REDUCING THE NEED FOR MARKMAN DETERMINATIONS

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I. INTRODUCTION

The existing patent system has been criticized for uncertainty in the scope and meaning of patent claim terms.² Markman hearings to determine the scope and meaning of claim terms are hotly contested proceedings because they control, and sometimes immediately resolve, validity and infringement determinations.³ At a minimum, uncertainty in claim construction substantially prolongs resolution of patent infringement disputes.⁴

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² Markman: Where Are We Now? An Update on Developments and Trends in Claim Construction, Timothy P. Ryan, American Bar Association, Section of Intellectual Property Law, 1999 IPL Summer Conference, June 23-27, 1999, San Francisco, CA (“The implementation of Markman has raised more questions than it has resolved, and the impact on the creation of a unique procedure for patent infringement litigation has spawned uncertainty, rather than eliminated it, as Markman intended.”)

³ See e.g., Vitrionics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1580 (Fed. Cir. 1996) (After the district court agreed with Conceptronic’s claim construction, “Vitrionics then conceded that the court was required to grant judgment as a matter of law in favor of Conceptronic, as Vitrionics had not presented any evidence of infringement under the court’s interpretation of solder flow temperature.”)

⁴ There is no requirement for district courts to make a Markman determination on the scope and meaning of the claims at the outset of litigation. In Vitrionics, the district court delayed announcing its claim construction until hearing all of the evidence put forth at trial, and the Federal Circuit reversed and remanded because the specification dictated a claim interpretation in accordance with Vitrionic’s proposed construction consistent, and so construed, the patent may have been infringed. Accord, William F. Lee & Anita K. Krug, Still Adjusting to Markman: A Prescription For The Timing Of Claim Construction Hearings, 13 HARV. J. LAW & TEC 55 (1999) (arguing that the most appropriate time for a Markman hearing is after the needed discovery has been completed but before the trial starts); James M. Amend, “Patent Law – A Primer For Federal District Court Judges (1998) (proposing “Plaintiff’s Claim Chart” on infringement 60 days after filing the Complaint, “Defendant’s Claim Chart” of non-infringement 30 days later, and 90 days later the district court hold a Markman hearing).
Indeed, many times the uncertainty of claim scope and meaning alone gives rise to the patent disputes.\textsuperscript{5} The uncertainty of claim scope and meaning is exacerbated because the Federal Circuit reverses lower court Markman decisions about 50% of the time.\textsuperscript{6} A single patent infringement case can take years and frequently runs into the millions of dollars for both the patent owner and the accused infringer(s).\textsuperscript{7}

The issue of claim construction need not and should not be an issue in litigation. Rather, the issue of claim construction can and should be resolved before patent issuance. The patent laws and regulations, namely 35 U.S.C. §112, ¶2 and 37 C.F.R. 1.75(d)(1), already dictate that the scope and meaning of the claims must be ascertainable by reference to the patent specification. Theoretically, strict compliance with 35 U.S.C. §112, ¶2 and 37 C.F.R. 1.75(d)(1) would eliminate the need for Markman hearings.

Further, patent applicants should be required to identify which claim terms are “means-plus-function” elements, identify the functions of the elements, and identify the corresponding structures, materials or acts for performing each specified function at the time of claim presentment to the examiner for examination. This would eliminate the need for a Markman hearing to determine whether 35 U.S.C. §112, ¶6 applies to a claim term, and if so, the need for a Markman hearing to determine the function and corresponding structure, material or act for performing each specified function.

Finally, applicants should be required to provide the meaning of their key claim terms at the time of presentment to the examiner for examination. All statements of the patent applicant on the scope and meaning of the claim terms should be placed into the patent specification itself just in front of the claims prior to patent

\textsuperscript{5} See e.g., Vitrionics, supra.

\textsuperscript{6} See Mark T. Banner, Changes in Patent Trial and Appellate Practices: Reversal and Addressing the Problems (February 27, 2004) (unpublished manuscript, on file with John Marshall Law School, as to its 48th Annual Conference on Developments in Intellectual Property Law) – reporting that in calendar year 2003 the Federal Circuit decided 91 cases where the issue of claim construction was at issue, and that the Federal Circuit reversed the district court claim construction 48 times, or 53% of the time, and that the reversal changed the result in 41 of the 91 cases, or 45% of the cases; Accord, Cybor Corp. v. Fas Technologies, Inc., 138 F.3d 1448, 1476 (Fed. Cir. 1998) (J. Rader in dissent stating that the Federal Circuit reversal rate between April 5, 1995 (date of Federal Circuit decision in Markman) and November 24, 1997, in whole or in part, on claim construction was almost 40%.

\textsuperscript{7} AIPLA, Report of the Economic Survey 2003, Table 22. Estimated Costs of Litigation, Median Cost of Patent Infringement Suit with $1-$25 million at risk, inclusive of all costs through appeal was $2 million for each side.
issuance. Since the specification as originally filed must support the claims, this procedure would not involve the addition of new matter.

These three approaches, separately or in combination, will bring more certainty to our patent system and this certainty will benefit both patent applicants and competitors alike.

II. REQUIRE COMPLIANCE WITH 37 C.F.R. 1.75(d)(1) AND 35 U.S.C. §112,¶2 DURING PATENT PROSECUTION

The Code of Federal Regulations states in part:

37 C.F.R. 1.75(d)(1) The claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description. [Emphasis added].

Thus, the Federal Regulations require that the terms in the claims are to be ascertainable by reference to the description in the patent specification. However, to date no Federal Circuit decision has cited this regulation for this legal proposition.

The integrity and fairness of the Patent System would be strengthened if the U.S. Patent and Trademark Office required strict compliance with 37 C.F.R. 1.75(d) prior to allowing a patent to issue. Arguably, issued patent claims should not need a Markman hearing because the meaning of the terms in the claim should be ascertainable by reference to the description in the patent.

The second paragraph of 35 U.S.C. §112 requires the specification of a patent to “conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.” The Federal Circuit has held that “[t]he test for definiteness is whether one skilled in the art would understand the bounds of the claim when read in light of the specification.”

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Thus, any claim, read in light of the specification, that does not apprise those skilled in the art of the scope of the claim is invalid under §112, ¶2. Arguably, issued patent claims should not need a Markman hearing because the meaning of the terms in the claims, read in light of the specification, should apprise those skilled in the art of the scope of the claim as required under §112, ¶2.

Patent applicants should be required to provide in their description clear support so that the meaning of the terms in the claims are ascertainable by reference to the description. The Federal Circuit has stated that the intrinsic record for claim construction includes not only the claims, but also the patent specification and its prosecution history. The Federal Circuit has also held that the claims are not limited to the preferred embodiment(s) disclosed in the detailed description. To avoid being limited to the preferred embodiment(s) in the detailed description, patent applicants can still draft claims that are broader than their preferred embodiment(s), and draft dependent claims to cover their preferred embodiment(s). Under the doctrine of claim differentiation, patent applicants will presumably not be limited to their preferred embodiment(s). The following examples show how application of strict compliance with 37 C.F.R. 1.75(d) and 35 U.S.C. §112, ¶2 prior to patent issuance would have eliminated the need for a Markman hearing in three seminal Federal Circuit cases.

Example 1 – Markman v. Westview Instruments, Inc., 52 F.3d 967 (Fed. Cir. 1995) (en banc), aff’d, 517 U.S. 370 (1996). In Markman the patent at issue was titled “Inventory Control and Reporting System for Drycleaning Stores.” The district court instructed the jury to determine the meaning of the claims as understood by those of ordinary skill in the art using the relevant patent documents, including the specifications, the drawings and the file history, and then compare the claims with the accused device to determine if it infringed. 952 F.3d at 973. After the jury verdict of infringement, the district court granted the defendant’s motion for judgment as a matter of

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9 52 F.3d at 973.
law. 10Id. The district court found that the claim term “inventory” as used in the claims meant “articles of clothing” and not simply transaction totals or dollars, and that the accused devices did not have the claimed “means to maintain an inventory total.” 11Id. The Federal Circuit affirmed after finding that the claims, the specification and the prosecution history all supported meaning of the term “inventory” as “articles of clothing.”12

If the patent applicant had expressly defined the claim term “inventory” in his specification as “articles of clothing,” then the patentee’s suit, if he had even filed one, could have easily and quickly been resolved on summary judgment.

Notably, the patentee would have benefited by expressly defining the claim term “inventory” in his specification. Specifically, the patentee would have benefited by knowing, prior to filing his application, exactly what this claim term would be construed to mean. He could have expressly stated a broad definition of the term in his specification had he wished to do so prior to filing his application. If the patentee opted not to broaden his express definition of the term “inventory” at the time of filing the application, then he would have known that he could not prevail against infringers by alleging a broader definition, and could have saved himself the time and expenses incurred in the case against Westview.

Example 2 – Vitrionics Corp. v. Conceptronic, Inc., 90 F.3d 1576 (Fed. Cir. 1996). In Vitrionics, the district court entered a judgment as a matter of law that Vitrionics had not proven infringement after finding that the disputed claim term “solder reflow temperature” meant “refers to 183°C,” which, as alleged by Conceptronic was the “lipidus temperature of a particular type of solder known as 63/37 (Sn/Pb) solder” (one of three exemplary types of solders in the specification).13 The Federal Circuit reversed after finding that the disputed claim term meant “peak reflow temperature” and not “lipidus temperature.”14 The Federal Circuit noted that the specification clearly defined “peak reflow temperature” and “lipidus temperature” as having distinctly different meanings.15 The Federal

10 Id.
11 Id.
12 52 F.3d at 981-82, and 988-89.
13 90 F.3d at 1580.
14 90 F.3d at 1583.
15 Id.
Circuit noted that in order to be consistent with the specification and the preferred embodiment described therein, the term had to be construed to mean “peak reflow temperature” – otherwise the preferred (and indeed) only embodiment in the specification would not fall within the scope of the patent claim.16

If the patent applicant had expressly defined the claim term “solder reflow temperature” in his specification as “peak reflow temperature,” then the defendant could not have alleged that the term meant “lipidus temperature.” The patentee would clearly have benefited from this exercise since it would not have had to litigate the meaning of the term.

The defendant would also have benefited from this exercise. Specifically, with the benefit of knowing the term meant “peak reflow temperature,” the defendant could have opted to continue to practice the prior art, or if available, to agree to a license from the patentee, and/or to concentrate its efforts to develop a non-infringing method with a clear understanding of the scope of the patent claims.

Example 3 – Texas Digital Systems, Inc. v. Telegenix, Inc., 308 F.3d 1193 (Fed. Cir. 2002). In Texas Digital the district court held that the claimed phrase “repeatedly substantially simultaneously activating” means “that during some portion of this period (defined as repeatedly), the two separate lights are on at the same time.”17 The Federal Circuit held that the district court correctly construed the term “repeatedly” but erred in its construction in the overall phrase, and ignored the meaning of the term “activating.” Apparently the patent specification was of little help, so the Federal Circuit considered a “relevant technical dictionary” as to the meaning of the word “activate.” The Federal Circuit stated that the intrinsic evidence was “entirely consistent with the dictionary definition,” but did not elaborate.18 The Federal Circuit held that the meaning of the “phrase requires that during some portion of the period defined as ‘repeatedly,’ the two separate lights are turned on at the same or nearly the same time.”19 Id.

If the patent applicant had expressly defined the claim term “activating” in the specification as “during some portion of the period defined as ‘repeatedly,’ the two separate lights are turned on at the same or nearly the

16 Id.
17 308 F.3d at 1205.
18 308 F.3d at 1206.
19 Id.
same time,” then the patentee’s suit, if he had even filed one, could have easily and quickly been resolved on summary judgment.

Notably, the patentee would have benefited by expressly defining the claim term “activating” in the specification. Specifically, the patentee would have benefited by knowing, prior to filing the application, exactly what this claim term will be construed to mean. The patentee could have expressly broadened that definition of the term in the specification if desired prior to filing the application. If the patentee opted not to broaden the express definition of the term “activating” at the time of filing the application, then the patentee would have known that it could not prevail against infringers using by alleging a broader definition.

III. REQUIRE APPLICANTS TO IDENTIFY WHICH CLAIM TERMS ARE “MEANS-PLUS-FUNCTION” ELEMENTS AND IDENTIFY THE CORRESPONDING STRUCTURE FOR PERFORMING EACH SPECIFIED FUNCTION

35 U.S.C. §112, ¶6 allows patent applicants, if they wish, to express a claim element “as a means or step for performing a specified function, without the recital of structure, material, or acts in support thereof and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.”

There have been a number of cases where the issue was whether a disputed claim term is a means-plus-function element. There is a rebuttable presumption that such a claim term is a means-plus-function element when “means for” language is used, and is not when “means for” language is not used in the claim. See e.g., Personalized Media Communications LLC v. Int’l Trade Comm’n, 161 F.3d 696 (Fed. Cir. 1998). Two other issues that are sometimes litigated are “what is the specified function” and “what is the corresponding structure, material or acts for performing the specified function.” Cardiac Pacemakers Inc. v. St. Jude Medical Inc., 296 F.3d 1106 (Fed. Cir. 2002). All three of these issues will continue to be litigated unless they are resolved in patent prosecution prior to patent issuance.

Since the patent applicant can choose to express a claim element “as a means or step for performing a specified function without recital of structure, material, or acts in support thereof,” it is only fair that the applicant
declare in patent prosecution which claim elements are “means-plus-function” elements. Moreover, the applicant should be required to identify the specified function and identify the corresponding structure, material or acts for performing the specified function. Only with this clear identification can the Patent Office properly examine the claims. Only with this clear identification can the above three issues be resolved and corresponding uncertainty removed at the proper stage at the proper time – during prosecution and prior to patent issuance. The following examples show that if patent applicants were required to declare in patent prosecution which claim elements are “means-plus-function” elements, and if so, identify the specified function and corresponding structure, material or acts for performing the specified function, then these issues would not need to be resolved in litigation.

Example 4 – Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d 1580 (Fed. Cir. 1996). In Greenberg, the district court construed the term “detent mechanism” to be a means-plus-function element. The district court granted the defendant’s motion for summary judgment of non-infringement after finding that the defendant’s accused structure for performing the function was not structurally equivalent to the detent mechanism disclosed in the patent. The district court gave two principal reasons to support its ruling. First, the district court concluded that “detent mechanism” in itself invoked section 112(6), because the term did not describe a particular structure but described any structure that performed a detent function. The district court noted that both the dictionary definition of the word “detent” (i.e., “a device for positioning and holding one mechanical part in relation to another”) and the definition of “detent mechanism” provided by Dr. Greenberg's expert (i.e., “[a]ny device for positioning and holding one mechanical part in relation to another so that the device can be released by force applied to one of the parts”) were expressed in functional terms. In addition, the district court reasoned that although claim 1 of the patent employed the term “detent mechanism,” the summary of the invention twice used “detent means” when referring to the detent that defined the rotation of the shafts at predetermined intervals, and that the two terms should therefore be viewed as synonymous, at least as used in the patent. Thus, the district court concluded that

22 91 F.3d at 1582.
23 Id. at 1583.
24 Id.
25 Id.
26 Id.
the term “detent mechanism” was equivalent to “means for,” and the phrase “defining the conjoint rotation of said shafts in predetermined intervals” stated the function performed by the means.27

The Federal Circuit reversed, holding that the factors on which the district court relied did not justify treating the claim language at issue in this case as falling within the purview of section 112(6).28 The Federal Circuit noted that the fact that a particular mechanism -- here “detent mechanism” -- is defined in functional terms is not sufficient to convert a claim element containing that term into a “means for performing a specified function” within the meaning of section 112(6).29 The Federal Circuit also stated that dictionary definitions make clear that the noun “detent” denotes a type of device with a generally understood meaning in the mechanical arts, even though the definitions are expressed in functional terms.30 The Federal Circuit stated that while the term “detent” does not call to mind a single well-defined structure, the same could be said of other commonplace structural terms such as “clamp” or “container.”31 The Federal Circuit stated that what is important is not simply that a “detent” or “detent mechanism” is defined in terms of what it does, but that the term, as the name for structure, has a reasonably well understood meaning in the art.32

The Federal Circuit also did not agree with the district court that the term “detent mechanism” in the patent should be treated as synonymous with the term “detent means” simply because the patent uses the term “detent means” in place of “detent mechanism” on two occasions in the “summary of the invention” portion of the specification.33 The Federal Circuit stated the drafter of the application that matured into the patent appears to have been enamored of the word “means,” as the word is used repeatedly in the summary of the invention. The Federal Circuit noted however, that a close reading of the specification reveals that the term is used in that portion of the patent simply as a shorthand way of referring to each of the key structural elements of the invention. The Federal Circuit noted that each of those elements is subsequently described in detail, without the use of the term “means,” in

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27 Id.
28 Id.
29 Id.
30 Id.
31 Id.
32 Id.
33 91 F.3d at 1583-84.
the “description of the invention” portion of the specification, and each is subsequently claimed, again without the use of the term “means,” in claim 1 of the patent.\textsuperscript{34}

The Federal Circuit stated that its decision does not suggest that section 112(6) is triggered only if the claim uses the word “means.”\textsuperscript{35} The Federal Circuit noted that the Patent Office has rejected the argument that only the term “means” will invoke section 112(6), see 1162 O.G. 59 n.2 (May 17, 1994), and that it agreed, citing Raytheon Co. v. Roper Corp., 724 F.2d 951, 957 (Fed. Cir. 1983), cert. denied, 469 U.S. 835 (1984) (construing functional language introduced by “so that” to be equivalent to “means for” claim language).\textsuperscript{36}

If the patent applicant had been required to identify whether any of the claim terms were “means-plus-function” limitations during patent prosecution, the patent applicant would have expressly made clear that there were no such claim terms, and the issue would have been resolved at the time of patent issuance rather than on appeal to the Federal Circuit. This would clearly have benefited patentee as the patentee would not have to appeal an adverse ruling in order to prevail on this issue. The defendant would also have benefited as it would have known that it would need to resolve the dispute without an uncertain claim interpretation that ultimately proved to be wrong as a matter of law.

Example 5 -- Cardiac Pacemakers Inc. v. St. Jude Medical Inc., 296 F.3d 1106 (Fed. Cir. 2002). In Cardiac Pacemakers, the district court concluded (4 years after suit was filed) that the claims could not be construed “because no structure in the disclosed embodiments performs the functions as stated in the [sole independent] claim.”\textsuperscript{37} The parties stipulated that under the district court’s claim construction, the claims were invalid, and the district court entered summary judgment that were indefinite for failure to comply with §112, ¶2.\textsuperscript{38} Id. The Federal Circuit affirmed, stating:

Cardiac Pacemakers’ attempts to identify structure corresponding to the function of the “third monitoring means” limitation are in vain. As we explain below, the function identified by the claim language is dual: it requires the same means to monitor the ECG signal and to activate the charging

\textsuperscript{34} 91 F.3d at 1584.
\textsuperscript{35} Id.
\textsuperscript{36} Id.
\textsuperscript{37} 296 F.3d at 1112.
means in the presence of abnormal cardiac rhythm. Because only the physician both monitors the
ECG signal and activates the charging means in the presence of abnormal cardiac rhythm, and
Cardiac Pacemakers concedes that the physician cannot be corresponding structure, the specification
discloses no structure that corresponds to the claimed function. This renders the claim, and the claims
depending from it, invalid for indefiniteness. This is so notwithstanding the presumption of validity,
see S3 Inc. v. NVIDIA Corp., 259 F.3d 1364, 1367, 59 USPQ2d 1745, 1747(Fed. Cir. 2001) (“The
claims as granted are accompanied by a presumption of validity based on compliance with, inter alia,
§ 112, ¶ 2.”) (citing Budde, 250 F.3d at 1376, 58 USPQ2d at 1806), and the issuance of dependent
claim 15, in which the “third monitoring means” includes a display. Although it remains true that we
will construe claims to preserve validity, if possible, see, e.g., Tate Access Floors, Inc. v. Interface
Architectural Resources, Inc., 279 F.3d 1357, 1367, 61 USPQ2d 1647, 1654(Fed. Cir. 2002), where
the specification fails to disclose structure corresponding to the claimed function, it is impossible. As
in this case, the claims are invalid.38

The applicant would have benefited from the requirement of identifying whether any of the claim terms
were “means-plus-function” limitations at the time of presentation of the original claims, as well as specify the
function and corresponding structure for performing the specified function. Specifically, the patent applicant would
have realized that there was no corresponding structure in the original application prior to filing the patent
application, and could have corrected the situation at that time. The patent applicant also would not have had to
appeal an adverse district court decision only to lose on appeal as well.

IV. REQUIRE APPLICANTS TO PROVIDE THE MEANING OF THEIR KEY ORIGINAL CLAIM
TERMS AT THE TIME THE PATENT APPLICATION IS FILED, AND ANY NEW TERMS
INSERTED IN THE CLAIMS DURING PROSECUTION

Since the patent applicant can choose the words to use in the claims to particularly point out and distinctly
claim the invention, it seems fair to require the applicant to provide the meaning to be given to a key claim term at

38 296 F.3d at 1114.
the time the applicant presents a claim having that term for Patent Office examination. The applicant can readily do this by simply using dictionary definitions of the applicant's own choosing, or by being his/her own lexicographer.

One commentator has proposed the requirement of a “dictionary” preference, either by the patent examiner or by the patent application, in the prosecution history of the patent to resolve questions about the meaning of claim terms. This proposal is a step in the direction of providing more certainty on the meaning of claim terms. This proposal does not account for how words in a particular combination should be construed. This proposal does not account for instances when a single dictionary may have multiple different definitions for the same word. Further, the reliance on a single dictionary to resolve questions about the meaning of claim terms may not be appropriate in all cases.

A more balanced and fair proposal would be to require applicants to define their claim terms by requiring them to recite the dictionary definitions of the applicant's own choosing, or to recite alternative, synonymous language to define the claim terms as applicants have the right to do as their own lexicographer. The definitions chosen by the applicant can and should appear just prior to the claims to each issued patent.

As shown in Section II, supra, strict compliance with 37 C.F.R. 1.75(d) and 35 U.S.C. §112, ¶2 prior to patent issuance would have eliminated the need for a Markman hearing in three seminal Federal Circuit cases -- Markman, Vitrionics, and Texas Digital (Examples 1, 2, and 3). To ensure vigilant compliance with 37 C.F.R. 1.75(d) and 35 U.S.C. §112, ¶2 prior to patent issuance, applicants should be required provide the meaning to be given to a key claim term at the time the applicant presents a claim having that term for Patent Office examination. The applicant can readily do this by simply using dictionary definitions of the applicant’s own choosing, or by being his/her own lexicographer. To assist the all those interested in understanding the meaning and scope of issued patents, these definitions by the applicants of the key claim terms should appear just prior to the patent claims.

V. CONCLUSION

To reduce the uncertainty on the scope and meaning of patent claims, as well as truly comply with 37 C.F.R. 1.75(d)(1) and 35 U.S.C. §112, ¶2, the Patent Office needs to be more vigilant in requiring applicants to

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provide a description in their specifications that so that the terms of the claims are ascertainable by reference to the
description. The Patent Office can best implement this vigilance by adopting appropriate rules that require
applicants to provide the meaning of each key claim term at the time of claim presentment to the Patent Office
during prosecution, and for those definitions to appear just prior to the claims of each issued patent. Applicants can
comply with these new rules by simply reciting the dictionary definitions of the applicants’ own choosing, or by
reciting alternative, synonymous language to define the terms as their own lexicographer. To further reduce the
uncertainty on scope and meaning of claim terms in connection with 35 U.S.C. §112, ¶6, patent applicants should be
required to declare in patent prosecution which claim elements are “means-plus-function” elements, and expressly
identify the corresponding structure, material or acts for performing the specified function. To eliminate most, if not
all questions on the scope and meaning claim terms, applicants should be required to define, in patent prosecution,
their claim terms with alternative, synonymous wording – something they would likely have to do in a Markman
hearing.