CYBOR CORP. V. FAS TECHNOLOGIES, INC.

By Matthew R. Hulse

Since 1995, 38.3% of all patent claim construction appeals to the Federal Circuit have resulted in reversals in whole or in part[1] Despite this high reversal rate, the Federal Circuit recently held, in *Cybor Corp. v. FAS Technologies, Inc.*,[2] that claim construction should be reviewed *de novo*[3] because it is a question of law.[4] Because *de novo* review enables the Federal Circuit to ignore the claim constructions of district courts, the *Cybor* decision likely will serve to sustain or increase the rate of claim construction reversals on appeal.

The Federal Circuit unwisely decided *Cybor* because it misinterpreted prior case law on the issue and ignored the factual inquiries that are common in claim construction proceedings. Instead, the Federal Circuit should have adopted a mixed review standard for claim construction that grants deference to those parts of a judge's claim construction that are based upon findings of fact. For all other aspects of claim construction, the court should apply a *de novo* standard of review.

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1. *See* Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1476, 46 U.S.P.Q.2d (BNA) 1169, 1192 (Fed. Cir. 1998) (Rader, J., dissenting).

2. 138 F.3d 1448, 46 U.S.P.Q.2d (BNA) 1169 (Fed. Cir. 1998).

3. *De novo*, or plenary, review means that the reviewing court does not defer to the lower court or agency's ruling in question. Questions of law are subject to *de novo* appellate review. A clearly erroneous, or deferential, review means that although there is evidence to support a finding, the reviewing court may reverse a finding if, on the entire evidence, the reviewing court is left with the definite and firm conviction that a mistake has been committed. *See* ROBERT L. HARMON, PATENTS AND THE FEDERAL CIRCUIT 852 (4th ed. 1998); FED. R. CIV. P. 52(a) ("Findings of fact ... shall not be set aside unless clearly erroneous.").

4. A question of law "is usually defined as a statement of a general principle or rule, predicated in advance, awaiting application to particular facts as they may arise." Markman v. Westview Instruments, Inc., 52 F.3d 967, 1009, 34 U.S.P.Q.2d (BNA) 1321, 1353 (Fed. Cir. 1995) (en banc) (Newman, J., dissenting). In contrast, a finding of fact is a "reality of events or things the actual occurrence or existence of which is to be determined by evidence." *Id.* Therefore, "the law is a general proposition, while the fact is a case-specific inquiry." *Id.*

I. BACKGROUND CASE LAW

A. The *Markman I* Decision

Prior to *Markman v. Westview Instruments, Inc.*[5] ("*Markman I*"), Federal Circuit opinions were inconsistent on the issue of claim construction being a legal, factual, or mixed issue.[6] In *Markman I*, the Federal Circuit held that the construction of patent claims is a question of law to be decided by a judge.[7] The court held that the appeals court should review an interpretation of a patent claim *de novo*.[8] Judge Archer's majority opinion relied upon various lines of reasoning. First, juries should not interpret patent claims because it is a fundamental principle of American law that "the construction of a written evidence is exclusively with the court."[9] A

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5. 52 F.3d 967, 34 U.S.P.Q.2d (BNA) 1321 (Fed. Cir. 1995) (en banc), *aff'd* 116 S. Ct. 1384, 38 U.S.P.Q.2d (BNA) 1461 (1996).

6. In the Federal Circuit's first case deciding an issue of claim construction, SSIH Equipment S.A. v. United States Int'l Trade Comm'n, 718 F.2d 365, 218 U.S.P.Q. (BNA) 678 (Fed. Cir. 1983), the Federal Circuit explicitly stated that the construction of a patent claim was an issue of law. Numerous Federal Circuit cases have followed the authority of *SSIH*. *See, e.g.*, SRI Int'l v. Matsushita Elec. Corp. of America, 775 F.2d 1107, 1118-22, 227 U.S.P.Q. (BNA) 577, 582-84 (Fed. Cir. 1985) (en banc); Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 770-71, 218 U.S.P.Q. (BNA) 781, 788 (Fed. Cir. 1983); Fromson v. Advance Offset Plate, Inc., 720 F.2d 1565, 1569-71, 219 U.S.P.Q. (BNA) 1137, 1140-42 (Fed. Cir. 1983). In *McGill Inc. v. John Zink Co.*, 736 F.2d 666, 221 U.S.P.Q. (BNA) 944 (Fed. Cir. 1984), the Federal Circuit stated for the first time that claim construction had underlying factual inquiries that must be submitted to a jury. *See id.* A line of cases developed that relied upon *McGill* and stated that sometimes there were jury-triable factual issues in claim construction, and these factual questions should be reviewed for clear error. *See, e.g.*, Tol-O-Matic, Inc. v. Proma Produkt-Und Mktg. Gesellschaft m.b.H., 945 F.2d 1546, 1549, 20 U.S.P.Q.2d (BNA) 1332, 1335 (Fed. Cir. 1991); Bio-Rad Labs, Inc. v. Nicolet Instrument Corp., 739 F.2d 604, 614, 222 U.S.P.Q. (BNA) 654, 661-62 (Fed. Cir. 1984). Another line of Federal Circuit cases has followed the earlier pronouncements that claim construction is solely a question of law that should be decided by a judge. *See, e.g.*, Read v. Portec, Inc., 970 F.2d 816, 822-23, 23 U.S.P.Q.2d (BNA) 1426, 1432 (Fed. Cir. 1992); Specialty Composites v. Cabot Corp., 845 F.2d 981, 986, 6 U.S.P.Q.2d (BNA) 1601, 1604 (Fed. Cir. 1988). Moreover, the Supreme Court has held that claim construction is a matter of law. *See* Winans v. Denmead, 56 U.S. (15 How.) 330, 338 (1854) ("[W]hat is the thing to be patented ... is a question of law.").

7. *See* Markman v. Westview Instruments, Inc., 52 F.3d at 970-71, 34 U.S.P.Q.2d at 1322.

8. *See* Markman v. Westview Instruments, Inc., 52 F.3d 967, 979, 34 U.S.P.Q.2d (BNA) 1321, 1329 (Fed. Cir. 1995).

9. *Id.* at 978, 34 U.S.P.Q.2d at 1328 (quoting Levy v. Gadsby, 7 U.S. (3 Cranch) 180, 186 (1805)).

patent is a fully-integrated written instrument,[10] and therefore appellate courts may interpret written documents as a matter of law.[11] Second, because a patent is a government grant of rights to the patentee, the judge essentially defines the legal rights created by the patent document on behalf of the federal government.[12] A judge is a superior actor to determine the scope of these rights because of the serious consequences that can result from infringement of patent rights.[13] Finally, Judge Archer reasoned that a judge should construe patent claims as a matter of law because a patentee's competitors should be able to ascertain the scope of the patent claims with a reasonable degree of certainty.[14] Competitors should have the ability to understand the scope of a patent claim by analyzing, with the aid of established rules of construction, the patent and prosecution history.[15] Competitors should arrive at a legally-accurate claim construction because a judge, trained in the law, also would apply established rules of construction while construing a patent claim if infringement litigation occurred.[16]

B. The *Markman II* Decision

In *Markman v. Westview Instruments, Inc.*[17] ("*Markman II*"), the sole issue on appeal to the Supreme Court was whether the interpretation of a patent claim is a matter of law reserved entirely for the court, or is subject to a Seventh Amendment guarantee that a jury will determine the meaning of a patent claim.[18] The Supreme Court held that the construction of a patent, including terms of art within a claim, is exclusively within the province of the court.[19]

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10. *See* Markman v. Westview Instruments, Inc., 52 F.3d 967, 978, 34 U.S.P.Q.2d (BNA) 1321, 1328 (Fed. Cir. 1995) (en banc).

11. *See id.* at 978, 34 U.S.P.Q.2d at 1328 (citing Eddy v. Prudence Bonds Corp., 165 F.2d 157, 163 (2d Cir. 1947) (Learned Hand, J.)).

12. *See id.*

13. *See* Markman v. Westview Instruments, Inc., 52 F.3d 967, 978, 34 U.S.P.Q.2d (BNA) 1321, 1328 (Fed. Cir. 1995) ("There is much wisdom to the rule that the construction of a patent should be a legal matter for a court.... Infringement of the patentee's right to exclude carries with it the potential for serious consequences.").

14. *See id.*

15. *See id.*

16. *See* Markman v. Westview Instruments, Inc., 52 F.3d 967, 978-79, 34 U.S.P.Q.2d (BNA) 1321, 1328-29 (Fed. Cir. 1995) (en banc).

17. 517 U.S. 370, 38 U.S.P.Q.2d (BNA) 1461 (1996).

18. *See* Markman v. Westview Instruments, Inc., 517 U.S. at 372, 38 U.S.P.Q.2d at 1463.

19. *See id.*

In its unanimous ruling, the Supreme Court noted that when an issue "falls somewhere between a pristine legal standard and a simple historical fact, the fact/law distinction at times has turned on a determination that, as a matter of the sound administration of justice, one judicial actor is better positioned than another to decide the issue in question."[20] Despite noting that claim construction is a "mongrel practice" of fact and law,[21] the Court concluded that, for the purposes of construing the meaning of a patent claim, judges are better suited to find the acquired meaning of patent terms.[22]

The *Markman II* decision did not directly address the issue of the proper standard of review to be used by an appellate court for claim construction. Because the standard of review for claim construction was not an issue on appeal, the *Markman II* decision arguably did not affirm the *de novo* standard.

C. Federal Circuit Decisions After *Markman II*, But Before *Cybor*

After *Markman II*, panels of the Federal Circuit generally used the *de novo* standard of review for claim construction that *Markman I* laid down.[23] However, in some cases, the Federal Circuit applied a clearly erroneous standard to findings considered to be factual in nature that were incident to a judge's claim construction.[24] For instance, in *Wiener v. NEC Electronics., Inc.*,[25] Judge Rader justified his use of a clearly erroneous standard by citing the *Markman II* decision.[26]

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20. *Id.* at 388, 38 U.S.P.Q.2d at 1470 (quoting Miller v. Fenton, 474 U.S. 104, 114 (1985)).

21. *See id.* at 378, 38 U.S.P.Q.2d at 1465.

22. *See* Markman v. Westview Instruments, Inc., 517 U.S. 370, 388, 38 U.S.P.Q.2d (BNA) 1461, 1470 (1996).

23. *See, e.g.*, Serrano v. Telular Corp., 111 F.3d 1578, 1582, 42 U.S.P.Q.2d (BNA) 1538, 1541 (Fed. Cir. 1997) (citing *Markman I* for the proposition that "[c]laim construction is a question of law, which [the Federal Circuit] review[s] de novo").

24. *See* Eastman Kodak Co. v. Goodyear Tire & Rubber Co., 114 F.3d 1547, 1555-56, 42 U.S.P.Q.2d (BNA) 1737, 1742 (Fed. Cir. 1997); Serrano v. Telular Corp., 111 F.3d 1578, 1586, 42 U.S.P.Q.2d (BNA) 1538, 1544 (Fed. Cir. 1997) (Mayer, J., concurring); Wiener v. NEC Elecs. Inc., 102 F.3d 534, 539, 41 U.S.P.Q.2d (BNA) 1023, 1026 (Fed. Cir. 1996); Metaullics Sys. Co. v. Cooper, 100 F.3d 938, 939, 40 U.S.P.Q.2d (BNA) 1798, 1799 (Fed. Cir. 1996).

25. 102 F.3d 534, 41 U.S.P.Q.2d (BNA) 1023 (Fed. Cir. 1996).

26. *See id.* at 539, 41 U.S.P.Q.2d at 1026 (quoting Miller v. Fenton, 474 U.S. 104, 114 (1985)) (noting that claim construction "falls somewhere between a pristine legal standard and a simple historical fact").

II. THE *CYBOR* CASE

A. The District Court Decision

Cybor Corporation sued FAS Technologies, Inc. and asked for a declaratory judgment of non-infringement, invalidity, and unenforceability of U.S. Patent No. 5,167,837 ("the '837 patent").[27] FAS Technologies, Inc. counterclaimed for infringement of all twenty claims of the '837 patent and sought damages and injunctive relief.[28] The '837 patent disclosed a method and device for dispensing industrial liquids.[29] The primary application for the patented inventions was to dispense small quantities of liquid onto semiconductor wafers.[30] The jury found that all of the claims were valid and that Cybor Corporation infringed all of the claims literally or under the doctrine of equivalents.[31] Cybor Corporation appealed the judgment of the district court that Cybor Corporation's product infringed the claims of the '837 patent.[32]

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27. *See* Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1453, 1476, 46 U.S.P.Q.2d (BNA) 1169, 1172 (Fed. Cir. 1998).

28. *See id.*

29. Claim 1 is representative and reads:

> 1. In a device for filtering and dispensing fluid in a precisely controlled manner, the combination of:
> first pumping means;
> second pumping means in fluid communication with said first pumping means; and filtering means between said first and second pumping means, whereby said first pumping means pumps the fluid through said filtering means to said second pumping means;
> in which each of said first and second pumping means includes surfaces that contact the fluid, said surfaces being of materials that are non-contaminating to industrial fluids which are viscous and/or high purity and/or sensitive to molecular shear; and comprising means to enable said second pumping means to collect and/or dispense the fluid, or both, at rates or during periods of operation, or both, which are independent of rates or periods of operation, or both, respectively, of said first pumping means.

Id. at 1451, 46 U.S.P.Q.2d at 1171.

30. *See id.*

31. *See id.* at 1453, 46 U.S.P.Q.2d at 1172.

32. *See id.* at 1451, 46 U.S.P.Q.2d at 1171.

B. THE FEDERAL CIRCUIT DECISION

1. The Majority Opinion

The Federal Circuit decided *Cybor en banc* in order to resolve the conflicting standards applied by different panels of the Federal Circuit.[33] The Federal Circuit affirmed the district court's judgment that Cybor Corporation's product infringed all of the claims of the '837 patent.[34] In so doing, the Federal Circuit concluded that the Supreme Court's decision in *Markman II* fully supported the Federal Circuit's conclusion in *Markman I* that claim construction, as a purely legal issue, is subject to *de novo* appellate review.

The Federal Circuit in *Cybor* considered three primary arguments before concluding that the *de novo* standard of review was good law. First, it rejected the argument that the *Markman II* decision suggested that factual underpinnings exist in claim construction.[35] In *Markman II*, the Supreme Court stated that claim construction may not easily be characterized as either pure law or simple fact.[36] These statements, according to the Federal Circuit, merely show that the determination of whether claim construction is a question of law or fact is not simple.[37] The *Markman II* decision addressed the issue of under which category, fact or law, claim construction should fall;[38] it did not address whether claim construction includes two components, fact and law.[39]

Second, the Federal Circuit reasoned that claim construction is a pure issue of law because of the role of expert testimony in claim construction.[40] The Federal Circuit noted that juries play an important role in evaluating the credibility of a witness.[41] In the context of claim construction, however, the Federal Circuit reasoned that credibility determinations are unlikely to be made in the context of claim construction because "any credibility determinations will be subsumed within the necessarily sophisticated analysis of the whole document, required by the standard construc-

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33. *See* Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1454-55, 46 U.S.P.Q.2d (BNA) 1169, 1173 (Fed. Cir. 1998).

34. *See id.*

35. *See id.* at 1455, 46 U.S.P.Q.2d at 1173.

36. *See* Markman v. Westview Instruments, Inc., 517 U.S. 370, 388, 38 U.S.P.Q.2d (BNA) 1461, 1470 (1996).

37. *See Cybor*, 138 F.3d at 1455, 46 U.S.P.Q.2d at 1173.

38. *See id.*

39. *See* Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1455, 1454-55, 46 U.S.P.Q.2d (BNA) 1169, 1173 (Fed. Cir. 1998)

40. *See id.*

41. *See id.*

tion rule that a term can be defined only in a way that comports with the instrument as a whole."[42] Although the Federal Circuit did not elaborate on this argument, a judge presumably is not making credibility judgments about witnesses because the judge is simply comparing their testimony to the contents of the patent document.

Finally, the Federal Circuit concluded that an alternative reading of the *Markman II* decision also would support a *de novo* standard of review for claim construction.[43] The Supreme Court's primary concern in *Markman II* was the Seventh Amendment issue of whether a party had a right to a jury trial on claim construction because of any potential factual issues involved.[44] Since the *Markman II* decision did not address the appellate standard of review, the Federal Circuit reasoned that *Markman II* can be read as addressing solely the respective roles of the judge and jury at the trial level and not the relationship between the district courts and the Federal Circuit.[45] The Federal Circuit reasoned that because *Markman II* affirmed its holding in all respects, even a narrow view of *Markman II* leaves the appropriate standard of review to be *de novo*.[46]

2. *Concurring Opinions*

In Judge Plager's concurring opinion, he noted that even though the Federal Circuit reviews claim constructions *de novo*, the trial judge's view will still carry weight.[47] Moreover, "[t]hat weight may vary depending on the care, as shown in the record, with which that view was developed, and the information on which it is based."[48] In what appears to be an effort to downplay the impact of the *Cybor* decision, Judge Plager stated that the majority opinion merely reaffirms the view that the appellate court and attorneys will not waste time debating whether the trial court's information base constitutes findings of "fact" or conclusions of "law."[49] Judge Plager opined that the *Cybor* decision will simplify the method by which trial and appellate courts address claim construction.[50] Judge Bryson's

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42. *Id.* at 1456, 46 U.S.P.Q.2d at 1174 (quoting Markman v. Westview Indus., Inc., 517 U.S. 370, 389, 38 U.S.P.Q.2d (BNA) 1461, 1470 (1996)).

43. *See id.* at 1456, 46 U.S.P.Q.2d at 1174.

44. *See* Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1455, 1456, 46 U.S.P.Q.2d (BNA) 1169, 1174 (Fed. Cir. 1998).

45. *See id.*

46. *See id.*

47. *See id.* at 1462, 46 U.S.P.Q.2d at 1180.

48. *Id.*

49. *See* Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1455, 1462, 46 U.S.P.Q.2d (BNA) 1169, 1180 (Fed. Cir. 1998)

50. *See id.* at 1463, 46 U.S.P.Q.2d at 1180.

concurrence argued that, although claim construction is an issue of law, the Federal Circuit will not disregard the work done by district courts in claim construction.[51] Also, Judge Bryson reasoned that the *Cybor* decision allows the Federal Circuit to give weight to all district courts' claim constructions.[52] Judge Bryson noted that reviewing courts frequently give significant weight to lower courts' judgments about legal issues, and he offered three examples.[53] First, the Supreme Court may defer to the construction of a state statute adopted by the regional court of appeals that includes that state.[54] Second, the Federal Circuit affords great respect and careful consideration to the interpretation of a contract by a Board of Contract Appeals.[55] Third, the Supreme Court frequently leaves the refinement of patent law up to the Federal Circuit.[56] Judge Bryson reasoned that the *Cybor* decision means that, with respect to certain aspects of claim construction, the district court may be better situated than the Federal Circuit to make a judgment.[57] Where the district court is better situated than the Federal Circuit, the Federal Circuit "should be cautious about substituting [its] judgment for that of the district court."[58]

Chief Judge Mayer argued, in a concurrence in the judgment, that the Federal Circuit's standard of review for claim construction is controlled by the Supreme Court's *Markman II* decision, not the Federal Circuit's *Markman I* decision.[59] Chief Judge Mayer opined that the Supreme Court chose not to accept the formulation of claim construction as a pure question of law to be decided *de novo* on appeal.[60] Under the *Markman II* standard, according to Chief Judge Mayer, a district court may make factual determinations that are more than just incident to claim construction.[61] For instance, a judge may need to weigh conflicting evidence about the understanding of one skilled in the art at the time the patentee filed the applica-

51. *See id.*

52. *See id.*

53. *See id.*

54. *See id.* at 1463, 46 U.S.P.Q.2d at 1180 (citing Propper v. Clark, 337 U.S. 472, 486-87 (1949)).

55. *See* Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1455, 1463, 46 U.S.P.Q.2d (BNA) 1169, 1180-81 (Fed. Cir. 1998) (citing Alvin, Ltd. v. United States Postal Serv., 816 F.2d 1562 (Fed. Cir. 1987)).

56. *See id.* at 1463, 46 U.S.P.Q.2d at 1181 (citing Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17 (1997)).

57. *See id.* at 1463, 46 U.S.P.Q.2d at 1181.

58. *Id.*

59. *See id.* at 1464, 46 U.S.P.Q.2d at 1181.

60. *See* Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1455, 1464, 46 U.S.P.Q.2d (BNA) 1169, 1181 (Fed. Cir. 1998).

61. *See id.* at 1464, 46 U.S.P.Q.2d at 1182.

tion.[62] In such a case, the *Markman II* standard just requires the judge to resolve the issue, not the jury.[63] When a judge does make factual determinations, those facts are entitled to greater deference in a *de novo* standard of review.[64]

3. The Dissent

In Judge Rader's dissent, he argued that the Supreme Court's language in *Markman II* repeatedly suggested that claim construction is not a pure issue of law.[65] Furthermore, Judge Rader argued that *de novo* review undermines the trial process as the "main event," and this result would undermine predictability in patent litigation.[66] According to Judge Rader, *Markman I* potentially promised to create early certainty about the meaning of patent claims, and this certainty was beneficial because it would generate early settlement of patent lawsuits.[67] Parties would be more willing to settle the case at an earlier stage because the parties could reasonably predict the likelihood of a favorable judgment.[68] This predictability did not occur, according to Judge Rader, because claim construction is subject to *de novo* review by the Federal Circuit.[69] Therefore, a trial court's early claim interpretation provides no certainty at all, and the claim construction is not certain until after a decision by the Federal Circuit.[70]

Judge Rader argued that the Federal Circuit should take a "functional approach" to setting a standard of review for claim construction.[71] Although he did not define the elements of a "functional approach," he analyzed the issue in the following way. Judge Rader noted that the trial judge, not the Federal Circuit judge, enjoys a potentially superior position to engage in claim construction.[72] Judge Rader argued that the trial judge might be in a better position to determine claim constructions because he or she has tools to acquire and evaluate evidence that the Federal Circuit

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62. *See id.*
63. *See id.*
64. *See id.*
65. *See* Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1455, 1473, 46 U.S.P.Q.2d (BNA) 1169, 1189 (Fed. Cir. 1998).
66. *See id.*
67. *See id.* at 1475, 46 U.S.P.Q.2d at 1191.
68. *See id.*
69. *See id.* at 1476, 46 U.S.P.Q.2d at 1192.
70. *See id.*
71. *See* Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1455, 1477, 46 U.S.P.Q.2d (BNA) 1169, 1193 (Fed. Cir. 1998).
72. *See id.*

lacks.[73] Therefore, Judge Rader reasoned that the institutional advantages of the district court over the Federal Circuit support deference to the district court's claim constructions.[74] Judge Rader concluded that, by according some deference to the district court's claim construction, the Federal Circuit can restore the district court's prominence in claim construction and create more certainty at an early stage of patent litigation.[75]

III. DISCUSSION

The *Cybor* majority unwisely held that a court should utilize a *de novo* standard of review for all claim constructions. In so holding, the Federal Circuit ignored the factual underpinnings of claim construction that frequently arise. In light of these factual elements of claim construction, the Federal Circuit should have adopted a mixed *de novo*/clear error standard of review for claim constructions.

A. Disagreements Regarding *Markman II*

Even though the Federal Circuit presumably decided *Cybor en banc* in order to clarify the proper standard of review, the multiple written opinions evidences a clear split among the court regarding the correct legal standard. First, the judges have distinctly different views about the meaning of the Supreme Court's decision in *Markman II*. In Judge Archer's majority opinion, he reasoned that the Supreme Court's reference to claim construction as a "mongrel practice" is a prefatory comment by the Court indicating that claim construction is difficult to characterize as a question of law or fact.[76] Therefore, he rejected the notion that the Supreme Court's language supports the view that claim construction includes findings of

73. *See id.* at 1477-78, 46 U.S.P.Q.2d at 1193.

> Trial judges can spend hundreds of hours reading and rereading all kinds of source material, receiving tutorials on technology from leading scientists, formally questioning technical experts, examining on site the operation of the principles of the claimed invention, and deliberating over the meaning of the claim language. If district judges are not satisfied with the proofs proffered by the parties, they are not bound to a prepared record but may compel additional presentations or even employ their own court-appointed expert. An appellate court has none of these advantages. It cannot depart from the record of the trial proceedings. To properly marshal its resources, the appellate bench must enforce strict time and page limits in oral and written presentations.

Id.

74. *See id.* at 1478.

75. *See id.*

76. *See* Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1455, 1455, 46 U.S.P.Q.2d (BNA) 1169, 1174 (Fed. Cir. 1998).

fact and law.[77] In sharp contrast, Chief Judge Mayer's concurrence in the judgment cites the Supreme Court's reference to a "mongrel practice" as showing that the Court refused to "bluntly force the square peg of claim construction into the round hole of fact or law."[78] Therefore, Chief Judge Mayer argued that the Supreme Court rejected the Federal Circuit's previous view of claim construction as a pure question of law to be decided *de novo*.[79] In his dissent, Judge Rader also opined that the Supreme Court's reference to claim construction as a "mongrel practice" shows that the Court views claim construction as "not as purely legal matter."[80]

Although the *Cybor* court's majority opinion dismissed any notion of claim construction that included factual findings, Judge Rader's dissent pointed to a clear example of a finding of fact: credibility determinations of expert witnesses.

> When two experts testify differently as to the meaning of a technical term, and the court embraces the view of one, the other, or neither while construing a patent claim as a matter of law, the court has engaged in weighing evidence and making credibility determinations.... But when the Federal Circuit Court of Appeals states that the trial court does not do something that the trial court does and must do to perform the judicial function, the court knowingly enters a land of sophistry and fiction.[81]

While the Federal Circuit has held that expert testimony is only intended to aid a court in understanding the claims, and a court might not pay any deference to such testimony,[82] Judge Rader's dissenting opinion is more aligned with the realities of patent litigation. When a judge faces conflicting testimony from experts, and he or she accepts the testimony of one over the other, it seems disingenuous to argue that credibility determinations are not being made.

The *Cybor* majority responded to this concern by stating that credibility determinations necessarily would be subsumed within the patent

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77. *See id.*

78. *Id.* at 1464 n.10, 46 U.S.P.Q.2d at 1197 n.10.

79. *See id* at 1464, 46 U.S.P.Q.2d at 1182.

80. *Id.* at 1473, 46 U.S.P.Q.2d at 1189.

81. *Id.* at 1475, 46 U.S.P.Q.2d at 1191 (citing Lucas Aerospace, Ltd. v. Unison Indus., LP, 890 F. Supp. 329, 333-34 n.7 (D. Del. 1995)).

82. *See* Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1584, 39 U.S.P.Q.2d (BNA) 1573, 1578 (Fed. Cir. 1996) ("[E]xtrinsic evidence in general, and expert testimony in particular, may be used only to help the court come to the proper understanding of the claims.... Indeed, where the patent documents are unambiguous, expert testimony regarding the meaning of a claim is entitled to no weight.").

document.[83] This position could be interpreted to mean that a court will choose the testimony of one expert over another based upon how well the testimony comports with the patent claims, specification, and prosecution history. However, the comparison of the expert testimony to the intrinsic evidence is unlikely to be helpful because the intrinsic evidence must be ambiguous before expert testimony may be used. The judge inevitably will compare the expert testimonies against each other, instead of against the intrinsic evidence, when deciding which testimony is more persuasive. Therefore, the Federal Circuit's position that a trial judge does not make credibility judgments regarding the testimony of expert witnesses for claim construction does not match reality. Numerous trial courts and legal commentators have shared this sentiment.[84]

B. Degree of Deference to the Trial Court

Concurring opinions by Judges Plager and Bryson undercut the *Cybor* majority's simple rule of *de novo* review. Judge Plager argued that even though the Federal Circuit utilizes a *de novo* standard of review, "common sense dictates that the trial judge's view will carry weight."[85] The amount of informal deference that a reviewing court will use is a function of the trial court's care with which it developed the claim construction and the information on which it based that construction.[86] However, if claim construction purely is a question of law, then the Federal Circuit does not need to grant any deference to the trial court's claim construction. Unfortunately, Judge Plager does not provide any clarification on this issue, but his opinion supports the idea that the Federal Circuit will apply a *de novo* standard in name only. In fact, Judge Plager stated that the *Cybor* major-

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83. *See* Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1456, 46 U.S.P.Q.2d (BNA) 1169, 1174 (Fed. Cir. 1998) (citing *Markman II*, 517 U.S. 370, 389, 38 U.S.P.Q.2d (BNA) 1461, 1470 (1996)).

84. *See* Elf Atochem North Am., Inc. v. Libbey-Owens-Ford Co., 894 F. Supp. 844, 857, 37 U.S.P.Q.2d (BNA) 1065, 1075 (D. Del. 1997); *In re* Mahurkar Double Lumen Hemodialysis Catheter Patent Litigation, 831 F. Supp. 1354, 1359, 28 U.S.P.Q.2d (BNA) 1801, 1805 (N.D. Ill. 1993). *See generally* Gregory D. Leibold, *In Juries We Do Not Trust: Appellate Review of Patent-Infringement Litigation*, 67 U. COLO. L. REV. 623 (1996) (arguing that trial judges make credibility determinations when trial judges hear expert witness testimony); Louis S. Silvestri, *A Statutory Solution to the Mischiefs of Markman v. Westview Instruments, Inc.*, 63 BROOK. L. REV. 279 (1997) (arguing that claim construction is a mixed fact/law issue); William R. Zimmerman, *Unifying Markman and Warner-Jenkinson: A Revised Approach to the Doctrine of Equivalents*, 11 HARV. J.L. & TECH. 185 (1997) (arguing that the Federal Circuit should expressly allow extrinsic evidence and encourage district courts to assess this evidence explicitly).

85. *Cybor*, 138 F.3d at 1462, 46 U.S.P.Q.2d at 1180.

86. *See id.*

ity's opinion is merely intended to eliminate the time-consuming practice of arguing whether elements of a particular claim construction includes findings of fact or conclusions of law.[87] Thus, as a practical matter, Judge Plager's reading of the *Cybor* decision would not alter the allegedly common practice of granting informal deference to some trial judges' decisions regarding claim construction.

Judge Bryson's concurring opinion further supports Judge Plager's position that a reviewing court should grant some amount of deference to a trial judge's claim construction. Judge Bryson argued that "[s]imply because a particular issue is denominated a question of law does not mean that the reviewing court will attach no weight to the conclusion reached by the tribunal it reviews."[88] Instead of adopting a strict view of *de novo* review, Judge Bryson pointed to three examples where appellate courts apply a deferential standard to some types of questions of law that ordinarily would be reviewed *de novo*.[89] Judge Bryson's examples are not very compelling when one considers the rationale for deference. In all three examples, the appellate court presumably grants deference because the lower court is more familiar with the particular law at issue.

For example, the Ninth Circuit Court of Appeals likely hears more cases dealing with interpretations of California law than does the Supreme Court. Therefore, the Ninth Circuit would have more familiarity with particular aspects of California state law, and the Supreme Court appropriately should defer to the Ninth Circuit's expertise. However, Judge Bryson cannot be arguing for deference to a trial judge's claim interpretation based upon the greater familiarity of district courts with patent law than the Federal Circuit Court of Appeals. The Federal Circuit frequently hears patent cases whereas most district courts rarely handle them. As a result, Judge Bryson's reasoning for informal deference to a trial judge's claim construction is not persuasive.

Judge Bryson concluded that, if claim construction turns on an issue such as a credibility judgment between two expert witnesses, "it would be entirely appropriate—and consistent with [the Federal Circuit's] characterization of claim construction as a question of law—to factor into [the Federal Circuit's] legal analysis the district court's superior access to one of the pertinent tools of construction."[90] To which tool of construction does the trial court have superior access? The only reasonable answer to

87. *See id.*

88. *Id.* at 1463, 46 U.S.P.Q.2d at 1180.

89. *See supra* Part II.B.2.

90. Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1455, 1463, 46 U.S.P.Q.2d (BNA) 1169, 1180 (Fed. Cir. 1998).

that question must be credibility determinations. Such a determination is a finding of fact that the trier of fact ordinarily decides. Judge Bryson's concurrence fails to explain why the appellate court needs to create a fiction that credibility is simply a tool of legal construction and not, as generally accepted,[91] a factual inquiry.

C. Policy Concerns

Judge Rader's dissent discusses many policy concerns that militate in favor of some deference in claim construction. First, Judge Rader reasoned that the American court system is based upon the trial as being the "main event."[92] Presumably, this means that the trial stage should be the principal place where a case is won or lost. If the trial is not the "main event," and the crucial point in litigation is at the appellate level, then cases are predominately being decided by appellate judges.

De novo review creates much more uncertainty than a deferential standard because an appellate judge has unconstrained freedom, under a *de novo* standard, to reverse the claim constructions of a trial judge. Therefore, even if a trial judge construed a patent's claim in a way that was unfavorable to one of the parties, that party has a second chance to get a favorable construction on appeal. If a court used a deferential standard, then the parties would be much more certain, after the claim construction phase of the trial, about the meaning of the claims. Under the *Cybor* rule, a *de novo* standard gives both parties much less of an incentive to settle the case prior to appellate review. If a court used a deferential standard for those elements of the claim construction that were based upon factual findings, then the parties would have a stronger understanding of how the case likely would result.

One may argue that a mixed *de novo*/deferential standard would not alleviate the disincentive to settle a patent litigation because substantial portions of the claim construction would likely be based upon pure conclusions of law subject to *de novo* review. For the constructions subject to *de novo* review, the parties would also have a disincentive to settle the case because of the uncertainty regarding how the case would eventually

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91. *See* ROBERT L. HARMON, PATENTS AND THE FEDERAL CIRCUIT 855 (4th ed. 1998) ("Where credibility determinations are involved, it is especially important to observe the rule of clear error. Determining the weight and credibility of the evidence is the special province of the trier of fact.") (citing Para-Ordnance Mfg. v. SGS Importers Int'l, Inc., 73 F.3d 1085 (Fed. Cir. 1995)).

92. *See Cybor*, 138 F.3d at 1477, 46 U.S.P.Q.2d at 1194. *See generally* Silvestri, *supra* note 84, at 279 (arguing that the characterization of claim construction as a matter of law has created the problem of relegating the trial to be a tryout instead of the "main event").

be decided upon appeal. However, a mixed standard would provide more certainty regarding the claim constructions for the very types of claims that are most prone to be reversed on appeal.

For example, a trial judge should only consider expert testimony regarding the meaning of claim terms when the intrinsic evidence (patent and prosecution history) leaves the meaning of the claim term ambiguous.[93] If a judge relies upon conflicting expert testimony to reach a decision, he or she inevitably will make credibility determinations.[94] If an appellate judge reads the trial record when reviewing the claim constructions of the trial judge, the appellate judge has no means by which he or she can assess the credibility of the witnesses. Therefore, the appellate judge has a smaller set of information on which to base a decision, and he or she is more likely to come to a different decision than the lower court than he or she would if judges at both levels relied upon the same set of information when making a judgment.

IV. CONCLUSION

The Federal Circuit unwisely decided *Cybor* from legal, practical, and policy standpoints. The Federal Circuit misconstrued the *Markman II* decision in an effort to justify a *de novo* standard of review. Moreover, the Federal Circuit ignored the fact-finding that frequently is an important element of claim construction. Instead of achieving the goal of improving the process of patent infringement litigation, the *Cybor* decision ironically has made patent litigation a much more uncertain process for both the courts and litigants. The perverse incentives created by a *de novo* standard will inevitably lead to a more burdened judiciary and increased litigation expenses for the parties.

The *Cybor* court should have adopted a mixed review standard for claim construction. A reviewing court should first decide which claim constructions were based upon findings of fact and which were based upon conclusions of law. If a trial court based a construction purely upon conclusions of law, then the appellate court may review the construction *de novo*. However, if a trial court based a construction upon a finding of fact, then a reviewing court should utilize a deferential standard of review. For instance, the Federal Circuit should defer to the district court where a claim construction is based upon the conflicting testimony of expert wit-

93. *See Vitronics*, 90 F.3d at 1584, 39 U.S.P.Q.2d at 1578 (stating that "where the patent documents are unambiguous, expert testimony regarding the meaning of a claim is entitled to no weight").

94. *See Cybor*, 138 F.3d at 1475, 46 U.S.P.Q.2d at 1191.

nesses. In such a case, the Federal Circuit lacks the capability to assess the credibility of the live witnesses. Therefore, the Federal Circuit should defer in its review of the claim construction because the trial record lacks the credibility information on which the trial judge based his or her decision. A mixed review standard would be superior in promoting the values of clarity and predictability in patent litigation than pure *de novo* review.