoned that having the courts interpret the claims would promote uniformity in claim construction.\(^9\) Indeed, uniformity in the interpretation of patent law was a goal of the Federal Courts Improvement Act,\(^10\) the law that created the CAFC in 1982.\(^11\) Under that Act, the CAFC was granted exclusive appellate jurisdiction in patent cases.\(^12\)

In spite of the legislative and judicial efforts to attain uniformity, there has been considerable uncertainty and inconsistency in patent law claim construction, even among the different panels of the CAFC.\(^13\) Thus, prior to *Phillips*, the CAFC adopted at least two distinct approaches to claim construction. In one approach, the court focused on the "intrinsic evidence," i.e., the patentee's own description of the invention in the patent's specification and the patent's prosecution history,\(^14\) with little weight given

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\(^5\)The "prior art" includes "knowledge that is publicly known, used by others, or available on the date of invention to a person of ordinary skill in the art." Black's Law Dictionary 119 (8th ed. 2004).

\(^6\)See infra text accompanying notes 22-23.


\(^8\)Markman v. Westview Instruments, Inc., 52 F.3d 967 (Fed. Cir. 1995).

\(^9\)Markman, 517 U.S. at 390.


to "extrinsic evidence" such as expert testimony and dictionaries.\textsuperscript{15} In the other approach, dictionaries were the primary source for determining the "ordinary meaning" of the claims, and the "ordinary meaning" thus derived governed unless a clear indication to the contrary appeared in the patent's specification or prosecution history.\textsuperscript{16} These fundamentally different approaches led to considerable uncertainty in the proper methodology for claim construction, perhaps contributing to the high reversal rates seen in the CAFC's claim construction decisions, which was reportedly as high as forty-seven percent in 2003-2004.\textsuperscript{17} In Phillips v. AWH Corp.,\textsuperscript{18} the CAFC agreed to a rehearing en banc\textsuperscript{19} primarily "to resolve issues concerning the construction of patent claims" raised by the different approaches.\textsuperscript{20}

This comment discusses the Phillips case and its implications. Part II describes the background to Phillips, focusing particularly on the development of the different approaches to claim interpretation following the Supreme Court decision in Markman. Part III describes the Phillips case itself, while Part IV discusses the holdings of the case, as well as the potential implications of the case, in greater detail.

II. BACKGROUND

A. Patent Claims and Claim Construction

Patent claims have been described as "statements ... of the metes and bounds of the patented invention."\textsuperscript{21} Claim construction—determining the meaning and scope of the claims of a patent—is of central importance in patent law. The validity of a patent claim, inter alia, depends on the claimed invention being both novel and nonobvious relative to the prior art,\textsuperscript{22} while patent infringement requires a showing that the alleged infringer is making, using, selling, offering for sale, or importing an invention

\textsuperscript{15}See infra text accompanying notes 72-83.
\textsuperscript{16}See infra text accompanying notes 84-97.
\textsuperscript{17}Mark T. Banner, Footnote 17: Love, Hate, and Markman, 6 SEDONA CONF. J. 131, 132 (2005).
\textsuperscript{19}Under FED. R. APP. P. 35, an en banc rehearing is appropriate if "necessary to secure and maintain uniformity of the court's decisions" or "the proceeding involves a question of exceptional importance." An en banc decision of the CAFC regarding an issue in patent law is particularly significant, because the decision binds all CAFC panels and also because the decision is national in scope due to the CAFC's exclusive jurisdiction in patent cases.
\textsuperscript{20}Phillips, 376 F.3d at 1382.
\textsuperscript{21}ROBERT C. KAHRL, PATENT CLAIM CONSTRUCTION § 1.01, at 1-3 (2001).
covered by a claim. Consequently, claim construction is often the central issue in patent litigation.

Claims have been used in patents for almost two hundred years. The Patent Acts of 1790 and 1793 required only that the patent specification describe the invention, and did not require claims. The first modern claim appeared in a patent issued in 1811, but the requirement for claims in patents developed from judicial decisions. In *Evans v. Eaton*, the United States Supreme Court interpreted the statutory requirement that the inventor describe his invention "in such full, clear and exact terms, as to distinguish the same from other things before known." The Court said the patentee should describe his improvement and "limit his patent to such improvement," thereby suggesting using claims to limit the patent's scope. The Patent Act of 1836 codified *Evans's* suggestion by requiring that the patentee "particularly specify and point out the part, improvement, or combination, which he claims as his own invention or discovery." Courts eventually came to regard the use of claims as mandatory, a requirement that Congress finally codified in the Patent Act of 1870. The requirement for claims under the current patent statute is now set forth in section 112, which retains, in essence, the language of the 1870 act.

Claims, like the patent specification as a whole, are written to be understood by a "person skilled in the art to which [the patented invention] pertains." Based on this statutory requirement, it follows that the claims, which are part of the specification, are interpreted from the point of view

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27 See KAHRL, supra note 21, § 2.03[F], at 2-29.
29 Act of Feb. 21, 1793, ch. 11, § 3.
30 *Evans*, 20 U.S. at 435.
32 See KAHRL, supra note 21, § 2.03[F], at 2-29.
33 Act of July 8, 1870, ch. 230, § 26, 16 Stat. 198, 201 (1870) (repealed 1952) (requiring that the patentee "particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery").
34 U.S.C. § 112, para. 2 (2000) (requiring that "[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention").
35 See id. § 112, para. 1.
of a person skilled in the patent's art.36 A patent may therefore assume, and need not explicitly disclose, details known to persons skilled in the art.37

B. Claim Construction as a Question of Law: Markman and Cybor

Despite the long history of using claims in patent law, there has been uncertainty as to the proper procedure for determining the meaning of patent claims. A threshold question is whether claim construction is a question of law or a question of fact.38 Although the Supreme Court in 1853 stated that determining what is the patented invention "is a question of law, to be determined by the court, construing the letters-patent, and the description of the invention and specification of claim annexed to them,"39 courts sometimes have recognized a fact-finding component to determining the meaning of claim terms.40

In its landmark decision in Markman v. Westview Instruments, Inc., the Supreme Court held "the construction of a patent, including the terms of art within its claim, is exclusively within the province of the court."41 Markman had sued Westview and another defendant for infringement of Markman's patent of a dry cleaning tracking system.42 The trial court had initially presented the issue of infringement to the jury, which returned a verdict finding infringement of Markman's patent.43 The court, however, then granted Westview's motion for judgment as a matter of law ("JMOL"), holding that "claim construction was a matter of law for the court."44 Specifically, the court found that the accused device did not infringe under its construction of the term "inventory" as it was used in Markman's

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36See KAHRL, supra note 21, § 4.03[B], at 4-17; see also Fromson v. Advance Offset Plate, Inc., 720 F.2d 1565, 1571 (Fed. Cir. 1983) ("Claims are normally construed as they would be by those of ordinary skill in the art."); Autogiro Co. of Am. v. United States, 384 F.2d 391, 407 (Ct. Cl. 1967) (stating if a particular construction "is intended in the claim, it must be pointed out so that people skilled in the art can make use of the patent").

37See, e.g., Spectra-Physics, Inc. v. Coherent, Inc., 827 F.2d 1524, 1534 (Fed. Cir. 1987) (stating that ".a patent need not teach, and preferably omits, what is well known in the art")

38See generally KAHRL, supra note 21, § 2.04[FI], at 2-65 to 2-72.


40See, e.g., Harries v. Air King Prods. Co., 183 F.2d 158, 164 (2d Cir. 1950) (Hand, J.) (holding that "the question was of how the art understood the term, which was plainly a question of fact; and unless the finding was 'clearly erroneous,' we are to take this definition as controlling").


43Id. at 973.

44Id.
claim. Markman appealed to the CAFC, arguing that the trial court erred in granting the JMOL because the court should have left the interpretation of the claim terms to the jury.

The CAFC acknowledged its prior opinions had "contained some inconsistent statements as to whether and to what extent claim construction is a legal or factual issue," but ultimately held claim construction was a matter of law to be reviewed de novo on appeal. The court also considered the sources of information that were used in construing claims. The primary sources of reference for claim construction were to be the intrinsic evidence: the claims themselves, the specification, and the prosecution history, if in evidence. The court also considered the role of extrinsic evidence—such as expert testimony—in construing the claims, stating the use of such evidence should be limited. Although a court had discretion to consider extrinsic evidence to help the court understand the patent and fully determine "the true meaning of the language employed in the patent," extrinsic evidence was not to be used "for the purpose of varying or contradicting the terms of the claims," nor for "clarifying ambiguity in claim terminology."

The Supreme Court's Markman decision, unanimously affirming the CAFC ruling, was concerned primarily with constitutional and policy considerations, and did not add to the CAFC's claim construction analysis. The Court concluded that claim construction was a "mongrel practice" "fall[ing] somewhere between a pristine legal standard and a simple historical fact." Applying the Court's "historical test," namely that the Seventh Amendment guarantees the right to trial by jury if such a right existed in 1791, the Court concluded that while there was a right to jury

45 Id.
46 Markman, 52 F.3d at 973-74.
47 Id. at 976.
48 Id. at 979.
49 Id. at 979-80.
50 Markman, 52 F.3d at 980-81.
51 Id. at 980 (quoting Seymour v. Osborne, 78 U.S. 516, 546 (1870)) (internal quotation marks omitted).
52 Id. at 981 (citing U.S. Indus. Chems., Inc. v. Carbide & Carbon Chems. Corp., 315 U.S. 668, 678 (1942)).
53 Id. at 986.
55 Id. at 388.
56 Id. at 376 (citing Charles W. Wolfram, The Constitutional History of the Seventh Amendment, 57 MINN. L. REV. 639, 640-43 (1973)).
57 Id.
trial in patent infringement cases, there was no historical evidence supporting a right to have a jury construe patent scope. The Court, however, did find that precedent and policy considerations, including the desirability of uniformity in claim construction, supported allocating responsibility for claim construction to courts. With respect to making credibility judgments, traditionally regarded as the jury's main strength, the court stated that credibility determinations made in assessing expert testimony relevant to claim construction would be "subsumed within the . . . sophisticated analysis of the whole document." Therefore, the jury's input would be less valuable than the judge's training and experience to evaluate the testimony in interpreting the whole document.

In Cybor Corp. v. FAS Technologies, Inc., the CAFC, en banc, reinforced the status of claim construction as a pure question of law. The Supreme Court's Markman opinion did not, under the CAFC's interpretation, regard claim construction as a legal issue with underlying fact questions, but rather rendered claim construction a pure question of law. Thus, under Cybor, a trial court's claim construction receives no deference and is reviewed de novo upon appeal.

C. Sources of Information for Claim Construction: Dictionaries and "Ordinary Meaning" versus the Specification

In Vitronics Corp. v. Conceptronic, Inc., the CAFC expanded upon its Markman holdings as to the sources courts could use in determining the meaning of claims. Vitronics sued Conceptronic for infringing a patent to a method involving soldering in the manufacture of printed circuit boards. The district court accepted a definition advanced by Conceptronic of a term ("solder reflow temperature") in the patent's claim. Conceptronic supported its interpretation using extrinsic evidence that included expert testimony. Under that claim interpretation, however, a preferred

58 Id. at 377.
59 Markman, 517 U.S. at 377-83.
60 Id. at 384-91.
61 Id. at 389.
62 Id. at 388-90.
63 138 F.3d 1448 (Fed. Cir. 1998) (en banc).
64 Id. at 1455.
65 Id. at 1456.
66 90 F.3d 1576 (Fed. Cir. 1996).
67 Id. at 1578-79.
68 Id. at 1587.
69 Id. at 1580-81.
embodiment of the invention described in the patent's specification fell outside the scope of the claim.\textsuperscript{70} The CAFC reversed, holding the extrinsic evidence considered by the trial court was inconsistent with the specification, and thus entitled to no weight.\textsuperscript{71}

In Vitronics, the CAFC strongly emphasized the role of intrinsic evidence in claim construction, stating: "In most situations, an analysis of intrinsic evidence alone will resolve any ambiguity in a disputed claim term. In such circumstances, it is improper to rely on extrinsic evidence."\textsuperscript{72} Intrinsic evidence should be consulted in the following order of priority: (1) the language of the claims, which should receive their "ordinary and customary meaning" unless the patentee, acting as "his own lexicographer," used the terms in a different manner and defined the special meaning in the patent specification or file history;\textsuperscript{73} (2) the specification, which is used to determine whether the patentee has used terms in a manner inconsistent with their ordinary meaning;\textsuperscript{74} and (3) the prosecution history, which is also part of the public record.\textsuperscript{75} In explaining the importance of relying primarily on the intrinsic evidence, the court emphasized the public notice function of the claims.\textsuperscript{76}

The specification-focused method used in Vitronics is one of two discrete approaches that the CAFC has taken to claim construction.\textsuperscript{77} Vitronics can be regarded as representative of a "specification-based" or contextual approach to claim construction because of the emphasis on

\textsuperscript{70}Vitronics, 90 F.3d at 1581.
\textsuperscript{71}Id. at 1584-86.
\textsuperscript{72}Id. at 1583.
\textsuperscript{73}Id. at 1582.
\textsuperscript{74}Vitronics, 90 F.3d at 1582.
\textsuperscript{75}Id. at 1582-83.
\textsuperscript{76}Id. at 1583 ("[C]ompetitors are entitled to review the public record, apply the established rules of claim construction, [and] ascertain the scope of the patentee's claimed invention . . . . Allowing the public record to be altered . . . by extrinsic evidence . . . would make this right meaningless."); \textit{see also }Michael S. Connor & John A. Wasleff, \textit{Where Do We Go from Here? A Critical Examination of Existing Claim Construction Doctrine}, 86 J. PAT. & TRADEMARK OFF. SOC'Y 878, 881 (2004) (noting that in this holding "a major concern of the court is the 'public notice function' of the claims").
reading claims in the overall context provided by the specification. In an extension of this approach, the court has sometimes read limitations into the scope of the claims based on the disclosure in the specification. In *SciMed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc.*, the court resolved a claim construction problem concerning whether the patentee's claims were limited to one of two known configurations for angioplasty catheters ("dual lumen" and "coaxial lumen" configurations). The court referred to the description in the common specification of three asserted patents, and concluded the description was consistent with only the coaxial configuration. The specification, therefore, disclaimed the dual configuration. The court stated:

Where the specification makes clear that the invention does not include a particular feature, that feature is deemed to be outside the reach of the claims of the patent, even though the language of the claims, read without reference to the specification, might be considered broad enough to encompass the feature in question.

Yet, in other cases, the CAFC has adopted an approach characterized as "claim-focused," emphasizing the "ordinary meaning" of the claims as the proper interpretation. A feature of these claim-focused cases has been judicial resort to published texts, such as dictionaries and treatises, as a special category of extrinsic evidence to determine the "ordinary meaning" of the terms used in the patent claims.

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78 See Molenda, supra note 77, at 915-920 (noting that in cases using the specification-focused claim construction methodology, the court has been willing, for example, to read limitations into the scope of the claims based on the disclosure in the specification). Cases cited by Dr. Molenda as typical examples of cases employing the specification-focused approach include *Toro Co. v. White Consol. Indus.*, 199 F.3d 1295 (Fed. Cir. 1999), and *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337 (Fed. Cir. 2001). *Vitronics* can be read as authorizing reading implied limitations on claim scope from specification, if it can be concluded that the specification "defines terms by implication." *Vitronics*, 90 F.3d at 1582 (citing *Markman*, 52 F.3d at 979).

79 242 F.3d 1337 (Fed. Cir. 2001)

80 Id. at 1340.

81 Id. at 1342-44.

82 Id. at 1344.

83 *SciMed Life Sys.*, 242 F.3d at 1341.

84 See Molenda, supra note 77, at 920-27 (suggesting that the recent "resurgence" of the claim-focused approach was a "backlash" against earlier "specification-focused" decisions).

Texas Digital Systems, Inc. v. Telegenix, Inc. has been described as a "high water mark" in this regard. In Texas Digital, the CAFC was faced with eleven separate claim construction issues. In articulating the proper analytical methods to resolve the issues, the court strongly endorsed using dictionaries in construing claim terms. The court reasoned that because the patentee had chosen the terms of a claim to satisfy the requirement of "particularly pointing out and distinctly claiming the subject matter" of his invention, those terms bore a "heavy presumption that they mean what they say and have the ordinary meaning that would be attributed to those words by persons skilled in the art." Furthermore, "dictionaries, encyclopedias and treatises" were "particularly useful resources to assist the court in determining the ordinary and customary meaning of claim terms."

The court went on to put "dictionaries, encyclopedias, and treatises publicly available at the time that the patent is issued" on par with the intrinsic record, stating such sources were objective, unbiased resources which help to determine the meaning of claim terms. The court concluded that "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." The court acknowledged that the intrinsic record must still be consulted "[b]ecause words often have multiple dictionary definitions . . . to identify which of the different possible dictionary meanings of the claim terms in issue is most consistent with the use of the words by the inventor," and to determine whether the patentee has rebutted "the presumption of ordinary and customary meaning" by "us[ing] the words in a manner clearly inconsistent with the ordinary meaning reflected . . . in a dictionary definition." However, consulting the specification and prosecution

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86308 F.3d 1193 (Fed. Cir. 2002).
88See Texas Digital Sys., Inc., 308 F.3d at 1201.
89Id.
91Texas Digital, 308 F.3d at 1202.
92Id.
93Id. at 1202-03.
94Id.
95Texas Digital, 308 F.3d at 1203 (emphasis added).
96Id. at 1204 (emphasis added).
history first "invite[d] a violation of . . . precedent counseling against importing limitations into the claims." 97

The protocol for claim construction advanced in Texas Digital thus departed from the approach advocated in Vitronics. At one level, the difference between the approaches could be seen as a difference of emphasis—i.e., looking to dictionaries first to determine the "ordinary meaning" under Texas Digital compared to looking first at the claims in the context of the specification under Vitronics. However, under Texas Digital, the specification was to be consulted only if the claim terms were inherently ambiguous, or to determine whether the patentee used terms in a manner "clearly inconsistent with the dictionary definition." 98 Under Vitronics, in contrast, it was improper to rely on extrinsic evidence if the meaning could be construed from the intrinsic evidence. 99

The divergence of approaches in claim construction methodology led to unpredictability 100 and confusion in the lower courts, 101 with commentators noting inconsistent approaches to claim construction depending on the particular panel composition of the CAFC. 102 In particular, several studies showed that about thirty-five to forty-five percent of district court claim construction decisions were reversed by the CAFC, 103 and a recent study

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97 Id.
98 Id. at 1203-04.
101 See, e.g., SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1347 (Fed. Cir. 2001) (Dyk, J., concurring) (noting that "[t]he problem is that our decisions provide inadequate guidance as to when it is appropriate to look to the specification to narrow the claim by interpretation and when it is not appropriate to do so").
102 See generally Wagner & Petherbridge, supra note 13, at 1105 (describing a statistical study of CAFC claim construction decisions and noting different approaches of members of the court).
103 Gretchen Ann Bender, Uncertainty and Unpredictability in Patent Litigation: The Time is Ripe for a Consistent Claim Construction Methodology, 8 J. INTELL. PROP. L. 175, 202-09 (2001) (finding that the CAFC found that district courts misconstrued claims in 65 of 160 cases (forty-one percent) reviewed between 1996 and 2000); Kimberly A. Moore, Are District Court Judges Equipped to Resolve Patent Cases?, 15 HARV. J.L. & TECH. 1, 8-17 (2001) (finding that the CAFC held that the district courts misconstrued thirty-three percent of 496 claim terms in 651 cases reviewed between 1996 and 2000); Kimberly A. Moore, Markman Eight Years Later: Is Claim Construction More Predictable?, 9 LEWIS & CLARK L. REV. 231, 239 (2005) (updating the preceding study and finding that the CAFC held that the district courts misconstrued almost thirty-five percent of 1100 claim terms in 651 cases reviewed between 1996 and 2003); Christian A. Chu, Note, Empirical Analysis of the Federal Circuit’s Claim Construction Trends, 16 BERKELEY TECH. L.J. 1074, 1104 (2001) (finding a forty-four percent reversal rate between 1998 and 2000); Andrew T. Zidel, Comment, 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, 744-748 (2003) (finding claim constructions reversed in thirty-nine of ninety-four claim
showed a reversal rate of forty-seven percent for claim construction decisions in 2003-2004.\textsuperscript{104} Although some commentators welcomed increased reliance on dictionaries as signaling a move towards formalism and predictability in claim construction,\textsuperscript{105} others commented on dictionaries' limitations, such as the potential for bias through dictionary choice\textsuperscript{106} and the linguistic inadequacy of a model that resorts to dictionaries first to address claim interpretation.\textsuperscript{107} The CAFC itself noted its claim construction case law had been "unfortunately complex and inconsistent,\textsuperscript{108}" while a trial court, faced with a claim construction issue and "not with a battle of experts, but rather one of opposing dictionaries and treatises . . . stitch[ing] no less than three definitional lines,"\textsuperscript{109} remarked that "the variegated tapestry of claim construction canons woven by the Federal Circuit in recent years . . . rivals that of Bayeux."\textsuperscript{110}

The CAFC chose Phillips v. AWH Corp. as its vehicle to address some of these patent claim construction issues.

III. ANALYSIS

A. Factual and Procedural History

In Phillips v. AWH Corp.,\textsuperscript{111} the patentee, Phillips, sued his former licensees for infringement of Phillips's patent for vandalism-resistant modular panels, which were useful in constructing prison walls.\textsuperscript{112} The


\textsuperscript{104}Banner, supra note 17, at 132.


\textsuperscript{107}Connor & Wasleff, supra note 76, at 890.


\textsuperscript{109}Boeing Co. v. United States, 57 Fed. Cl. 22, 25 (Fed. Cl. 2003).

\textsuperscript{110}Id. at 24.


\textsuperscript{112}Id. at 1209.
The district court found the claim element "means . . . for increasing its load bearing capacity comprising internal steel baffles" was a "means-plus-function" description, and thus limited under section 112 paragraph 6, to the embodiments shown in the specification. The claim was therefore construed to require that the "baffles" be oriented at angles other than 90° relative to the outer walls, and form an interlocking barrier since these were features of the embodiment shown in the specification. At the district court level, Phillips conceded he could not show "infringement under the court's claim construction," and the court granted summary judgment for the defendants.

On appeal, a panel of the CAFC affirmed the district court's grant of summary judgment. The panel disagreed with the court's characterization of the baffle element as a means-plus-function description because the word "baffle," which had a dictionary-derived ordinary meaning of "something for deflecting, checking, or otherwise regulating flow," was a "sufficient recitation of structure" to avoid the application of section 112 paragraph
Even so, the panel majority concluded that Phillips's specification had characterized the ability of the baffles to deflect projectiles, such as bullets, as essential to the invention. Therefore, "the baffles must be oriented at angles other than 90°" because "[b]affles directed at 90° cannot deflect projectiles . . . and, in any event, are disclosed in the prior art." On the other hand, the dissenting opinion objected and stated the majority had incorrectly read the requirement of nonperpendicular deployment of the baffles from the specification into the claims. Judge Dyk argued that the plain meaning did not exclude the 90° orientation and should control in claim construction since "there [was] no suggestion that the patentee, acting as his own lexicographer, gave a special meaning to the term baffles." The dissent also stated that because the specification described only a preferred embodiment of the invention, it should not limit the claims. Judge Dyk also argued that bullet-deflection was only one function of the baffles, with others including "high load bearing strength." This undercut the argument that the nonperpendicular orientation of the baffles was a required feature of the invention because claims should not be construed as being limited to embodiments that achieve every objective of the invention.

Phillips petitioned for rehearing, and the CAFC vacated the panel decision and agreed to rehear the appeal en banc. In granting the petition, the court stated it had "determined to hear this case en banc in order to resolve issues concerning the construction of patent claims raised by the now-vacated panel majority and dissenting opinions." The court then solicited party and amicus curiae briefs addressing seven questions concerning claim construction methodology, particularly addressing the
role of dictionaries versus the specification (Questions 1-3); whether both the majority's and minority's methodologies should be considered together resulting in a dual restriction on claim scope (Question 4); whether and when a narrow construction should be adopted in order to avoid invalidity (Question 5); the role of prosecution history and expert testimony in construing claims (Question 6); and what deference, if any, should the CAFC accord to a trial court's claim construction (Question 7). Since the CAFC has sometimes provided explicit answers to questions posed in orders granting en banc rehearing, the stage was set for the possible resolution of the claim construction conundrum.

interpret a claim term or by looking primarily to the patentee's use of the term in the specification? If both sources are to be consulted, in what order?
2. If dictionaries should serve as the primary source for claim interpretation, should the specification limit the full scope of claim language (as defined by the dictionaries) only when the patentee has acted as his own lexicographer or when the specification reflects a clear disclaimer of claim scope? If so, what language in the specification will satisfy those conditions? What use should be made of general as opposed to technical dictionaries? How does the concept of ordinary meaning apply if there are multiple dictionary definitions of the same term? If the dictionary provides multiple potentially applicable definitions for a term, is it appropriate to look to the specification to determine what definition or definitions should apply?
3. If the primary source for claim construction should be the specification, what use should be made of dictionaries? Should the range of the ordinary meaning of claim language be limited to the scope of the invention disclosed in the specification, for example, when only a single embodiment is disclosed and no other indications of breadth are disclosed?
4. Instead of viewing the claim construction methodologies in the majority and dissent of the now-vacated panel decision as alternative, conflicting approaches, should the two approaches be treated as complementary methodologies such that there is a dual restriction on claim scope, and a patentee must satisfy both limiting methodologies in order to establish the claim coverage it seeks?
5. When, if ever, should claim language be narrowly construed for the sole purpose of avoiding invalidity under, e.g., 35 U.S.C. §§ 102, 103, and 112?
6. What role should prosecution history and expert testimony by one of ordinary skill in the art play in determining the meaning of the disputed claim terms?
7. Consistent with the Supreme Court's decision in Markman v. Westview Instruments, Inc., 517 U.S. 370, 116 S. Ct. 1384, 134 L.Ed.2d 577 (1996), and our en banc decision in Cybor Corp. v. FAS Technologies, Inc., 138 F.3d 1448 (Fed. Cir. 1998), is it appropriate for this court to accord any deference to any aspect of trial court claim construction rulings? If so, on what aspects, in what circumstances, and to what extent?

Id. at 1383.

B. The Decision En Banc

In its decision en banc, the CAFC described the question presented by the case as "the extent to which [the court] should resort to and rely on a patent's specification in seeking to ascertain the proper scope of its claims."\(^{133}\) This question, the court found, was framed by the first two paragraphs of Section 112 of the Patent Act.\(^ {134} \) "The second paragraph requires us to look to the language of the claims to determine what 'the applicant regards as his invention.' On the other hand, the first paragraph requires that the specification describe the invention set forth in the claims."\(^ {135} \) The court stated that this issue was hardly new, and later concluded its decision would "reaffirm" the "still applicable" principles established in Markman and Vitronics, but that the court's previous statements, namely with regard to the use of dictionaries in claim construction, "require[d] clarification."\(^ {136} \)

The court reiterated some of the principles of claim construction established in the prior cases. The court first stated "[i]t is a 'bedrock principle' of patent law that the claims," and not the written description part, of a patent specification defined the invention and the patentee's "right to exclude."\(^ {137} \) The terms of a claim are given the "ordinary and customary meaning . . . that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application."\(^ {138} \) The relevant inquiry, however, was how a person of ordinary skill in the art would understand the claim term reading it "not only in the context of the particular claim . . . but in the context of the entire patent, including the specification."\(^ {139} \) The court therefore reaffirmed the principle of Vitronics that the intrinsic evidence—the claims themselves, the written description, and the prosecution history—is the


\(^{135}\)Phillips III, 415 F.3d at 1312.

\(^{136}\)Id.

\(^{137}\)Id. (quoting Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1115 (Fed. Cir. 2004)). A patent grants the patent holder the right to exclude others from practicing the invention rather than the right to practice the invention himself.

\(^{138}\)Id. at 1312-13 (citing Innova, 381 F.3d at 1116). The definition removes some doubt as to the relevant time at which the meaning of a claim terms to a person of skill in the art—and hence construction of a claim—should be evaluated. Because of advances in technology, the understanding of a claim may be different at the time of the invention, the time at which the patent application is filed, or the time at which the patent application is issued. See ROBERT L. HARMON, PATENTS AND THE FEDERAL CIRCUIT 354-55 (7th ed. 2005).

\(^{139}\)Phillips III, 415 F.3d at 1313.
primary source of information for claim construction.\textsuperscript{140} The court explained that the specification's importance in claim construction was due to the statutory requirement for a "full' and 'exact' description of the claimed invention," so that "the specification necessarily informs the proper construction of the claims."\textsuperscript{141}

With regard to the use of dictionaries and treatises, however, the court stated "the Texas Digital court'' had placed too much emphasis on these extrinsic sources, and too little emphasis on the intrinsic sources.\textsuperscript{142} The court reasoned that looking to the meaning derived from a dictionary and whether the patentee has overcome a presumption in favor of that definition, by explicitly using a different definition or "clear[ly] disavow[ing] claim scope,"\textsuperscript{143} 'improperly restrict[ed] the role of the specification in claim construction" in a manner inconsistent with the court's prior holdings in cases such as Vitronics.\textsuperscript{144} The problem with this approach was "that it fociuse[d] the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent."\textsuperscript{145} The court then proceeded to explain that "[p]roperly viewed, the 'ordinary meaning' of a claim term is its meaning to the ordinary artisan after reading the entire patent."\textsuperscript{146} Dictionaries, on the other hand, give definitions of claims as used in multiple settings, not just the field of a particular patent. Consequently, overly relying on a broad dictionary definition for claim interpretation risks reaching an overbroad interpretation of the claim.\textsuperscript{147} However, the court also clarified that the appropriate use of dictionaries and treatises, like that of expert testimony, was still permitted under the principles established in Markman and Vitronics.\textsuperscript{148}

The court acknowledged that the "fine" distinction between interpreting claims in light of the specification and avoiding improper importation of limitations from the specification into the claims—the

\textsuperscript{140}Id. at 1314-17.

\textsuperscript{141}Id. at 1316 (citing Merck & Co. v. Teva Pharms. USA, Inc., 347 F.3d 1367, 1371 (Fed. Cir. 2003)).

\textsuperscript{142}Id. at 1319-20. The court's discussion of the Texas Digital decision is characterized by an interesting linguistic shift, referring to "the Texas Digital court" in contrast to the discussion of cases such as Vitronics which speaks in terms such as "we have held" and "this court." See id. at 1311-18.

\textsuperscript{143}Phillips III, 415 F.3d at 1320 (citing Texas Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193, 1204 (Fed. Cir. 2002)).

\textsuperscript{144}Id.

\textsuperscript{145}Id. at 1321.

\textsuperscript{146}Id. (emphasis added).

\textsuperscript{147}Phillips III, 415 F.3d at 1321.

\textsuperscript{148}Id. at 1317-19, 1322-23.
concern initially expressed in Texas Digital—was difficult to apply in practice. The court suggested the line between the two could be discerned by focusing on how a person of skill in the art would understand the claim terms, and how the terms are used in the specification and claims, to determine whether the descriptions in the specification were exemplary or the only embodiments contemplated by the patentee.

The court concluded there was "no magic formula or catechism for conducting claim construction." A court can use both intrinsic and extrinsic evidence in claim construction, and the order of consulting the different sources is not important as long as the appropriate weight is attached to the respective evidence, with the goal of comprehending "how a person of ordinary skill in the art would understand the claim terms."

Although agreeing with the panel's approach of looking to the specification to construe the claims, the court en banc disagreed with the panel's application of this principle in the Phillips case. The court adopted some of the dissent's reasoning that the "baffles" were not required to be at angles other than 90° because there were dependent claims requiring baffles to be oriented at "angles for deflecting projectiles," the inclusion of the limitation in the dependent claim suggested that the patentee did not understand the term "baffles," already to include that limitation. The court also agreed that because the specification described

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149 Id. at 1323 (quoting Comark Commc'ns, Inc. v. Harris Corp. 156 F.3d 1182, 1186 (Fed. Cir. 1998) ("[T]here is sometimes a fine line between reading a claim in light of the specification, and reading a limitation into the claim from the specification.")

150 See id. at 1323. The court did not explicitly state how the distinction between permissibly reading claims in light of the specification and impermissibly importing limitations from the specification into the claims was to be made. Judge Lourie stated, "[C]laims need not necessarily be limited to specific or preferred embodiments in the specification, although they are limited to what is contained in the overall disclosure of the specification." Id. at 1328-29 (Lourie, J., concurring in part, dissenting in part). Belt and Quish suggest a "formula" for when the specification limits the claims that a claim will be limited by the specification when: (1) the specification provides an express definition; (2) the specification disavows claim scope (a) expressly, (b) by distinguishing a term from the prior art, or (c) describing a particular embodiment as important to the invention; (3) the claim is ambiguous and requires intrinsic evidence to clarify it; and (4) in means-plus-function claims. See Erik Paul Belt & Courtney M. Quish, What Phillips Didn't Tell You: The Federal Circuit's Formula for Reading Limitations from the Specification into the Claims, ANDREWS PATENT LITIG. REP., Sept. 20, 2005, at 13 (citing CCS Fitness, Inc. v. Brunswick Corp. 288 F.3d 1359, 1366-67 (Fed. Cir. 2002)).

151 Phillips III, 415 F.3d at 1324.

152 See id.

153 Id. at 1323.

154 Id. at 1324. In claim 2 of Phillips's patent, the limitation on the orientation of the "baffles" was the only added limitation, so claims 1 and 2 would have the same scope if the term "baffles" already inherently contained this limitation. See U.S. Patent 4,677,798, col.6, II.21-38 (issued July 7, 1987). The rule that a claim should be construed as not to contain limitations
functions of the "baffles" other than deflecting projectiles which could be served by perpendicularly oriented "baffles," such as providing structural support, and it was not required that every objective of an invention be served by every embodiment, the nonperpendicularity limitation was not required by the specification. 155

In a strongly worded dissent, Judge Mayer criticized the court's decision156 to leave the Cybor157 holding unchanged, i.e., that claim construction is subject to nondeferential review upon appeal.158 He remarked on "the futility, indeed the absurdity of the court's persistence in adhering to the falsehood that claim construction is a matter of law devoid of any factual component."159 In doing so, the court had substituted the "black box . . . of the jury, with the black hole of this court," a court whose "rulings resemble reality, if at all, only by chance."160 Judge Mayer stated that without recognizing the factual component of the task of claim construction, and reviewing the trial court's determination on such questions of fact deferentially, it would be impossible to develop a "workable standard" for claim interpretation.161 In conclusion, Judge Mayer likened the court's opinion "to rearranging the deck chairs on the Titanic—the orchestra is playing as if nothing is amiss, but the ship is still heading for Davey Jones' locker."162

IV. EVALUATION

A. Construing Patent Claims in Context

The Phillips court appropriately determined that the intrinsic record, the specification, and prosecution history, should be the primary source of reference for claim construction. The claims should be construed in the context provided by the written description. This conclusion is eminently sensible, consistent with the Patent Act, and serves important policy goals.

The court's decision en banc in Phillips can be criticized for failing to set out a precise methodology to provide certainty in claim construction.

explicitly added in a claim that depends from it is known as the "doctrine of claim differentiation." KAHRL, supra note 21, § 4.03[F], at 4-40.

155Phillips III, 415 F.3d at 1325-27.
156Id. at 1330.
158See supra text accompanying notes 63-65.
159Phillips III, 415 F.3d at 1330 (Mayer, J., dissenting).
160Id.
161Id. at 1331.
162Id. at 1334-35.
The belief that greater certainty would result from emphasizing "plain meaning" has been seen as a virtue of the approach, espoused in Texas Digital, of relying heavily on dictionary definitions.\textsuperscript{163} Yet, while such pragmatic considerations have a role in considering questions of procedure, such as whether claim construction should be determined by judge or jury,\textsuperscript{164} alone they should surely play a lesser role, if any, in determining the substantive outcome of the claim's construction. The Phillips decision itself demonstrates that certainty of outcome does not follow from general agreement on claim construction methodology. The panel and en banc decisions agreed that the claims should be construed by emphasizing the context provided by the intrinsic evidence, but reached different conclusions as to the proper claim construction. Nevertheless, as discussed below, contextual interpretation is the method most consistent with the Patent Act, and provides several policy advantages.

In considering the proper methodology to be applied in answering a claim construction question, the first issue that must be addressed is defining the precise question that a claim construction inquiry seeks to answer.\textsuperscript{165} The Patent Act requires a patent to provide "a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains . . . to make and use the same."\textsuperscript{166} Thus, the CAFC has consistently held the claims are to be construed in the way that a person skilled in the art would understand them.\textsuperscript{167} Consequently, the meaning of the claim to the person skilled in the art is the objective inquiry of the claim construction determination.

\textsuperscript{163}See, e.g., Karen C. Mitch, Comment, Pondering a "Baffling" Situation: The "Reconstruction" of Claim Construction, 4 J. MARSHALL REV. INTELL. PROP. L. 623, 641 (2005). Whether the dictionary-based approach in fact provides this advantage is doubtful because of the uncertainties created by dictionary choice and the multiplicity of definitions potentially to be found within the dictionaries. See Miller & Hilsenteger, supra note 106.


\textsuperscript{166}35 U.S.C. § 112, para. 1.

\textsuperscript{167}E.g., Multiform Desiccants, Inc. v. Medzam, Ltd., 133 F.3d 1473, 1477 (Fed. Cir. 1998):

It is the person of ordinary skill in the field of the invention through whose eyes the claims are construed. Such person is deemed to read the words used in the patent documents with an understanding of their meaning in the field, and to have knowledge of any special meaning and usage in the field. The inventor's words that are used to describe the invention—the inventor's lexicography—must be understood and interpreted by the court as they would be understood and interpreted by a person in that field of technology.
If the Patent Act contemplates that claims are to be construed as a person skilled in the art would interpret them, then it is equally clear the patent claims should be construed in the context of the patent specification as a whole. This view is strongly supported by Supreme Court precedent. Although a patent lawyer might tend to read a patent specification starting from the back with the claims, by requiring the specification to conclude with the claims, section 112 clearly contemplates that a person skilled in the art would read the claims after reviewing the specification. Thus, the Phillips court's holding that "the 'ordinary meaning' of a claim term is its meaning to the ordinary artisan after reading the entire patent," rather than an abstract dictionary definition, is entirely consistent with, and arguably mandated by, section 112 of the Patent Act.

Likewise, the statutory requirement that the specification describe and enable a person skilled in the art to make and use the claimed invention necessarily requires that the claims be construed in light of the specification. This requirement clearly contemplates that a person skilled in the art will look to the description of the invention, and how to make and use it, in order to understand what the claimed invention is. Further, a valid construction of the claim must be consistent with the written description and enablement requirements of the statute.

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168E.g., United States v. Adams, 383 U.S. 39, 49 (1966) ("[I]t is fundamental that claims are to be construed in the light of the specifications and both are to be read with a view to ascertaining the invention . . ."); Weber Elec. Co. v. E.H. Freeman Elec. Co., 256 U.S. 668, 678 (1921):

[T]hat no rotary movement was implied in the use of "telescopically received" and 'telescopically applied' in the patent . . . is . . . unmistakably shown by the frequent use of the same or equivalent expressions in the specification . . . That the inventor did not intend to claim . . . such rotary movement . . . is . . . so clear that it is not necessary to consider the dictionary definitions of the words used . . .

Carnegie Steel Co. v. Cambria Iron Co., 185 U.S. 403, 432 (1902) ("The claim of a patent must always be explained by and read in connection with the specification . . . where infringement charged in the use of an apparatus for mixing cupola metal, the question would be squarely presented whether the claim had been illegally expanded beyond the specification."); Seymour v. Osborne, 78 U.S. 516, 547 (1870) ("Where the claim immediately follows the description of the invention it may be construed in connection with the explanations contained in the specifications, and where it contains words referring back to the specifications, it cannot properly be construed in any other way.").


170Phillips III, 415 F.3d at 1321 (emphasis added).

An illustration of this concept—and of the danger of relying on dictionary definitions—is provided by *Nystrom v. Trex Co.*, which involved the disputed construction of the term "board" in a patent for decking boards that were curved to shed water. When the case was originally heard by the CAFC, the term "board" was given a broad construction, encompassing both wooden and nonwooden boards, based on its dictionary definition. This was the case despite the specification consistently describing the boards as being made from wood cut from a log, and emphasizing that the shape of the boards made better use of the log. After *Phillips* was decided en banc, the CAFC reheard the case and withdrew its earlier claim construction decision, holding that, because of the description in the specification, the term "board" was limited to wooden boards cut from a log. The court explained:

What *Phillips* now counsels is that in the absence of something in the written description and/or prosecution history to provide explicit or implicit notice to the 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.

Additionally, policy considerations strongly support interpreting the claims in the context of the intrinsic record. Since the specification and prosecution history together comprise the publicly available record—the record available to persons skilled in the art—the public notice function of patent claims is better served by making the intrinsic record the primary reference for interpreting claims. In contrast, were dictionary definitions to serve as the primary reference in interpreting claims, a competitor seeking to design around the patent claims might need to consult a plethora of definitions in a multitude of dictionaries, without knowing which

173 Id. at 1107.
174 Id. at 1111-12.
175 Id. at 1121 (Gaharsa, J., dissenting).
176 *Nystrom*, 424 F.3d at 1143.
177 Id. at 1145.
178 See supra note 76.
dictionary, or dictionaries, a court might ultimately follow in attempting to discern the boundaries encompassed by the patent's claims.

The intrinsic evidence is the record that was available to the Patent Office when it examined the claims and found them to be patentable. Contextual interpretation—relying primarily on the intrinsic record—carries the greatest likelihood of a claim construction that is consistent with the way in which the Patent Office interpreted the claims when the patent was issued. As the Phillips court noted, relying on dictionary definitions as the presumed construction, absent a clear disavowal of claimed scope, is problematic because it risks a systematically overbroad interpretation of the claims—beyond that which the Patent Office has deemed patentable, and that which the patentee actually invented and disclosed.

The patent system exists "[t]o promote the Progress of Science and useful Arts," and seeks to "foster and reward invention" by granting the patent monopoly, and "promot[ing] disclosure of inventions to stimulate further innovation." By limiting the scope of claims to only what the patentee invented and disclosed, contextual interpretation serves as a means of accomplishing a fundamental goal of patent policy, which is to stimulate innovation. Disclosing the invention stimulates innovation by encouraging competitors to improve upon and design around patented inventions. The reference to dictionary definitions gives patent claims a systematically overbroad construction and inhibits innovation by reducing the opportunity and incentive for competitors to engage in such activities. Limiting the scope of the patent to the invention actually contemplated and described by the patentee leaves room for innovation by others, while still granting the patent monopoly for the invention contemplated by the patentee, to the extent that it is adequately disclosed in the specification.

179Miller & Hilsenteger, supra note 106, at 908-09 (charting the twenty-five different general purpose dictionaries and forty-four specialized references used by the CAFC as resources in claim construction opinions between 1995 and 2004).
180Brief for the United States as Amicus Curiae at 10, Phillips v. AWH Corp., 415 F.3d 1303 (Fed. Cir. 2005) (Nos. 03-1269, 03-1286).
181Phillips III, 415 F.3d at 1321.
182U.S. CONST. art. 1, § 8, cl. 8.
184E.g., Slimfold Mfg. Co. v. Kinkead Indus., Inc., 932 F.2d 1453, 1457 (Fed. Cir. 1991) ("Designing around patents is, in fact, one of the ways in which the patent system works to the advantage of the public in promoting progress in the useful arts, its constitutional purpose.").
B. The Role of Dictionaries and Expert Testimony in Claim Construction

The Phillips decision appropriately relegated the weight given to dictionary definitions in construing claims. At the same time, the court's emphasis on construing claims in light of the specification from the point of view of a person skilled in the art may result in an increased emphasis on expert testimony in claim construction. Although the court has been concerned with potential bias from such witnesses, this concern should be outweiged by the value of the input from people who are actually skilled in the art. The protections of the adversary process, the judge's ability to evaluate testimony, and the court's powers under the rules of evidence provide adequate safeguards against witness bias.

The Markman and Vitronics decisions grouped references such as dictionaries, encyclopedias, and treatises together with testimonial evidence, such as expert or inventor testimony, as disfavored "extrinsic evidence" to be considered, if at all, only to explain the technological background of the invention. Texas Digital, in contrast, elevated dictionaries to the role of a primary reference for claim construction which resulted in tension with the Markman/Vitronics approach. The CAFC's decision in Phillips clarifies the role of dictionary definitions in claim construction to a secondary role as extrinsic evidence.186

The Phillips court discussed the problems associated with using dictionaries as a primary reference for claim construction, and the court's decision would seem to resolve the matter. In addition to the main problem discussed by the court—i.e., using dictionaries focuses the inquiry on the abstract meaning of words, and tends to result in overbroad claim construction187—commentators have noted other issues.188 Collateral problems include: choosing among available dictionaries, choosing between different definitions, that the approach ignores the context in which the term is to be used, and that dictionaries do not keep up with changes in technology.189 By clarifying the role of dictionaries as extrinsic evidence, i.e., secondary to the intrinsic record, the CAFC in Phillips has appropriately addressed these issues. The court's holding does, however,

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186Phillips III, 415 F.3d at 1322.
187Id. at 1321.
188E.g., Jessica C. Kaiser, Comment, What's that Mean? A Proposed Claim Construction Methodology for Phillips v. AWH Corp., 80 CHI.-KENT L. REV. 1009, 1021 (2005); see also Miller & Hilsenteger, supra note 106, at 866-79 (discussing the problem of dictionary choice and interpreting dictionary definitions and how the choice can influence the outcome of claim construction enquiries).
189Id.
permit the use of dictionaries and treatises "at any time . . . to better understand the underlying technology . . . when construing claim terms, so long as the dictionary definition does not contradict [the intrinsic record]." Since the use of dictionaries potentially escapes the protections of the adversary process, it is advisable that reliance on dictionaries be confined to situations under which the doctrine of judicial notice would apply if the dictionary definition were regarded as an adjudicative fact.

The Phillips case did not address in detail the role of expert testimony in claim construction, since it was not directly raised by the case, although briefing on the issue was requested in the order granting the rehearing en banc. The court briefly restated the principle that courts could use expert testimony to provide technical background information as to the technology, or how the invention works, and to establish the meaning in the art of particular terminology, but should discount expert testimony that is inconsistent with the intrinsic evidence.

The potential practical effect of the court's emphasis on the meaning of claims from the point of view of the person skilled in the art in the context of the specification may be that expert testimony will assume increased importance in claim construction. The use of expert testimony from persons skilled in the art to explain the technological background of the invention is already a feature of Markman (claim construction) hearings. Increasing the emphasis on the context provided by the specification increases the importance of expert testimony to understand this context because the judge making the claim construction determination is generally not equipped with the knowledge to understand the technology

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190 Phillips III, 415 F.3d at 1322-23 (quoting Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1578, 1584 n.6 (Fed. Cir. 1996)).

191 Connor & Wasleff, supra note 76, at 889.

192 See FED. R. EVID. 201(b) (stating that "[a] judicially noticed fact must be one not subject to reasonable dispute"). Thus, it would be inappropriate for a court to judicially notice as "the" definition of a term one definition chosen among many available dictionary definitions, since such a choice would render the definition subject to reasonable dispute; see also KAHRL, supra note 21, § 7.03, at 7-9 to 7-10 (characterizing use of dictionaries in claim construction as judicial notice); but cf. Miller & Hilsenteger, supra note 106, at 867 (suggesting that the Federal Rules of Evidence might not regulate the use of dictionaries at all if dictionary content is considered a legislative rather than an adjudicative fact).

193 See supra note 131.

194 Phillips III, 415 F.3d at 1318 (citing Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1308-09 (Fed. Cir. 1999); Key Pharms. v. Hercon Labs. Corp., 161 F.3d 709, 716 (Fed. Cir. 1998)).

195 Id. (citing Key Pharms., 161 F.3d at 716).

196 KAHRL, supra note 21, § 12.02[C], at 12-11 to 12-14. As a result of Markman's holding that claim construction is a matter of law for the court, claim construction is conducted pretrial and typically involves an evidentiary "Markman hearing." See id. § 12.02.
of the invention. Such knowledge, however, is possessed by the person skilled in the art from whose viewpoint the claims should be construed. The intrinsic evidence alone may be insufficient to understand the teachings of the specification, in part, because the specification may assume, and therefore not explicitly disclose, details known to persons skilled in the art.\textsuperscript{197} Although the potential for bias has been a concern with allowing expert testimony to be considered in claim construction decisions,\textsuperscript{198} a judge should be well equipped to discern such bias, particularly when the witness's testimony is subject to cross-examination. In addition, the discretion given to the trial court under the rules of evidence,\textsuperscript{199} or the court's inherent powers,\textsuperscript{200} including the power of the court to appoint its own expert,\textsuperscript{201} provide appropriate safeguards to control the integrity of expert witnesses.\textsuperscript{202}

C. De Novo Review of Claim Construction Determinations

Perhaps the most controversial aspect of the \textit{Phillips} decision—and that which provoked Judge Mayer's spirited dissent—was the decision to leave the \textit{Cybor} holding unchanged. Specifically, the court held the claim construction determination is a pure matter of law without underlying factual determinations, and hence subject to \textit{de novo} review without any deference to the trial court upon appeal.\textsuperscript{203} AWH also unsuccessfully

\begin{footnotesize}
\begin{enumerate}
\item See supra text accompanying notes 35-37; see also Connor & Wasleff, supra note 76, at 908; M. Reed Staheli, \textit{Deserved Deference: Reconsidering the De Novo Standard of Review for Claim Construction}, 3 MARQ. INTELL. PROP. L. REV. 181, 187 (1999) ("A judge can only learn so much from intrinsic evidence because it is designed to 'enable any person skilled in the art to which it pertains . . . to make and use the' invention.").
\item See, e.g., \textit{Phillips III}, 415 F.3d at 1318.
\item See \textit{Fed. R. Evid.} 702 (requiring expert testimony to be (1) "based upon sufficient facts or data"; (2) "the product of reliable principles and methods"; and (3) result from reliable application of the principles and methods to the facts of the case); see also Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 592-95 (1993) (requiring a trial judge to evaluate whether proffered scientific testimony is based on scientific knowledge and will be helpful to the trier of fact in understanding or determining a fact in issue).
\item See \textit{Kahrl}, supra note 21, § 12.02[B], at 12-10. The rules of evidence have been stated to be inapplicable in \textit{Markman} hearings. Chad Indus., Inc. v. Automation Tooling Sys., Inc., 938 F. Supp. 601, 604 (C.D. Cal. 1996). However, \textit{Markman} authorizes courts to "use[e] certain extrinsic evidence that the court finds helpful and reject[] other evidence as unhelpful." Markman v. Westview Instruments, Inc., 52 F.3d 967, 981 (Fed. Cir. 1995).
\item \textit{Fed. R. Evid.} 706.
\item Connor & Wasleff, supra note 76, at 909.
\item \textit{Phillips III}, 415 F.3d at 1328.
\end{enumerate}
\end{footnotesize}
petitioned the Supreme Court to take up this issue on appeal.\textsuperscript{204} To be fair, the CAFC merely stated it had "decided not to address that issue at this time,"\textsuperscript{205} thus leaving the door ajar to potential future reconsideration of the issue. During such reconsideration by the CAFC, the \textit{Cybor} decision should probably be abrogated to recognize that claim construction involves underlying factual determinations that should be reviewed deferentially on appeal, a standard recommended in several amicus curiae briefs,\textsuperscript{206} and required by the Federal Rules of Civil Procedure.\textsuperscript{207}

The Supreme Court's decision in \textit{Markman} recognized that claim construction is a "mongrel practice"\textsuperscript{208} that "falls somewhere between a pristine legal standard and a simple historical fact."\textsuperscript{209} In \textit{Cybor}, the CAFC declined to recognize that the claim construction involved underlying factual determinations and held it to be a pure question of law, with the claim construction subject to \textit{de novo} review on appeal.\textsuperscript{210} In contrast, if claim construction were considered a question of law subject to underlying factual determinations,\textsuperscript{211} the factual determinations of the trial court would be reviewed deferentially on appeal.\textsuperscript{212}

The claim construction decision clearly involves determinations of fact. For example, a court's consideration of expert testimony involves

\textsuperscript{204}AWH's Petition for Certiorari asked the Court to consider the Question Presented: "Whether the Federal Circuit is correct in holding that all aspects of a district court's patent claim construction may be reviewed \textit{de novo} on appeal." Petition for a Writ of Certiorari, AWH Corp. v. Phillips, 126 S. Ct. 1332 (2006) (No. 05-602), \textit{available at} 2005 WL 3038548 (Nov. 9, 2005). However, the Court denied certiorari. AWH Corp. v. Phillips, 126 S. Ct. 1332 (2006).

\textsuperscript{205}\textit{Phillips III}, 415 F.3d at 1328.


\textsuperscript{207}See \textit{Fed. R. Civ. P.} 52(a) (stating that "[f]indings of fact, whether based on oral or documentary evidence, shall not be set aside unless clearly erroneous").


\textsuperscript{209}Id. at 388.

\textsuperscript{210}Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1455-56 (Fed. Cir. 1998) (en banc).

\textsuperscript{211}See Graham v. John Deere Co., 383 U.S. 1, 17 (1966) (characterizing the question of patent validity under § 103 as a question of law subject to "basic factual inquiries").

\textsuperscript{212}\textit{Fed. R. Civ. P.} 52(a).
factual determinations as to what is known in the art, as well as what the patent specification teaches to a person of skill in the art, both of which are relevant to the claim construction question because of their bearing on how a person skilled in the art would understand the claims. The CAFC has sidestepped this issue by characterizing the role of the facts presented by extrinsic evidence as background "information," assisting in the interpretation of the legal document, rather than "evidence" to be evaluated for credibility from which factual evidentiary findings are drawn. Yet this is a strained analysis, which leaves the court in the difficult position reviewing de novo the trial court determination made following factually intensive Markman hearings.

The court's failure to recognize underlying factual questions in claim construction and its decision to treat claim construction as a pure matter of law, subject to de novo review, has several undesirable consequences. First, it is probably an underlying reason for the constraints placed by the CAFC on the reception of expert testimony in claim construction. This is because it would be difficult to reconcile de novo appellate review as a matter of law with allowing trial court decisions to depend heavily on factual expert testimony, even though such testimony should be able to provide insight as to how a claim would be interpreted by persons skilled in the art. Second, because no deference is given to the trial court, parties who lose the claim construction argument at trial have less incentive to settle and more incentive to appeal to the CAFC. The resulting lack of finality at the district courts is wasteful of both the courts' and litigants' resources.

213 See Markman v. Westview Instruments, Inc., 52 F.3d 967, 981 (Fed. Cir. 1995).
215 See Staheli, supra note 197, at 194 (noting that the trial court is in a better position than the appellate court to evaluate technical evidence); Phillips v. AWH Corp., 415 F.3d 1303, 1332 (Fed. Cir. 2005) (en banc) (Mayer J., dissenting) (noting that Markman hearings are often longer than jury trials and involve a battle of experts offering conflicting evidence with regard to multiple factual questions), cert. denied 126 S. Ct. 1332 (2006).
216 See generally Burgess, supra note 214.
217 See Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1480 (Fed. Cir. 1998) (Newman J., dissenting) (stating that "[a] fresh view of fact and law would . . . ameliorate the constraints we have placed on the presentation of extrinsic evidence on the issue of claim interpretation"), Nard, supra note 214, at 17 (noting that "the court painted itself into a corner with respect to the issue of extrinsic evidence because it was now faced with the prospect of reconciling the use of factually intensive expert testimony . . . with its holding that claim interpretation is a question of law subject to de novo review").
resources. Third, *de novo* review of multiple claim construction issues probably contributes to the high reversal rate observed in claim construction cases. Fourth, when it comes to legal precedent, less may sometimes be more because the nuances of precedential opinions can cause confusion at the trial courts. Such confusion certainly existed prior to *Phillips* with regard to the proper role of dictionaries in interpreting claims. The court's current practice encourages appeals in claim construction cases, and each appealed case is reviewed as a question of law, and thus carries the potential to create new precedent. It may be preferable for the CAFC to give clear general guidance such as that provided by *Phillips*, and defer to trial court decisions that are judicially reasonable interpretations of the intrinsic evidence viewed in light of expert testimony heard during the *Markman* hearing. Recognizing the fact/law distinction in claim construction would be consistent with the Supreme Court's holding in *Markman* and would alleviate the problems to which the CAFC's adherence to *Cybor*, by denying the factual component of claim construction, has contributed.

V. CONCLUSION

The CAFC's en banc opinion in *Phillips*, in spite of the Supreme Court's denial of certiorari on the deference question, is one of the most important recent cases in patent law. The case rewrote the law of claim construction to alleviate some of the confusion caused by the emergence of two separate approaches to claim construction at the appellate level. The court's opinion disclaims the prior approach of focusing on dictionary definitions as a source of claim construction and goes "back to basics," reestablishing the statutorily mandated approach of interpreting claims from the point of view of the person skilled in the art in the context of the specification.

The opinion, however, is unlikely to make the outcome in the case of disputed claim constructions substantially more certain. Although the case sets the rules of combat, and dictionaries are removed to the sidelines,

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218 See *Phillips III*, 415 F.3d at 1334 (Mayer J., dissenting) (noting that "[i]f we persist in deciding the subsidiary factual components of claim construction . . . there is no reason why litigants should be required to parade their evidence before the district courts").

219 Brief For the United States as Amicus Curiae at 22, *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (Nos. 03-1269, 03-1286) (noting that "in a given case, *de novo* review of the interpretations of the multiple disputed claim terms, typically on a limited record, often yields some ground for reversal").

220 Shepard's records over 387 citing cases (as of Oct. 19, 2006) in the fifteen months since the case was decided.
the *Markman* hearing will remain a battle of experts over the meaning of claims to the person skilled in the art. Yet without deference to trial courts' factual determinations made incident to the claim construction process, it is likely that the parade of claim construction cases presented to the CAFC for determination will continue.

For patent practitioners, and future patentees, the court's decision serves as a reminder of the importance of the specification. However carefully drafted the claims, they will be interpreted in light of the remainder of specification, whose importance cannot therefore be disregarded. Although it remains to be seen how the law of claim construction will develop from the holdings in *Phillips*, it is clear, given the court's emphasis on interpreting claims in light of the specification, that the key to favorable claim construction is now placed firmly in the hands of the patent practitioner who writes the specification.

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