10:15—HOW TO PRESENT AN EFFECTIVE *MARKMAN* HEARING

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THE *MARKMAN* HEARING—PRACTICAL TIPS AND STRATEGIES

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1. INTRODUCTION

The presentation at a *Markman* hearing can be a powerful tool in persuading the court to adopt the claim construction positions advocated by a litigant. *Markman* presentations provide a unique opportunity to educate the court on the technology involved in the case, to highlight the important issues that are critical to the patent litigation strategy and to leave the court with a lasting impression of why it should adopt a party's proposed claim constructions. While the claim construction briefs are an important part of the claim construction process, the claim construction hearing and presentation allow the litigant a unique opportunity to educate and persuade the court in a more dynamic and creative setting.

Before the *Markman* hearing itself, there are numerous strategic and practical considerations that the advocate should keep in mind when deciding upon the manner in which the arguments and evidence will be presented, the type of evidence that will be presented and how the presentation will be organized. This article is intended to provide tips and strategies to consider when formulating the claim construction positions prior to the *Markman* Hearing, deciding upon what evidence to use in support of the claim construction positions, and determining the manner of effectively presenting the evidence.

2. CLAIM CONSTRUCTION FRAMEWORK

a. Historical Development Since *Markman*

Markman v. Westview Instruments, Inc., 517 U.S. 370, 373 (1996) resolved that the construction of a patent, including terms of art within its claims, is a question of law exclusively within the province of the court. To ascertain the meaning of claims, three sources of "intrinsic evidence" are used: the claims, the specification, and the prosecution history. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995).

In *Vitronics Corporation v. Conceptronic, Inc.*, 90 F.3d 1576 (Fed. Cir. 1996), the Federal Circuit, following *Markman* and other precedent, provided a specific hierarchy for the use of evidence for claim construction, distinguishing between intrinsic and extrinsic evidence. *Vitronics* provides that in interpreting claims, the court should look first to the intrinsic evidence of record, *i.e.*, the patent itself, including the claims, the specification and the prosecution history. *Id.* at 1582. The court in *Vitronics* emphasized that "[s]uch

intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language." *Id.*

Within the intrinsic evidence, *Vitronics* provided a further hierarchical approach, indicating that, first, the words of the claims themselves, both asserted and nonasserted, should be examined as they define the scope of the patented invention. *Id.* This step of claim construction involves review of not only the claim term at issue, but the other limitations of the claim at issue, as well as the other claims of the patent. This is done because the interpretation given to a claim term should encompass all uses of that term. For example, the same word appearing in the same claim should be interpreted consistently[1] and the meaning of a claim term should be defined in a manner that is consistent with its appearance in other claims of the same patent.[2]

Vitronics further provided that it is necessary to review the specification. 90 F.3d at 1582. This is because a patentee may choose to be his or her own lexicographer and use terms in a manner other than their ordinary meaning, provided the special definition utilized by the patentee is clearly stated. *Id*. Thus, the specification may act as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication. *Id*. The specification also plays an important role because "[c]laims must be read in view of the specification, of which they are a part." *Id*. Indeed, according to *Vitronics*, the specification is usually "dispositive" to the claim construction analysis and "it is the single best guide to the meaning of a disputed term." *Id*.

Vitronics also provided that the court may consider the prosecution history of the patent. *Id.* The prosecution history contains the complete record of all the proceedings before the Patent and Trademark Office, including any express representations made by the applicant regarding the scope of the claims. *Id.* Accordingly, it "is often of critical significance in determining the meaning of claims." *Id.* This is because the prosecution history can also act as a dictionary where a special definition of a term is clearly stated therein.[3]

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1. *See, e.g., Digital Biometrics, Inc. v. Identix, Inc.,* 149 F.3d 1335, 1345 (Fed. Cir. 1998)
2. *CVI/Beta Ventures, inc. v. Tura LP*, 112 F.3d 1146, 1159 (Fed. Cir. 1997) ("At the same time, we are obliged to construe the term 'elasticity' consistently throughout the claims")
3. Provided, of course, that the special definition is supported (i.e. sufficiently described and enabled) by the original application and does not introduce "new matter." See 35 U.S.C. .§§ 112 and 132

The prosecution history is also important because it "limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution." *Vitronics*, 90 F.3d at 1582 *citing Southwall Tech., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1576 (Fed. Cir. 1995). Thus, while traditionally the role of prosecution history was often limited to the context of determining infringement under the doctrine of equivalents,[4] the prosecution history may also be used to determine the meaning of terms in the context of claim construction.

Finally, *Vitronics* held that the court may, in appropriate circumstances, consider extrinsic evidence. 90 F.3d at 1582. Extrinsic evidence, by definition, is any evidence that might be used to determine the meaning of a claim term besides the patent claims, the specification and the prosecution history. Examples include dictionary definitions, treatises, prior art, and inventor and expert testimony.[5] With respect to extrinsic evidence, *Vitronics* cautioned that where the intrinsic evidence alone will resolve any ambiguity in a disputed claim term, it is improper to rely on extrinsic evidence in such circumstances. *Id.* Extrinsic evidence may be considered only "*if needed* to assist in determining the meaning or scope of technical terms in the claims." *Id.* (emphasis in original).

On numerous occasions, the Federal Circuit has reaffirmed the *Vitronics* holding that the intrinsic evidence - and in particular the specification – is "[t]he best source for understanding a technical term" of a disputed claim element. *See, e.g., Multiform Desiccants, Inc. v. Medzam, Ltd*., 133 F.3d 1473, 1478 (Fed. Cir. 1998); *Metabolite Labs, Inc. v. Lab Corp. of Am. Holdings*, 370 F.3d 1354, 1360 (Fed. Cir. 2004) ("In most cases, the best source for discerning the proper construction of claim terms is the patent specification wherein the patent applicant describes the invention."); *Kinik Co. v. Int'l Trade Comm'n*, 362 F.3d 1359, 1365 (Fed. Cir. 2004) ("The

4. Traditionally under the doctrine of prosecution history estoppel, a patentee asserting infringement under the doctrine of equivalents is estopped from trying to recapture subject matter surrendered during prosecution to secure allowance of a patent claim.
5. In a note appearing later in the *Vitronics* opinion, the court noted that although technical treatises and dictionaries fall within the category of extrinsic evidence, that judges are free to consult such resources in order to better understand the technology and may rely on definitions that do not contract a definition found in or ascertained by a reading of the patent documents. 90 F.3d at 1584 n.6.

words of patent claims have the meaning and scope with which they are used in the specification and the prosecution history").

Although the Federal Circuit has often articulated the *Vitronics* claim construction principles in many of its claim construction decisions over the past decade, some of the court's cases had suggested a different approach to claim construction, in which the court gave greater emphasis to dictionary definitions of claim terms and assigned a less prominent role to the specification and the prosecution history. The leading case in this line was *Texas Digital v. Telegenix, Inc.*, 308 F.3d 1193, 1201-1205 (Fed. Cir. 2002).

In *Texas Digital*, the Federal Circuit emphasized the "heavy presumption" that claims should be given the ordinary meaning that would be attributed to those words by persons skilled in the art and that, unless compelled otherwise, a court should give a claim term the full range of ordinary meanings. 308 F.3d at 1202. The court identified the use of dictionaries, encyclopedias and treatises as particularly useful, if not the most important, resources in determining the ordinary meaning of claim terms. *Id.* The court remarked that dictionaries, encyclopedias and treatises are publicly available at the time of the patent and provide objective and reliable sources of information on the established meanings that would have been attributed to the terms of the claims by those of skill in the art at the relevant time. *Id.* The court emphasized that "[s]uch references are unbiased reflections of common understanding not influenced by expert testimony or events subsequent to the fixing of the intrinsic record by the grant of the patent, not colored by the motives of the parties, and not inspired by litigation." *Id.* at 1203. Although not characterizing such evidence as "intrinsic", the court, at least in some respects, arguably elevated the importance of such resources even over the specification itself, warning that "[c]onsulting the written description and prosecution history as a threshold step in the claim construction process, before any effort is made to discern the ordinary and customary meanings attributed to the words themselves, invites a violation of our precedent counseling against importing limitations into the claims." *Id.* at 1204.

In *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) *en banc*, the Federal Circuit addressed the question of whether the *Vitronics* "pro-specification" approach or the *Texas Digital* "pro-dictionary" approach should govern a court's claim construction analysis. As the Federal Circuit explained in this *en banc* opinion, "'[t]he principle question that this case presents to us is the extent to

which we should resort to and rely on a patent's specification in seeking to ascertain the proper scope of its claims." *Id*. at 1312. The court resolved this issue in favor of the *Vitronics* approach, noting that "the basic principles of claim construction outlined [in *Vitronics* and other cases] are still applicable, and we reaffirm them today." *Id.* The court implicitly rejected the *Texas Digital* "pro dictionary" approach.

In restating the claim construction principles set forth in *Vitronics*, the *Phillips* court emphasized the importance of the intrinsic evidence. With regard to claims, the court stated that the "context in which a term is used ... can be highly instructive" and that '"[o]ther claims ... can also be valuable sources of enlightenment as to the meaning of a claim term." *Id*. at 1314. With regard to the specification, the court noted that "[a]s we stated in *Vitronics*, the specification 'is always highly relevant … Usually, it is dispositive; it is the single best guide.'" *Phillips*, 415 F.3d at 1314, *quoting Vitronics,* 90 F.3d at 1582. With regard to the prosecution history, the court explained that, like the specification, the prosecution history "provides evidence of how the PTO and the inventor understood the patent." *Id.* at 1317.

The court lessened the importance of extrinsic evidence relative to *Texas Digital*, stating that "while extrinsic evidence 'can shed useful light on the relevant art,' we have explained that it is 'less significant than the intrinsic record in determining the legally operative meaning of claim language.'" *Phillips*, 415 F.3d at 1317, *quoting C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 862 (Fed. Cir. 2004). Though the court recognized the role of dictionaries and expert testimony as tools that may be employed in appropriate circumstances to assist in determining the meaning of claims, it identified a number of reasons why extrinsic evidence should be considered less reliable than intrinsic evidence. The court found that unlike the specification, extrinsic evidence is not created at the time of patent prosecution for the purpose of explaining the patent's scope, that it may not be written by or for skilled artisans, and that because a virtually unbound universe of extrinsic evidence exists, only pieces of extrinsic evidence most favorable to a party, not necessarily that which is most useful, will be proffered by the party's advocate. *Id.* at 1318. The court explained that the *Texas Digital* opinion put ''too much reliance on" extrinsic sources (*e.g.,* dictionaries) and too little on intrinsic evidence, noting, in particular, a number of problems

with elevating dictionary definitions over the specification.[6] *Id.* at 1320. In summary, *Phillips* reaffirmed the *Vitronics* approach to claim construction, recognizing the intrinsic evidence, and in particular the specification, as the most important form of evidence, while still permitting extrinsic evidence to be used, provided it is properly considered in the context of the intrinsic evidence.[7]

b. Claim Construction under *Phillips* and Subsequent Decisions

The claim construction framework laid out in the *Phillips* opinion clarified that despite the apparent restrictions laid out in *Vitronics* (limiting extrinsic evidence) and *Texas Digital* (cautioning against reliance on the specification), both sources of evidence can be used in appropriate circumstances. For instance, while more recent decisions recognize that *Phillips* rejected the Texas Digital (pro-dictionary) approach, numerous cases have confirmed that dictionaries may be consulted to assist in determining the appropriate definition for a term so long as the meaning is not inconsistent with the intrinsic evidence. See, e.g., *Free Motion Fitness, Inc. v. Cybex Int'l, Inc.*, 423 F.3d 1343, 1348-49 (Fed. Cir. 2005); *Pfizer, Inc. v. Teva Pharmaceuticals USA, Inc.*, 429 F.3d 1364, 1373 (Fed. Cir. 2005). Similarly, other decisions have confirmed that "expert testimony can help to educate the court concerning the invention and the knowledge of persons of skill in the field of the invention" even though *Phillips* had "cautioned against undue reliance on experts." *See, e.g., Inpro II*

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6. Problems which the Court identified with elevating dictionaries over the specification include (i) that dictionaries focus on abstract meaning of terms instead of in the context of the patent; (ii) that dictionaries by nature provide an expansive array of definitions; (iii) that by design, dictionaries collect definitions not only in a particular art field, but in many different settings; (iv) that technical dictionaries may suffer from same deficiencies because the patent by nature is describing something novel; (v) that different dictionaries may have different sets of definitions for the same words; and that (vi) dictionaries may oversimplify in order to communicate with public at large instead of to those in the related art or technology. *Philips*, 415 F.3d at 1321-22.
7. *Vitronics* indicates that extrinsic evidence may relied upon where the intrinsic evidence does not resolve an ambiguity in a disputed claim terms. 90 F.3d at 1583. In addition, *Phillips* recognized that a court is generally permitted to consider extrinsic evidence, such as expert testimony, for a variety of purposes, including to ensure that the court's understanding of the technical aspects of the patent is consistent with persons of skill in the art or to explain how an invention works. 415 F.3d at 1318.

Licensing, S.A.R.L. v. T-Mobile USA, Inc., 450 F.3d 1350, 1357 (Fed. Cir. 2006).[8] Thus, various sources of evidence may be available to the claim construction advocate in a post-*Phillips* claim construction hearing, provided they are used in the proper way and given the appropriate weight.

The *Phillips* decision also addressed the dichotomy between the prohibition from "importing limitations from the specification into the claims" and the mandate that the claim terms must be construed "in light of" and "with reference to" specification. The *Phillips* decision remarked that "[m]uch of the time, upon reading the specification … it will become clear whether the patentee is setting out specific examples of the invention … or whether the patentee instead intends for the claims and the embodiments to be strictly coextensive." 415 F.3d at 1323. The court, however, acknowledged this might not always be the case:

> In the end, there will still remain some cases in which it will be hard to determine whether a person of skill in the art would understand the embodiment to define the outer limits of the claim term or merely to be exemplary in nature. While that task may present difficulties in some cases, we nonetheless believe that attempting to resolve that problem in the context of the particular patent is likely to capture the scope of the actual invention more accurately than either strictly limiting the scope of the claims to embodiments disclosed in the specification or divorcing the claim language from the specification

Id. At 1323-24. Not surprisingly, Federal Circuit cases have since applied the *Phillips* claim construction framework to justify both broad[9] and narrow constructions[10], depending on the scope of disclosure and usage of the term at issue.

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8. The court, however, found that district court did not abuse its discretion in excluding expert testimony for this particular case, noting that the appellant did not object to the exclusion or make a proffer as to who its expert would be or what testimony the expert would offer. *Id*.
9. *See, e.g., Conoco, Inc. v. Energy & Environmental Int'l, L.C.*, 460 F.3d 1349, 1357 (Fed. Cir. 2006) (declining to limit to the term "water-alcohol mixture" in view of its description in the specification, noting that under *Phillips* an inventor may use the specification to disclaim the broad scope of a claim, but that the intention must be clear); *Verizon Services Corp. v. Vonage Holdings Corp*., 503 F.3d 1295, 1302-03 (Fed. Cir. 2007) ("The mere fact that the specification's examples of translation may involve a change in protocol from a higher to a lower level protocol does not establish that such a limitation should be incorporated into the claims.").
10. *See, e.g., On Demand Machine Corp. v. Ingram Industries, Inc.*, 442 F.3d 1331, 1338 (Fed. Cir. 2006) ("the scope and outer boundary of claims is set by the

Accordingly, given the relatively wide latitude that the *Phillips* opinion affords the claim construction advocate, this article will examine techniques and strategies to incorporate various types of evidence into the claim construction presentation in a manner consistent with and exploitive of the Federal Circuit's current claim construction framework.

3. FORMULATING THE CLAIM CONSTRUCTION POSITIONS PRIOR TO THE MARKMAN HEARING

An important consideration to first undertake before formulating the claim construction strategy is to know the judge who will be presiding over the *Markman* hearing. While the legal framework for claim construction remains the same regardless of the judge or district, the court's experience and record for construing patent claims can impact the advocate's overall approach to the claim construction proposal. For example, the judge may have a particular practice that affects the Markman hearing, including, for example, the time allotted for the hearing, the manner of presenting evidence, and what types of evidence the court typically considers. Some judges may also have a preference to holding a Markman early in the case, while others may have them after the close of discovery. The judge's practices should be kept in mind when formulating the claim construction strategy, as this may impact not only the number of terms that are construed, but the manner in which the claim constructions can be supported based on the time allotted for hearing and the receptiveness of the judge toward the various forms of supporting evidence.[11]

To determine the judge's practice, one should consult the local rules, as well as any individual practice guidelines published by the judge. In addition, one should consult local counsel who are familiar with the

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patentee's description of his invention" and the terms "sales information" and "customer" should be limited in view of the intrinsic evidence); *Nystrom v. Trex Company, Inc*., 424 F.3d 1136, 1142-46 (limiting term "board" to wood cut from log in view of the specification despite claim differentiation argument and dictionary definition supporting broader construction).

11. In some instances special masters may be used in the claim construction process. One possible advantage to using special masters is that they may have expertise in relevant technology. It should be kept in mind, however, that special master decisions are generally subject to de novo review by the district court. F.R.C.P. 53(f). The advocate should also consider whether having the judge conduct the Markman hearing could be a useful opportunity to educate the judge about the technology and patent issues in the case.

court's practices or other attorneys who have recently been before the particular judge for a Markman hearing. It is also beneficial to do a search for claim construction decisions that have issued by the Court. This will not only help to get a sense of the judges level of experience so that the Markman briefs and presentation can be tailored accordingly, but it may give some insight into the judges tendencies when construing terms. For example, the prior decisions might show if the judge tends to rely most heavily and exclusively on intrinsic evidence or if the judge also relies on technical definitions and/or expert testimony to more fully understand terms from the perspective of one skilled in the art. It is also worth searching to determine how the district court's claim constructions have held up on appeal. For example, if the judge was recently reversed for construing a claim too narrowly in view of the specification and the party now favors a narrow construction, the advocate should be prepared to give the judge comfort that in this particular case, it is correct and appropriate to construe the claim term or terms at issue in such a manner.

After having done the initial research concerning the judge, the next step is determining the number of terms to construe. This, of course, is case dependant and will depend on the nature of the claim terms at issue, as well as the intrinsic evidence. For example, the presence of special definitions in the specification or number of times that prosecution disclaimers may appear in the file history may affect the decision whether to pursue construction of a claim. Also, the presence of technical terms or ambiguous language will also impact the number terms a party seeks to construe. In any case, a party should focus on claim terms which are truly important or meaningful to the litigation. For the accused infringer, this may mean ensuring that proposed constructions are proffered for claim limitations which might give rise to a non-infringement argument, such as constructions that may result in light of a special definition in the specification, a limiting description of the claimed invention, or prosecution disclaimer in the file history. For the patentee, this may mean focusing on terms that may need technical explanation for the jury or possibly constructions that might help distinguish over the prior art. Of course, since the Markman hearing is typically intended to address all the claim construction issues, the advocate should make sure it addresses all the terms that are potentially important to the case at this stage. A non-exhaustive checklist to consider for each patent claim at issue is whether there is any language that is subject to a special definition, prosecution disclaimer, or possible mean-plus-function construction (even if it does not use the word "means"), or that might be deemed indefinite, ambiguous, or otherwise requiring some

construction or disposition to ensure the party has its strongest case for its infringement and validity positions. Of course, the most essential inquiry is whether there is any term susceptible to more than one interpretation. If there is, and one interpretation favors a party's case, the party should seek construction.

The next step is determining the proposed construction for the terms that will be at issue. In general, clarity and conciseness is important. Often courts view claim construction as a process that is intended to simplify the patent analysis for the judge or jury. Courts are thus reluctant to adopt a construction that is too technical or verbose and does not provide clarity to the term meaning. Of course, in some instances, the specification or file history will dictate a specific construction that is lengthy or highly technical and the advocate must be prepared to explain why that construction should be adopted nonetheless in light of the claim construction framework.

As for timing in formulating proposed constructions, the local rules or court's discovery schedule often provide that the parties exchange proposed claim constructions before the Markman briefing, often with citations to supporting evidence. As a practice tip, the advocate should always make sure the proposed construction can be supported, almost verbatim, by the intrinsic and, where relevant, extrinsic evidence. This may mean tracking the claim language from a particular definition or affirmative description of a term in the specification, paraphrasing from an applicable dictionary definition that is consistent with the specification's use of the claim language, or repeating an affirmative remark regarding the scope of a claim term that was made by the applicant during prosecution. It is critical for the advocate to do this as a first step in the claim construction process prior to exchanging terms, even when identification of supporting evidence is not required by the court at this initial stage. Otherwise, a party prematurely proposing a wording without taking this initial step, may find itself faced with the dilemma of having to change its proposed construction in the middle of the briefing and potentially lose credibility with the court or be stuck with a proposed wording that is difficult to support. Of course, minor changes to proposed constructions in the course of briefing or otherwise prior to the Markman hearing may be permitted or even welcome if they provide more clarity or conciseness to a proposed construction, if they foster potential agreement by the parties or if they bring the proposed construction more in line with the intrinsic evidence.

In some instances, the parties will be asked by the judge to limit the number of terms for construction at the Markman Hearing. In this case, if

party truly believes that construction is needed for more than the number of terms allotted for the hearing, then there are a number of steps the party might take. As a first step, the parties can meet and confer to see if the number of claims from the asserted patent or patents can be limited to representative claims. This can cut back significantly on the number of terms needing construction and may allow the parties to focus on the claims that are truly important to the litigation. In addition, the parties should meet and confer to attempt to stipulate to the constructions of certain terms, which can also significantly reduce the number of terms at issue. Together, these efforts often result in getting the parties to agree upon a limited number of terms that is manageable by the court. If the number of terms in dispute still exceeds the number set by the court, the parties might propose a phased approach where the construction of certain secondary terms might be deferred until after the Markman hearing. Indeed, the Markman hearing may shape the case in such a manner that the construction of such terms becomes less important or even unnecessary. It may also be that certain of these terms might be construed in conjunction with summary judgment briefing, which often follows after the Markman hearing phase of the litigation, or that their construction could otherwise be deferred until a later stage in the litigation where the issues are more crystallized and the need for claim construction narrowed. Another possibility is to offer to brief all of the terms in dispute, but identify to the court the most critical ones. This allows the court some flexibility in deciding how many terms it will construe at that stage of the litigation, after having an opportunity to review the briefs and party positions. In any event, the advocate should be prepared to be flexible and provide alternative proposals that facilitate the judge's requirements.

4. EVIDENCE TO CONSIDER AND THE MANNER OF ADMITTING AND PRESENTING IT AT THE MARKMAN HEARING

The proposed claim construction should not only be clear and concise, it must also be supported by the appropriate evidence. The Federal Circuit recognizes that the intrinsic evidence is the most importance form of evidence. Thus, the Markman briefs and presentations, typically should focus on how a party's proposed construction is consistent with, or even compelled by, the intrinsic evidence. This often means demonstrating how the wording of the proposed construction is consistent with the relevant passages in the specification describing the term, is consistent with the structure and operation of the inventions as described in the

patent specification and figures, and, where applicable, is consistent with statements and characterizations of the claim language in the prosecution history.

Though the admissibility of such intrinsic evidence is rarely in dispute, it is essential to get the entire published patent, and often, the prosecution history into the record. One reason for doing this is so that the advocate can reference any portion of patent or its file history that may be needed at the hearing and so that all such evidence can be considered on appeal. The intrinsic evidence is most typically put into the record by submitting the materials with the claim construction briefs or in a supplemental filing prior to the *Markman* hearing.

Outside of the intrinsic evidence, dictionaries definitions are also an important form of evidence which, though technically extrinsic, has at times been elevated as a particularly useful form of evidence in the claim construction process. For this reason, it is often the case that a presenter will first show how the proposed construction coincides with the relevant dictionary definition(s) of the term even before getting to the intrinsic evidence. Depending on the nature of the claim term and the technology at issue, definitions may come from standard English dictionaries, technical dictionaries, or both. Typically, parties have preferred to use traditional, unabridged dictionaries, though the use of online dictionaries and other resources has become more prevalent. Care should be taken when using multiple dictionaries and addressing terms that have multiple meanings, to ensure that the selection of one dictionary or definition over another for a particular term can be justified. This is particularly true where the adversary could point out that a party is conveniently overlooking an unfavorable definition out of that party's own selected dictionary that was used for another term. In general, one should use dictionaries that were available at the time patent was filed, as this provides the definition that would have been in use at the time the patent application was written. In any event, it is critical that this evidence be admitted into the record so that it can be considered by the district court and on appeal. Relevant pages from the applicable dictionaries should thus be submitted with the briefs or, if permitted, in a supplemental filing prior to the *Markman* hearing. Filing all of the supporting materials can be particularly important given that the district court's claim construction rulings are reviewed *de novo* on appeal and the Federal Circuit may consider any evidence that was part of the record in the district court.[12]

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12. The Federal Rules of Appellate Procedure, in conjunction with the Federal Circuit Rules, allow the parties to the appeal to designate materials for consideration in

Besides intrinsic evidence and dictionaries, the use of other evidence at Markman hearing can vary widely by the judge or the nature of the technology at issue. Inventor testimony is perhaps one of the less favored forms of such evidence. It is considered extrinsic evidence and generally less reliable than the intrinsic evidence because it is not a part of the public record and may be subject to bias and other uncertainty. Unlike intrinsic evidence, which is fixed at the time of patenting and open to the public, inventor testimony may be colored by motives of the parties and shaped by the litigation and events subsequent to the patent issuance. For these reasons, there is rarely live inventor testimony presented at Markman hearings. Inventor testimony, however, may still have some role in the claim construction process. For example, prior to the Markman hearing, the accused infringer may be permitted to take the deposition of one or more of the named inventors. Since, during the prosecution of the patent at issue, the inventors typically would have signed an oath affirming that they read and understood the contents of specification, a deposition can sometimes yield useful information or admissions about the meaning of term from the perspective of the inventor, which may be most helpful where the advocate can show the inventor to be one of ordinary skill in the art. For example, it might be helpful to get the inventor's perspective to assist in identifying the extent of corresponding structure in a specification for a mean-plus-function limitation or to identify a unique technical term that was generally understood in the art but not apparent from the patent. Excerpts from the inventor deposition might then be used in the claim construction briefs or Markman presentation to reinforce a point, so long as that testimony is consistent with the intrinsic evidence. The pros of an accused infringer using inventor testimony favorable the infringer's position are evident. Such testimony often may be viewed almost as a patentee party admission that can be confirmatory or corroborative of the accused infringer's position. The benefits to using inventor testimony by the patentee, however, are less prevalent. At times inventor testimony can be used by the patentee to explain the background of the invention and the problems in the art that were overcome. Often, however, the inventor's testimony will be viewed as too self serving or biased to be of given much weight for purposes of the patentee.

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the appeal that are part of the record on appeal. *See* F.R.A.P. 30 and Fed. Cir. Rule 30. The record on appeal consists of (1) the original papers and exhibits filed in the district court; (2) the transcript of proceedings and (3) and the docket entries prepared by the district clerk. *See* F.R.A.P. 10(a).

Another category of extrinsic evidence is expert testimony. Like other forms of extrinsic evidence, the prevalence of its use can also vary by judge and the nature of the technology at issue. One uncontroversial use of expert testimony relates to tutorials which focus on teaching the court technology and the scientific principles at issue, rather than on the proposed constructions dictated by the patent documents. Such tutorials might be held prior to or in conjunction with the Markman hearing. Courts which have adopted the use of tutorials or which are open to the possibility generally prefer them to be non-adversarial and more educational in nature. Nonetheless, the tutorial may still be designed to lay the groundwork for the arguments or claim construction positions. For example, if the operation of a particular aspect of the invention is important to understanding the basis for a party's proposed construction, or if there are technical terms that may require a special meaning in the context of the patent, the tutorial may be an opportunity to address these issues. Beyond their role in tutorials and otherwise explaining the background of the technology, the role of experts in the claim construction process varies.

For the purpose of claim construction, expert testimony is extrinsic evidence and, thus, less favored. For this reason, some courts will discourage, or even not permit, experts to testify at Markman hearings. Claims, however, are construed from the vantage point of persons of skill in the art. Thus, for certain terms or a certain area of technology it can be important to have the viewpoint of a qualified expert. In these instances, even if the court disfavors experts, a party might still proffer expert testimony in the form of a declaration and submit it with the Markman briefs to have this as part of the record. This might be important where, for example, the extent of the corresponding structure of a means plus function claim is at issue, where there is an ambiguous technical term, or where there is a disagreement as to whether a term even has a commonly understood technical meaning outside of the context of the patent. The declaration should clearly lay out the expert's qualifications to show how he or she can give perspective from one of ordinary skill in the art at the relevant time of invention. Further, in most instances, the expert declaration can address every claim term in dispute, even if it is to merely confirm the ordinary meaning that would be understood by one of skill in the art in light of the intrinsic evidence.

In the case where expert testimony is permitted or even favored, the advocate should chose an expert who has not only the appropriate credentials or relevant experience, but one who is well spoken and, most importantly, can convey to the judge complex technical issues in a clear

and concise manner. Preparation is critical because the expert chosen for claim construction will likely be subject to a deposition or cross-examination. Thus, it is crucial to protect the expert's credibility, particularly where this expert will be used for the remainder of the case in other technical areas of the case concerning infringement and validity. The pros and cons to using an expert in the Markman hearing can widely vary. In general, however, the more complex the technology, the more important an expert can be. Also, the more technical steps that are involved in the claim construction process, such as determining the necessary corresponding structure in a means-plus-function claim or defining the technical contours of an inherently ambiguous term, the more important an expert is. In any event, one should address with the adversary early on if he or she intends to use an expert and secure an agreement on the use of experts, subject to court approval. This is important so that if a party sees no need for an expert, it will not be placed at a disadvantage by suddenly learning late in the Markman process that the adversary is using an expert. As a counterpoint, it is important to get agreement or court approval, if necessary, to ensure one is able to use an expert if one is needed. It can also be useful to agree whether live expert testimony will be offered, whether just a declaration will be submitted and if depositions will be permitted.

One form of expert testimony that used to be more prevalent in patent trials and, to some degree, at *Markman* hearings, is the use of expert testimony on patent procedures and practices. An expert on this subject could testify generally about the procedures in the PTO and how a patent is prosecuted. The use of the this testimony is generally less favored as it relates more to legal issues and the patent application process itself and does not provide the type of testimony that will help educate the judge on the relevant technology which judges are often most interested in. However, there may be circumstances where such testimony could be useful to educate a judge with limited *Markman* experience on PTO practices and procedures so the court might better understand how file wrapper estoppel was developed or how limiting statements made during the course of prosecution could impact construction, so long as the patent expert is not providing conclusory legal opinions, such as what the proper interpretation of a claim should be. However, these are generally instances where the law determines how things should be interpreted, with the facts being provided by the underlying documents, and the need for such experts is limited.

In presenting the various types of testimony discussed above, the advocate may have a choice between presenting on the briefs or

presenting at the hearing. The pros and cons to presenting live testimony versus the briefs would appear to be evident. A party with a strong witness generally will prefer to present live testimony to educate and even persuade the judge to adopt his or her positions. The advocate, however, must consider a number of factors besides just the strength of the witnesses. For example, if a party believes the that its claim constructions are strongly supported by the intrinsic evidence, then the use of expert testimony may be unnecessary and even detractive. It should also be kept in mind the inherent risks and uncertainty of live testimony, even for a seasoned and well prepared expert. In general, given the importance of the intrinsic evidence to the patent construction framework, use of expert testimony is often best limited to a tutorial of the technology or a declaration submitted with the briefs affirming the proposed claim constructions.

5. PRESENTING THE PARTY'S POSITIONS AT THE MARKMAN HEARING

After formulating the claim construction positions, deciding what evidence to use to support the claim construction, and determining whether the evidence will be presented at the hearing or only in the briefs, the advocate must determine how to best present the party's positions at the Markman hearing. As a threshold consideration, the advocate should determine in advance, first, the order of the presentation (e.g., will each party present its entire presentation or will the court alternate among claim terms) and, second, what claims can be addressed at the presentation.

With regard to the order of the presentation, most Markman hearings typically involve a presentation by the patentee, followed by a presentation from the accused infringer, often followed by a brief rebuttal by the patentee. This format is preferred by many practitioners as it generally allows a party the latitude to present in one focused setting what he or she feels is most important to their case. Some courts, however, have each party present arguments for each claim term so that the court can see the claims argued in a point-counterpoint manner. This can be advantageous where there are numerous terms or patents at issue and there are natural breaks in the types of claim limitations and technology being construed. In such cases, it might make sense for the court to fully hear both sides on one aspect of the claim construction before moving on to a next topic. In general, however, the advocate may prefer to present his or her claim construction all at once, as this allows

the party the most flexibility to devote attention to arguments and claim construction positions believed to be the most critical for the time allotted.

The time allotted for Markman hearings can vary widely and often there is not sufficient time to address every issue as fully as the advocate may like. In such instances, it should be emphasized that the focus of the presentation should only be on the claim terms which are truly important to the case. Nothing detracts more from the effectiveness of the presentation and ability to present a theme than to rush or present a monotonous diatribe about dozens of claim terms in a mechanical fashion.

Once the format, length of the Markman hearing, and number of terms that can be addressed at the Markman hearing is determined, the advocate must prepare the claim construction presentation itself. An effective claim construction presentation will often begin with an overview of the theme supporting that party's overall claim construction position followed by a summary of the technology at issue. This section might include a discussion on the state of the art at the time of invention. The next section typically would include a substantive presentation on a claim limitation by claim limitation basis showing proposed constructions and basis to support it. The strategy chosen for the introductory and substantive portions of the *Markman* presentation will, of course, depend on the audience, the amount of time allotted to the *Markman* presentation, the nature of the technology involved, and the number of claim terms at issue.

a. The Introduction and Theme

A theme the patentee may choose to emphasize is that the patent claims themselves, not the specification, define the meets and bounds of the invention and that patent claims should be given their ordinary meaning. The patentee may want to explain the invention to the court in simple, general terms to show there is little room for ambiguity in the meaning of claim terms and that the claim terms should be afforded their full range of ordinary meaning. By obtaining the full range of ordinary meaning, the patentee is generally more likely to obtain a broad construction and thus strengthen its infringement position by making it easier for the claim(s) at issue to read on an accused device. The patentee often will want to emphasize the importance of the invention described in the patent and its contribution to the state of the art, stating in the most general terms the concept(s) the inventor was first to recognize or the problem(s)

overcome. This approach may also have some impact on securing a broader construction for the patentee by suggesting that the differences between the claimed invention and the prior art are significant, leaving less opportunity for the accused infringer to argue that the claims should be restricted in view of the prior art.

On the other hand, the accused infringer will often want to present a theme emphasizing the importance of the "public notice" function of claim construction and why claims must be construed in view of the specification and file history in order to support a more limiting construction which is less likely to read on the accused device or process. The public notice function of claim construction dictates that the patentee be held to statements made on the public record (*i.e.*, in the specification or the prosecution history) about what his or her invention covers. The rational is that competitors of the patentee should be able to rely on these publicly available statements in attempting to ascertain the scope of the claimed invention when evaluating issues of infringement with respect to their products. An effective opening may include examples of how the patentee's proposed claim constructions are contrary to what the patent conveys to the public or what the inventors told the PTO in order to obtain allowance of the patent.

For either party, an effective *Markman* presentation will often begin with a general overview of the legal framework of claim construction and the policies guiding that framework, whether it is the principle that claims themselves define the invention and that claim terms should be given their full range of ordinary meaning, often emphasized by the patentee, or the importance of the "public notice" function of claim construction, often emphasized by the accused infringer. A brief overview of claim construction law summarizing points of law (*e.g.*, by using slides quoting key passages from recent Federal Circuit cases) can be important in focusing the court on appropriate legal framework before getting into the substance of the presentation. However, it is imperative to ascertain the judge's experience with claim construction. If his or her experience is significant, it may be preferable to place less emphasis on the legal standards of claim construction and highlight only recent developments in claim construction law that are pertinent to the case. An effective alternative to having an overview of relevant claim construction law would be to present the law as it pertains to particular constructions in the course of the presentation.

The claim construction presentation will often require reference to and discussion of the relevant technology. This is one area where the claim construction advocate can be creative and often will be afforded the most latitude in presenting extrinsic evidence in the form of expert testimony, inventor testimony, descriptions of what was known in the art at the time of invention, and animations about the technology described in the patent. Except in the case where the presenter is actually discussing the "Background Of The Invention" section of the specification or strictly referring to prior art that was made part of the prosecution history of the patent, this part of the claim construction is likely to include "extrinsic evidence."

As noted above, the court, in its discretion, typically can consider extrinsic evidence for the purpose of understanding the technology at issue. Thus, depending on the nature of the case, the court may be willing to hear expert testimony explaining the technology at issue. Given the Federal Circuit's emphasis on the importance of intrinsic evidence, however, one may want to consider use of such testimony sparingly other than in cases where the technology at issue is particularly complex or unfamiliar. In any event, such evidence should be "linked" clearly to the claim terms at issue or be presented as the state of the art at the time of the effective filing date of the patent claims to further enable the court to have a working background to assist in understanding what the meaning of the claim term was at the time of invention from the perspective of a person of ordinary skill in the art.

One way to inform the court about the nature of the technology at issue is for the presenter (or party expert) to step through the background art and the operation of the invention described in the patent. For the patentee, this is a chance to educate the court on the significance of the invention and why there should be little or no ambiguities in the claim terms and that they should be afforded broad scope. For the accused infringer, this is the chance not only to explain the technology as background to the claim construction arguments, but to emphasize to the court what the inventors may have considered important to their invention, which, in appropriate circumstances, could have an impact on limiting claim scope in a manner consistent with the proposed constructions. For either party, the presenter can use a series of slides or, in appropriate circumstances, an animation that explains the operation of the invention. Such demonstratives typically will make use of relevant figures from the patent and may be highlighted or colored alongside related passages from the

specification. In this manner, the presenter can focus the court on the technology at issue while highlighting only the key sections of the often complex drawings and lengthy written description to concisely explain the relevant operation of the invention as it relates to the claim terms at issue.

Another approach to educating the court about the technology at issue is to show a chronology of the prior art leading up to the effective filing date of the patent(s) at issue. Effective demonstratives can consist of a series of slides or a timeline with relevant figures and descriptions from the prior art showing the evolution of the technology at issue and what was known in the art. It is important to keep in mind that such evidence, unless part of the patent or prosecution history, is also extrinsic and may not always be considered relevant to claim construction.

b. Presenting Intrinsic and Extrinsic Evidence

Following an introduction and any discussion of the technology at issue, the next consideration for the *Markman* presentation is what to include in the presentation and how to organize the arguments concerning the claim terms at issue. If the patent involves only a few claims with a limited number to terms in dispute, it may be possible to cover the entire claim construction argued in the briefs at the hearing. Often, however, at the claim construction phase of the litigation, there will still be a number of asserted patents and disputed claim terms. In such cases, the presenter could attempt to cover all the claim terms in the time allotted for the hearing or else focus only on the terms that are most important to the case. The former choice, while offering the benefit of completeness, is generally less effective because the presenter will not have time to focus the court on the key issues and risks losing the court's attention. Accordingly, as noted above, the focus of the presentation should only be on the claim terms which are most important to the case.

Regardless of how many terms are in dispute, the presenter should be prepared to address all of the claims terms at issue at the hearing when feasible. That way the presenter will be prepared to address specific questions the court may have about a specific claim construction. As a practice tip, this can be done by preparing one or more bound sets of demonstratives addressing all of the claim terms at issue in a form that can be handed to the court and the adversary prior to the hearing, allowing opportunity for any objections. Advantageously, this allows the presenter to leave with the court (for

reference during and after the *Markman* hearing) a summary of the arguments for all the disputed claim terms, whether discussed or not, which highlight the key intrinsic evidence and consistent or essential extrinsic evidence and allow a final opportunity to reinforce arguments and respond to the points made in latest briefs submitted before the *Markman*. The presentation should also be indexed and referenced in a format that is easy to follow. The presenter can then focus on the important claim terms as time permits, but will be prepared to jump to a claim term the court may have a question about or to respond to an argument just raised by the adversary at the hearing. Some effort should also be made to combine similar claim terms and limitations for conciseness and to avoid repetition.

The next consideration, is how to present the intrinsic and extrinsic evidence concerning the terms at issue. As with any court hearing, an effective claim construction presentation will often provide the court with an initial overview of what the presenter intends to address at the hearing. Once the presenter has provided the court with an overview of the claims or terms that will be discussed, a demonstrative of the first claim being considered (often independent claim 1), highlighting the disputed claim terms should be provided. This, of course, is preferable to simply reading the claim aloud without visual reference or asking the court to flip through the pages of the patent or file history in order to follow the presentation. In most cases, it is important to provide a demonstrative of the entire claim since that is the starting point of claim construction and provides the context of the terms at issue.

The presentation should then focus on the first claim limitation at issue and how the claim should be construed. A strategic decision should be made on whether to present the adversary's proposed construction at this time. For example, if the adversary's construction seems reasonable, it may be better to wait to later in the analysis to demonstrate why that construction should not be accepted. On the other hand, if the adversary is espousing an unusual, awkward or unduly limiting construction, a side-by-side comparison in a demonstrative slide or board may be beneficial.

After identifying the claim term at issue and its proposed construction, the presenter will want to show how this construction is consistent with its ordinary meaning, if there is one. If the presenter is advocating for ordinary meaning, he or she should be prepared to show how the construction coincides with the relevant dictionary definition(s) of the term. The demonstrative slide often will include

excerpts from the presenter's chosen dictionary, and may be especially effective if it can quote from a dictionary relied on by the adversary as further support.

The presenter should next show how the proposed construction is consistent with the intrinsic evidence. Often, this will involve a slide or board that reproduces a relevant patent figure and passages from the specification supporting the proposed construction. In the case of the patentee, the presenter may wish to emphasize how the specification discloses alternative ways to do a certain aspect of the invention and uses non-limiting language to support a broad construction. In the case of the accused infringer, the presenter may wish to emphasize that a certain aspect of the limitation at issue was described as important to the invention or that a certain embodiment was repeatedly described as the only way to accomplish the claim limitation at issue in support of a narrow construction. In either event, demonstratives which repeatedly quote relevant passages highlighting the terms at issue in the form of bullet points to show consistent support for the proposed interpretation of the claim term from the specification are often especially effective. Slides with highlighted portions of each of the relevant patent figures supporting a proposed construction can be similarly effective. Passages from the prosecution history, where relevant, should be added to support the presenter's construction.

One should also consider using a series of demonstratives focused on explaining why the adversary's proposed claim construction should not be accepted. Typically, this will start with a slide quoting the other party's proposed construction followed by examples of how that construction does not comport with the ordinary meaning or is otherwise inconsistent with the intrinsic evidence. More obvious examples of demonstratives to achieve this purpose would be those which include recitation to passages from the specification and file history where the inventor has limited or otherwise disavowed claim scope (often contrary to a patentee's broader construction) or passages emphasizing that the embodiment or distinction at issue relating to the claim limitation was merely exemplary (often contrary to an accused infringer's more narrow construction). The party may also want to use this portion of the presentation to address any points in the adversary's brief that are either incorrect or which could not be responded to in the last brief.

The presenter may also want to incorporate specific points of law into the analysis of a construction of a certain claim term. This,

however, should also be done sparingly since the court presumably already has the law from the party briefs, but can be effective when woven into a very specific point of the substantive claim construction being discussed or when demonstrating how the adversary's construction is counter to controlling precedent.

With regard to extrinsic evidence, the Federal Circuit has made clear that it is improper to rely on extrinsic evidence to construe a claim term where the intrinsic evidence alone resolves any ambiguity in a disputed claim term. Often, however, it may be beneficial to present extrinsic evidence to confirm the construction arrived at by the intrinsic evidence or to reinforce a point. Taking, for example, inventor testimony, it would be improper to rely on this to alter the clear meaning of a patent term derived from the intrinsic evidence. An accused infringer, however-after demonstrating how its proposed construction is supported by the intrinsic evidence - might still make effective use of inventor testimony by showing how the inventor agrees with its construction, quoting the relevant testimony.

In circumstances where the ambiguities of the claim limitation at issue are not resolved by the intrinsic evidence or where the claim uses a term that does not have a well understood meaning in the art that can be readily resolved by the intrinsic evidence, extrinsic evidence may be essential. In these instances, the most effective presentation may be through an expert who can provide a narrative incorporating the proposed claim term interpretation within the framework of explaining the state of the technology at the relevant time and explaining how one of ordinary skill would interpret the claim in light of patent's description. Demonstratives could be used effectively in conjunction with the testimony to focus the court and the expert on the issues at hand. Such demonstratives again, may include highlighted or colored excerpts from the patent. In cases where the intrinsic evidence does not resolve ambiguity, the demonstrative may refer to contemporaneous publications that shed light on the meaning of such claim terms.

To the extent extrinsic evidence may be necessary to construe claim terms, there is no limit per se on the type of evidence that might be considered. Foreign prosecution history, for example might be used in certain circumstances to confirm a point of claim construction or highlight a party admission. Other extrinsic evidence, such as a business record or a product description describing a technical concept might also be considered if they are confirmatory of the intrinsic evidence or contradict an adversary's position. Such

evidence, however, should be used sparingly and only after support of the construction based in the intrinsic evidence is set forth and it is clear what limitations on its use exist.

Once the presenter has addressed the term at issue by providing the proposed construction, stepping through the supporting evidence, and summarizing any pertinent points of law, it is helpful to conclude each section by repeating the proposed construction, serving to refocus the court on the proposed language. The presenter will then typically, move on to the next disputed term in that same claim and repeat the process. This provides a focused, coherent presentation of the parties claim construction that can be followed from beginning to end. Of course, some effort should be made to combine similar terms and limitations at issue such that they can be presented at the same time to avoid unnecessary repetition.

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