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# NOTES

## A STATUTORY SOLUTION TO THE MISCHIEFS OF *MARKMAN v. WESTVIEW INSTRUMENTS, INC.*<sup>1</sup>

### INTRODUCTION

Infringement analysis in patent infringement actions proceeds in two steps.<sup>2</sup> First, the scope of the patent is determined: the patent claims are interpreted or construed.<sup>3</sup> Second, the properly construed patent claims are compared with the accused product or process.<sup>4</sup> If the accused product or process sufficiently encroaches upon the patent, infringement has occurred.<sup>5</sup>

Nearly always, to decide what the claims mean is to decide the case.<sup>6</sup> It is a relatively simple matter to compare the accused product or process with the patent and determine the level of encroachment.<sup>7</sup> In the main, however, it is much more difficult to interpret the patent claims.<sup>8</sup> Such claims are often ambiguous and contain complex technical subject matter. As a result, the decisionmaker vested with the task of interpreting patent claims often must depend on extrinsic evidence, usually expert or inventor testimony, in order to understand properly and construe the claims.<sup>9</sup> The Supreme Court, in an apparent

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<sup>1</sup> 116 S. Ct. 1384 (1996) [hereinafter *Markman III*].

<sup>2</sup> *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc) [hereinafter *Markman II*].

<sup>3</sup> *Markman II*, 52 F.3d at 976. Patent claims are the portion of the patent document that defines the scope of the patentee's rights. See *infra* note 24.

<sup>4</sup> *Markman II*, 52 F.3d at 976.

<sup>5</sup> *Id.*

<sup>6</sup> *E.g., id.* at 989, 993 (Mayer, J., concurring).

<sup>7</sup> See, *e.g., id.*

<sup>8</sup> *E.g., id.* at 1002-08 (Newman, J., dissenting).

<sup>9</sup> *Markman II*, 52 F.3d at 980-81; see *Winans v. New York & Erie R.R. Co.*,

effort to reduce the frequency of improper interpretations, recently abolished the jury's role in interpreting patent claims.

In *Markman v. Westview Instruments, Inc.*,<sup>10</sup> the question presented to the Supreme Court was whether the interpretation of patent claims is solely a question of law or rather a mixed question of law and fact.<sup>11</sup> If the Supreme Court determined that claim interpretation is solely a question of law, then conflicting extrinsic evidence regarding claim interpretation would never raise a question of fact and would always be decided by the judge.<sup>12</sup> If the Supreme Court determined that claim interpretation is a mixed question of law and fact, then disputes regarding conflicting expert testimony would need to be resolved by the fact finder on the way to construing the claims as a matter of law.<sup>13</sup>

The Supreme Court held that the interpretation of patent claims is a matter of law solely for the court to decide, and not subject to the Seventh Amendment right to a jury trial.<sup>14</sup> This conclusion was based partially on the assertion that although credibility determinations with regard to expert testimony offered in support of conflicting interpretations are factual in nature and within the jury's forte, they are rarely dispositive.<sup>15</sup> Furthermore, the Supreme Court articulated the highly controversial notion that even in cases where such credibility determinations may be dispositive, a judge's trained ability to evaluate conflicting testimony is more significant than a jury's ability to evaluate demeanor, human conduct, and truthfulness.<sup>16</sup>

This Note argues that the characterization of claim interpretation as a matter of law has created certain mischiefs that hinder the judicial process in patent infringement cases. First, such characterization violates the Seventh Amendment's right to a jury trial by creating a "complexity exception" for patent

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62 U.S. (21 How.) 88, 100 (1858) ("[E]xperts may be examined to explain terms of art, and the state of the art at any given time. They may explain to the court and the jury the machines, models, or drawings exhibited.")

<sup>10</sup> 116 S. Ct. 1384 (1996).

<sup>11</sup> *Id.* at 1387; *Markman II*, 52 F.3d at 989 (Mayer, J., concurring).

<sup>12</sup> *See Markman III*, 116 S. Ct. at 1395-96.

<sup>13</sup> *Markman II*, 52 F.3d at 991 (Mayer, J., concurring).

<sup>14</sup> *Markman III*, 116 S. Ct. at 1387, 1395-96.

<sup>15</sup> *Id.* at 1395.

<sup>16</sup> *Id.*

cases.<sup>17</sup> Second, because legal questions are reviewed de novo on appeal, characterization of claim interpretation as a legal question relegates what is supposed to be the "main event" in the adjudicatory process, the trial, to a "tryout on the road."<sup>18</sup>

Furthermore, this Note proposes a statutory solution to the dual mischiefs of *Markman*. The proposal relies on the contention that patent claims are very often ambiguous. Thus, the decisionmaker vested with the task of interpreting the claims usually requires expert assistance in order to understand properly and construe the claims. Introduction of competing expert testimony on claim interpretation leads to factual disputes regarding witness credibility and bias.<sup>19</sup> When that happens, the mischiefs of *Markman* arise to hinder the judicial process. If patent claims were less ambiguous, however, district courts would be better able to interpret patent claims without having to depend on extrinsic evidence.

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<sup>17</sup> See *SRI Int'l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1127-31 (Fed. Cir. 1985) (Markey, C.J., additional views). The Seventh Amendment states that "In Suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury shall be otherwise re-examined in any Court of the United States, than according to the rules of the common law." U.S. CONST. amend. VII.

In *SRI Int'l*, Chief Judge Markey explained that the "complexity exception" to the Seventh Amendment creates a dichotomy between factual issues appropriate for a jury to decide and factual issues appropriate for a judge to decide. *SRI Int'l*, 775 F.2d at 1126, 1131. Under such an exception, certain factually complex cases are determined to be too complex for juries to resolve properly, and thus, such cases are resolved by the court, notwithstanding the Seventh Amendment right to a jury trial. *Id.* at 1127. The Chief Judge further stated that because the Seventh Amendment provides no such distinction, such an exception could only exist where the complexity of certain cases is so great that it renders such suits beyond the ability of a jury to decide by rational means with a reasonable understanding of the evidence. *Id.* at 1130. Patent cases, the Chief Judge concluded, are not such cases. *Id.*

<sup>18</sup> In *Anderson v. City of Bessemer City*, 470 U.S. 564 (1985), the Supreme Court stated that "[w]hen [factual] findings are based on determinations regarding the credibility of witnesses," FED. R. CIV. P. 52(a) requires even greater deference to the fact finder's findings than the already stringent clearly-erroneous standard. *Id.* at 575. In addition, where the parties have already fought at the trial level to persuade the fact finder that their account of the facts is the correct one, requiring them to persuade three more judges at the appellate level is requiring too much. *Id.* Instead, the Court found that, "the trial on the merits should be the 'main event' rather than a 'tryout on the road.'" *Id.* Federal Rule of Civil Procedure 52(a) states that "[f]indings of fact shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge of the credibility of the witnesses." FED. R. CIV. P. 52(a).

<sup>19</sup> E.g., *Markman II*, 52 F.3d at 991 (Mayer, J., concurring).

In this regard, this Note proposes that 35 U.S.C. § 112 (“§ 112”),<sup>20</sup> the statute that sets out disclosure requirements for patent claims and specifications, be amended to require a potential patentee to include in the specification a definition or interpretation for each term of art and each technical term in the claims, and for each word that qualifies such a term. Such an amendment would require potential patentees to describe their inventions in greater detail, thereby reducing much of the ambiguity in claim terminology. By reducing ambiguity in claim terminology, more complete disclosure by the potential patentee would allow courts to consider only the intrinsic evidence, the patent and its prosecution history, when making their determination. Consequently, more complete disclosure would eliminate the court’s reliance on extrinsic evidence when construing claims as a matter of law. Thus, because the mischiefs of *Markman* arise only to the extent that claim interpretation as a matter of law contains a factual element, more complete disclosure by a potential patentee, by eliminating the court’s reliance on extrinsic evidence, would likewise eliminate the mischiefs associated with *Markman*.

This Note consists of five parts. Part I provides background information regarding basic patent law and patent infringement actions. Part II reviews the facts of *Markman* and the decisions of the district, circuit, and Supreme courts, focusing on the rationale that these courts provide for the conclusion that all aspects of patent claim interpretation are questions of law. Part III argues that this conclusion is ill-conceived. This part illustrates the flaws in such a characterization by explaining the errors in the Supreme Court’s reasoning and identifying the negative practical consequences for both litigants and courts—the mischiefs of *Markman*—that flow

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<sup>20</sup> In its present form, 35 U.S.C. § 112 states, in pertinent part, that

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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

35 U.S.C. § 112 (1984).

therefrom. Part IV analyzes statutory patent disclosure requirements under § 112 in an attempt to determine whether these requirements adequately provide courts with an intrinsic record enabling them to interpret claim language without resorting to extrinsic evidence. This part concludes that § 112, in its present form, does not provide for the disclosure needed by courts after *Markman*. Finally, Part V proposes a statutory amendment to § 112 that would more adequately provide courts with the level of disclosure necessary to avoid the mischiefs of *Markman* in future patent cases.

## I. BACKGROUND: BASIC PATENT LAW AND PATENT INFRINGEMENT ACTIONS

Patents safeguard inventions that are new, useful, and not obvious from the prior art—the past research—to a person of ordinary skill in the profession at the time the invention was made.<sup>21</sup> When a patent is issued, the patentee is awarded the right to exclude others from making, using, or selling the given invention for a term beginning on the date the patent issues and ending 20 years from the date the application for the patent was filed.<sup>22</sup>

Typically, plaintiffs in patent suits allege infringement. Such claims are based on accusations that the defendant unlawfully made, used, or sold the patented invention in the United States sometime during the life of the patent.<sup>23</sup> Infringement analysis involves two steps: 1) construction or interpretation of asserted patent claims,<sup>24</sup> and 2) determination

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<sup>21</sup> *E.g.*, DONALD S. CHISUM, UNDERSTANDING INTELLECTUAL PROPERTY LAW 2-18 (1992).

<sup>22</sup> 35 U.S.C. § 154 (West Supp. 1995).

<sup>23</sup> *Markman III*, 116 S. Ct. at 1388.

<sup>24</sup> The Constitution grants Congress the power “[t]o promote the Progress of Science and the useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.” U.S. Const. art. I, § 8, cl. 8. The grant of a patent advances these objectives. There are two distinct elements of a patent: the specification and the claims. The specification describes the invention and “the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains . . . to make and use the same . . . .” 35 U.S.C. § 112 (1984). The claims “particularly point[] out and distinctly claim[] the subject matter which the applicant regards as his invention.” *Id.* The claims define the scope of the patent grant and circumscribe the patentee’s right of exclusivity under the

of whether the accused product or process infringes such claims once properly construed.<sup>25</sup>

Because of the scientific nature of most inventions, the issue of infringement often involves complex technical information that may be confusing to judges and juries.<sup>26</sup> As a result, expert witnesses are often called upon to explain claim language and the state of the art.<sup>27</sup> If the language and meaning of words used in a claim are unambiguous or uncontested, claim interpretation is a relatively simple determination.<sup>28</sup> However, this is very seldom the case. As one district court very lucidly pointed out:

In most cases, the parties will look first to the accused product [or process] and describe it. Then, the parties will look at the words used in the claim to see where an interpretation of a word or group of words does or does not describe the accused product or process. As to these words, the patent owner will propose a meaning that precisely describes the accused product or process. The accused infringer will do just the opposite.<sup>29</sup>

It is this typical pattern in patent infringement cases that produces the disputes regarding the meaning of claim terms. And, not surprisingly, it is this process that generated the dispute in the *Markman* case, which centered around the meaning of the word "inventory."

## II. *MARKMAN V. WESTVIEW INSTRUMENTS, INC.*

### A. *Facts*

Markman owns United States Reissue Patent No. 33,054, entitled "Inventory Control and Reporting System for Drycleaning Stores."<sup>30</sup> The patent describes a system that can monitor and report the status, location, and movement of clothing in dry-cleaning and laundry establishments.<sup>31</sup> The

patent. See, e.g., *Markman III*, 116 S. Ct. at 1388.

<sup>25</sup> E.g., *Vitronics Corp. v. Conceptor, Inc.*, 90 F.3d 1576, 1581-82 (Fed. Cir. 1996).

<sup>26</sup> See, e.g., *Markman II*, 52 F.3d at 980-81.

<sup>27</sup> *Id.*

<sup>28</sup> *Id.* at 979-80, 991; *Elf Atochem N. Am., Inc. v. Libbey-Owens-Ford Co.*, 894 F. Supp. 844, 858-59 (D. Del. 1995).

<sup>29</sup> *Elf Atochem*, 894 F. Supp. at 858-59.

<sup>30</sup> *Markman III*, 116 S. Ct. at 1388.

<sup>31</sup> *Id.*; *Markman v. Westview Instruments, Inc.*, 772 F. Supp. 1535, 1537 (E.D.

Markman system consists of a keyboard, a data processor, and a series of optical detectors.<sup>32</sup> Under the Markman system, as customers bring in their articles of clothing for cleaning, the employee enters information on the keyboard identifying the customer, the type of articles being deposited, and the particular cleaning services to be performed.<sup>33</sup> The data processor stores and processes the information entered by the employee, associating each transaction with a specific number.<sup>34</sup> The data processor is connected to a printer that generates records for each transaction, including tags that are attached to individual articles or groups of articles in inventory.<sup>35</sup> The article tags contain bar codes readable by optical detectors,<sup>36</sup> which are used to call up information associated with the customer or transaction and to generate reports containing information such as the location of certain articles within the system and the number of articles at a particular point in the system.<sup>37</sup> After the articles have been cleaned, optical detection of the bar codes can be used to organize the articles into customer packages for delivery.<sup>38</sup>

Similarly, Westview's product includes a keyboard, a data processor, and an optical detector.<sup>39</sup> When a customer delivers articles of clothing for cleaning, an employee enters on the keyboard information about the customer, articles to be cleaned, and charges for the cleaning.<sup>40</sup> The system then prints out a bar-coded invoice listing the information entered by the employee.<sup>41</sup> However, the Westview system, unlike Markman's, retains in memory only the invoice number, date, and cash total.<sup>42</sup> Westview's optical detector is used to compare the in-

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Penn. 1991) [hereinafter *Markman I*].

<sup>32</sup> *Markman III*, 116 S. Ct. at 1388.

<sup>33</sup> *Markman II*, 52 F.3d at 971.

<sup>34</sup> *Id.*

<sup>35</sup> *Id.*

<sup>36</sup> *Id.*

<sup>37</sup> *Id.* at 972.

<sup>38</sup> *Markman II*, 52 F.3d at 972.

<sup>39</sup> *Id.*

<sup>40</sup> *Id.*

<sup>41</sup> *Id.*

<sup>42</sup> *Id.*



voice list stored by the data processor with invoices in the establishment.<sup>43</sup> In this way, the system identifies extra or missing invoices.<sup>44</sup>

### B. *The District Court Decision*

Markman sued Westview alleging patent infringement. Westview answered, claiming there was no infringement because Westview's product functions only to record an inventory of receivables by tracking invoices and transaction costs, not to record and track an inventory of articles of clothing.<sup>45</sup> The dispute was based upon the meaning of the word "inventory," a word used in Markman's independent claim 1,<sup>46</sup> a portion of the patent that delimits the patentee's rights.<sup>47</sup> The case was

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<sup>43</sup> *Markman II*, 52 F.3d at 972.

<sup>44</sup> *Id.*

<sup>45</sup> *Markman I*, 772 F. Supp. at 1537-38.

<sup>46</sup> In claim 1, Markman claims his invention to be

1. The inventory control and reporting system, comprising: a data input device for manual operation by an attendant, the input device having switch means operable to encode information relating to sequential transactions, each of the transactions having articles associated therewith, said information including transaction identity and descriptions of each of said articles associated with the transactions; a data processor including memory operable to record said information and means to maintain an inventory total, said data processor having means to associate sequential transactions with unique sequential indicia and to generate at least one report of said total and said transactions, the unique sequential indicia and the descriptions of articles in the sequential transactions being reconcilable against one another; a dot matrix printer operable under control of the data processor to generate a written record of the indicia associated with sequential transactions, the written record including optically-detectable bar codes having a series of contrasting spaced bands, the bar codes being printed only in coincidence with each said transaction and at least part of the written record bearing a portion to be attached to said articles; and, at least one optical scanner connected to the data processor and operable to detect said bar codes on all articles passing a predetermined station, whereby said system can detect and localize spurious additions to inventory as well as spurious deletions therefrom.

*Markman II*, 52 F.3d at 972.

<sup>47</sup> *Markman III*, 166 S. Ct. at 1388. An independent claim, like all patent claims, particularly points out and distinctly claims the subject matter which the applicant regards as her invention. 35 U.S.C. § 112 (1984). An independent claim, unlike a dependent claim, neither contains a reference to a claim previously set forth nor incorporates by reference all the limitations of a claim to which it refers, but rather sets forth an independent limitation of the subject matter claimed. *Id.*

tried before a jury, which heard expert testimony regarding the meaning of the disputed term.<sup>48</sup>

After the jury compared Markman's patent with Westview's product, it found infringement of claim 1.<sup>49</sup> Notwithstanding the jury's verdict, however, the district court granted Westview's renewed motion for judgment as a matter of law, holding that the term "inventory" in Markman's patent was a broad term covering "both cash inventory and the actual physical inventory of articles of clothing."<sup>50</sup> Under this interpretation, in order for a product to infringe Markman's patent, the product must be capable of: 1) tracking invoices and transaction costs; and 2) tracking articles of clothing and generating reports about their status, location, and movement throughout the store.<sup>51</sup> Since Westview's product cannot track clothing, only invoices and transaction costs, the court held that despite the jury's findings, Westview's product did not infringe Markman's patent.<sup>52</sup>

### C. *The Federal Circuit Decision*

Markman appealed, claiming it was error for the trial court to decide the meaning of the word "inventory," notwithstanding the contrary meaning determined by the finder of fact.<sup>53</sup> Markman's argument was premised on the fundamental notion that it is the province of juries, not judges, to consider and weigh conflicting evidence in reaching a final decision

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<sup>48</sup> *Markman I*, 772 F. Supp. at 1536-37. Markman's expert testified that the word "inventory" in claim 1 meant "cash" or "invoices" and not "articles of clothing." The District Court ruled that these definitions were contrary to: 1) the ordinary meaning of the word; and 2) the obvious meaning intended by the patentee, as indicated in the specification and file history of the patent. *Id.* Ironically, at trial neither the court nor the jury heard conflicting expert testimony with respect to what the word "inventory" meant to one of ordinary skill in the art at the time the patent was issued. See *Markman II*, 52 F.3d at 998 (Rader, J., concurring). Westview's interpretation was based on the intrinsic evidence, the patent and the prosecution history. *Id.* Thus, as Circuit Judge Rader argued in his concurrence in *Markman II*, the question presented in *Markman II* need not have been raised or answered for it was not before the court. *Id.*

<sup>49</sup> *Markman I*, 772 F. Supp. at 1536-37.

<sup>50</sup> *Id.* at 1538.

<sup>51</sup> *Id.* at 1537-1538.

<sup>52</sup> *Id.*

<sup>53</sup> *Markman III*, 116 S. Ct. at 1389.

on the merits.<sup>54</sup> Nevertheless, the Court of Appeals for the Federal Circuit ("CAFC") affirmed the district court's judgment for Westview, holding that the interpretation of patent claim terms is a matter of law exclusively for the court to decide.<sup>55</sup>

To support their holding, the CAFC found that in considering extrinsic evidence, the district court is not making factual findings:

[T]he court is not crediting certain evidence over other evidence or making factual evidentiary findings. Rather, the court is looking to the extrinsic evidence to assist in its construction of the written document, a task it is required to perform. The district court's claim construction, enlightened by such extrinsic evidence as may be helpful, is still based upon the patent and prosecution history. It is therefore still construction, and is a matter of law . . . .<sup>56</sup>

With regard to oral expert or inventor testimony, the CAFC specifically stated that such testimony is entitled to "no deference," and that it "amounts to no more than legal opinion."<sup>57</sup> Furthermore, when extrinsic evidence offered by experts is conflicting, "such conflict does not create a question of fact."<sup>58</sup> Essentially, the CAFC held that district courts shall consider such expert testimony akin to legal argument or opinion, notwithstanding its evidentiary underpinnings.

In supporting its contention that factual questions do not arise during claim interpretation, the CAFC made two remarkable findings. First, it stated that patent claims are never ambiguous to one of ordinary skill in the art.<sup>59</sup> To support this assertion, the CAFC noted that 35 U.S.C. § 112 requires a certain level of exactness regarding the written description of the invention that a potential patentee must include in the patent.<sup>60</sup> In addition, the court explained that "[t]his statutory

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<sup>54</sup> *Markman II*, 52 F.3d at 973.

<sup>55</sup> *Id.* at 970-971.

<sup>56</sup> *Id.* at 981 (footnote omitted). In holding that claim interpretation never involves a question of fact, the CAFC conveniently avoided having to address the constitutional issue. For if such claim interpretation did involve the resolution of factual disputes, the Seventh Amendment would likely create a right to trial by jury. *E.g.*, *Walker v. New Mexico & So. Pac. R. Co.*, 165 U.S. 593, 596 (1897) (The Seventh Amendment "requires that questions of fact in common law actions shall be settled by a jury, and that the court shall not assume directly or indirectly to take from the jury or to itself such prerogative.").

<sup>57</sup> *Markman II*, 52 F.3d at 983.

<sup>58</sup> *Id.*

<sup>59</sup> *Id.* at 986.

<sup>60</sup> *Id.* See *supra* notes 20 and 24 for the specific disclosure requirements as

language has as its purpose the avoidance of the kind of ambiguity that allows introduction of extrinsic evidence [during litigation].<sup>61</sup> Based on these facts, the CAFC concluded that because patent claims are sufficiently unambiguous for the Patent and Trademark Office ("PTO"), i.e., because the patent was granted, there exists no factual ambiguity when those same claims are later construed by a court of law in an infringement action.<sup>62</sup> This is not true. As evidenced by 1) the dispute over the word "inventory" in Markman's claim, and 2) the disputes in many patent infringement cases,<sup>63</sup> it is clear that claim terms are often ambiguous. The CAFC's bold assertion to the contrary came as a great surprise to many judges and lawyers.<sup>64</sup>

Second, in arguing that questions of fact do not arise in the process of construing a patent, the CAFC equated patents to statutes.<sup>65</sup> In justifying this comparison, the court stated that both patents and statutes are public documents that may create liability in third persons who were not participants in the legislative process or the PTO proceedings.<sup>65</sup> Thus, the court concluded that the statutory interpretation model is an accurate one for purposes of claim interpretation.<sup>67</sup> Consequently, because the drafters of legislation are not required to testify in actions involving statutory interpretation, likewise,

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outlined in the text of 35 U.S.C. § 112.

<sup>61</sup> *Markman II*, 52 F.3d at 986.

<sup>62</sup> *Id.* Apparently, this applies to patent claims where the parties are not litigating the invalidity of the claims for indefiniteness under 35 U.S.C. § 112. *Markman II* implies that truly ambiguous claims, those the PTO erroneously grant protection to, would render the patent invalid. *Id.*

<sup>63</sup> See *supra* note 29 and accompanying text.

<sup>64</sup> *Markman II*, 52 F.3d at 990 (Mayer, J., concurring) ("[I]t is remarkable that the court so casually changes its mind, especially when the . . . precedent was compelled by the Seventh Amendment and not the mere preference of a sufficient number of judges."); Joseph R. Re & Joseph F. Jennings, *Answers and Questions Raised by the Federal Circuits Markman and Hilton Davis Decisions*, in *WINNING STRATEGIES IN PATENT LITIGATION 1995*, at 877 (PLI Patents, Copyrights, Trademarks, and Literary Property Course Handbook Series No. 423, March, 1995) ("In essence, the Federal Circuit judicially pronounced all patent claims as without ambiguity. This may come as a surprise to many practitioners who sometimes are puzzled over the meaning of a claim term, and it certainly will shock many trial judges who have presided over patent cases.") (footnote omitted).

<sup>65</sup> *Markman II*, 52 F.3d at 987.

<sup>66</sup> *Id.*

<sup>67</sup> *Id.*

in patent suits, it is from the public record or intrinsic evidence only, and not from extrinsic evidence, that a court should determine the meaning of claim language.<sup>68</sup>

Although this assertion reiterates the general rule with regard to the interpretation of legal documents,<sup>69</sup> it utterly ignores the one major exception to that rule—the “technical language exception”—articulated by the Supreme Court over one hundred years ago in *Goddard v. Foster*.<sup>70</sup> In *Goddard*, the Supreme Court held that written documents are for the court to interpret “except when they contain technical words, or terms of art,” and where the “effect depends not merely on the construction and meaning of the instrument, but upon extrinsic facts and circumstances, *in which case the inference to be drawn from it must be left to the jury*.”<sup>71</sup> Given such precedent, it seemed likely that not only would the Supreme Court grant certiorari to address this issue, but that they would reverse the CAFC’s decision.

#### D. *The Supreme Court Decision*

Notwithstanding the ambiguous nature of patent claims and the “technical language exception,” both of which warrant inquiry by a fact finder, the Supreme Court unanimously affirmed *Markman II*.<sup>72</sup> Although the Court investigated the

<sup>68</sup> *Id.*

<sup>69</sup> *William & James Brown & Co. v. McGran*, 39 U.S. (14 Pet.) 479, 493 (1840) (“[T]he interpretation of written documents properly belongs to the Court, and not to the jury.”).

<sup>70</sup> 84 U.S. (17 Wall.) 123 (1872).

<sup>71</sup> *Id.* at 142 (emphasis added). Justice Story espoused this very doctrine specifically with respect to the issue of patent claim interpretation twenty-eight years earlier in the case of *Washburn v. Gould*, 29 F. Cas. 312 (C.C.D. Mass. 1844) (No. 17,214). In *Washburn*, Story stated that with

respect to [the contention] that the court was bound to state what in point of law the invention claimed by the patentee was, I agree, that this is generally true, so far as the construction of the words of the patent, and specification is concerned. But then this doctrine is to be received with [the] qualification[] . . . [that] the jury are to judge of the meaning of words of art, and technical phrases, in commerce and manufactures, and of the surrounding circumstances, which may materially affect, enlarge or control the meaning of the words of the patent and specification.

*Id.* at 325.

<sup>72</sup> *Markman III*, 116 S. Ct. at 1387.

history of patent claims and Supreme Court precedent more thoroughly than the CAFC, it found little support for its decision in these resources. “[H]istory and precedent,” the Court stated, “provide no clear answers” in determining whether the Seventh Amendment guarantee applies to claim interpretation.<sup>73</sup> Instead, the Court based its affirmation on “functional considerations.”<sup>74</sup>

In surveying such functional considerations, the Court first explained the rationale behind the long-standing rule that interpretation of written instruments is a matter of law for the court to decide.<sup>75</sup> Judges, not juries, the Court stated, possess training and discipline in the construction of written instruments,<sup>76</sup> and patent interpretation, in particular, requires such special training.<sup>77</sup> Thus, judges are more likely to be correct in interpreting patents.<sup>78</sup> Juries, lacking such practice and training, cannot be expected to interpret patent claims correctly, and thus, are likely to be wrong if given the opportunity to do so.<sup>79</sup>

With regard to conflicting expert testimony and the “technical language exception,” the Court conceded, in contradiction to the CAFC’s holding, that there could be cases in which a factual element will arise in the process of interpreting claims as a matter of law: “It is, *of course*, true that credibility judgments have to be made about the experts who testify in patent cases, and in theory there could be a case in which a simple credibility judgment would suffice to choose between experts.”<sup>80</sup> Regardless of this factual element, however, the

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<sup>73</sup> *Id.* at 1395.

<sup>74</sup> *Id.* (“[F]unctional considerations also play their part in the choice between judge and jury to define terms of art. . . . [W]hen 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.’ So it turns out here, for judges, not juries are the better suited to find the acquired meaning of patent terms.”) (quoting *Miller v. Fenton*, 474 U.S. 104, 114 (1985)).

<sup>75</sup> *Id.*

<sup>76</sup> *Id.*

<sup>77</sup> *Markman III*, 116 S. Ct. at 1387.

<sup>78</sup> *Id.*

<sup>79</sup> *Id.*

<sup>80</sup> *Id.* at 1395 (emphasis added). Interestingly, in *Metaullics Systems Co. v. Cooper*, 100 F.3d 938 (Fed. Cir. 1996), the CAFC stated in dicta that the Supreme

Court refused to characterize claim interpretation as a mixed question of law and fact. It did so for two reasons. First, without citing any authority in support of its contention, the Court declared that factual disputes regarding expert credibility and bias are rarely, if ever, dispositive of the issue of claim interpretation.<sup>81</sup> Second, in cases where such factual issues could be dispositive, the Court found that the functional considerations forming the basis for the general rule on document interpretation outweigh litigants' right to a jury trial.<sup>82</sup> The Court based this finding on the assertion that credibility determinations that must be made in considering conflicting expert testimony are subsidiary to the ultimate question of interpretation.<sup>83</sup> Thus, since judges are vested with the general task of construing the patent, they are in a better position to ascertain whether an expert's proposed interpretation fully comports with the language of the patent.<sup>84</sup> Claim interpretation is document interpretation, the Court stated, and, notwithstanding its factual underpinnings, we would rather have judges interpreting such complex subject matter.<sup>85</sup>

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Court's contradictory statements in this regard renders claim construction a mixed question of law and fact, and that the CAFC may be required to defer to a trial court's factual findings on claim construction. *Id.* at 939 ("Even if this court were to disregard the Supreme Court's functional rationale, because claim construction is a mixed question of law and fact, see *Markman*, — U.S. at —, 116 S.Ct. at 1390 (classifying claim construction as "a mongrel practice" consisting of factual and legal components), we may be required to defer to a trial court's factual findings. Where a district court makes findings of fact as a part of claim construction, we may not set them aside absent clear error. See FED. R. CIV. P. 52(a) ("Findings of fact, whether based on oral or documentary evidence, shall not be set aside unless clearly erroneous . . .").).

<sup>81</sup> *Markman III*, 116 S. Ct. at 1395 ("[O]ur own experience with document construction leaves us doubtful that trial courts will run into many cases like that [in which a credibility determination would suffice to choose between competing interpretations advanced by expert witnesses.]").

<sup>82</sup> *Id.* at 1395-96.

<sup>83</sup> *Id.* at 1395 ("[A]ny credibility determinations will be subsumed with the necessarily sophisticated analysis of the whole document . . .").

<sup>84</sup> *Id.*

<sup>85</sup> *Id.* at 1395-96.

### III. THE WRONG RESULT FOR THE WRONG REASONS

#### A. *The Wrong Reasons*

By making it the court's obligation to determine the meaning of claim language, the *Markman* decision requires judges to consider factual evidence regarding scientific principles and the state of the art in certain cases.<sup>85</sup> Such evidence is offered "to aid the court in coming to a correct conclusion as to the true meaning of the language employed in the patent."<sup>87</sup> Although the court must regard intrinsic evidence—the patent and its prosecution history—as primary evidence,<sup>83</sup> the court must also consider extrinsic evidence, such as expert or inventor testimony, when the intrinsic evidence is not dispositive: "if, after consideration of all th[e] [intrinsic] documentation, the judge cannot readily resolve the meaning of the claims, he resorts to extrinsic evidence to shed light on them."<sup>89</sup> Such extrinsic evidence may be helpful to explain scientific principles, the meaning of technical terms, and terms of art that appear in the patent and prosecution history.<sup>89</sup> The helpfulness of extrinsic evidence is not debated; however, the CAFC's and Supreme Court's holdings with regard to conflicting extrinsic evidence is new and ill-conceived.

Before *Markman II*, the CAFC consistently held that claim interpretation is a mixed question of law and fact—that ultimately the issue of claim scope is a question of law because the result gives legal effect to claim terms, but it may require the resolution of certain factual disputes which are within the jury's province to decide.<sup>91</sup> In *Markman II*, however, the

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<sup>85</sup> *Markman III*, 116 S. Ct. at 1395-96.

<sup>87</sup> *Markman II*, 52 F.3d at 980.

<sup>88</sup> *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582-84 (Fed. Cir. 1996); *Markman II*, 52 F.3d at 987.

<sup>89</sup> *Id.* at 991 (Mayer, J., concurring). The Federal Circuit has even held that a district court's rejection of expert testimony to resolve claim disputes is an abuse of discretion. *Moeller v. Ionetics, Inc.*, 794 F.2d 653, 657 (Fed. Cir. 1986) ("Although use of experts is generally a matter of discretion with the trial judge, that discretion is not unlimited. In a patent case involving complex scientific principles, it is particularly helpful to see how those skilled in the art would interpret the claim.").

<sup>90</sup> *Markman II*, 52 F.3d at 980.

<sup>91</sup> *Arachnid Inc. v. Medalist Mktg. Corp.*, 972 F.2d 1300, 1302 (Fed. Cir. 1992) (claim interpretation "may require the factfinder to resolve certain factual issues");



CAFC held that claim interpretation is a question of law solely for the court to decide. The Supreme Court agreed with this holding, although it conceded that "in theory there could be a case in which a simple credibility judgment would suffice to choose between experts."<sup>92</sup>

In cases where credibility assessments do suffice to choose between experts or where conflicting extrinsic evidence must be considered to interpret claim language, the determination is one based in fact, rather than law.<sup>93</sup> The judicial actor charged with making the determination must evaluate human conduct and demeanor in deciding which conflicting interpretation comports with the intrinsic evidence.<sup>94</sup> Such responsibilities have traditionally been left to the jury.<sup>95</sup> The CAFC's con-

Lemelson v. General Mills Inc., 968 F.2d 1202, 1206 (Fed. Cir. 1992) ("[U]nderlying factual issues in dispute become the jury's province to resolve in the course of rendering its verdict on infringement."); Johnston v. IVAC Corp., 885 F.2d 1574, 1579 (Fed. Cir. 1989) ("A disputed issue of fact may, of course, arise in connection with interpretation of a term in a claim if there is a genuine evidentiary conflict created by the underlying probative evidence pertinent to the claim's interpretation.") (emphasis added); Palumbo v. Don-Joy, 762 F.2d 969, 974 (Fed. Cir. 1985) ("[W]hen the meaning of a claim is disputed and extrinsic evidence is necessary to explain that term, then an underlying factual question arises."); McGill v. John Zink Co., 736 F.2d 666, 672 (Fed. Cir. 1984) (If "the meaning of a term of art in the claims is disputed and extrinsic evidence is needed to explain the meaning, construction of the claims could be left to a jury. In [this] instance, the jury cannot be directed to the disputed meaning for the term of art.") (emphasis added).

<sup>92</sup> *Markman III*, 116 S. Ct. at 1395.

<sup>93</sup> *E.g.*, *Markman II*, 52 F.3d at 1000 (Newman, J., dissenting). In her dissent in *Markman II*, Federal Circuit Judge Newman had much to say about the majority's conclusion that factual disputes do not arise when conflicting extrinsic evidence is introduced at the trial level:

In patent infringement litigation there is often a factual dispute as to the meaning and scope of the technical terms or words of art as they are used in the particular patented invention. When such dispute arises its resolution is not a ruling of law, but a finding of fact.

*Id.* Further, Judge Newman stated that the "technical language exception" that applies in other areas of law must likewise apply in patent claim interpretation cases:

Inventor's usages of words to describe their inventions, and the meanings thereby conveyed to persons skilled in the field, are questions of fact, not matters of law, in patent documents as in other written instruments. Disputes concerning the meaning and usage of technical terms and words of art arise in many areas of law. These disputes are resolved by the triers of fact, whether judge [in a bench trial] or jury, in their established roles in the adjudicatory process.

*Id.* at 1007.

<sup>94</sup> *Markman III*, 116 S. Ct. at 1395.

<sup>95</sup> *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986) ("Credibility de-

tention that credibility assessments do not arise in cases where conflicting extrinsic evidence is considered, and the Supreme Court's claim that it is "doubtful that trial courts will run into many cases like that,"<sup>96</sup> ignore the evidentiary underpinnings involved in these patent cases.<sup>97</sup>

Furthermore, the Supreme Court's reliance on functional considerations is misplaced. Such reliance was based primarily on the assertion that judges, not juries, are better suited to resolve all aspects of claim interpretation because judges regularly construe written instruments.<sup>98</sup> This conclusion, the Court stated, is constitutionally permissible because the issue of whether the Seventh Amendment applies to claim interpretation "falls somewhere between a pristine legal standard and a simple historical fact."<sup>99</sup>

terminations, the weighing of the evidence, and the drawing of legitimate inferences from the facts are jury functions, not those of a judge."); *Miller v. Fenton*, 474 U.S. 104, 114, 117 (1985) (When "the issue involves the credibility of witnesses and therefore turns largely on an evaluation of demeanor, there are compelling and familiar justifications for leaving" the determination to the fact finder.); *Commissioner v. Duberstein*, 363 U.S. 278, 289 (1960) (When "the decision of the issue presented . . . must be based ultimately on the application of the fact-finding tribunal's experience with mainsprings of human conduct . . . the close relationship of [such decision] to the data of practical human experience . . . confirm[s] us in our conclusion that primary weight in this area must be given to the conclusions of the trier of fact."); *United States v. McConney*, 728 F.2d 1195, 1204 (9th Cir. 1984) (en banc) ("[W]hether an individual acted 'reasonably' by community standards" is an issue to be left to the finder of fact.).

<sup>96</sup> *Markman III*, 116 S. Ct. at 1395.

<sup>97</sup> *Markman II*, 52 F.3d at 1007 (Newman, J., dissenting) ("It has not heretofore been seriously challenged that findings of the weight and credibility of evidence are for the jury, whether the issues are technologic, scientific, or otherwise."); see *Sartor v. Arkansas Natural Gas Corp.*, 321 U.S. 620, 628 (1944) (The weight and credibility of a witness's testimony "belongs to the jury, who are presumed to be fitted for it by their natural intelligence and their practical knowledge of men and the ways of men; and so long as we have jury trials they should not be disturbed in their possession of it . . ."); see also *In re Mahurkar Double Lumen Hemodialysis Catheter Patent Litig.*, 831 F. Supp. 1354, 1359 (N.D. Ill. 1993) (Easterbrook, J., sitting by designation) ("[J]udges should not pretend that all nominally 'legal' issues may be resolved without reference to facts.").

<sup>98</sup> *Markman III*, 116 S. Ct. at 1395.

<sup>99</sup> *Id.* (quoting *Miller v. Fenton*, 474 U.S. 104, 114 (1985)). Interestingly, the Court in *Miller* also stated that, in contrast to a situation where an issue falls somewhere between a pristine legal standard and a simple historical fact, where "the issue involves the credibility of witnesses and therefore turns largely on an evaluation of demeanor, there are compelling and familiar justifications for leaving the process of applying law to fact to the [finder of fact] and according its determination presumptive weight." *Miller*, 474 U.S. at 114.

The Court's argument does not ring true. There are two reasons why. First, the Court's reliance upon such functional considerations is misplaced. Functional considerations may play a role in choosing between judge and jury only where an issue "falls in between a pristine legal standard and a simple historical fact," that is, where an issue is neither one nor the other.<sup>100</sup> But an issue does not "fall in between" simply because it consists of both. Claim interpretation need not be characterized as purely legal or purely factual; it may be characterized as a mixed question. All aspects of claim interpretation do not become matters of law simply because history and precedent are silent on the issue. The Seventh Amendment, and federal law of procedure developed pursuant to it, require the issue of claim interpretation to be one of both law and fact.<sup>101</sup>

Second, even if functional considerations may play a role in choosing between judge and jury, such considerations do not convert matters of fact into matters of law. When appropriate, rules of law are applied to the facts of a particular case.<sup>102</sup> The mere existence of this basic jurisprudential procedure does not transform findings of fact into findings of law.<sup>103</sup> Nor does the fact that the written instrument to be construed is a patent, to the extent that patent interpretation requires a height-

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<sup>100</sup> *Markman III*, 110 S. Ct. at 1395.

<sup>101</sup> When factual issues arise at trial, the Seventh Amendment dictates that such issues will be decided by a jury. U.S. CONST. amend. VII. The only exception arises when such factual issues are not fundamental elements of the right. *Parklane Hosiery Co. v. Shore*, 439 U.S. 322, 337 (1979). In patent cases, the ultimate issue of infringement is unquestionably a jury issue. *Markman III*, 116 S. Ct. at 1389. Because infringement nearly always depends on construction of the claims, such construction is likewise nearly always a fundamental element of the right to a jury trial. *Markman II*, 52 F.3d at 991-93 (Mayer, J., concurring).

In addition, when genuine issues of material fact exist at trial, Federal Rule of Civil Procedure 56 dictates that such issues are not subject to summary judgment. FED. R. CIV. P. 56(c) ("The [summary] judgment sought shall be rendered forthwith if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is *no genuine issue as to any material fact* and that the moving party is entitled to a judgment as a matter of law."). See also *Moeller v. Ionetics, Inc.*, 794 F.2d 653, 657 (Fed. Cir. 1986) ("[A]lthough claim construction is a legal question, underlying fact disputes may arise pertaining to extrinsic evidence that might preclude summary judgment treatment of claim construction.").

<sup>102</sup> *E.g.*, *Markman II*, 52 F.3d at 1000 (Newman, J., dissenting).

<sup>103</sup> *E.g.*, *Id.*

ened level of legal training,<sup>104</sup> necessitate such a conversion.<sup>105</sup> Similarly, factual findings regarding claim interpretation are not rendered matters of law simply because judges give legal effect to patents.<sup>106</sup> The Supreme Court's assertion that all aspects of claim interpretation are questions of law simply because some aspects of claim interpretation are questions of law more closely resembles circular reasoning than informed judicial decision-making.

### B. *The Wrong Result: The Mischiefs of Markman*

The Supreme Court's refusal to recognize the importance of factual elements in claim interpretation has had a profound effect on patent practice and litigation. In particular, two exceedingly negative consequences regarding the well-established roles of trial judges, juries, and appellate courts have resulted from the Court's characterization. First, by proclaiming all aspects of claim interpretation to be legal, the Supreme Court created an impermissible "complexity exception" to the Seventh Amendment for patent cases.<sup>107</sup> This result takes from the jury and gives to the judge the power to find facts crucial to the outcome of the case.<sup>108</sup> Such an exception usurps a major part of the functions of both trial judge and jury in patent cases. Second, the characterization has derogated what is supposed to be the "main event" in the adjudicatory process, the trial, to a "tryout on the road."<sup>109</sup> As a matter of law, claim

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<sup>104</sup> Assuming that's what the Supreme Court meant when it stated that "[p]atent construction in particular 'is a special occupation, requiring, like all others, special training and practice.'" *Markman III*, 116 S. Ct. at 1395 (quoting *Parker v. Hulme*, 18 F. Cas. 1138, 1140 (C.C.E.D. Pa. 1849) (No. 10,740)).

<sup>105</sup> *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1547 (Fed. Cir. 1983) ("So long as the Seventh Amendment stands, the right to a jury trial should not be rationed, nor should particular issues in particular cases be treated differently from similar issues in other types of cases."); see *Dimick v. Schiedt*, 293 U.S. 474, 486 (1935); *Markman II*, 52 F.3d at 993 (Mayer, J., concurring).

<sup>106</sup> See *Reed v. Proprietors of Locks & Canals on Merrimac River*, 49 U.S. (8 How.) 274, 288-289 (1850) ("It is true that it was the duty of the court to give a construction to the [written instrument] in question . . . . But after all this is done, it is still a question of fact . . . for the jury to decide, whether [the plaintiff's or defendant's interpretation fully comports with the written instrument.]").

<sup>107</sup> See *supra* notes 17, 95 & 97.

<sup>108</sup> See *supra* notes 17, 95 & 97.

<sup>109</sup> See *supra* note 18.

interpretation will be reviewed de novo by the CAFC.<sup>110</sup> Thus, any "legal" findings below with regard to conflicting extrinsic evidence, although essentially factual, will not be afforded any deference and will be decided anew by the appellate court.<sup>111</sup> This result eliminates the well-established, defined differences between the roles of trial and appellate courts, and vests adjudicative authority over patent disputes in the CAFC, a federal appellate court.<sup>112</sup>

### 1. The Creation of an Impermissible "Complexity Exception" to the Seventh Amendment in Patent Cases

In characterizing all aspects of claim interpretation as questions of law, the Supreme Court has created a dichotomy between the rules governing the right to jury trials in patent suits for damages and the rules governing the right to jury trials in other suits for damages.<sup>113</sup> In *Markman III*, the Supreme Court found that where a factual element exists as to claim interpretation, "a jury's capabilities to evaluate demeanor, to sense the 'mainsprings of human conduct,' or to reflect community standards is much less significant than a [judge's] trained ability to evaluate the [conflicting] testimony in relation to the overall structure of the patent."<sup>114</sup> In all other types of cases, a jury's prerogative to evaluate demeanor, human conduct, or community standards is protected by the Seventh Amendment.<sup>115</sup> Such a distinction creates an impermissible "complexity exception" to the Seventh Amendment and hinders the judicial process in patent cases.<sup>116</sup>

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<sup>110</sup> *E.g.*, *Markman II*, 52 F.3d at 991 (Mayer, J., concurring).

<sup>111</sup> *Id.* at 990-92.

<sup>112</sup> *Id.*

<sup>113</sup> *Markman III*, 116 S. Ct. at 1395-96.

<sup>114</sup> *Id.* (citations omitted).

<sup>115</sup> *See supra* note 95 and accompanying text.

<sup>116</sup> *See supra* notes 17 and 97 and accompanying text. I believe that the Supreme Court intended to create such an exception, albeit indirectly, in *Markman III*, affording great deference to and affirming the CAFC's similar creation of a "complexity exception" in patent cases in *Markman II*. Apparently, given the controversial nature of such an exception, based as it is on the belief that learned judges are smarter than incompetent juries, *see SRI Int'l v. Matsushita Electronic Corp. of Am.*, 775 F.2d 1107, 1127-28 (Fed. Cir. 1985) (Markey, C.J., additional views), neither the CAFC nor the Supreme Court wanted to come right out and

Such a dichotomy is arguably permissible if patent cases are so inherently complex so that all patent suits are "beyond the ability of a jury to decide by rational means."<sup>117</sup> However, it is not the case that all patents, by their very nature, are too complex for a jury. Rather, some patents may contain difficult scientific and technical terms. Even so, there is no compelling reason to remove technically complex subject matter from the realm of jury consideration.<sup>118</sup> Judges are no more knowledgeable than the average citizen with regard to complex scientific subject matter.

Moreover, the CAFC's decision in *Markman II* oddly departs from prior patent law principles. The CAFC has consistently held that the same rules apply to patent cases as apply to other suits for damages.<sup>119</sup> In addition, Congress has repeatedly rejected requests for specialized courts limited to decision-making on complex technological subject matter.<sup>120</sup> Instead, as several commentators have explained, effective judicial management of the complex case, via careful explanation and presentation of evidence and mindful supply of instructions to juries, is the key to proper adjudication of such cases.<sup>121</sup>

The problem with the courts deciphering complex terminology is that any such determination will necessarily be influenced by the credibility and bias of the expert witnesses pre-

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say what they believed to be true.

<sup>117</sup> See *SRI Int'l*, 775 F.2d at 1129-30 (Markey, C.J., additional views) (quoting *In re Japanese Elec. Prods. Antitrust Litigation*, 631 F.2d 1069, 1086-88 (3d Cir. 1980)).

<sup>118</sup> *Markman II*, 52 F.3d at 993 (Mayer, J., concurring) ("[T]here is simply no reason to believe that judges are any more qualified than juries to resolve the complex technical issues often present in patent cases."); *Railroad Dynamics, Inc. v. Stucki*, 727 F.2d 1506, 1515 (Fed. Cir.), *cert. denied*, 469 U.S. 871 (1984) ("There is, of course, no reason for considering patent cases as somehow out of the mainstream of the law and rules of procedure applicable to jury trials for centuries under our jurisprudence.").

<sup>119</sup> *Railroad Dynamics*, 727 F.2d at 1515; see *supra* note 106.

<sup>120</sup> See *Atari, Inc. v. JS & A Group, Inc.*, 747 F.2d 1422, 1436 (Fed. Cir. 1984); see also RICHARD A. POSNER, *THE FEDERAL COURTS: CRISIS AND REFORM* 219 (1985) ("If Congress abolished the right to jury trials in federal civil cases, it would take a very loose construction of the Seventh Amendment to avoid a declaration of unconstitutionality.").

<sup>121</sup> See Mark A. Constantino & Daniel L. Master, Jr., *The Seventh Amendment Right To Jury Trial In Complex Civil Litigation: Historical Perspectives and a View From the Bench*, 12 *AIPLA Q. J.* 279, 284 (1984).

senting such evidence. Credibility determinations involve evaluations of witness demeanor and conduct. These evaluations are best determined by a group of citizens who are presumed to be fitted for it based on their natural intelligence and practical knowledge of human behavior. Indeed, the Supreme Court has stated that where the "mainsprings of human conduct" are to be evaluated, the "primary weight in this area must be given to the conclusions of the trier of fact."<sup>122</sup> A judge may make such determinations, as a substitute for the jury, only with the consent of both parties. Neither Congress nor the Supreme Court may take such prerogative from the jury. Yet, the complexity exception has unjustifiably usurped the major functions of both trial courts and juries in patent cases.<sup>123</sup>

In *Elf Atochem North America v. Libbey Owens Ford Co.*,<sup>124</sup> a recent patent infringement case, the trial court reviewed the extrinsic evidence submitted by the parties and determined that each party presented viable contentions with regard to the meaning of certain terms in the claims of the patent-in-suit.<sup>125</sup> In fact, it appeared to the court that such extrinsic evidence created a "genuine dispute of material fact" over the proper interpretation to be accorded certain terms in the patent claims.<sup>126</sup> In describing the nature of the dispute, the court explained that issues regarding expert witness credibility and bias had been raised by both parties and that it appeared such concerns were valid.<sup>127</sup> Consequently, the court

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<sup>122</sup> *Commissioner v. Duberstein*, 363 U.S. 279, 289 (1960).

<sup>123</sup> *E.g.*, *Elf Atochem N. Am. v. Libbey-Owens-Ford Co.*, 894 F. Supp. 844, 850 (D. Del. 1995).

<sup>124</sup> 894 F. Supp. 844 (D. Del. 1995).

<sup>125</sup> *Id.* at 850. The extrinsic evidence in *Elf Atochem* was offered in support of each party's motion for summary judgment. *Id.* at 848. Such extrinsic evidence included technical dictionaries, chemistry textbooks, statements by witnesses in depositions, and affidavits by technical expert witnesses. *Id.*

<sup>126</sup> *Id.* at 850.

<sup>127</sup> *Id.* at 850-51. Apparently, plaintiff's expert had little to no experience in the technology at issue in the suit. His only experience had occurred ten years earlier, at which time he had spent some months dabbling in the area, but he had had no contact with the technology since. *Id.* at 851. In addition, defendant's expert, although very well qualified, had had a long-standing business relationship with the defendant. *Id.* In fact, the defendant was the exclusive licensee of his patents in the subject matter. *Id.* Defendant's expert had received over \$600,000 in royalties from the defendant the previous year alone. *Id.* Furthermore, the invention he developed was one of the products accused of infringing plaintiff's patents in the case at hand. *Id.*

determined that it normally would have denied the motions for summary judgment and allowed the parties to try the issues to a jury.<sup>128</sup> However, several months prior to the decision in *Elf Atochem*, the CAFC decision in *Markman II* had come down. As a result, and against what the trial court believed to be the proper ruling under the law of summary judgments, the court in *Elf Atochem* was precluded from sending the genuine factual dispute to the jury.<sup>129</sup> This result, the court stated, is an "unusual procedure" for a district court to maintain in patent cases.<sup>130</sup> Furthermore, the court concluded that in cases where a genuine factual dispute exists as to claim term meaning, characterization of claim interpretation as a legal matter is inconsistent with Rule 56 of The Federal Rules of Civil Procedure and Supreme Court precedent, and, in addition, may have an adverse impact on the litigants' Seventh Amendment right to a jury trial.<sup>131</sup>

The "unusual procedure" endured by the court in *Elf Atochem* has become commonplace in post-*Markman* patent suits.<sup>132</sup> Determinations of expert witness credibility and bias very often are subsidiary issues in claim interpretation at the

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<sup>128</sup> *Id.* at 850.

<sup>129</sup> *Elf Atochem*, 894 F. Supp. at 850.

<sup>130</sup> *Id.* at 858.

<sup>131</sup> *Id.* at 849, 858. Rule 56 states, in pertinent part, that "[t]he [summary] judgment sought shall be rendered forthwith if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact . . . ." FED. R. CIV. P. 56(c).

<sup>132</sup> See *Lee's Aquarium & Pet Prods., Inc. v. Putnam Pet Prods., Inc.*, 951 F. Supp. 1469, 1474 (S.D. Cal. 1997); *Allied Gator, Inc. v. NPK Constr. Equip., Inc.*, 937 F. Supp. 694, 699 (N.D. Ohio 1996); *Ultradent Prods., Inc. v. Life-Like Cosmetics, Inc.*, 924 F. Supp. 1101, 1109 (D. Utah 1996); *Environetics, Inc. v. Millpore Corp.*, 923 F. Supp. 344, 345-46 (D. Conn. 1996); *Monroe Eng'g Prods., Inc. v. J.W. Winco, Inc.*, 915 F. Supp. 901, 905 (E.D. Mich. 1996); *Optical Coating Lab., Inc. v. Applied Vision, Ltd.*, No. C-92-4689, 1996 WL 53631, at \*4-5 (N.D. Cal. Jan. 19, 1996); *Rolite, Inc. v. Wheelabrator Tech., Inc.*, 903 F. Supp. 870, 873-74 (E.D. Pa. 1995); *Lucas Aerospace, Ltd. v. Unison Indus.*, 890 F. Supp. 329, 333-34 n.7 (D. Del. 1995).



trial level.<sup>133</sup> Such determinations are inherently factual and

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<sup>133</sup> See, e.g., *Lucas Aerospace, Ltd. v. Unison Indus.*, 890 F. Supp. 329, 333-34 n.7 (D. Del. 1995) ("Non-transcribable courtroom occurrences such as a witness's body language, inability to maintain eye contact when confronted with a telling question, hesitance or delay in giving an affirmative answer in a voice revealing the truthful answer is 'no,' or the changing demeanor of a witness when shifting from sure to treacherous footing" all occurred during the course of this trial). Interestingly, after *Markman II* but before *Markman III*, district courts were not allowed to consider any of these courtroom occurrences in construing the claims as a matter of law. *Markman II*, 52 F.3d at 986-87 ("This sort of inquiry is not appropriate, or even possible, in the context of patent litigation."). There can be only one correct interpretation of a patent, the CAFC concluded, and thus factual disputes, including disputes over witness credibility, do not occur at the trial level. *Id.*

The district court in *Lucas* interpreted the disputed patent claims as a matter of law, but staunchly disagreed with *Markman II's* contention that trial courts do not credit certain evidence over other evidence when confronted with conflicting testimony regarding claim interpretation:

When two experts testify differently as to the meaning of a technical term, and the court embraces the view of one of them, 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.

*Lucas*, 890 F. Supp. 329, 333-34 n.7. Although the *Lucas* court acknowledged the CAFC's holding that no issue of claim construction may contain a factual element, the court found that evidence weighing is essential to its function as claim interpreter and harshly criticized the CAFC's bold assertion to the contrary: "when the [CAFC] states that the trial court does not do something that the trial court must do to perform the judicial function, *that court knowingly enters a land of sophistry and fiction.*" *Id.* (emphasis added). Based on these findings, the *Lucas* court refused to follow *Markman II* and interpreted the claims in light of its findings on expert witness credibility and bias:

[b]ound by slavish adherence to the fiction that a judge does not make credibility determinations when confronted with testimonial extrinsic evidence en route to pronouncing the "true" meaning of a patent claim, this opinion has been crafted in a manner that leaves the reader, and the reviewing court, uninformed as to the credibility assessments which, as always, are necessary precursors to the acceptance or rejection of testimonial evidence from competing experts. In fairness to all, those assessments unavoidably have been made in evaluating all testimony and in connection with exhibits relating to claim construction.

*Id.*

One might ask how effective this approach is in leaving the readers, including a panel of CAFC judges, uninformed as to the true bases for the district court opinion. After all, the court spelled it out for any reader to see. However, the admission made by the *Lucas* court was made in a footnote to the opinion, specifically, footnote 7. Perhaps the *Lucas* court was hoping that the CAFC would not read the footnote, after all, legend has it that "no one reads footnotes anyway." See Phil Nichols, Note, *A Student Defense of Student Edited Journals: In Response to Professor Roger Cramton*, 1987 Duke L.J. 1122, 1131; Daniel M. Friedman, *Winning on Appeal*, 9 No. 3 LITIGATION, Spring, 1983, at 15, 17-18. One reason this may be true, according to then United States Circuit Court Judge Abner J.

have not, until *Markman*, been characterized as legal.<sup>134</sup>

## 2. The Derogation of Any Trial Level Activity to a "Tryout on the Road"

In addition to the above contrariety created by the decision, *Markman* has also imposed a new standard of review for claim interpretation appeals. Because *Markman* determined that claim interpretation is a matter of law solely for the court to decide, appellate courts now review all aspects of claim construction de novo.<sup>135</sup> Since the issue of claim construction often dictates the outcome in a patent infringement suit,<sup>135</sup> this standard gives patent litigants two bites at the apple. If claim construction at the trial level truly involved only legal determinations, this result would not be troublesome.

However, claim construction involves a factual component. Under the de novo standard of review, the resolution of such factual disputes by the trial court is accorded no deference by the appellate court. Thus, when conflicting interpretations are offered at trial, any decision rendered by the trial court becomes meaningless on appeal. Such a result derogates the "main event" in the adjudicatory process to a mere "tryout on the road," thereby eliminating the well-established, defined differences between trial and appellate courts in patent cases.

In *Markman II*, Circuit Judge Mayer stated in his concurrence that "the effect of this case is to make of the judicial

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Mikva, is that footnotes are a pain to read: "If footnotes were a rational form of communication, Darwinian selection would have resulted in the eyes being set vertically rather than on an inefficient horizontal plane." Abner J. Mikva, *Goodbye to Footnotes*, 56 U. COLO. L. REV. 647, 648 (1985).

In any case, the Supreme Court effectively reversed this part of the CAFC's holding when it decided that credibility determinations must, of course, be made about the experts who testify in patent cases. *Markman III*, 116 S. Ct. at 1395. Regardless of these factual elements, however, the Supreme Court still characterized all aspects of claim interpretation as legal, basing its decision primarily on "functional considerations." See *supra* Part II D.

<sup>134</sup> See *supra* notes 91, 93 & 95 and accompanying text.

<sup>135</sup> *Markman II*, 52 F.2d at 981. Previously, credibility issues with regard to conflicting extrinsic evidence were questions of fact and thus subject to the clearly erroneous standard on appeal. FED. R. CIV. P. 52(a); see *supra* note 95 and accompanying text.

<sup>135</sup> *Id.* at 989, 993 (Mayer, J., concurring) ("All these pages and all these words cannot camouflage what the court well knows: to decide what the claims mean is nearly always to decide the case.").

process a charade, for notwithstanding any trial level activity, this court [the CAFC] will do pretty much what it wants under its de novo retrial."<sup>137</sup> This mischief is readily apparent in *Exxon Chemical Patents, Inc. v. Lubrizol Corp.*<sup>138</sup> In *Exxon Chemical Patents*, the only issue on appeal to the CAFC was whether the trial court correctly interpreted the claims at issue.<sup>139</sup> At trial, the district court interpreted the claims as a matter of law.<sup>140</sup> In so doing, the court heard testimony introduced by both parties as to the proper interpretation of the claims, including expert witness testimony regarding complex chemical subject matter.<sup>141</sup> The trial court adopted the views advanced by the plaintiff and its experts and instructed the jury accordingly.<sup>142</sup> Not surprisingly, interpretation of the claims as a matter of law decided the infringement question: the jury verdict found defendants liable for willful infringement and, based on such finding, the court awarded plaintiffs approximately \$130 million dollars in damages, attorney's fees, and costs.<sup>143</sup>

The defendants in *Exxon Chemical Patents* brought an appeal before the CAFC, arguing that the district court's interpretation of the claims was erroneous, and thus, the jury verdict should be vacated.<sup>144</sup> The CAFC agreed with the defendant that the trial court's interpretation was erroneous, and although not adopting the defendant's specific interpretation, reinterpreted the claims in a way favorable to the defendant.<sup>145</sup> In addition, based on such reinterpretation, the CAFC entered judgment in favor of the defendant on the infringement claim and vacated the jury verdict.<sup>146</sup>

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<sup>137</sup> *Id.* at 993 (Mayer, J., concurring).

<sup>138</sup> 64 F.3d 1553 (Fed. Cir. 1995), *reh'g denied*, 77 F.3d 450 (Fed. Cir. 1996).

<sup>139</sup> *Id.* at 1555.

<sup>140</sup> *Id.*

<sup>141</sup> *Id.* at 1558-59.

<sup>142</sup> *Id.* at 1555, 1556-59.

<sup>143</sup> *Id.* at 1555; *Exxon Chem. Patents, Inc. v. Lubrizol Corp.*, 30 U.S.P.Q.2d 1813, 1816 (S.D. Tex. 1994), *vacated*, 64 F.3d 1553 (Fed. Cir. 1995). Such excessive damages were awarded because the jury found not only that defendant had infringed, but that it had done so willfully. *Id.* at 1814-15. Therefore, the actual damages, \$48 million, were doubled. *Id.* at 1816.

<sup>144</sup> *Exxon Chemical Patents*, 64 F.3d at 1555-57.

<sup>145</sup> *Id.* at 1557-58.

<sup>146</sup> *Id.*

The troublesome nature of the CAFC's decision in *Exxon Chemical Patents* is threefold. First, the CAFC ignored the district court's interpretation of the claims even though such interpretation was based upon extrinsic evidence, including expert witness testimonial evidence.<sup>147</sup> The weighing of such extrinsic evidence often entails determinations of witness credibility and bias, determinations that are best left to the trial court hearing such evidence in person.<sup>148</sup> Appellate judges, working with a cold record, are not privy to courtroom occurrences that go a long way in establishing a witness's credibility. The CAFC's reinterpretation of the claims in *Exxon Chemical Patents*, done without according any deference to the trial court, renders meaningless the trial court activity with regard to claim interpretation.

Second, the CAFC's decision in *Exxon Chemical Patents* further hinders the judicial process because in reinterpreting the claims, the CAFC offered an interpretation that occurred to no one else during the case's extensive period of litigation.<sup>149</sup> Federal Circuit Court Judge Mayer, in concurring with the majority's denial of rehearing in the case, explained that the CAFC's reinterpretation of the claims had no evidentiary support in the record.<sup>150</sup> Such a reinterpretation further obliterates the well-established, defined differences between the roles of trial and appellate courts in patent cases: "After *Markman*, apparently the meaning of a claim has very little to do with the parties' theories of the case and the record made in support, and everything to do with what at least two judges here [at the CAFC] prefer regardless of the record."<sup>151</sup> Such a result clearly vests adjudicative authority in patent cases in the

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<sup>147</sup> *Id.* at 1558-60.

<sup>148</sup> See *Lucas Aerospace, Ltd. v. Unison Indus.*, 894 F. Supp. 329, 333-34 n.7 (D. Del. 1995).

<sup>149</sup> *Id.* at 1557-58; *Exxon Chem. Patents, Inc. v. Lubrizol Corp.*, 77 F.3d 450, 451 (Fed. Cir. 1996) (denial of rehearing) ("Two judges have divined an interpretation of the claim that occurred to no one else in this extensive litigation.") (Mayer, J., concurring).

<sup>150</sup> *Exxon Chem. Patents*, 77 F.3d at 451 (Mayer, J., concurring) ("None of the parties or the trial court offered the interpretation that these two judges chose, and none of the extensive extrinsic evidence about how those skilled in the art would understand the claim supports it.")

<sup>151</sup> *Id.* This, Judge Mayer said, "is another example of the predicted mischief of *Markman v. Westview Instruments, Inc.*" *Id.* I have borrowed his label for this Note.

CAFC, thus truly derogating any trial level activity to a "try-out on the road."<sup>152</sup>

Third, a reinterpretation of the claims by the CAFC that does not comport with either the trial court's interpretation or the appellant's asserted interpretation violates Federal Rule of Civil Procedure 50.<sup>153</sup> Rule 50 allows for entry of judgment as a matter of law only in accordance with the movant's motion for judgment as a matter of law ("JMOL").<sup>154</sup> In *Exxon Chemical Patents*, defendant's appeal to the CAFC only challenged the district court's rejection of defendant's renewed motion for JMOL.<sup>155</sup> The sole issue on appeal, therefore, was whether the district court erred in denying defendant's motion for JMOL, i.e., whether the district court's interpretation of the claims was erroneous.<sup>156</sup> The issue was not whether another possible interpretation of the claims, an interpretation not argued for in the defendant's renewed motion, could be found by the CAFC to vacate the jury's finding of infringement.<sup>157</sup>

The authority of an appellate court to enter a judgment rather than a remand is severely circumscribed. If no motion for JMOL on the issue is made an "appellate court [is] without power to direct the district court to enter a judgment contrary to the one [the district court] had permitted to stand."<sup>158</sup> By adopting a different interpretation of the claims on its own, the CAFC required the appellee in *Exxon Chemical Patents* to litigate during trial not only its opponent's position but also the unknowable position of the CAFC. By entering judgment against appellee based on this unknowable interpretation, the

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<sup>152</sup> See *supra* note 18.

<sup>153</sup> *Exxon Chem. Patents*, 64 F.3d at 1568-69 (Nies, J., dissenting). Rule 50 states, in pertinent part, that a motion for JMOL "shall specify the judgment sought and the law and the facts on which the moving party is entitled to the judgment." FED. R. CIV. P. 50(a)(2).

<sup>154</sup> *Malta v. Schulmerich Carillons, Inc.*, 952 F.2d 1320, 1324 (Fed. Cir. 1991), *cert. denied*, 504 U.S. 974 (1992).

<sup>155</sup> *Exxon Chem. Patents*, 64 F.3d at 1555. This is the typical vehicle appellants use to appeal issues of claim interpretation.

<sup>156</sup> *Id.* at 1568-69 (Nies, J., dissenting).

<sup>157</sup> *Id.*

<sup>158</sup> *Cone v. West Virginia Pulp & Paper Co.*, 330 U.S. 212, 218 (1947); see also *Biodex Corp. v. Loredan Biomedical, Inc.*, 946 F.2d 850, 854 (Fed. Cir. 1991) ("Quite clearly, the only available remedy upon finding error in a judgment entered on a jury verdict where [the issue not preserved by proper JMOL] is limited to a remand for a new trial."), *cert. denied*, 504 U.S. 980 (1992).

CAFC impermissibly exercised complete adjudicative authority over the case. Not only does this result render any trial level activity meaningless, it totally eliminates the litigant's opportunity to a trial on the merits.

Since *Markman II*, the derogation of any trial level activity to a "tryout on the road" has become commonplace in patent suits.<sup>159</sup> Such derogation further occurs when the appellate court's reinterpretation is not based on the record. When the appellate court's reinterpretation is neither based on the record nor permissible under Federal Rule of Civil Procedure 50, the effect of *Markman's* mischaracterization clearly makes a charade of the judicial process, whereby the CAFC will do and has done "pretty much what it wants under its de novo retrial."<sup>160</sup>

#### IV. STATUTORY PATENT DISCLOSURE REQUIREMENTS UNDER 35 U.S.C. § 112

The mischiefs of *Markman* arise in connection with factual issues regarding claim interpretation that are ignored by trial and appellate courts. Trial courts, deciding all aspects of claim interpretation as matters of law, take from the litigants their right to a jury trial with respect to certain disputes regarding witness credibility and bias. Appellate courts, reviewing all aspects of claim interpretation under the de novo standard, reinterpret claims without affording any deference to the trial court's findings with regard to such factual disputes. The mischiefs, therefore, arise in connection with the introduction of extrinsic evidence regarding claim interpretation at the trial level.<sup>161</sup> The introduction of extrinsic evidence at the trial level occurs only when the judge is unable to properly interpret the claims from the intrinsic evidence alone.<sup>162</sup> Thus, the mis-

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<sup>159</sup> See *J.T. Eaton & Co. v. Atlantic Parts & Glue Co.*, 106 F.3d 1563, 1568-70 (Fed. Cir. 1997); *Vitronics Corp. v. Conceptiontronic Inc.*, 90 F.3d 1576, 1580-84 (Fed. Cir. 1996); *Hoechst Celanese Corp. v. BP Chemicals Ltd.*, 78 F.3d 1575, 1578-81 (Fed. Cir. 1996); *National Presto Indus. v. West Bend Co.*, 76 F.3d 1185, 1189-90 (Fed. Cir. 1996).

<sup>160</sup> *Markman II*, 52 F.3d at 993 (Mayer, J., concurring).

<sup>161</sup> *Id.* at 994.

<sup>162</sup> *Id.*; *Vitronics Corp. v. Conceptiontronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) (Extrinsic evidence may be considered if needed to assist in determining claim term meaning, but "[i]n those cases where the public record [intrinsic evidence] unambiguously describes the scope of the patented invention, reliance on any ex-

chiefs of *Markman* arise because certain patents are not sufficiently unambiguous to allow judges, in construing such patents as a matter of law, to interpret claim terms without resorting to extrinsic evidence.<sup>163</sup> In order to avoid these mischiefs, the cause of such ambiguity must be identified and corrected. One obvious place to look is 35 U.S.C. § 112, the statute that sets forth the disclosure requirements for patent claims and specifications.

### A. Section 112

35 U.S.C. § 112 requires a certain level of disclosure that a potential patentee must include in any patent application:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.<sup>164</sup>

Such disclosure is commonly referred to as proper "enabling disclosure."<sup>165</sup> The purpose of such enabling disclosure is twofold. First, the object is to require a patentee to describe the invention so that others may make and use it after expiration of the patent.<sup>166</sup> Second, the requirement exists so that the public may be informed during the life of the patent of the limits on the exclusivity asserted, "so that it may be known which features may be used without license and which may not."<sup>167</sup>

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trinsic evidence is improper.").

<sup>163</sup> See *Vitronics*, 90 F.3d at 1583.

<sup>164</sup> 35 U.S.C. § 112 (1984).

<sup>165</sup> *E.g.*, *Harris Corp. v. IXYS Corp.*, 114 F.3d 1149, 1155 (Fed. Cir. 1997).

<sup>166</sup> See, *e.g.*, *Schriber-Schroth Co. v. Cleveland Trust Co.*, 305 U.S. 47, 57 (1938). Because the principles described in this Part IV A are longstanding, and the enactment of § 112 was intended to codify them, I will, in this Part IV A, cite to the older leading cases establishing such principles with the knowledge that such cases do not interpret § 112 in particular, but rather establish said principles that were later, in 1952, codified as § 112.

<sup>167</sup> *Id.*

With regard to the sufficiency of a disclosure, courts have made several important findings. First, since patents are to be addressed to those skilled in the art, disclosure will not be insufficient though the unskilled may be unable to understand from it how to use the invention.<sup>163</sup> In addition, disclosure will be sufficient even though a skilled person might have to make several trials or experiments before successfully making and using the invention, so long as such required experimentation is not undue.<sup>163</sup> With regard to definitions, a patentee may be her own lexicographer and utilize terms other than in their strict dictionary sense as long as she defines them and is consistent in their use and interpretation.<sup>170</sup> Furthermore, disclosure may be sufficient even though an inventor does not understand or disclose the scientific principles of the invention so long as the specification enables a skilled person to make and use the invention.<sup>171</sup> With regard to the best mode of carrying out the invention, disclosure of a single useful mode is sufficient even where the product or process is susceptible of being made, used, or applied in many modes.<sup>172</sup>

In addition to the enabling disclosure requirement, § 112 requires that the patent "shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention."<sup>173</sup> The purpose of this requirement is similar to that of the enabling disclosure requirement: to apprise the public of what is still open to them, and to circumscribe the outer limits or boundaries of the patent's scope.<sup>174</sup> In *Evans v. Eaton*,<sup>175</sup> the Supreme Court articulated what it is to particularly point out and distinctly claim the subject matter of the invention. Each claim, the Court explained, must state what the improvement is, assert how far the invention extends, and explain what is the limit of the improvement described in the speci-

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<sup>163</sup> *Mowry v. Whitney*, 81 U.S. (14 Wall.) 620, 644 (1872).

<sup>169</sup> *A.B. Dick Co. v. Barnett*, 288 F. 799, 801 (2d Cir. 1923).

<sup>170</sup> *E.g.*, *Dennis v. Pitner*, 106 F.2d 142, 148 (7th Cir. 1939).

<sup>171</sup> *Diamond Rubber Co. v. Consolidated Rubber Tire Co.*, 220 U.S. 428, 435 (1911).

<sup>172</sup> *Tilghman v. Proctor*, 102 U.S. 707, 728 (1881).

<sup>173</sup> 35 U.S.C. § 112 (1984).

<sup>174</sup> *See McClain v. Ortmayer*, 141 U.S. 419, 424 (1891).

<sup>175</sup> 20 U.S. (7 Wheat.) 356, 434 (1822).



fiction.<sup>176</sup> In a later case, the Court held that to claim an exclusive right to use a product or process without describing what that product or process is, is too broad, and thus not patentable.<sup>177</sup>

The enabling disclosure and particularity requirements of § 112 go a long way in ensuring accuracy and precision in patent terminology. Preferably, a patent is a model of clarity, leaves nothing to doubt or speculation, and does not require any experiments to make or use the invention.<sup>178</sup> Thus, ideally there should be no ambiguity in claim terminology to one of ordinary skill in the art that would require the introduction of extrinsic evidence during litigation regarding claim interpretation.<sup>179</sup> Indeed, § 112 "has as its purpose the avoidance of the kind of ambiguity that allows introduction of extrinsic evidence."<sup>180</sup>

#### B. *The Inadequacy of § 112's Disclosure Requirements in Enabling Courts to Interpret Claim Terminology Without Resorting to Extrinsic Evidence*

Section 112 does ensure that patents include a written description of the invention that is clear and complete enough to enable those of ordinary skill in the art to make and use it.<sup>181</sup> Unfortunately, however, § 112's disclosure requirements do not adequately prevent ambiguity in claim terminology with respect to claim interpretation. Very often judges are unable to interpret claims from the intrinsic evidence alone and must decide which of two or more competing interpretations—introduced via extrinsic evidence—is the correct one.<sup>182</sup> Thus,

<sup>176</sup> *Id.* at 369, 413-15.

<sup>177</sup> *O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 113 (1853). In *Morse*, the Supreme Court considered the patent issued to Samuel Morse on his renowned telegraph invention. The Morse patent had been held valid by the Kentucky District Court, but on appeal the Supreme Court invalidated the eighth claim for indefiniteness, stating that Morse "claims an exclusive right to use a manner and process which he has not described and indeed had not invented, and therefore could not describe when he obtained his patent. The court is of opinion that the claim is too broad, and not warranted by law." *Id.*

<sup>178</sup> See *Markman II*, 52 F.3d at 986-87.

<sup>179</sup> *Id.* at 986.

<sup>180</sup> *Id.*

<sup>181</sup> *E.g.*, *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

<sup>182</sup> *E.g.*, *Elf Atochem N. Am., Inc. v. Libbey Owens Ford Co.*, 894 F. Supp. 844,

§ 112 fails to further Congressional intent to avoid the kind of ambiguity that allows for introduction of extrinsic evidence during litigation.

Ambiguity in claim terminology exists where certain words in a claim are capable of being understood in two or more possible ways.<sup>183</sup> Conversely, ambiguity in claim terminology does not exist where claim terms may be interpreted in only one way. Lack of ambiguity in claim terminology exists only where the patentee, in complying with § 112's disclosure requirements, uses words in her disclosure whose ordinary and customary meaning is not disputable, or where the words in the disclosure are specifically defined elsewhere in the intrinsic evidence such that their meaning is not open to dispute.<sup>184</sup> But §112 does not require patentees to include specific definitions of claim terms in the patent. In addition, the ordinary and customary meaning of claim terms is very often elusive, even to those of ordinary skill in the art.<sup>185</sup> Indeed, nearly all disputes regarding claim interpretation concern conflicting expert interpretations with respect to the ordinary and customary meaning of certain claim terms.<sup>186</sup> Section 112 allows for such disputes because it does not require patentees to define certain words in patent claims, words that are capable of being understood in two or more possible ways. Thus, because the mischiefs of *Markman* arise only where extrinsic evidence is introduced to clarify ambiguity in claim terminology, § 112's failure to require disclosure sufficient to prevent such ambiguity is an underlying cause of the mischiefs of *Markman*.

The CAFC's recent decision in *Vitronics Corp. v. Conceptoronic, Inc.*<sup>187</sup> supports this contention. In *Vitronics*, the CAFC reconsidered the issue of whether § 112 adequately provides courts with an intrinsic record enabling them to inter-

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858-59 (D. Del. 1995); see also *Lucas Aerospace, Ltd. v. Unison Indus.*, 890 F. Supp. 329, 333-34 n.7 (D. Del. 1995).

<sup>183</sup> See *Lucas Aerospace*, 890 F. Supp. at 333-34 n.7; see also MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY 36 (10th ed. 1993).

<sup>184</sup> See *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582-83 (Fed. Cir. 1996).

<sup>185</sup> See *Markman II*, 52 F.3d at 991 (Mayer, J., concurring); *Elf Atochem*, 894 F. Supp. at 858-59.

<sup>186</sup> See *supra* note 29 and accompanying text.

<sup>187</sup> 90 F.3d 1576 (Fed. Cir. 1996).

pret patent claims without resorting to extrinsic evidence.<sup>188</sup> Previously, in *Markman II*, the CAFC stated that no aspect of claim interpretation involves the resolution of factual disputes, and thus, all aspects of interpretation are matters of law, because § 112 requires proper enabling disclosure and particularity.<sup>189</sup> The use of extrinsic evidence, the court in *Markman II* stated, is not to clarify ambiguity in claim terminology, but rather, to educate the judge with respect to unknown scientific subject matter:

A judge is not usually a person conversant in the particular technical art involved and is not the hypothetical person skilled in the art to whom a patent is addressed. Extrinsic evidence, therefore, may be necessary to inform the court about the language in which the patent is written. But this evidence *is not for the purpose of clarifying ambiguity in claim terminology*. It is not ambiguity in the document that creates the need for extrinsic evidence but rather unfamiliarity of the court with the terminology of the art to which the patent is addressed.<sup>190</sup>

In an apparent retreat from this position, the CAFC in *Vitronics* stated that extrinsic evidence may be used at the trial level and, when used, is for the purpose of clarifying ambiguity in claim terminology.<sup>191</sup> In addition, the *Vitronics* court stated that such ambiguity exists only where the intrinsic evidence alone does not sufficiently illustrate claim term

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<sup>188</sup> *Id.* at 1582-83.

<sup>189</sup> *Markman II*, 52 F.3d at 986-87 ("If the patent's claims are sufficiently unambiguous for the PTO, there should exist no factual ambiguity when those same claims are later construed by a court of law in an infringement action.")

<sup>190</sup> *Id.* at 986 (emphasis added).

<sup>191</sup> *Vitronics*, 90 F.3d at 1584. Said retreat was no doubt facilitated by the Supreme Court's apparent reversal of *Markman II* in this regard. *See supra* note 133.

Such apparent reversal was expanded upon in a later case decided by a panel of three CAFC judges. In *Metaullics Systems Co. v. Cooper*, 100 F.3d 938 (Fed. Cir. 1996), Federal Circuit Judge Mayer, writing for the majority, went so far as to state that the Supreme Court in *Markman III* determined that claim construction was a "mixed question of law and fact." *Id.* at 939. In supporting his statement, Judge Mayer pointed to language in *Markman III* describing claim construction as a "mongrel practice," *Markman III*, 116 S. Ct. at 1390, stating that such language indicates that, according to the Supreme Court, claim construction consists both of factual and legal components. *Metaullics*, 100 F.3d at 939. As a result, Judge Mayer concluded, "we [the CAFC] may be required to defer to a trial court's factual findings. Where a district court makes findings of fact as part of claim construction, we may not set them aside absent clear error." *Id.*

meaning: "Only if there [is] some genuine ambiguity in the claims, after consideration of all available intrinsic evidence, should the trial court [resort] to extrinsic evidence, such as expert testimony, in order to construe claim [language]."<sup>152</sup> Thus, in *Vitronics*, contrary to its decision in *Markman II*, the CAFC determined that despite § 112's statutory disclosure requirements, ambiguity in claim terminology exists in some cases. Certainly, the court found, current disclosure requirements under § 112 do suffice to enable those skilled in the art to make and use an invention, but they do not enable courts to rely exclusively on intrinsic evidence when interpreting claims as a matter of law during litigation.

#### V. A STATUTORY AMENDMENT TO § 112 THAT WILL REDUCE A COURT'S RELIANCE UPON EXTRINSIC EVIDENCE WHEN INTERPRETING CLAIMS AS A MATTER OF LAW

Before *Markman*, when genuine issues of material fact regarding claim interpretation arose at the trial level, district courts, in construing claims as a matter of law, deferred the resolution of such factual disputes to the jury.<sup>153</sup> Claim interpretation was a mixed question of law and fact. The fact that many patent claim terms were ambiguous, i.e., courts were not able to construe the claims solely on the intrinsic evidence, was not particularly troublesome. When conflicting extrinsic evidence was introduced at the trial level, litigants were able to present their competing interpretations to the fact finder and such findings were upheld on appeal unless clearly erroneous. In this way, all patent litigants were assured a fair trial on the merits. In addition, statutory patent disclosure requirements under § 112, although failing to prevent ambiguity in

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<sup>152</sup> *Vitronics*, 90 F.3d at 1584.

<sup>153</sup> *E.g.*, *Elf Atochem N. Am., Inc. v. Libbey Owens Ford Co.*, 894 F. Supp. 844, 849-50. In *Elf Atochem*, the district court stated that "where affidavits from expert witnesses . . . present equally plausible interpretations of disputed words in a claim, this court would [before *Markman*] deny summary judgment and allow a jury to resolve the meaning of the disputed terms based upon all of the evidence including the credibility and bias of the expert witnesses. In so doing, this court is cognizant of Judge Easterbrook's comment that 'judges should not pretend that all nominally 'legal' issues may be resolved without reference to facts.'" *Id.* (quoting *In re Mahurkar Double Lumen Hemodialysis Catheter Patent Litig.*, 831 F. Supp. 1354, 1359 (N.D. Ill. 1993) (Easterbrook, J., sitting by designation)).

claim terminology, were considered adequate in that they enabled those skilled in the art to make and use the invention and informed the public as to the limits of a patent's scope.

After *Markman*, the inadequacy of § 112 has resulted in frequent violations of the Seventh Amendment, the Federal Rules of Civil Procedure, and well-established case law with respect to the differences between trial judge and jury, and trial and appellate courts. Such mischiefs can be completely eliminated only if patents, and their corresponding file histories, consistently and sufficiently describe claim terms so that reliance on extrinsic evidence to interpret claims properly at the trial level is avoided. An amendment to § 112 requiring all potential patentees to include definitions or interpretations of certain claim terms in the patent would go a long way in providing for such necessary disclosure.

In this regard, § 112 should be amended to add, at the end of paragraph 2,<sup>194</sup> the following sentence: "The specification shall contain definitions or interpretations for all terms of art and all technical words in the claims, and all words that qualify terms of art or technical words in the claims." Such an amendment would ensure that most, if not all, potentially ambiguous claim terms are capable of being understood in only one possible way: the way the inventor defines or interprets the term in the specification. Furthermore, such an amendment would enable courts to assign to any term of art or technical word that meaning which is given to it in the specification. In this way, courts, in construing claims as a matter of law, would be able to interpret the claims from the intrinsic evidence alone, without resorting to extrinsic evidence. Such an amendment is appropriate under the CAFC's rationale in *Markman II*, and, in addition, advances the purposes behind the current disclosure requirements codified in § 112.

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<sup>194</sup> Paragraph 2 of 35 U.S.C. § 112 presently states that "[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention."

In *Markman II*, the CAFC stated that occasionally, under § 112's current requirements, disclosure "will serve as a dictionary for terms appearing in the claims."<sup>195</sup> Such a situation, the court stated, is ideal, because it avoids any reliance upon extrinsic evidence in interpreting patent claims.<sup>196</sup> The CAFC reiterated this point in *Vitronics* when it said that "[t]he specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication."<sup>197</sup> In most cases, the court stated, the specification is dispositive, and thus, it is the single best guide to the meaning of a disputed term.<sup>198</sup> If an ideal situation for interpreting claims as a matter of law is when the specification expressly defines claim terms, and if the specification is the single best guide to the meaning of a term, why are patentees not required to define claim terms in specifications? The specification should always act as a dictionary, it should always expressly define terms used in claims. It should not be the occasional patent case where interpretation as a matter of law is truly a matter of law. Questions of law should be decided not with regard to factual determinations of witness credibility and bias, but rather solely with regard to that which has been disclosed in the patent and thus available in the public record for consideration by a judge during litigation. An amendment to § 112 that requires potential patentees to provide definitions or interpretations of claim terms in the specification would avoid the current problems associated with § 112 after *Markman*, whereby courts are making factual determinations under the guise of answering legal questions.

The CAFC's comparison of patents to statutes<sup>199</sup> further supports such an amendment. In *Markman II*, the CAFC justified its comparison by stating that patents, like statutes, are written instruments that all persons are presumed to be aware of and are bound to follow.<sup>200</sup> This determination is true, and although it does not justify characterizing all aspects of claim

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<sup>195</sup> *Markman II*, 52 F.3d at 979-80.

<sup>196</sup> *Id.* at 986.

<sup>197</sup> *Vitronics*, 90 F.3d at 1582.

<sup>198</sup> *Id.*

<sup>199</sup> *Markman II*, 52 F.3d at 987-88 (The "appropriate analogy for interpreting patent claims is the statutory interpretation analogy.")

<sup>200</sup> *Id.* at 987.

interpretation as legal, it does note an important similarity between patents and statutes: both have as their purpose the public notification of what is legal behavior and what it not. In furthering this purpose, statutes very often contain definitions of potentially ambiguous terms.<sup>201</sup> Patents, conversely, very often do not. An amendment requiring patents to include such definitions would recognize the important similarity between patents and statutes and more adequately notify the public as to which products may be made, used, or sold without license and which may not.

In short, an amendment requiring definitions or interpretations of claim terms in patents would significantly further Congressional intent to avoid "the kind of ambiguity that allows introduction of extrinsic evidence" in patent cases.<sup>202</sup> Without such an amendment, § 112 will remain ineffectual in advancing such purpose and the mischiefs of *Markman* will continue to hinder the judicial process in patent cases.

## CONCLUSION

In *Markman II & III*, the CAFC and the Supreme Court mischaracterized certain aspects of patent claim interpretation as questions of law, impermissibly creating a "complexity exception" to the Seventh Amendment and wrongfully eliminating the well-established, defined differences between trial judge and jury, and trial and appellate courts in patent cases. That characterization has brought to light the failure of statutory patent disclosure requirements to provide judges responsible for interpreting claims as a matter of law with an intrinsic record enabling them to so interpret claims without resorting to the consideration of outside or extrinsic evidence. These detriments could be avoided or corrected if 35 U.S.C. § 112 was

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<sup>201</sup> United States v. James, 60 F. 257, 258 (N.D. Ill. 1894) (Statutes are "a series of definitions which, for the purposes of public safety or welfare, designate certain acts" as illegal.); United States v. Trice, 30 F. 490, 491 (W.D. Tenn. 1887) (definitions in statutes are used to prevent disputes over the meaning of words); Vermont Hydro-Electric Corp. v. Commissioner, 29 B.T.A. 1006, 1010 (B.T.A. 1934) (Definitions in statutes exist in order to "establish a definite inflexible standard, to remove the uncertainties and obviate the variables constantly impeding efficient administration" of statutory law.).

<sup>202</sup> *Markman II*, 52 F.3d at 986.

amended to require greater disclosure in the form of definitions or interpretations of certain claim terms. Such an amendment is merited under *Markman II* and advances the purposes behind the enactment of § 112.

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