PHILLIPS v. AWH CORP.: NO MIRACLES IN CLAIM CONSTRUCTION

By David Sanker

In 2004, the Federal Circuit agreed to hear Phillips v. AWH Corp. en banc and declared that it would address claim construction. Given the critical role of patent claims and the problem created by the Federal Circuit’s divergent views on the role of dictionaries in claim construction reflected in Vitronics Corp. v. Conceptronic, Inc. and Texas Digital Systems, Inc. v. Telegenix, Inc., Phillips presented a good opportunity to clarify claim construction because the technology at issue was simple and the case centered on a single disputed claim term.

However, the Phillips opinion was anti-climactic. The court receded from the Texas Digital line of cases, which had elevated dictionaries to primary importance in claim construction. The court affirmed its holding in Vitronics, reiterating the primacy of intrinsic evidence over extrinsic evidence, and expanded on the hierarchy of claim construction sources. However, the court did not explain how to read claims in light of the specification without importing limitations from the specification into the claims did not adequately address the canons of claim construction, and did not address the issue of deference to trial courts.

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1. 376 F.3d 1382, 1382-83 (Fed. Cir. 2004) (en banc) [hereinafter Phillips IV].
2. 90 F.3d 1576 (Fed. Cir. 1996).
3. 308 F.3d 1193 (Fed. Cir. 2002).
4. The disputed claim term was “baffles.” Id. at 1309-10.
6. Id. at 1312-19.
7. Id. at 1317-19. In Vitronics, the court described the use of the claims themselves, the specification, and the patent prosecution history. See Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582-83 (Fed. Cir. 1996). The court’s analysis of extrinsic evidence was not as extensive, but the court did state that expert testimony was less objective and reliable than other extrinsic sources. See id. at 1584-85.
8. See Phillips V, 415 F.3d at 1328 (“We have decided not to address that issue at this time.”).
Part I of this Note provides historical background for claim construction, including the *Markman v. Westview Instruments, Inc.* decision in 1995. Part II of this Note provides a summary of the en banc *Phillips* decision. Part III analyzes *Phillips*, including the use of dictionaries, and the dilemma of how to read claims in light of the specification without importing limitations from the specification into the claims. Building on that discussion, Part IV addresses the high reversal rate for claim construction at the Federal Circuit.

I. LEGAL BACKGROUND

This Part begins by tracing the use of explicit claims to define patent scope. Next, this Part discusses *Markman v. Westview Instruments, Inc.*, in which the Supreme Court determined that claim construction is a matter of law. Finally, this Part examines two cases where the Federal Circuit articulated the hierarchy of evidentiary sources that courts may use to construe claims.

A. The Emergence of Patent Claims

The Patent Act of 1793 did not require patent applicants to write claims. The Act only required patent applicants to provide a full explanation of the invention. In fact, a patentee was the first person to use "claim" as a verb to specifically denote the scope of his invention in a patent application. Congress introduced patent claims with the Act of 1836 and formalized the claim requirement in 1870. Claims continue to be required today.

12. *Id.* at 134-35.
13. *Id.* at 135.
14. *Id.* at 135-36. On November 20, 1807, Isaiah Jennings received a patent, and he concluded the specification with the paragraph:

> such is my invention and I claim the benefit and application of it to every mode of forming thimbles by its instrumentality, whether the machine be worked by the foot of the operator upon a treadle, by his hand through a winch, by a wheel turned by hand labour, or by any mechanism set in motion by water, or by any other power.

*Id.*
B. Claim Construction is a Matter of Law

Winans v. Denmead established that claim construction was a question of law.\textsuperscript{17} Winans designed an efficient railroad car for carrying coal.\textsuperscript{18} The shape was a vertical cylinder with an inverted cone at the bottom, enabling it to carry more coal than a typical rectangular railroad car.\textsuperscript{19} The defendants copied the design but created a car with an octagonal cross-section.\textsuperscript{20} The trial court\textsuperscript{21} concluded that an octagon was not circular, so the defendant's railroad cars did not infringe.\textsuperscript{22} The Supreme Court reversed.\textsuperscript{23}

The Court's language in Winans v. Denmead foreshadows Markman by approximately 140 years.\textsuperscript{24} The Winans Court pointed out that there are two questions in a patent trial: "What is the thing patented?" and "Has that thing been constructed, used, or sold by the defendants?"\textsuperscript{25} The court then stated that the former is a question of law, to be determined by the court, and the latter is a question of fact, to be submitted to a jury.\textsuperscript{26} Next, the Court reviewed the trial court's claim construction. The Court focused on whether the patentee had limited his claims to the embodiments in the specification.\textsuperscript{27} Thus, only a few years after claims were first allowed in patents, the Supreme Court addressed how to read claims in light of the specification without importing limitations from the specification. In Winans, the Court chose to construe specifications liberally\textsuperscript{28} unless an embodiment and the invention were inseparable.\textsuperscript{29} Noting that no railroad car could be exactly circular, the Court concluded that any form sufficiently close to a circle would be covered by the patent if it achieved the same kind of result.\textsuperscript{30}

\begin{itemize}
\item \textsuperscript{17} 56 U.S. 330, 338 (1854). This appears to be the first case to address whether claim construction was an issue of law or fact.
\item \textsuperscript{18} Id. at 339.
\item \textsuperscript{19} Id. at 339-40.
\item \textsuperscript{20} Id. at 340.
\item \textsuperscript{21} At the time of this case, federal trial courts were called "Circuit Courts." See id. at 338.
\item \textsuperscript{22} See id. at 340.
\item \textsuperscript{23} Id.
\item \textsuperscript{24} Compare id. at 338, with Markman II, 517 U.S. 370, 384 (1996).
\item \textsuperscript{25} Winans, 56 U.S. at 338.
\item \textsuperscript{26} Id.
\item \textsuperscript{27} Id. at 341.
\item \textsuperscript{28} Id.
\item \textsuperscript{29} Id. at 343.
\item \textsuperscript{30} Id. at 343-44.
\end{itemize}
More than 140 years later, the Supreme Court reaffirmed claim construction as a matter of law in \textit{Markman}.\textsuperscript{31} There, the patentee invented an inventory system for dry-cleaning establishments.\textsuperscript{32} The dispute centered on whether "inventory" referred to articles of clothing or to monetary transactions and whether the judge or the jury should make that determination.\textsuperscript{33} The Supreme Court held that judges should make that determination because claim construction involves interpreting legal documents, a task for which judges are particularly well-suited.\textsuperscript{34} Because of the long history of judges interpreting contracts and other legal documents, the Court also held that its ruling was consistent with the Seventh Amendment's guarantee of jury trials.\textsuperscript{35}

Although claim construction is a matter of law, some subsequent decisions by the Federal Circuit held that appellate courts should defer to trial courts on "factual matters" underlying claim construction.\textsuperscript{36} The Federal Circuit accepted \textit{Cybor Corp. v. FAS Technologies, Inc.} en banc to resolve this issue.\textsuperscript{37} The second paragraph of the en banc opinion tersely disposed of the deference question.\textsuperscript{38} Because the Supreme Court in \textit{Markman} had unanimously affirmed that claim construction is a pure issue of law, the \textit{Cybor} court interpreted this affirmation to fully support de novo review on appeal.\textsuperscript{39} The Federal Circuit held that it would not defer to district courts on any "allegedly" underlying factual issues,\textsuperscript{40} or even admit that there are any underlying factual issues.\textsuperscript{41}

C. Claim Construction Evidence

To construe patent claims, a court uses the specification, prosecution history, dictionaries, and other sources of evidence, but not all sources have equal weight. Federal Circuit panels have addressed the issue of claim construction evidence and ultimately developed two competing

\begin{itemize}
  \item 32. \textit{Id.} at 971.
  \item 33. \textit{Id.} at 970-71, 973.
  \item 34. See \textit{Markman II}, 517 U.S. at 388.
  \item 35. \textit{Id.} at 384.
  \item 36. See \textit{Eastman Kodak Co. v. Goodyear Tire & Rubber Co.}, 114 F.3d 1547, 1555-56 (Fed. Cir. 1997); \textit{Serrano v. Telular Corp.}, 111 F.3d 1578, 1586 (Fed. Cir. 1997) (Mayer, J., concurring); \textit{Wiener v. NEC Elecs., Inc.}, 102 F.3d 534, 539 (Fed. Cir. 1996); \textit{Metaluclics Sys. Co. v. Cooper}, 100 F.3d 938, 939 (Fed. Cir. 1996).
  \item 37. 138 F.3d 1448 (Fed. Cir. 1998) (en banc).
  \item 38. \textit{Id.} at 1451.
  \item 39. \textit{Id.}
  \item 40. \textit{Id.} at 1456.
  \item 41. \textit{Id.} at 1455-56.
\end{itemize}
methodologies. The *Vitronics* court emphasized the probative weight of intrinsic evidence, including the specification, and noted that extrinsic evidence, such as expert testimony, is less valuable. In *Texas Digital*, the court designated dictionaries, an extrinsic source, as the primary source of claim construction evidence.

1. *Intrinsic vs. Extrinsic Evidence*

In 1996, in *Vitronics*, the Federal Circuit consolidated claim construction methodology from several previous opinions. The patent at issue claimed a method for soldering printed circuit boards on an assembly line. The specification distinguished between the temperature at which the solder began to melt and the temperature yielding optimal solder flow, and the distinction was necessary for the patent claims to cover the preferred embodiment. However, relying primarily on expert testimony, the district court accepted Conceptronic's argument that the two temperatures were identical.

On appeal, the Federal Circuit called into question the reliance by the district court on expert testimony to contradict clear evidence in the specification. As the court noted, the public relies on the intrinsic record consisting of the patent specification and file history. Citing *Markman*, the court emphasized the importance of competitors' ability to view the public records of patents and to determine the scope of the patents based on es-

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42. *See* *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576 (Fed. Cir. 1996); *Texas Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002). Judges Michel, Lourie, and Friedman were on the *Vitronics* panel, and judges Michel, Schall, and Linn were on the *Texas Digital* panel. *Vitronics*, 90 F.3d at 1576; *Texas Digital*, 308 F.3d at 1193. All of the aforementioned judges, with the exception of Judge Friedman, were part of the Phillips en banc majority. *Phillips V*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

43. *Vitronics*, 90 F.3d at 1582-83.

44. *Texas Digital*, 308 F.3d at 1202-03.

45. 90 F.3d at 1576 (citing *Markman I*, 52 F.3d 967, 979-80 (Fed. Cir. 1995), Bell Commc'ns Research, Inc. v. Vitalink Commc'ns Corp., 55 F.3d 615, 620 (Fed. Cir. 1995), Graham v. John Deere & Co., 383 U.S. 1, 33 (1965), and Pall Corp. v. Micron Separations, Inc., 66 F.3d 1211, 1216 (Fed. Cir. 1995)).

46. *Id.* at 1579.

47. *Id.*

48. *Id.* at 1581.

49. *See id.* at 1583.

50. Extrinsic evidence encompasses all other forms of evidence that bear on claim construction. *See, e.g.*, *id.* at 1582-84.
tablished rules of claim construction. Competitors do not have access to expert testimony that will be created in future litigation.

Furthermore, the court ranked the types of intrinsic evidence and held a court should begin with the language of the disputed claims. A court may consider even the language of claims that are not asserted because the language appearing in non-asserted claims may help to establish the meaning of terms that appear in disputed claims. Next, a court must look to the specification because “it is the single best guide to the meaning of a disputed term.” Finally, the court may turn to the prosecution history of the patent if it is in evidence. Expressing a somewhat optimistic view, the court declared that reviewing the intrinsic sources is generally adequate to “resolve any ambiguity in a disputed claim term.”

Perhaps because of the court’s assertion that extrinsic evidence is generally unnecessary to construe claim terms, the court did little to explain the relative ranking of types of extrinsic evidence outside of admonishing a court from using extrinsic evidence to contradict the meaning established by the intrinsic evidence. Only when the meaning of a disputed claim term is ambiguous after consulting all of the intrinsic evidence may a court resort to consideration of extrinsic evidence.

2. Dictionaries, First and Foremost

In spite of the Vitronics precedent, the Federal Circuit proposed an alternative claim construction methodology in Texas Digital Systems, Inc. v. Telegenix, Inc. The court focused on how to construe claims terms in light of the specification without reading limitations into the claims based

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52. See Vitronics, 90 F.3d at 1584.
53. Id.
54. Id.; see also Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1342 (Fed. Cir. 2001). Although the Vitronics court indicated that “we look to the words of the claims themselves, both asserted and nonasserted,” the opinion in Rexnord explained the reasoning by noting that “claim terms found in different claims should be interpreted consistently.” Vitronics, 90 F.3d at 1582; Rexnord, 274 F.3d at 1342.
55. See Vitronics, 90 F.3d at 1582.
56. Id. at 1582-83.
57. Id. at 1583.
58. Id. at 1584-85. The only clear ranking is that expert testimony is at the bottom. “[P]rior art documents and dictionaries, although to a lesser extent, are more objective and reliable guides. Unlike expert testimony, these sources are accessible to the public in advance of litigation.” Id.
59. Id.
60. See 308 F.3d 1193, 1204-05 (Fed. Cir. 2002).
District courts have found this dual set of admonishments difficult to apply objectively because the Federal Circuit essentially asked district court judges to read the specification into the claims without going too far.

The Texas Digital court resolved this dilemma by elevating the role of dictionaries. In the Texas Digital panel's view, dictionaries are preferable to intrinsic evidence because they are prepared by objective third parties not affiliated with any of the parties in litigation, and they fix the meaning of a word at a particular time contemporaneous with the patent application date. The court viewed dictionary definitions as presumptively correct definitions, whereas the intrinsic evidence from the specification and file history could only be used to rebut the presumptive definition. The two most common cases of rebuttal are (1) where the patentee acts as his own lexicographer or (2) where the patentee makes an explicit disclaimer in the specification or file history.

However, the Texas Digital approach to claim construction was inconsistent with the Vitronics approach. According to the Vitronics court, dictionaries are part of the extrinsic evidence, so a court should refrain from using dictionaries in claim construction unless claim terms are ambiguous after consulting the intrinsic evidence. But in Texas Digital, the roles are reversed, with dictionaries taking precedence over all other evidence, including intrinsic evidence. It was only a matter of time before the Federal Circuit would have to resolve these conflicting approaches to claim construction.

II. CASE SUMMARY: PHILLIPS V. AWH CORP.

The Vitronics and Texas Digital methodologies for claim construction could not coexist. In order to fulfill its role of providing a uniform body of patent law, the Federal Circuit had to establish a uniform standard for claim construction.

61. Id.
62. Id. at 1204 (citing, for example, Generation II Orthotics Inc. v. Med. Tech. Inc., 263 F.3d 1356, 1367 (Fed. Cir. 2001) and Loctite Corp. v. Ultrasell Ltd., 781 F.2d 861, 867 (Fed. Cir. 1985)).
63. Id. at 1205.
64. Id. at 1202-03.
65. See id. at 1206.
68. See Texas Digital, 308 F.3d at 1205-06.
A. Prelude to the En Banc Federal Circuit Opinion

Phillips held a U.S. patent for modular steel-shell panels. The panels described in the patent are well-suited for prisons because they resist vandalism, insulate against fire and noise, and are able to bear substantial loads. The panels consist of exterior steel shells and interior steel baffles. Phillips licensed his patent to the defendant. However, after termination of the license agreement, the defendant continued to manufacture modular panels. Phillips alleged that the defendant’s panels infringed his patent.

In order to determine whether AWH infringed the patent, the court had to construe claim language regarding the orientation of the steel baffles. The claims referred to “internal steel baffles extending inwardly from the steel shell walls.” The embodiments depicted in the specification all illustrated the internal steel baffles at acute angles with the steel shell walls. In addition, the specification repeatedly referred to the ability of the panels to deflect projectiles. The district court judge reasoned that such deflection would not occur if the baffles were disposed at ninety degree angles. Thus, based upon the specification, the judge concluded that the patent claims did not encompass baffles at ninety degree angles with the steel shell walls. Consequently, the defendant’s product which located the baffles perpendicular to the walls did not fall within the scope of the patent.

On appeal, the Federal Circuit held that the language in the specification required a restrictive interpretation of the claims. The majority affirmed the trial court’s claim construction, which excluded baffles perpen-

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72. Id. at *5.
dicular to the walls. Judge Dyk dissented, arguing that the panel’s construction of the term “baffles” was contrary to the plain meaning of the term. He argued that the court should adopt the general dictionary definition of a baffle as “something for deflecting, checking, or otherwise regulating flow.” According to Judge Dyk, the court should not impose limitations on the claims based on the preferred embodiment.

B. The En Banc Federal Circuit Opinion

In 2004, the court vacated the original panel’s decision and granted a petition for the case to be heard en banc. At that time, the court invited additional parties to submit briefs, and indicated the court would address the relative roles of the specification, prosecution history, dictionaries (technical and general), and expert testimony. The court also asked parties to address the notion of narrowing claims solely to preserve validity and the issue of deference to trial courts on any aspects of claim construction.

1. The Majority Opinion

The Phillips opinion explicitly affirmed the claim construction methodology from Vitronics, and slightly expanded the Vitronics analysis. The majority acknowledged the objective of not importing limitations from the specification into the claims, but concluded that dictionaries should not have the primary role in claim construction. The court also distinguished between using a dictionary or treatise in order to understand the underlying technology of a patent and using a dictionary or treatise to construe the meaning of claim terms. Courts may employ the former usage, but they may not use dictionaries to contradict the definitions “ascertained by reading the patent documents.”

The court articulated six sources of evidence for claim construction and assigned relative weights to each. The sources, in order of importance,
are: (1) the claims themselves; (2) the written specification; (3) the file (prosecution) history; (4) technical dictionaries and "learned" treatises; (5) general dictionaries; and (6) expert testimony. The first three are intrinsic; the last three are extrinsic. In addition, the court stated that extrinsic evidence cannot be used to contradict intrinsic evidence.

Phillips held that courts should begin claim construction by focusing on the language of the claims themselves. A court must construe the individual words of a claim within the context of other words in the claim and consistently with the usage of the same terms in other claims of the same patent. The court emphasized the importance of the specification, stating that it "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." When available, courts should review the prosecution history because it demonstrates "how the PTO and inventor understood the patent." However, the court noted that prosecution history is less valuable than the specification because it is an "ongoing negotiation between the PTO and the applicant," and therefore often lacks the clarity of a final document.

The court held that technical dictionaries and learned treatises top the list of extrinsic evidence. It reasoned that because claim construction aims to determine how those skilled in the art would have understood the claims at the time the patent application was filed, technical publications represent that knowledge and skill better than general publications. The court also noted that general dictionaries, by their very nature, are written for broad audiences and therefore may not capture the proper meaning in specialized technical fields. Consequently, it found general dictionaries are less valuable in claim construction than technical dictionaries and treatises. Finally, expert testimony rounds out the acceptable sources of extrinsic evidence. The court distinguished between using expert testi-

97. Id. at 1314-18.
98. Id. at 1320-23.
99. Id. at 1314.
100. Id.
101. Id. at 1315 (quoting Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996)).
102. Id. at 1317.
103. Id.
104. Id. at 1318.
105. Id.
106. Id. at 1321.
107. See id. at 1318.
108. See id.
mony to provide background information about a technology and using expert testimony to construe the claims.\textsuperscript{109} Although providing background is valuable to a court, the court held that such testimony should not be a major factor in the construction of the claims.\textsuperscript{110} Courts should treat expert testimony skeptically because litigants “generate” it at the time of litigation for a specific purpose.\textsuperscript{111}

Thus, the majority opinion resolved any conflict between \textit{Vitronics} and \textit{Texas Digital} regarding claim construction evidence in favor of \textit{Vitronics}.\textsuperscript{112} It is noteworthy that all three judges who were on the \textit{Texas Digital} panel were in the majority in the \textit{Phillips} en banc decision.\textsuperscript{113}

To construe the term “baffles,” however, the court did not refer to its discussion of claim construction, instead relying primarily on the canon of claim differentiation and the doctrine that claims in a patent need not serve all of the function recited in the specification.\textsuperscript{114} Since dependent claim 2 of the patent required baffles “disposed at angles for deflecting projectiles,” and independent claim 1 did not state the same requirement, the court reasoned that there should be no limitation on the angles of the baffles in claim 1.\textsuperscript{115}

2. \textit{Judge Lourie’s Dissent}

Judge Lourie fully supported the majority’s opinion on the relative weights of claim construction evidence.\textsuperscript{116} He also agreed with the majority that claims should not “necessarily be limited to specific or preferred embodiments in the specification.”\textsuperscript{117} However, employing the claim construction methodology espoused in the en banc majority opinion, Judge Lourie reached the opposite conclusion about the meaning of the term

\textsuperscript{109} See id.
\textsuperscript{110} Id.
\textsuperscript{111} Id.
\textsuperscript{112} Compare id. at 1318-19 (listing the drawbacks to relying too much on extrinsic evidence), and \textit{Vitronics Corp. v. Conceptronic, Inc.}, 90 F.3d 1576, 1583 (Fed. Cir. 1996) (“In those cases where the [intrinsic evidence] unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper.”), \textit{with Texas Digital Sys. v. Telegenix, Inc.}, 308 F.3d 1193, 1202 (Fed. Cir. 2002) (“Dictionaries are always available to the court to aid in the task of determining meanings that would have been attributed by those of skill in the relevant art to any disputed terms.”).
\textsuperscript{113} The three judges were Judge Michel, Judge Schall, and Judge Linn. \textit{See Texas Digital}, 308 F.3d at 1193 (Fed. Cir. 2002); \textit{Phillips V}, 415 F.3d at 1303.
\textsuperscript{114} \textit{Phillips V}, 415 F.3d at 1324-27.
\textsuperscript{115} Id.
\textsuperscript{116} Id. at 1328 (Lourie, J., dissenting in part).
\textsuperscript{117} Id.
“baffles.” He noted, in particular, that all of the references to baffles in the specification were to angled baffles and that the "constantly stated objective of deflection of bullets is dependent upon such an angle." Finally, while not advocating a strictly deferential standard, Judge Lourie thought that the court should "lean toward affirmance" of a trial court's claim construction when there was no strong conviction of error.

3. Judge Mayer's Dissent

Judge Mayer's dissent reiterated his previously stated opinions on claim construction, arguing that factual issues underlie claim construction. Consequently, he argued that the Federal Circuit must exercise deferential review of a trial court's determination of those facts. Comparing the majority's discussion of claim construction to "rearranging the deck chairs on the Titanic . . . [as it heads] for Davey Jones' Locker," Judge Mayer asserted that the court should instead reconsider its refusal to defer to factual findings in claim construction.

First, Judge Mayer pointed out that factual issues inherently underlie claim construction. The court must focus its analysis on a determination of who qualifies as one of ordinary skill in the art and what constituted the state of the art at the time of the invention. To demonstrate the factual nature of these issues, Judge Mayer noted that parties use extensive testimony and documentary evidence rather than case law during Markman hearings to support their views on claim construction. District courts must analyze volumes of evidence to determine what a patent term would mean to one of ordinary skill in the art, which dictionary a skilled artisan would use, what the appropriate scope of specialized terms should be, what problem a patent aimed to solve, what is related or pertinent art, and whether a construction was disallowed during prosecution. Second, whereas issues of law can be generalized, and thus, clarified in appellate

118. Id. at 1329.
119. Id.
120. Id. at 1330.
121. Id. at 1330-34 (Mayer, J., dissenting); see Markman v. Westview Instruments, Inc., 52 F.3d 967, 989 (Fed. Cir. 1995) (en banc) (Mayer, J., concurring); Cybor Corp. v. FAS Technologies, Inc., 138 F.3d 1448, 1464-65 (Fed. Cir. 1998) (en banc) (Mayer, J., concurring in the judgment); Phillips IV, 376 F.3d 1382, 1384 (Fed. Cir. 2004) (en banc) (Mayer, J., dissenting).
123. Id. at 1334-35.
124. Id. at 1332.
125. Id.
126. Id.
courts, the meaning of a claim term in a patent has no bearing on other patents, even if the same claim term appears in another patent. Subsidiary determinations in claim construction are “specific, multifarious, and not susceptible to generalization” and, therefore, have little bearing on other cases because the underlying factual contexts would be different.

Third, Judge Mayer drew an analogy between claim construction and determination of obviousness in infringement litigation. As the Supreme Court stated in Graham v. John Deere Co., although patent validity is ultimately a question of law, it lends itself to several basic factual inquiries: the scope and content of the prior art, the differences between the prior art and the claims at issue, and the level of ordinary skill in the art. And, in Graver Tank & Manufacturing Co. v. Linde Air Products Co., the Supreme Court held that those factual determinations are entitled to deference. Judge Mayer explained that these same inquiries are necessary to a substantial extent in claim construction.

Finally, Judge Mayer emphasized that the Federal Circuit should follow other appellate courts. Other courts developed the rule of deferential review based on two centuries of experience. In particular, “[d]etermining the weight and credibility of the evidence is the special province of the trier of fact.” Because trial judges are more experienced in fact-finding than appellate judges, trial judges are better positioned and less likely to err in evaluating facts. Thus, claim construction should be reviewed in accordance with Federal Rule of Civil Procedure 52(a), which states that “findings of fact . . . shall not be put aside unless clearly erroneous.” Also, according to Judge Mayer, de novo review of factual issues in claim construction has led to increased litigation costs, inefficient use of judicial resources, greater uncertainty, and “diminished respect for the court.”

127. Id. at 1332-33.
128. Id. at 1332.
129. Id. at 1333.
133. Phillips V, 415 F.3d at 1333 (Mayer, J., dissenting).
134. Id. at 1334.
135. Id.
136. Id. (quoting Inwood Labs., Inc. v. Ives Labs., Inc., 456 U.S. 844, 856 (1982)).
137. Id.
138. Id. at 1331.
139. Id.
III. ANALYSIS

Although the Federal Circuit resolved the conflict between *Vitronics* and *Texas Digital*, the court failed to resolve crucial aspects of claim construction. Section III.A argues that the court failed to follow its own methodology, leaving open the possibility of further disputes about the appropriate sources of evidence in claim construction. Section III.B acknowledges that the court’s decision regarding dictionaries best serves the public notice function of patents. Section III.C discusses the court’s failure to provide needed guidance on how to construe claims without reading in limitations from specific embodiments in the specification.

A. Applying the Methodology to the Facts in *Phillips*

Despite the considerable exposition concerning claim construction, the majority did not follow its own guidelines to determine the meaning of the term “baffles.” First, despite its arguments confirming the primacy of intrinsic evidence, the court accepted the dictionary definition of baffles as objects that “check, impede, or obstruct the flow of something.”\(^\text{140}\) Second, the court relied heavily on the canon of claim differentiation.\(^\text{141}\) Independent claim 2 of the patent added specific language about baffles orientated at angles for deflecting projectiles, so the court concluded that independent claim 1 did not have the angular limitation.\(^\text{142}\) Finally, the court concluded that the baffles created “internal compartments” and, therefore, impeded the flow of material from one compartment to another.\(^\text{143}\) Based on claim differentiation and reasoning that not all claims of a patent must embody all functions recited in the specification, the court rationally concluded that claim 1 did not limit the orientation of the baffles.\(^\text{144}\) However, to accommodate the stipulated definition of baffles, the court concluded that the baffles were impeding the flow of material between compartments.\(^\text{145}\)

The majority could have reached the same construction of the term baffles more persuasively by following the methodology appearing earlier in the opinion. The specification emphasized the load-bearing capability created by the baffles, as indicated by the phrase “internally directed load supporting baffles” in the first sentence of the patent’s disclosure, and baff-

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140. Id. at 1324.
141. See id.
142. Id.
143. Id. at 1325-26 (“When material is placed into the wall during installation, the baffles obstruct the flow of material from one compartment to another . . . .”).
144. Id. at 1324-27.
145. See id. at 1326.
fles oriented at any angle would enhance the load-bearing capacity of the panels.\textsuperscript{146}

The lack of consistency between the majority's discussion of claim construction and the application of claim construction to the facts in \textit{Phillips} perpetuates uncertainty about claim construction.

\textbf{B. The Role of Dictionaries}

Although the \textit{Phillips} opinion may have been deficient in other respects,\textsuperscript{147} the court clearly addressed the usage of dictionaries. Whether one argues for or against the use of dictionaries in claim construction, both sides of the debate acknowledge that the scope of the claims must be clear to the public.\textsuperscript{148}

Those in favor of employing dictionaries in claim construction argue that (1) they provide a simple, objective standard for determining the ordinary meaning of claim terms, (2) they are particularly well-suited for providing the meaning of terms, since that is their primary function, and (3) their use would discourage claim drafters from writing vague claims.\textsuperscript{149} However, dictionaries fail to provide a simple objective standard.\textsuperscript{150} For example, within the last nine years, the Federal Circuit turned to twenty-four different dictionaries to elucidate claim terminology.\textsuperscript{151} With hundreds of dictionaries to choose from and multiple definitions in each dictionary entry, one cannot find a single objective definition for a given claim term.\textsuperscript{152} In fact, the number of dictionary choices leads to the same

\begin{itemize}
\item \textsuperscript{146} U.S. Patent No. 4,677,798 col.1 l.65-col.2 l.1 (filed Apr. 14, 1986).
\item \textsuperscript{147} \textit{See infra} Section III.C and Part IV.
\item \textsuperscript{149} \textit{See Brief of Wagner & Miller, supra} note 148, at 5-10; Brief of the American Bar Association as Amicus Curiae Supporting Neither Party at 4-6, \textit{Phillips V}, 415 F.3d 1303 (Fed. Cir. 2005) (en banc) (No. 03-1269, -1286) [hereinafter Brief of the American Bar Association].
\item \textsuperscript{150} \textit{See Brief for Amici Curiae Intel Corp. et al., supra} note 148, at 7.
\item \textsuperscript{152} \textit{See Brief for Amici Curiae Intel Corp. et al., supra} note 148, at 7.
\end{itemize}
problem created by other extrinsic evidence: litigators shop for the best
definition to support their goals.\textsuperscript{153} In addition, reliance on dictionaries can
lead to meanings that are vastly different from what a patentee wrote or
intended.\textsuperscript{154} As the PTO expressed in its amicus brief,\textsuperscript{155} a patent is a fully
integrated legal document. To understand what a patent means, a person
must read that document.\textsuperscript{156}

Furthermore, dictionaries fail to provide guidance for construing
phrases. For example, in \textit{Callicrate v. Wadsworth Manufacturing, Inc.},
one of the disputed terms was a "lever for deforming a grommet."\textsuperscript{157} Al-
though each of these words appears in dictionaries, the combination does
not, and the combination matters. However, the use of intrinsic evidence
addresses this issue. Section 112 requires the specification to support the
claims;\textsuperscript{158} therefore, either the specification provides enough information
to understand what a "lever for deforming a grommet" is or else the claim
is indefinite. Either way, the specification is dispositive.

Therefore, whether construing the meaning of a single word or a
phrase, the Federal Circuit correctly recognized that public notice is best
served by relying on intrinsic evidence that is available to everyone rather
than relying on dictionaries.

C. The Claim Construction Dilemma

Perhaps the most difficult issue that judges face in claim construction
is how to "read the claims in light of the specification"\textsuperscript{159} without commit-

\textsuperscript{153} See \textit{id.; see also Phillips v. AWH Corp., 415 F.3d 1303, 1318 (Fed. Cir. 2005)}
(en banc).

\textsuperscript{154} See \textit{Phillips V, 415 F.3d at 1322 ("Indiscriminate reliance on definitions found
in dictionaries can often produce absurd results."); Brief of Amicus Curiae Federal Cir-
cuit Bar Association at 3, Phillips \textit{V, 415 F.3d 1303 (Fed. Cir. 2005)} (en banc) (No. 03-
1269, -1286) ("Another undesirable consequence of the dictionary-centered approach is
that it can result in terms being given meanings far removed from what the inventor had
in mind at the time the application was filed.").}

\textsuperscript{155} Brief for the United States as Amicus Curiae at 15, Phillips \textit{V, 415 F.3d 1303
(Fed. Cir. 2005)} (en banc) (No. 03-1269, -1286).

\textsuperscript{156} \textit{Id.}

\textsuperscript{157} 427 F.3d 1361 (Fed. Cir. 2005).

\textsuperscript{158} The specification shall contain a written description of the inven-
tion . . . in such full, clear, concise, and exact terms as to enable any
person . . . to make and use the same.

The specification shall conclude with one or more claims particularly
pointing out and distinctly claiming the subject matter which the appli-
cant regards as his invention.

\textsuperscript{35 U.S.C. § 112 (2000).}

\textsuperscript{159} \textit{Phillips V, 415 F.3d at 1315.}
ting "one of the cardinal sins of patent law—reading a limitation from the written description into the claims." \(^{160}\) The Phillips court stated that, by focusing on how a person of ordinary skill in the art would understand the claim terms, frequently "it will become clear" whether the specification is providing example embodiments or describing the entire invention. \(^{161}\) Unfortunately, the distinction is often not so "clear" \(^{162}\) to district court judges. \(^{163}\) The failure to address this issue and provide guidance to district courts will perpetuate the high reversal rate of district court decisions by the Federal Circuit. \(^{164}\)

Despite the Federal Circuit’s instruction to construe claims based on intrinsic evidence, the court failed to explain how to distinguish between a description of an embodiment and a description of the invention itself. \(^{165}\) Although the Federal Circuit claimed that such issues will become clear, even Federal Circuit judges have found this task difficult: Judge Dyk, in his dissent in the first Phillips panel, argued that the angled baffles in the specification were just an embodiment and that limiting the claims to this embodiment would constitute a "major and unfortunate change in our recent claim construction jurisprudence." \(^{166}\) In contrast, Judge Lourie pointed out that angled baffles were fundamental to the invention itself. \(^{167}\)

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161. See Phillips V, 415 F.3d at 1323.
162. [O]bviously; certainly; clearly; undeniably. It has become an ironic joke among lawyers that when an opponent—or for that matter, frequently, a judge—uses one of these words, the statement that follows is likely to be false, unreasonable, or fraught with doubt. This skepticism has grown from the widespread abuse of the terms. Reserve them for what is truly obvious, certain, clear, or undeniable. When they are used merely to buttress arguments, they take on the character of weasel words: they weaken the arguments. See Bryan A. Garner, The Elements of Legal Style 129-30 (2d ed. 2002).
163. If it were clear, the reversal rate should be somewhat lower than 34.5%. See Kimberly A. Moore, Markman Eight Years Later: Is Claim Construction More Predictable?, 9 LEWIS & CLARK L. REV. 231, 238 (2005).
165. See HERBERT F. SCHWARTZ, PATENT LAW AND PRACTICE 129-31 (4th ed. 2003). Professor Schwartz lists the second canon of claim construction as "ordinarily, claims are not limited to the preferred embodiment in the specification." Id. at 130.
167. See Phillips V, 415 F.3d at 1328-29 (Lourie, J., dissenting).
This dispute concerning whether angled baffles were an embodiment or fundamental to the invention illustrates why *Phillips* was an ideal case for the Federal Circuit to provide guidance on how to make the distinction. The claim language “further means disposed inside the shell for increasing its load bearing capacity comprising internal steel baffles extending inwardly from the steel shell walls” taken in isolation does not impose any limitation on the angle of the baffles. 68 In addition, the many references in the patent to the load-bearing capacity of the panels indicate the importance of this quality and load-bearing capacity would not require angled baffles. 69

However, an alternative analysis supports the view that the baffles must be angled. The short abstract references impact resistance and bullet deflection as inherent to the invention four times, but has no references to load-bearing capacity. 170 For example, the abstract states that “three steel panel pieces are formed into a module, each being partly *triangular in cross section . . .* which thereby form the internal baffles at angles for deflecting bullets.” 171 Further, in the “Disclosure of the Invention” section, the second sentence clarifies the construction by stating that “the modules comprise three steel plate wall panel sections of partially triangular cross section shape positioned to provide the internally directed baffles.” 172 The triangular cross section requirement would not allow the baffles to be perpendicular to the walls.

Nevertheless, rather than explaining how to make the distinction, the court simply stated that “the manner in which the patentee uses the term within the specification and claims usually will make the distinction apparent.” 173 In this respect, *Phillips* was a lost opportunity for clarification.

IV. THE FUNDAMENTAL PROBLEM: HIGH REVERSAL RATE FOR CLAIM CONSTRUCTION

The Federal Circuit’s practice of reversing a significant percentage of all district court claim constructions creates undesirable results. First, it encourages district court judges to limit the amount of time they spend on claim construction. Since the Federal Circuit will likely discard their constructions on appeal, district court judges have little incentive to do other-
wise. Second, the uncertainty created by the high reversal rate reduces the incentive for parties to settle. Quite the opposite, parties become more likely to seek review in the Federal Circuit, increasing both the time and the expense of patent litigation.

One potential solution is to provide clearer guidelines and training so that district courts uniformly produce high quality claim constructions. The Phillips court attempted to provide such guidance by clarifying the role of dictionaries, reaffirming the distinction between intrinsic and extrinsic evidence, and establishing a clear hierarchy for the different types of evidence courts use in claim construction. However, the Federal Circuit failed to advise courts on how they should discern an embodiment from a description of the invention itself. In addition, the Phillips court tiptoed around the canons of claim construction. There are at least ten canons of claim construction, and the Federal Circuit has referred to these canons frequently in recent opinions. In Phillips, the Federal Circuit provided a hierarchical framework for evaluating evidence, but did not explain how the canons of claim construction fit into this framework. Without clearer guidance on these matters, the Federal Circuit will likely continue to reverse "incorrect" claim constructions.

Another way to reduce the high reversal rate of district court claim constructions would be to simply change the standard of appellate review so as to give district court claim constructions greater deference. As Fromson v. Anitec Printing Plates, Inc. illustrates, claim construction often involves significant questions of fact, suggesting that such deference may be appropriate. In Fromson, the patent at issue was a process for anodizing aluminum. Based on extensive testimony, the trial judge concluded that "in 1973 no reasonable practitioner of this process would have had the opinion that a non-porous non-adherent oxide coating, as thin as the 5 nanometer coating found naturally in the environment, of post-phosphoric oxide, constituted an anodized surface." This conclusion led the trial

174. See Brief of the American Bar Association, supra note 149, at 18.
175. See Kimberly A. Moore, Are District Court Judges Equipped to Resolve Patent Cases?, 12 FED. CIR. B.J. 1, 22-23 (2002).
176. See id.
177. See Phillips V, 415 F.3d at 1319-23.
178. Id. at 1314-19.
179. Id.
181. Id. Professor Schwartz provides extensive references for the ten canons. Id.
182. 132 F.3d 1437 (Fed. Cir. 1997).
183. See id. at 1439.
184. Id. at 1444-45.
judge to a narrow construction of the term "anodized."\textsuperscript{185} The Federal Circuit panel affirmed the claim construction of "anodized."\textsuperscript{186} Because the construction required extensive testimony, the panel reasoned that it was appropriate to defer to the credibility determinations of the trial judge.\textsuperscript{187}

A significant practical problem would be determining what constitutes an underlying factual issue. For example, Judge Mayer would designate who qualifies as one of ordinary skill in the art and what the meaning of patent terms are to such people as factual inquiries.\textsuperscript{188} But, if district courts were to treat both of these questions as factual inquiries, then claim construction would no longer be a matter of law—the answers to these extremely broad questions would dictate completely the meaning of claim terms. Accordingly, either a narrower definition of factual inquiries is required, or else the Supreme Court will need to overturn \textit{Markman}.\textsuperscript{189}

In addition, Federal Rule of Civil Procedure 52(a) requires that "findings of fact . . . shall not be set aside unless clearly erroneous."\textsuperscript{190} Should claim construction be regarded as a factual inquiry, Rule 52(a) would be irreconcilable with \textit{Cybor}, which calls for \textit{de novo} review of claim construction.\textsuperscript{191} Having recently denied AWH's bid for certiorari on the continued validity of \textit{Cybor},\textsuperscript{192} the Supreme Court appears extremely unlikely to resolve this conflict in favor of greater deference to trial courts.

As a third alternative, Congress could address the reversal rate problem through the establishment of specialty courts or specially designated patent judges that hear patent cases. Because patent cases represent only about one percent of a typical judge's case load, an average judge conducts only one patent trial every seven years.\textsuperscript{193} Not only do district court judges have limited exposure to patent cases, but also most of the cases they do try are "complex, difficult, time-consuming, and expensive."\textsuperscript{194}

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  \item[185.] \textit{Id.} at 1444-49.
  \item[186.] \textit{Id.}
  \item[187.] \textit{Id.}
  \item[188.] \textit{Id.}
  \item[189.] The Supreme Court affirmed \textit{Markman} unanimously, so the Court is unlikely to overturn the decision. \textit{Markman II}, 517 U.S. 370 (1996).
  \item[190.] \textit{FED. R. CIV. P. 52(a)} (2003).
  \item[191.] \textit{Cybor Corp. v. FAS Techs., Inc.}, 138 F.3d 1448, 1451 (Fed. Cir. 1998) (en banc).
  \item[192.] \textit{Phillips v. AWH Corp.}, No. 05-602, 2006 U.S. LEXIS 1154 (Feb. 21, 2006).
  \item[194.] See Improving Federal Court Adjudication of Patent Cases: Hearings Before the Subcomm. on Courts, the Internet, and Intellectual Property of the H. Comm. on the Ju-
\end{itemize}
\end{footnotesize}
For these reasons, even if the Federal Circuit were to provide complete and clear guidance on patent claim construction, the results from district court judges would still be inadequate.

Professor Moore proposes that only particular judges in each district hear patent cases. She argues that if all patent cases were assigned to one or more designated trial court judges, those designated judges would develop the necessary expertise. Patent litigator Pegram and District Judge Holderman agree with Professor Moore’s key points, but propose instead that the Court of International Trade (CIT) hear patent cases. According to Pegram, the CIT already has nationwide jurisdiction under the supervision of the Federal Circuit, and the CIT judges appear to have available time. Although the CIT judges do not currently have patent expertise, they are Article III judges and would quickly gain experience if assigned a substantial number of patent cases. Although Congress should be cautious when making changes to the court system, specialized patent courts or judges may be the only viable option to reduce the high reversal rate.

V. CONCLUSION

The Phillips decision limited the role of dictionaries and expanded on the claim construction evidence hierarchy from Vitronics, including the distinction between intrinsic and extrinsic evidence. The court’s emphasis on claim differentiation suggests that patent drafters should write more dependent claims in order to get maximum protection on independent claims. However, as a case expected to clarify claim construction methodology, Phillips missed the mark. The court specified what evidence to use, and the relative weights of the evidence, but failed to guide district courts in how to use the evidence. Perhaps a future Federal Circuit opinion will explain how to resolve the riddle of “construing the claims in light of the

195. Id.
196. Id.
199. Id.
specification without importing limitations from the specification."\textsuperscript{200} That would be a miracle in claim construction.

\footnotesize{\textsuperscript{200} Texas Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193, 1204-05 (Fed. Cir. 2002).}