

**STRATEGIES FOR ADDRESSING SOME KEY ISSUES
IN CLAIM CONSTRUCTION TODAY**

I. HOW CLAIM CONSTRUCTION AND INFRINGEMENT PROBLEMS MAY BE CREATED OR AVOIDED AT THE PATENT PROSECUTION STAGE

A. Subjective Intent is Irrelevant.

Of all the sources of evidence that are relied upon in claim construction, one that carries little or no weight is the testimony of the inventor (or his attorney) as to how he intended the claim to be construed. There is good reason for this. The inventor's after the fact assertion is likely to be self serving, and it is difficult to prove what his subjective intent actually was at the time of filing. The most important reason for not relying upon the inventor's subjective intent, however, is that the public has no ability to ascertain that intent from the patent document or file history. That is why the construction must be done objectively, relying upon what is in the patent document and other publicly available sources to give reasonable public notice of the scope of the claims.

While the subjective understanding of the invention is not reliable evidence *ex post facto*, it is however, central to the proper drafting of the patent document. Claims should not be drafted in a vacuum, or as a finishing touch to the application. To make the patent a valuable business asset, the client and attorney should have agreed upon objectives before drafting any portion of the application.

B. Determining Potentially Patentable Subject Matter.

The first inquiry is to determine what subject matter could be claimed, putting aside for a moment the issues of whether it should be claimed or how it should be claimed. This is traditionally done by a patentability search and opinion, but it can be done based upon the client's familiarity with the industry. Most patent applications begin with this determination having been made. The exception may be when the application claims priority to a provisional application, and the provisional was written with no analysis of patentable subject matter. There are good arguments for at least outlining, if not completely crafting, claims at the provisional application stage; but since claims are not required in provisional applications, the expedient is often to file any material that will be publicly disclosed after the provisional filing.

C. Claims are Crafted, not Drafted.

The legal rights under a patent are exclusionary rights. They give the patent owner the right to prevent others from making, importing, using, selling or offering for sale in the United States whatever falls within the boundaries of the patent claims. Understanding these rights is essential to the claim crafting process. The key issue is NOT what subject matter can be claimed in a form that would be allowed by the PTO. The real issue is what aspect or aspects of the patentable subject matter would others want to make, use, or sell, either by licensing or in order to compete with the client. The value of the patent lies in crafting claims that protect those

aspects. Well crafted claims also give fair notice of what is protected, and can be demonstrably proven to be infringed.

D. Write the Specification to Support the Claims.

Most organizations and instructors who teach patent drafting recommend writing the claims before starting to write the specification. The statutory requirement for the specification is that it contain a written description of the invention, and a manner and process of making and using the invention, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains to make and use the (claimed invention), and also set forth the best mode contemplated by the inventor of carrying out his claimed invention.

Thus, crafting the claims provides a roadmap for what you need to say in the specification, and just as importantly, what you do not need to say.

E. Write the Specification to Assure the Construction of the Claims that You Intended.

Having made a significant effort to craft claims that capture the subject matter the client wishes to exclude others from making, using, or selling, the last thing you want to do is create any ambiguity about the scope of the claims. The days of purposely leaving a little “wobble room” are long over. That practice is more likely to hurt the client than help.

It is not necessary for you to provide express definitions of the terms in a claim. On the other hand, you can and should provide an express definition if you have any concern that the term is susceptible to a construction you do not want. What you need to be constantly aware of, however, is that you are providing implicit definitions of the claim terms by the manner in which you use and qualify those terms in the specification. This is what *Phillips v. AWH* refers to in its statement that the ultimate issue is how a person of ordinary skill would construe the disputed term in the context of the entire patent document, not just from the claim in isolation. The “proceduralist” approach to construction, in which the claims are the primary source of interpretation, was modified at least to this extent. The legal task entrusted to the hypothetical person of ordinary skill is NOT to determine what a claim limitation means as an abstract mental exercise using dictionaries, logic or grammar – it is to determine what the limitation means in the context of defining a boundary of the invention that is described in the patent. That context is always created by the person writing the patent application, by her choosing the terms used in the claims and the manner in which they are defined and supported in the specification. By crafting the claims before the supporting material, you will find it easier to always use a claim term in the context in which you want it to be construed.

F. Use the Terms of the Claim Limitation in the Specification.

There was once a school of thought, not widely accepted, that the claim should use terms that are not found in the specification. The rationale was that it emphasized the point that the claimed invention was not limited to the described embodiments. That is still a legitimate objective, but there is a better way to do it. When you use an ostensibly broad claim limitation in describing an embodiment in

which a particular form of the limitation is a recognizable structure with its own specific name; simply state that: “In this embodiment, the [Claim Element] is in the form of a [Specific Structure]”. This reinforces the point that the claimed invention is not limited to the described embodiment. A court construing the claim will have greater assurance that the claim limitation is broader than the specific structure if you provide this context, rather than just using different terms.

In the same vein, if a claim term is used in more than one limitation in a claim, it will normally be assumed to have the same meaning in each limitation in which it appears. Why would a person of ordinary skill attribute different meanings to the same term?

G. The Word Processor is your Best Friend.

Having crafted the claims as the initial step, the BLOCK, COPY and PASTE functions allow you to insert some or all of the claim language at various points in the specification. The claim can be used as an outline for portions of the written description. While the single sentence format of a patent claim may not be very pleasing syntax, it can usually be broken up and changed into standard English without much difficulty. This process assures that the claim limitation terminology will be used in the written description.

You can also put the FIND function to good use by finding the places where a claim term is repeated in the specification. Many of the patent optimizer tools use a form of the FIND function for this purpose. What you want to eliminate is any use of a claim limitation term that is not consistent with the meaning you intended for that limitation.

H. Pay Attention to Common Words and Rules of Grammar.

In many claim construction disputes, the issue is not determining the meaning of some technical term of art. The issue is often a dispute over common terms that are generally understood by lay persons as well as they are by one of ordinary skill in a technical field. Words of general usage such as “about”, “between”, “connected”, “push” or “pull”, “above” or “below” often provoke a dispute where they are not made clear. For example, a region “between” two objects may or may not include a region that also extends beyond one or both of the objects. If you can identify that potential problem when you craft the claims, it is relatively easy to make its full scope clear in the written description. When using a term such as “about N”, which is itself intended to indicate a range of some extent around the number N, the claim construction will be to define and limit that extent.

Grammar and punctuation are also important. A person of ordinary skill is entitled to expect adherence to the standard rules. If you ignore or mangle grammar or punctuation, you create a problem that could easily have been avoided by more rigor in writing the claim.

I. Write the Claims and Specification to Enable Proof of Infringement.

After the claims have been properly construed (true to the meaning that you intended if you have followed the process above), someone still must prove that the accused product or process infringes the claims. Don't write claims that make the proof more difficult than it needs to be. If you are going to use any physical phenomena in the claim, consider how you will have to prove it exists in the infringing product. For example, if you are going to claim a unique crystal form of a pharmaceutical compound by describing a detection method and a parameter of detection, first investigate how easy or difficult it will be to prove if the infringing crystal is mixed with another substance that will mask identification. In crafting method claims, consider how you will know whether a particular step was followed. If you can't make proof of infringement an easy determination, consider eliminating or rethinking the step.

J. Craft Claims That Do Not Rely Upon Vicarious Infringement.

The claim should be directed to inhibit competitors and commercial actors, not consumers. Contributory infringement and active inducement of infringement are intended to capture the real party in interest in the infringement, but both have serious limitations. If you can craft the claim to make the product or service that is most likely to be performed by the competitors or commercial actors a direct infringement, those limitations can be avoided.

K. Craft Claims that Cover Consumable Parts Individually, Not as Part of the Combination.

Under the doctrine of patent exhaustion, the sale of a combination carries with it the implied right to use it for its expected life cycle, which includes repair of parts and replacement of consumable elements. The making and selling of these parts can only be protected if they are covered by a separate patent claim, not just as part of the combination.

L. If you use Means-Plus-Function, do it Properly.

Don't use the §112 (6) format, or even the word "means", indiscriminately. The format is proper and it can be useful in the right situation, such as when you intend to describe several embodiments of a combination, each having different components for performing the identical function. The Means - Plus - Function format can be used to craft a generic claim to cover all embodiments of the embodiments.

The Means - Plus - Function claim limitation is properly construed as claiming any of the components that are actually described in the specification as performing that function, and the structural equivalents of any of them. It does NOT necessarily include every structure capable of performing the function. If you use the Means - Plus - Function format simply because the function is being performed, but you do not show or describe the structure performing the function, the claim is indefinite.

Consequently, if you decide to use Means - Plus - Function format, force the downstream claim construction to come out the way you intend by using the verbatim language of function from the claim when describing each of the embodiments, and

link that function to the minimum structure needed to carry it out in each embodiment.

M. Don't Let a Well-Intentioned Examiner Ruin the Claim.

Having gone to the considerable effort to craft claims that will be construed as you wish them to be construed, and which provide a roadmap for proving infringement, you don't want an Examiner's Amendment to cloud the picture. The Examiner's job is to determine whether your claim meets the conditions for allowance. It is not his job to make the claim valuable to your client. Despite good intentions, an Examiner's Amendment can create uncertainty and vulnerability in a claim. It will almost inevitably be considered an amendment for the purpose of patentability, invoking the *Festo* presumptions against the Doctrine of Equivalents.

It is usually best to let an Examiner explain his reasons for proposing the amendment, but then courteously let him know that you need to think through the possible ramifications of the amendment before agreeing to it. The Examiner may be right. His proposed amendment may be innocuous. But you must make that judgment call, not him. If you understand his rationale for wanting the amendment, but don't agree with the terms he wants to use, you can propose alternative language.

II. EXAMPLES OF SOME COMMON MISTAKES

While the case law on claim construction focuses on the objective determination of how a person of ordinary skill in the art would construe the disputed term in the context of the patent document, the reason that the dispute was permitted to exist can usually be traced to a mistake made in crafting the claims for prosecution. This section explores why the mistakes can arise, and what the consequences of the mistake are when the claim is construed, using examples from the reported cases or expired patents.

A. Having a restrictive view of the invention at the time of prosecution; then trying to change that view in later litigation. *SafeT Care Mfg. v. Tele-Made, Inc. et al.*, 2007 U.S. App. LEXIS 18464

The invention is a hospital bed for obese patients. It has sections that pivot from the frame to raise or lower the patient's head or legs, and electric motors to lift or lower the sections with the patient's weight on it. The disputed claim limitation was:

a plurality of electric motors carried by said frame and coupled to respective ones of said plurality of deck sections for exerting a pushing force on said plurality of deck sections for causing said deck sections to rotate

upwardly relative to said frame so as to adjust the contour of the mattress.

The bed alleged to infringe this claim had an electric motor that pulled an edge of the foot panel down toward the motor, but a pivoting attachment to the frame causes the panel to rotate upwardly. Literally, a “pushing force” was lifting one end of the foot panel in a direction away from the motor, even though the pushing force was a reaction to the pull at the other end. If the claim limitation were read in isolation, it would support literal infringement. But the district court found, and the CAFC affirmed, that the patent applicant had disavowed a scope of claim that would have including “pushing” by reaction to a pull force. The patent specification specifically described why a motor pushing a panel upward was safer than a motor pulling on the panel to tilt it upward. Hence, someone of ordinary skill would understand that the patent did not intend to claim a motor using a pulling force. In the vernacular of claim construction, the patent owner had “disavowed” any broad scope of the term “pushing force” in favor of the more specific meaning.

Both the inventor and patent attorney had clearly viewed the “pushing force” limitation to be important in distinguishing over the prior art beds that used pulling motors. That is clear in the specification and from the fact that the pushing force is a limitation in all of the claims. So why was it asserted to cover a motor using a pull force? Keep in mind that this civil action was filed before *Phillips*, and that the prior rules making the “plain meaning” of the claim language paramount created the possibility of expanding the scope of the claim. This appears to have been an opportunistic attempt to assert the patent in a way that the inventor and attorney had not intended.

**B. Thinking like a scientist or mathematician instead of a lawyer.
Example: US 4,693,244.**

Laws of nature should not be confused with the law we practice as patent attorneys. This example is from a jury trial by the author (John Marshall) in 1993.

Snell's law of refraction, often expressed in a mathematical formula of ratios, is used to describe the relationship between the angles of incidence and refraction when referring to light passing through (or reflecting from) a boundary between two different media, such as air and glass. In this patent, the inventor used the angle ratios to design a probe for laser surgery that kept the light reflected inside the probe as the radius decreased toward the tip. The patent attorney attempted to capture that invention as follows:

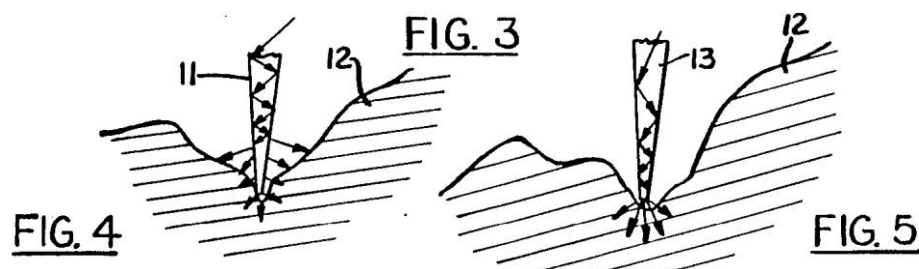
1. A medical and surgical laser probe for contact laser surgery;... which probe is characterized in that the tapered portion defining cross-sections of generally circular form..., and the length and the taper angle of the tapered portion and the radius of the tip end face of the tapered portion are determined and structural so that substantially all laser beam incident on the laser beam receiving portion from the laser beam guide means is emitted from the tip end face of the tapered

portion without leaking out from the tapered face of the tapered portion; the laser beam being concentrated at the tip end face whereby said concentrated laser beam facilitates the surgical cutting of tissue.

The specification supported the claim.

The conditions are critical for emitting all laser beam incident on the rod member 2 only from the tip end face of the tapered portion without leaking out from the tapered face of the portion 10.

... If the rod member has a configuration which cannot satisfy the above condition, laser beam leaks out from the tapered face of a rod member 11 as illustrated in FIG. 4 so that the energy density of laser beam emitted from the tip end face is lowered, which makes the incision of the tissue 12 difficult. ... In contrast, when the configuration of the rod member satisfies the above condition, laser beam is emitted only from the tip end face of a rod member 13 as illustrated in FIG. 5.



The real world problem, however, is that the mathematical formula assumes perfectly smooth surfaces. In the real world, where the probe is tapered by polishing, tiny surface imperfections create points where the angle of incidence exceeds the angle of reflection, and some light leaks out of the tapered face. The judge construed the claim to allow the jury to determine infringement based upon satisfying the gross angle ratios, even though some leakage always occurred. Had this been explained in the specification and made clear in the claims, however, this would not have created a dispute of claim construction.

C. Using the wrong term of art. *Honeywell International v. Universal Avionics Systems Corp*, 2007 U.S. App. LEXIS 15820, 83 U.S.P.Q.2D (BNA) 1425

When a term has a clear “ordinary meaning” in a field, you must be careful to use it only for that meaning. Sometimes the court will save you from your drafting mistakes, but you can’t count on it happening all the time. This case had a happy ending for the attorney who wrote the claim.

The invention was for a ground proximity warning system for aircraft. A ground warning system must be disabled during the approach to landing, where ground proximity is intentional. Prior systems used wing flap position to disable the

warning. This invention used navigation signals representing distance from a fixed point at the airport, coupled with the aircraft bearing from that fixed point, to determine that the aircraft was beginning final approach and then disable the warning. The dispute arose because the patent claims used the term "heading" instead of "bearing".

The term "heading" was used as follows:

[4] a source of signals representative of the relative angular position of a particular runway with respect to the heading of the aircraft; and

[5] means responsive to said first and second sources of signals for providing a signal representative of the alignment of the aircraft with the runway by determining the angle between the runway and the heading of the aircraft.

Both parties agreed that the ordinary and accustomed meaning of "Heading" in air navigation is "*the direction in which the aircraft is pointing in relation to North.*" If that construction were adopted, there would be no infringement.

Both parties agreed that the ordinary and accustomed meaning of "Bearing" in air navigation is "*the angle formed by the line connecting the aircraft position and the airport and a reference datum, usually North.*" If "heading" were construed to mean "bearing", there was infringement.

This is a classic example of a claim construction in which the ordinary meaning of the claim limitation would have been immediately apparent to one of ordinary skill in air navigation without having to read the specification. At the same time, however, the person of ordinary skill may have wondered why heading would be used, since the aircraft's bearing would give better information that the aircraft was in the approach path for the active runway.

To argue for an interpretation different from the ordinary meaning, Honeywell had to rely upon the rule that a patent applicant can be his own lexicographer. Honeywell's dilemma, however, was that the term "heading" didn't appear anywhere in the specification and therefore was never explicitly defined.

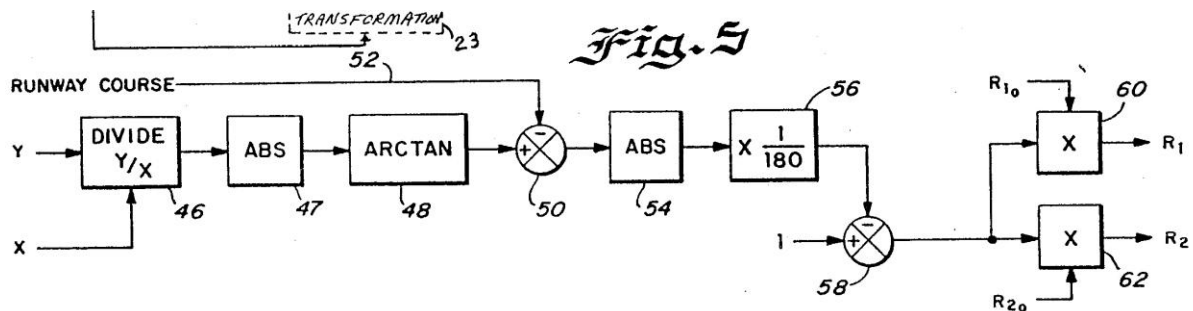
The original language of the claim 1 phrased the two corresponding limitations as follows:

a source of signals representative of the relative angular position of a particular runway with respect to a datum and

means for providing a signal representative of the alignment of the aircraft with the runway.

The examiner rejected the claim based on indefiniteness about "how a runway is compared to a datum." In response, the applicant replaced the phrase "a datum" with "the heading of the aircraft," and added the language "by determining the angle between the runway and the heading of the aircraft". This explanation of datum could be supported either by the heading or the bearing of an aircraft.

The district court found, and the CAFC affirmed, that despite using the well understood term "heading" the patent drafter was actually trying to describe a bearing. To do so, it looked to the physical parameters being processed, by referring to Figure 5.



The specification explains that signals X and Y are the differences in longitude and latitude between the position of the aircraft and the centerpoint of the nearest runway. By computing the arctangent of the ratio between Y and X, devices 46, 47, and 48 compute the angle of a line connecting the centerpoint of the runway to the position of the aircraft. In other words, they compute the angle of a line having a direction that is conventionally known as the bearing of the aircraft from the runway. Device 50 then compares the direction of that line with the direction that the runway is pointing, resulting in "a signal which is representative of the aircraft's alignment with the particular runway." Thus, the specification makes it clear that in referring to the "alignment" of an aircraft with a runway, the patent denotes the extent to which the runway points at the aircraft, not the extent to which the aircraft points at the runway or points in the same direction that the runway points.

What really went wrong? The device is an electronics device and the specification was written as an electronics application. Figure 5 and its explanation described the use of electronics for processing the navigation signals. But the patent claim was not about electronics – it was about air navigation. The attorney prosecuting the application (and the examiner) understood the electronics but apparently not the ordinary terms of navigation. Had the attorney known the proper navigation term to be "bearing", there would have been no need for claim construction.

- D. If a patentee wants their claims to cover subject matter broadly, then they must say so. *Nystrom v. TREX Co., Inc.*, 424 F.3d 1136 (Fed. Cir. 2005).**

The issue in *Nystrom v. TREX* was the meaning of the term “board” in claims directed to construction material for use in exterior flooring. The district court construed “board” to mean “a piece of elongated construction material made from wood cut from a log.” In construing the term narrowly, the district court relied on the specification and prosecution history. The patentee, Nystrom, appealed to the CAFC seeking to have the term defined broadly to include other rigid materials besides wood. The patentee asserted that statements in the specification did not represent a clear disavowal of claim scope, and contended therefore that it was improper for the district court to rely on those statements in limiting the claim term. The defendant, TREX, argued that the term should be construed narrowly because the specification only described boards as made of wood cut from a log.

In affirming the district court’s construction of the term “board,” the CAFC said that claim construction analysis begins with the words of the claim, which are “generally given their ordinary and customary meaning.” The court explained that the ordinary and customary meaning is the meaning that the term would have to a person of ordinary skill in the art in the light of the entire intrinsic record. The court found that the written description and prosecution history required “board” to be limited to wood cut from a log. Citing portions of the specification, the court noted that the patent consistently described the invention in the context of wood decking materials cut from logs. The court also found that “[t]hroughout the written description, Nystrom consistently used the term ‘board’ to describe wood decking material cut from a log.” The patentee’s prosecution history statements provided additional context that board was consistently used as wood cut from a log.

Thus, because the patentee had not indicated that they intended their invention to cover more than boards made from wood, they were limited to a construction in accordance with what they had described. Their failure to indicate that they intended “board” to include materials other than wood was held to limit their claims.

Therefore, simply writing broad claims is not enough. Although a broad claim may cover more than the embodiments disclosed in the specification and drawings, the specification should state that the invention includes more than just the embodiments and variations disclosed by the specification. Though a patentee’s statements can and probably will be used against them in infringement litigation, the patentee’s failure to explain/define claim terms may be detrimental to their patent rights.

III. CLAIM CONSTRUCTION UNDER THE NEW PTO RULES LIMITING THE NUMBER OF CLAIMS

On August 21, 2007 the PTO issued new rules limiting the number of claims which can be filed and the number of continuation applications and requests for continued examination (RCE). If an applicant exceeds the limits for the number of

claims, they must present justification in an Examination Support Document (ESD) which will become part of the file history.

Although the new rules become effective on November 1, 2007, some parts of the rules apply retroactively to pending applications, and some rules have effect as of the publication date (August 21, 2007).

A. Limits on Claims.

Previously, there was no limit on the number of claims in an application. Applicants included claims covering many different embodiments and aspects of an invention. The new rules limit the number of claims to five (5) independent claims and twenty-five (25) total claims in an application that contains patentably indistinct claims. If these limits are exceeded, the applicant must file an ESD before a First Office Action on the Merits (FOAM). A restriction requirement is not considered to be a FOAM (although a restriction requirement may be included with a FOAM).

The 5/25 claim rule is not limited to applications filed on or after November 1, 2007, but is also applicable to all pending applications which have not yet received a FOAM by that date.

As discussed below, the rules limiting continuation practice (together with the rules limiting the number of claims) allow the applicant a maximum of 15 independent claims and 75 total claims in an application family that contains patentably indistinct claims without triggering a requirement for the applicant to file an ESD.

B. Examination Support Document (ESD).

When the 5/25 claim limit is exceeded, the applicant must file an ESD. This requirement in effect places the burden on the applicant to practically examine their own application. The ESD must include:

- a pre-examination search statement, which must: encompass all the limitations of the claims; identify the date of search and the fields of search by U.S. class and subclass; identify search strings and databases (which must include U.S. patents and patent application publications, foreign patent documents, and non-patent literature);

- a listing of references deemed most closely related to the subject matter of each claim;

- identification of claim limitations disclosed by each reference;

- detailed explanation of the patentability of each independent claim, wherein the applicant must explain why the claim limitations render the claimed subject matter novel and non-obvious over the cited prior art, and why one of ordinary skill in the art would not have combined the references; and

- a showing of support in the specification for each limitation of the claims (if the application claims the benefit of one or more other applications, the showing also must identify the support for each claim in each such priority application).

In addition, supplemental ESD's may be required upon amendment of the claims or submission of new references in an Information Disclosure Statement (IDS).

In addition to the substantial expense of preparing an ESD, filing an ESD increases the risks for possible claims of inequitable conduct and other grounds which could render a patent unenforceable or invalid.

C. Suggested Requirement for Restriction (SRR).

If an application contains claims to more than one invention, the applicant may file a Suggested Requirement for Restriction (SRR). The SRR must be accompanied by an election of invention to no more than 5/25 claims, and must be filed before the earlier of a FOAM or a restriction requirement. If a SRR is rejected and an ESD has not been filed, the applicant will have a two-month non-extendable period to respond.

For applications pending on November 1, 2007 in which a FOAM was not mailed before that date, a two-month time period (extendable up to 6 months) will be granted to either file an ESD or to cancel claims to comply with the 5/25 claim requirement.

D. Limits on Number of Continuation Applications.

The new rules also limit the number of continuation applications which can be filed. An applicant may file two continuations or continuation-in-part (CIP) applications and one RCE in an application family. An application family includes the initial application and its continuation or CIP applications.

Any additional continuing applications or RCE's may be filed only with a petition and showing as to why an amendment, argument, or evidence could not have been submitted during prosecution of the prior-filed applications.

E. Rethinking Claim Drafting Strategies in View of the New Rules.

Applications which narrowly claim an invention most likely will be least affected under the new rules, while applications seeking broad coverage are likely to be affected the most. Although the rules do allow applicants to exceed the limits on claims and continuation applications under certain conditions, the burdensome requirements of filing an ESD and the possible ramifications for doing so are substantial.

In view of the restrictive and burdensome aspects of the new rules, it will be necessary to rethink many aspects of patent prosecution, including the strategies for drafting and amending claims. These strategies may vary with different types of technologies, as well as the current and future business goals of clients.

The new rules will likely result in a shift from lengthy, comprehensive applications which disclose a broad range of the various aspects of an invention to applications which are relatively shorter and narrower in scope.

IV. CLAIM CONSTRUCTION UNDER PROPOSED POST GRANT OPPOSITION

Although no final form of post grant opposition (or cancellation if you prefer) has yet been passed, every version of the patent reform bills of 2005, 2006 and 2007 have included a provision for third parties to challenge the validity of a patent under more grounds of invalidity and with greater participation and less procedural disadvantage than the current *inter partes* reexamination. The concept of this type of patent challenge, if not the particulars, has been favorably viewed by most of the interested organizations.

If (or more likely, when) the opposition proceedings become available, one consequence will be to force the parties and the PTO to engage in claim construction. The PTO supposedly examines patents using the broadest reasonable construction, but the reality is that the meaning of a claim term is only an issue when the examiner believes a term to be indefinite. If the examiner thinks that he understands the meaning of a term, he uses his construction.

The post grant opposition process will allow validity challenges based upon all conditions for patentability, including anticipation and obviousness over prior public uses and offers for sale. As an initial step to proving invalidity, the challenged claim must be construed, and the initial burden will be upon the challenger to propose the proper construction. While the patent owner may adopt the challenger's construction, the more likely result will be the patent owner proposing an alternative construction that avoids the prior art. While the district courts are not bound to follow the claim construction of the PTO, there will likely become an estoppel where the patent owner prevails on its proposed construction to get the patent allowed, and later tries to change the construction in infringement litigation.

V. WORKING WITH THE INVENTOR(S)

To fully understand the patentable invention, to determine what should be claimed, and to draft claims which are likely to provide value to the client/patent owner, you should work closely with the inventor(s) prior to and during preparation of the patent application. In addition to discussing the technical aspects of the invention and the prior art, it is important to obtain a good understanding of the "commercial aspects" of the invention, including the client's products and services, as well as any competitive advantages which may be achieved in the marketplace by the claimed invention.

The quality of an invention disclosure provided to you often varies with the sophistication of the client and the inventors. A well-written disclosure will discuss the problem(s) addressed by the invention, the inventor's solution to the problem(s), the benefits and advantages of the invention relative to the prior art, etc. If such information has not been provided, you should ask the inventor questions, such as:

- 1) What problem did they address/solve?
- 2) Why was that a problem?
- 3) How did they solve the problem?
- 4) What other potential solutions did they consider or investigate?
- 5) Why do they believe that their solution is the best?
- 6) What prior art are they aware of?
- 7) What benefits/advantages does the invention provide over the prior art?
- 8) Have they disclosed the “best mode” of the invention?

After obtaining an initial understanding of the invention, it may be useful to play the role of “devil’s advocate,” even to the point of questioning the patentability of the invention. This may include questioning whether the invention may be obvious. However, when convinced that the invention is patentable, you should become an advocate for the invention, working with the inventor to obtain the best coverage possible.

During discussions with the inventor and/or the client, additional questions may be:

- 1) How else can this be accomplished?
- 2) What other solutions are possible for the problem(s) addressed?
- 3) How might a competitor solve this problem(s)?
- 4) How might the client solve this problem(s) with their next generation of products/services?
- 5) How might competitors solve the problem(s) with their next generation of products/services?

After obtaining answers to your questions, and now being armed with a good understanding of the prior art and the invention, an initial set of draft claims should be prepared for use as a vehicle for further discussions with the inventor. In addition to asking the inventor to comment on the draft claims, you and the inventor should put yourselves in the position of a competitor or others who may attempt to “design around” the claimed invention. Ask the inventor how they would design a product or process to accomplish the same (or a similar) result which would not be covered by the draft claims. Working with the inventor in this way will help you close any loopholes for possibly avoiding infringement, and will tighten up the claims for submission to the PTO. Ideally, the inventor will have reviewed one or more revised versions of the draft claims and will have agreed with you on a final set of claims to be filed before you prepare the specification.

VI. ADDITIONAL CLAIMS DRAFTING TIPS

Even though very few patents will ever be litigated, when drafting claims, you should keep in mind that the real value of a patent flows from its strength in litigation. The best claims are those that, when evaluated as if they were to be litigated, will be valid and infringed (so that litigation is not necessary). Thus, to create value for your client, you should assume that a patent which will issue from the application which you are preparing will eventually be litigated. Of course, rather than litigating to collect money damages or obtain an injunction against an infringer, your client may

choose to use the patent to keep competitors out of the market and/or license the patent for royalties.

In addition to drafting one or more independent claims defining the invention as broadly as the prior art will allow, you should consider drafting additional claims which competitors may likely infringe. This should include dependent claims which will reduce, or hedge against, validity risks. In addition to providing narrower validity fall-backs, dependent claims broaden the independent claims by claim differentiation, thereby providing additional value.

You should also consider including a narrower independent claim for the product or service which your client actually sells or intends to sell (e.g., a “picture claim”).

After you have crafted a proposed set of draft claims, you should:

- Look hard for words which may be left out of the draft claims. A claim with too many words may be as narrow as, or narrower than, a claim with too narrow words.
- Determine whether each key term in the claims has an established meaning in the art and whether that meaning is appropriate in this application.
- Make sure that there is adequate support in the specification for all of the language in the claims.

Drafting the claims and the rest of the application should be an iterative process in which the claims are drafted first, then each and every feature of the claims is described in the specification and shown in the drawings. In addition, each of the alternative embodiments and all of the features of the dependent claims should be fully described in the specification. This iterative process focuses more and more on the invention, which in turn leads to the drafting of revised and new claims. As the claimed invention becomes even more crystallized, the specification should be revised accordingly up to the time of filing of the application.

VII. STRATEGIC USE OF MEANS-PLUS-FUNCTION (M-P-F) CLAIMS

Item L under Section I at pages 4-5 above briefly discussed the use of Means-Plus-Function (M-P-F claims). The strategic use of M-P-F claims is discussed further below.

35 U.S.C. § 112, ¶ 6 provides:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claims shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

Section 12, paragraph 6 provides the basis for “means-plus-function” claims (for apparatus or composition claims) and “step-plus-function” claims (for method or process claims). Such claims are limited to the structure, material, or acts in the specification and equivalents thereof. The disclosed structure is a “corresponding” structure only if the specification, the dependent claims, or the prosecution history clearly links (or associates) that structure to the function recited in the claim. Whether or not there is a proper linking is determined from the perspective of the person of ordinary skill in the art. If the written description does not set forth the structure intended to correspond to the claimed function, then the claim will fail as indefinite under § 112, ¶ 2 for failing to particularly point out and distinctly claim the invention.

Because only known structural equivalents are covered, you should state the structural alternatives broadly in the application. You also should explain the function and the range of ways for carrying out the function. It is helpful to use figures to show the basic configuration claimed, as well as more detailed embodiments.

A M-P-F clause may read upon a single structural element or a train of many elements cooperating with one another to perform the recited function. The particular means may be simple or complicated, and there is no objection to the terminology covering a number of cooperating parts. Furthermore, it is also proper for two different means clauses to include one or more overlapping or shared parts, as long as those shared parts form only a portion of the cooperating train of parts in each means clause and performs a defined function in each.

M-P-F claims may become more important in view of the 5/25 limit in the new PTO rules. In addition to the ability to capture multiple embodiments in a single claim, M-P-F claims can also help avoid a “dedication” problem for unclaimed subject matter.

The challenge is not only to craft the best claims possible given the current state of the prior art, the current technology, and the current law, but to select a strategy which will give the patent owner the best opportunity of having strong, enforceable patent rights in the future when the prior art, technology, and law have all evolved to points which could not have been predicted when the claims were crafted.

In view of the fact that there surely will be changes in the future in all three areas (prior art, technology, and law), the best strategy may involve the use of a mix of plain language apparatus claims, M-P-F apparatus claims, plain language method claims, step-plus-function method claims, and product claims, if applicable (*i.e.*, all types of claims relevant to the subject technology). The extent to which the different types of claims are used may vary considerably based on the type of invention sought to be protected, the specific disclosure, and the description in the disclosure of specific alternative structures. And, of course, you must now implement your strategy within the constraints of the new PTO rules, including the 5/25 claims limit and the 15/75 claims limit discussed above.