Since the Supreme Court’s 1996 decision in *Markman v. Westview Instruments, Inc.*, it has been hornbook law that the interpretation of patent claims is a matter of law to be determined exclusively by the courts. Not so clear has been the extent to which extrinsic evidence—defined as all evidence external to the patent and the prosecution history, including expert and inventor testimony, dictionaries and learned treatises—properly considered during claim construction. This paper focuses on Federal Circuit cases’ evolving view of the use of expert testimony in the context of claim construction.

The *en banc* Federal Circuit in *Markman I* noted that a “court may, in its discretion, receive extrinsic evidence in order to ‘aid the court in coming to a correct conclusion’ as to the ‘true meaning of the language employed’ in the patent.” The Court stated that extrinsic evidence was not to be used to vary or contradict the terms of the claims, but that it could be considered to assist in claim construction. Although the claim construction may be “enlightened” by extrinsic evidence, it still must be based on the patent and prosecution history.

Shortly after, the Federal Circuit seemed to take a dim view of the use of extrinsic evidence in its *Vitronics* decision. In that decision, the court stated that “where the public record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper.” The court noted that there would be no error in relying on expert testimony and other extrinsic evidence solely to help the district court understand the technology, but that expert testimony on the proper construction of a disputed claim term may only be relied upon if the patent documents, taken as a whole, are insufficient to enable the court to construe disputed claim terms. The court also
suggested that expert testimony is a less valuable guide to the meaning of claim terms than published documents:

[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. They are to be preferred over opinion testimony, whether by an attorney or artisan in the field of technology to which the patent is directed. Indeed opinion testimony on claim construction should be treated with the utmost caution, for it is no better than opinion testimony on the meaning of statutory terms. [Citation omitted]°

Although a fair reading of Vitronics indicates that the court did leave the door open to the consideration of expert testimony in the proper circumstances, the court’s negative comments about the value of such testimony led many to believe that it rarely would be considered, and a number of subsequent decisions indicated that it would be improper for the court to rely on extrinsic evidence in the absence of ambiguity in the intrinsic evidence.°

What this harsh view of extrinsic evidence seemed to miss was the fact that claim terms are to be construed as they would have been construed by one of “ordinary skill in the art” at the time the application for patent was filed and that judges are not such skilled artisans. How, then, is the judge to construe the claims without reference to expert testimony?

Possibly recognizing this issue, the Federal Circuit, subsequent to Vitronics, seemed to soften its stance about considering expert testimony. For example, in Key Pharmaceuticals, the court distinguished between using extrinsic evidence and hearing extrinsic evidence, as follows:

The court has made strong cautionary statements on the proper use of extrinsic evidence, see Vitronics Corp. v. Conceptron, Inc., 90 F.3d 1576, 1583, 39 USPQ2d 1573, 1577 (Fed. Cir. 1996), which might be misread by some members of the bar as restricting a trial court’s ability to hear such evidence. We intend no such thing. To the contrary, trial courts generally can hear expert testimony for background and education on the technology implicated by the presented claim construction issues, and trial courts have broad discretion in this regard.
In *Key Pharmaceuticals*, the Federal Circuit found that the intrinsic evidence was insufficient to establish the numerical range of amounts represented by the term “pharmaceutically effective amount” and found that the use of expert testimony and FDA standards to construe the term was appropriate.\(^{14}\) The court also noted that trial courts have broad discretion with regard to the need for and use of expert testimony in construing claims.\(^{15}\)

The Federal Circuit also distinguished between hearing extrinsic evidence and relying on extrinsic evidence in *Pitney Bowes*.\(^ {16}\) In this case, the court noted that *Vitronics* does not prohibit courts from examining extrinsic evidence, even when the patent document is itself clear.\(^ {17}\) Rather, it is proper to consider and use extrinsic evidence when it is consistent with the intrinsic evidence to ensure that the claim construction is correct, even where the intrinsic evidence is unambiguous.\(^ {18}\) The court noted,

This is especially the case with respect to technical terms in general usage or terms of art in the claim-drafting, such as “comprising.” Indeed a patent is both a technical and a legal document. While the judge is well-equipped to interpret the legal aspects of the document, he or she must also interpret the technical aspects of the document, and indeed its overall meaning, from the vantage point of one skilled in the art. [Citation omitted.] Although the patent file may often be sufficient to permit the judge to interpret the technical aspects of the patent properly, consultation of extrinsic evidence is particularly appropriate to ensure that his or her understanding of the technical aspects of the patent is not entirely at variance with the understanding of one skilled in the art.\(^ {19}\)

The *en banc* Federal Circuit addressed the use of extrinsic evidence in claim construction once more in the *Cybor* decision.\(^ {20}\) Here, the court explained that extrinsic evidence could provide “aid to the court in coming to a correct conclusion as to the true meaning of the language employed in the patent” and could properly be used “for the court’s understanding of the patent.”\(^ {21}\) The *Cybor* court also reaffirmed that, even though a court may consider and give weight to extrinsic evidence, claim construction is a purely
legal question and is to be reviewed by the appellate court de novo, including any allegedly fact-based questions.22

Subsequently, the Court has recognized the educational value of extrinsic evidence in several cases, going so far as to suggest, in the AFG Industries case, that a district court may err when it ignores scientific testimony regarding how a claim term is understood in the art, where that testimony corroborates the meaning adduced from the specification.23 In AFG, the Court reversed the trial court’s claim construction that did not distinguish between “layers” and “interlayers,” noting that an expert’s undisputed testimony “appears to represent ‘trustworthy’ and ‘clearly expressed, plainly apposite’ evidence that persons of ordinary skill in the art do distinguish between layers and interlayers.”24

The TAP Pharmaceuticals25 decision is a more recent example of a case in which the Federal Circuit endorsed reliance on expert testimony in arriving at the proper construction of a claim term, even though it was a non-technical term. The term in dispute was the word “containing” in the phrase “particles containing a water-soluble drug.” The court noted that “containing” was not a technical term but was essential in helping to describe the patented technology. As a result, the term cannot be defined by some ordinary meaning isolated from the proper context, and it was appropriate for the district court not only to consider the intrinsic evidence, but also to consider [an expert’s] interpretation of that evidence, both in context and from the perspective of a person of ordinary skill in the art.26

Ortho-McNeil27 is another case where the Federal Circuit approved giving weight to expert testimony in construing a claim term. The patent in issue was directed to a pharmaceutical composition comprising certain weight ratios of two drugs, tramadol and acetaminophen. The claim recited that “the ratio of the tramadol material to acetaminophen is a weight ratio of about 1:5.” The district court, relying on expert testimony as well as intrinsic evidence, construed the “about 1:5” limitation to mean
“approximately 1:5; encompassing a range of ratios no greater than 1:3.6 to 1:7.1.” In affirming, the Federal Circuit referenced and discussed the expert testimony, noting that the expert had used statistical analyses to determine confidence bounds for the data in the patent in order to determine an upper bound and a lower bound for the 1:5 weight ratio. 

In the *Abbott v. Andrx* case, the Federal Circuit reversed the district court’s construction of the claim language “pharmaceutically acceptable polymer” relying, in part, on the parties’ experts’ testimony. The district court had relied upon language in the patent specification stating, “The pharmaceutically acceptable polymer is a water-soluble hydrophilic polymer…” as support for its construction that was a hydrophilic water-soluble polymer. In reversing, the Federal Circuit relied on intrinsic evidence but also noted that neither parties’ experts had declared that the written description in the specification was “purely definitional” of the disputed phrase, from the point of view of one of skill in the art.

An expert’s testimony will likely be given little weight if it is deemed as merely conclusory. For example, in *Network Commerce*, the Federal Circuit dismissed the expert declaration of one party, noting that the expert did not “support his conclusion with any references to industry publications or other independent sources” and that “conclusory, unsupported assertions by experts as to the definition of a claim term are not useful to a court.” The Court also noted that expert testimony “at odds with the intrinsic evidence must be disregarded.”

Further, the expert’s testimony may be deemed unpersuasive if it is not tied to the patent or claim language. In *Biagro Western Sales*, the claim was directed to a fertilizer composition, and the term in dispute was “wherein said phosphorous-containing acid or salt thereof is present in an amount of about 30 to about 40 weight percent.” Biagro argued that the amount of phosphorous-containing acid in the claim limitation
referred to a chemical equivalent amount rather than, as the trial court had held, the amount of phosphorous-containing acid actually present in the final fertilizer product. In support of this position, Biagro relied on expert declarations explaining that those skilled in the art understand that the amounts of plant nutrients in fertilizer products are frequently expressed a “chemical equivalents.” The Federal Circuit found this unconvincing, noting that, even if it agreed with the experts’ conclusions regarding what those skilled in the art are familiar with, Biagro could not tie its extrinsic evidence to the patent or the claim language. “Nothing in the patent or prosecution history indicates that labeling standards are relevant to the claimed fertilizer, and nothing in Biagro’s extrinsic evidence suggests that a person skilled in the art of fertilizer formulation would necessarily use a chemical equivalent to express the amount of phosphorous acid in a fertilizer that does not actually contain phosphorous acid.”

In view of the evolving case law, it appears that the Federal Circuit will be receptive to expert testimony relating to claim construction if it is couched in the proper terms. The testimony should not be conclusory or contradict the intrinsic evidence. But if it provides background and education on the technology implicated by the claim construction issues, or -- if going directly to the meaning of the claim term – it is tied to the claims and the specification, and helps to explain the meaning of terms of art or of terms which cannot be defined by some ordinary meaning isolated from the proper context of the patent, there is a good chance that such expert testimony will be considered, and possibly even welcomed, by the Federal Circuit.

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2 Markman v. Westview Instr., Inc., 52 F.3d 967, 980 (Fed. Cir. 1995).
3 Id. at 980.
4 Id. at 981.
5 Id.
7 Id. at 1583.
8 Id. at 1585.
9 Id. (emphasis added).
10 Interactive Gift Express, Inc. v. CompuServe, Inc., 231 F.3d 859, 867 (Fed. Cir. 2000);
12 Key Pharmaceuticals v. Hercon Labs Corp., 161 F.3d 709 (Fed. Cir. 1998).
13 Id. at 716.
14 Id. at 718.
15 Id. at 716.
17 Id. at 1308.
18 Id. at 1309.
19 Id.
21 Id. at 1454 n. 3.
22 Id. at 1456.
23 AFG Indus., Inc. v. Cardinal IG Co., Inc., 239 F.3d 1239, 1249 (Fed. Cir. 2001).
24 Id.
26 Id. at 1354.
27 Ortho-McNeil Pharm., Inc. v. Caraco Pharm. Labs., Ltd., 476 F.3d 1321 (Fed. Cir. 2007).
28 Id. at 1328.
29 Abbott Labs v. Andrx Pharm., Inc., 473 F.3d 1196 (Fed. Cir. 2007).
30 Id. at 1210-11.
32 Id. at 1361.
33 Id.
35 Id. at 1303-04.