

## Patent Claims Definiteness: Navigating Differing Pre- and Post-Issuance Standards After Nautilus and Packard

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# Outline

- I. Understanding 35 U.S.C. §112(b) (“indefiniteness”)
- II. Packard per curiam
- III. Nautilus at the Supreme Court
- IV. Best practices for drafting and prosecuting claims in the USPTO
- V. Best practices for preparing strong patent claims that will hold up in litigation and before PTAB under any of the definiteness standards
  
- VI. Questions
  - How do the decisions distinguish the USPTO's standard and the court's standard for indefiniteness?
  - What are the implications of the Nautilus and Packard rulings for patent counsel in drafting applications? And in challenging claims?
  - What is the proper §112 analysis in PTAB patent challenges?

# Understanding 35 U.S.C. §112(b) (“indefiniteness”)

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

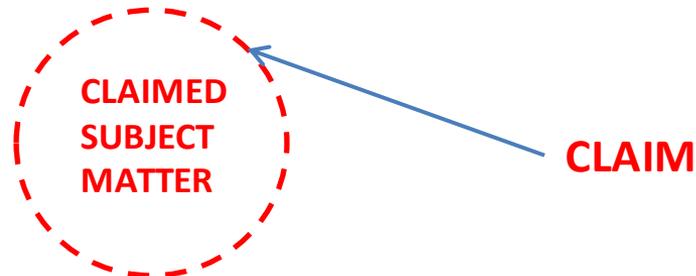
(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

Definiteness of claim scope: one skilled in the art must be able to determine with a reasonable degree of certainty the meets and bounds of the claim.

Subject matter claimed must be what the inventor(s) believe(s) is the invention

# Satisfying §112(b) Definiteness Requirement

- Distinguish between §112 (a) and (b):
  - USPTO rejections can confuse first and second paragraphs of §112
    - **Breadth ≠ indefiniteness** → broad claim with clear scope satisfies para. (b)
      - *In re Miller*, 441 F.2d 690 (CCPA 1971); MPEP § 2173.04
    - Often see rejections as “**vague and indefinite**” based on requirement for “**particularly pointing out and distinctly claiming.**”
- Definiteness → clear claim scope, boundaries of claimed subject matter



# Assessing Compliance - §112(b) Definiteness Requirement

- from *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U. S. \_\_\_\_\_ (\*8-9) (2014):
  - “definiteness is to be evaluated from the perspective of someone skilled in the relevant art. See, e.g., *General Elec. Co. v. Wabash Appliance Corp.*, 304 U. S. 364, 371 (1938).”
  - “in assessing definiteness, claims are to be read in light of the patent’s specification and prosecution history. See, e.g., *United States v. Adams*, 383 U. S. 39, 48–49 (1966) (specification); *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U. S. 722, 741 (2002)
  - “[d]efiniteness is measured from the viewpoint of a person skilled in [the] art at the time the patent was filed.’ ...See generally E. Manzo, *Patent Claim Construction in the Federal Circuit* §0.2, p. 9 (2014)[.]”

# Satisfying §112(b) Definiteness Requirement: Can Depend on Nature of Subject Matter

- Definiteness requirement does not require greater precision than the subject matter permits.
  - *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U. S. \_\_\_\_ (\*11) (2014): “The standard we adopt accords with opinions of this Court stating that ‘the certainty which the law requires in patents is not greater than is reasonable, having regard to their subject-matter.’ [citations omitted]”
  - See also, *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1385 (Fed. Cir. 1986)(“**the claims, read in light of the specification, reasonably apprise those skilled in the art and are as precise as the subject matter permits. As a matter of law, no court can demand more.**”).
- If precision is challenged during prosecution, consider **Rule 132 declaration** of expert explaining the degree of precision available (or lack thereof) in the relevant art at the relevant time.
- **Interview** – ask what Examiner wants.

# Second Part of §112(b)

- **“distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.”**
- Subjective inquiry based on opinion of inventor(s).
- Rejection requires evidence that the inventor(s) considers invention different from what is defined by the claims.

# MPEP § 2173.05(e)

- “A claim is indefinite when it contains words or phrases whose meaning is **unclear**.”
- “If the scope of a claim would be **reasonably ascertainable** by those skilled in the art, then the claim is not indefinite.”

# MPEP § 2173.02

- “Patented claims enjoy a presumption of validity and are not given the broadest reasonable interpretation during court proceedings involving infringement and validity, and can be interpreted based on a fully developed prosecution record. Accordingly, when possible, courts construe patented claims in favor of finding a valid interpretation. A court will not find a patented claim indefinite unless it is ‘insolubly ambiguous.’”
- “In contrast, no presumption of validity attaches before the issuance of a patent. ... In deciding whether a pending claim particularly points out and distinctly claims the subject matter, a lower threshold of ambiguity is applied during prosecution. ... applicant has the ability to provide explanation and/or amend the claims to ensure that the meaning of the language is clear and definite prior to issuance.”

# Standard for Pre-Issuance Claims

- *In re Packard*, --F.3d \_\_ (Fed. Cir. May 6, 2014)(per curiam) (decided before *Nautilus*)
  - Representative claim: “28. I claim a small, thin, flat plane, rectangular change holding card and wallet/billfold or purse construction with the front top side of the card comprising three raised, straight, parallel, double flanged separators and two raised, straight, parallel, double flanged side edges and a raised side edge end thereby forming four parallel, side by side, flanged coin holding channels or rows of the same length and of different widths,...”
  - Board upheld examiner rejection for indefiniteness on grounds that claims “contain[ ] words or phrases whose meaning is unclear.”
    - Applied review standard of MPEP § 2173.05(e): “[a] claim is indefinite when it contains words or phrases whose meaning is unclear.”

# Standard for Pre-Issuance Claims

- *Packard* (con't)
  - Packard argued that Board should have applied “insolubly ambiguous” standard to his claims.
    - “not indefinite if a court can give any meaning to the disputed term in the context of the claim”
    - “insolubly ambiguous” applies to both pre- and post-issuance claims.

# Standard for Pre-Issuance Claims

- *Packard* (con't)
  - Federal Circuit:
    - Affirmed rejection.
      - “indefiniteness under the MPEP standard properly applied by the USPTO”
    - notes de novo review as question of law (claim construction)
    - resolved without addressing the broad issues raised by *Packard*, including standard for post-issuance indefiniteness
    - “when the USPTO has initially issued a well-grounded rejection that identifies ways in which language in a claim is ambiguous, vague, incoherent, opaque, or otherwise unclear in describing and defining the claimed invention, and thereafter the applicant fails to provide a satisfactory response, the USPTO can properly reject the claim as failing to meet the statutory requirements of § 112(b).”

# Standard for Pre-Issuance Claims

- *Packard* (con't)
  - Federal Circuit:
    - “indefiniteness rejections by the USPTO arise in a different posture from that of indefiniteness challenges to an issued patent.”
      - examiner’s initial rejection
      - applicant has chance to respond to that prima facie case
      - if inadequate, examiner confirm rejection on the substantive basis of having failed to meet the requirements of § 112(b).
    - “statutory language of ‘particular[ity]’ and ‘distinct[ness]’ indicates, claims are required to be cast in clear—as opposed to ambiguous, vague, indefinite— terms. It is the claims that notify the public of what is within the protections of the patent, and what is not.”
    - “At the same time, this requirement is not a demand for unreasonable precision. ...Rather, how much clarity is required necessarily invokes some standard of reasonable precision in the use of language in the context of the circumstances.”

# Standard for Pre-Issuance Claims

- *Packard* (con't)
  - Federal Circuit:
    - “reasonable implementation of the examination responsibility, as applied to § 112(b), for the USPTO, upon providing the applicant a well-grounded identification of clarity problems, to demand persuasive responses on pain of rejection. That approach decides this case, because Mr. Packard did not offer a satisfactory response to well-grounded indefiniteness rejections in this case.”
    - “[Packard] did not focus on the claim language difficulties, nor did he propose clarifying changes or show why, on close scrutiny, the existing claim language really was as reasonably precise as the circumstances permitted.”
    - “crucial distinction between what Mr. Packard argued and what is required to address an indefiniteness problem: Mr. Packard’s ‘arguments focus on what is contained in the disclosure, whereas the indefiniteness to which [§ 112(b)] is applied is in the language of the claims.’”

# Standard for Pre-Issuance Claims

- *Packard* (con't)
  - Federal Circuit:
    - PTO can apply a different standard for indefiniteness than would be applied by the courts.
    - Did not need to wait for the Nautilus Supreme Court decision because that relates to definiteness of an issued patent claim.

# Standard for Pre-Issuance Claims

- *Packard* (con't)
  - Plager, concurring
    - long-standing policy: “overriding policy considerations that claims must unambiguously define any invention over the prior art, and provide notice to the public.”
    - This examination was made necessary by Mr. Packard’s insistence that this court has a singular standard for such cases, that this standard differs materially from the standard applied by the Board to his case, and that our standard is the one that must be used by the Board. However, ...there currently is not one singular standard used by this court but rather a complex of standards, though a complex whose range nevertheless can be described. **The question then remains, is the Board’s standard substantively different from the standard(s) ostensibly applied by this court and, if so, is it nevertheless permissible.”**

# Standard for Pre-Issuance Claims

- *Packard* (con't)
  - Plager, concurring
    - “Board position [is] that it applies the traditional test to claims proposed by a patent applicant, namely, whether what is claimed is reasonably understood by one of ordinary skill in the art. However, in applying this test the Board does so in a manner—the ‘lower threshold’—that is uniquely applicable to the pre-issuance situation.”
    - “no legal obstacles to the USPTO’s proposed interpretation, and there are compelling reasons why, as a policy matter, this court should not preclude or otherwise interfere with the USPTO carrying out its full responsibilities under the Patent Act. Further, there is no reason why those trained and employed in the art of patent and patent claim drafting cannot comply with the USPTO requirements, recognizing that the nature of the invention and the particular art involved will affect the degree to which precision in language is possible.”

# “In Spaced Relationship”

- *Biosig Instruments, Inc. v. Nautilus, Inc.*, No. 10-cv-7722 (S.D.N.Y. Feb. 22, 2012)
  - Claim term: a live electrode and a common electrode “mounted . . . *in spaced relationship* with each other.”
  - District Court construed to mean “there is a defined relationship between the live electrode and the common electrode on one side of the cylindrical bar and the same or a different defined relationship between the live electrode and the common electrode on the other side of the cylindrical bar;”
  - Nautilus moved for summary judgment of invalidity for indefiniteness,
  - District Court granted; words “did not tell [the court] or anyone what precisely the space should be,” or even supply “any parameters” for determining the appropriate spacing.

# Perspective Of One Of Ordinary Skill In The Art Saves From Being “Insolubly Ambiguous”

- *Biosig* (con’t)
  - FC: **Reversed and remanded.**
    - “A claim is indefinite only when it is ‘not amenable to construction’ or ‘insolubly ambiguous.’” citing *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005)
    - Claim term in this case definite - “discloses certain inherent parameters of the claimed apparatus, which to a skilled artisan may be sufficient to understand the metes and bounds of ‘spaced relationship.’”
      - “spaced relationship” could be calculated knowing the intended functionality of the claim.

# Questions for Supreme Court

- *Nautilus, Inc. v. Biosig Instruments, Inc.*, cert. granted, 134 S.Ct. 896 (U.S., Jan. 10, 2014)
  - Questions:
    - Does the Federal Circuit's acceptance of ambiguous patent claims with multiple reasonable interpretations—so long as the ambiguity is not “insoluble” by a court—defeat the statutory requirement of particular and distinct patent claiming?
    - Does the presumption of validity dilute the requirement of particular and distinct patent claiming?

# Supreme Court Decision Unanimous

- *Nautilus, Inc. v. Biosig Instruments, Inc.*, -- U.S. \_\_\_\_ (U.S. June 2, 2014)
  - **Vacate and remand.**
    - 35 U. S. C. §112, ¶2: a patent specification “conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as [the] invention.”
    - Federal Circuit standard: §112, ¶2 met if claim is “amenable to construction,” and the claim, as construed, is not “insolubly ambiguous.”
    - this “does not satisfy the statute’s definiteness requirement.”
    - **USSC standard: “a patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.”**

# “Delicate Balance”

“On the one hand, the definiteness requirement must take into account the inherent limitations of language. ...Some modicum of uncertainty, the Court has recognized, is the “price of ensuring the appropriate incentives for innovation.””

“At the same time, a patent must be precise enough to afford clear notice of what is claimed, thereby ‘appris[ing] the public of what is still open to them.’”

# USSC Standard

- “To determine the proper office of the definiteness command, therefore, we must reconcile concerns that tug in opposite directions. Cognizant of the competing concerns, **we read §112, ¶2 to require that a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.** The definiteness requirement, so understood, mandates clarity, while recognizing that absolute precision is unattainable. The standard we adopt accords with opinions of this Court stating that ‘the certainty which the law requires in patents is not greater than is reasonable, having regard to their subject-matter.’”

# “Insolubly Ambiguous” “Breed[s]...Confusion”

- Federal Circuit’s standard: “amenable to construction” or “insolubly ambiguous”
- USSC: “such terminology can leave courts and the patent bar at sea without a reliable compass” and “breed lower court confusion, for they lack the precision §112, ¶2 demands. It cannot be sufficient that a court can ascribe some meaning to a patent’s claims; the definiteness inquiry trains on the understanding of a skilled artisan at the time of the patent application, not that of a court viewing matters post hoc. To tolerate imprecision just short of that rendering a claim ‘insolubly ambiguous’ would diminish the definiteness requirement’s public-notice function and foster the innovation-discouraging ‘zone of uncertainty,’ ...against which this Court has warned.”

*Do Packard and Nautilus* Mean More  
Indefiniteness Challenges?

# Sample Claims

- Ortho-McNeil Pharms. Inc. v. Mylan Labs., Inc., 520 F.3d 1358 (Fed. Cir. 2008)
  - Ortho’s patent claims topiramate (TOPOMAX®) as a compound with “and” linking a number of components.
    - **R2, R3, R4 and R5 are independently hydrogen or lower alkyl** **and** **R2 and R3 and/or R4 and R5 together may be a group of the following formula** ...wherein R6 and R7 are the same or different **and** are hydrogen, lower alkyl or are alkyl **and** are joined to form a ... ring.
  - **Blue** and **green** have to be met to infringe?
  - Mylan’s compound met the **green** component, but did not meet the **blue** component.
  - DC: permanent injunction against Mylan and reset effective approval date for Mylan's ANDA.
  - FC: Affirmed - claim 1 covers Mylan’s compound
    - “the claim language depicts two subsets of compounds, but does not require their simultaneous existence.”
    - “as used in this claim, **and** conjoins mutually exclusive possibilities.”

# Sample Claims

- Halliburton Energy Services, Inc. v. M-I LLC, 514 F.3d 1244 (Fed. Cir. 2008)
  - Claim: “A method for conducting a drilling operation in a subterranean formation using a fragile gel drilling fluid[.]”
  - Specification defined “fragile gel” as:
    - a “gel” that is easily disrupted or thinned, and that liquifies or becomes less gel-like and more liquid-like[.]”
  - FC: Halliburton’s claim term “fragile gel” was indefinite - insufficiently defined functionally.
    - “We note that the **patent drafter is in the best position to resolve the ambiguity in the patent claims**, and it is highly desirable that patent examiners demand that applicants do so in appropriate circumstances so that the patent can be amended during prosecution rather than attempting to resolve the ambiguity in litigation.”
    - “The claim term might also be sufficiently definite if the specification provided a formula for calculating a property along with examples that meet the claim limitation and examples that do not.”
    - “Proof of indefiniteness ...is met where an accused infringer shows by clear and convincing evidence that a skilled artisan **could not discern the boundaries of the claim** based on the claim language, the specification, and the prosecution history, as well as her knowledge of the relevant art area.”

# Sample Claims

- Star Scientific Inc. v. R.J. Reynolds Tobacco Co., 655 F.3d 1264 (Fed. Cir. 2011), reh'g denied (2011)
  - Claim: 4. A process of substantially preventing the formation of at least one nitrosamine ..., the process comprising: drying...in a controlled environment and for a time sufficient to substantially prevent the formation of said at least one nitrosamine;...; and wherein said controlled environment is provided by controlling at least one of humidity, temperature, and airflow.
  - FC: Claim not indefinite.
    - “record repeatedly shows that a person of skill in the art of tobacco curing would possess adequate understanding to manipulate these variables to create a controlled environment” even though numerical values for variables not recited.
    - “the term ‘controlled environment’ falls well within the bounds of ordinary skill in the art. Thus, this term is not insolubly ambiguous and is not indefinite.”

# Sample Claims

- Amgen, Inc. v. Hoechst Marion Roussel, Inc., 314 F.3d 1313 (Fed. Cir. 2003)
  - Claim: glycoprotein having “glycosylation which differs from that of human urinary erythropoietin.”
  - Specification taught three measurement methods, but failed to limit "glycosylation which differs" to particular method.
  - DC: patent failed to identify a single standard by which the “difference” could be measured, so no infringement and patent invalid for failure to satisfy §112.
  - FC: Affirmed because claims indefinite. “One cannot logically determine whether an accused product comes within the bounds of a claim of unascertainable scope.”

# Sample Claims

- Union Pacific Resources Co. v. Chesapeake Energy Corp., 236 F.3d 684 (Fed. Cir. 2001)
  - Patentee's failure to define claim terms “comparing” and “rescaling” resulted in the claims being held invalid.
- Allen Engineering Corp. v. Bartell Indus., 299 F.3d 1336 (Fed. Cir. 2002)
  - FC: claim ending in the middle of a limitation (“coupled to said gearbox means by rigid...”) is indefinite because it is impossible to discern the scope of such a truncated limitation.

# Sample Claims

- Lighting Ballast Control L.L.C. v. Philips Electronics North America Corp., 2013 WL 11874 (Fed. Cir. Jan. 2, 2013), vacated and then reinstated, 744 F.3d 1272 (Fed.Cir. 2014)
  - District court: “voltage source means” did not implicate means-plus-function analysis under 35 U.S.C. §112, para. 6.
  - Federal Circuit: Reversed.
    - Means-plus-function claim.
    - Treating the term as functional, the court concluded that the specification lacked corresponding structure and thus, the asserted claims were invalid for indefiniteness.

# Sample Claims

- W.L. Gore & Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1555 (Fed. Cir. 1983)
  - “stretch rate”
  - *no formula in specification* for calculating stretch rate
  - was uncontradicted evidence in the record that, *at the time the application was filed, “stretch rate” meant to those skilled in the art* the percent of stretch divided by the time of stretching, and that the latter was measurable, for example, with a stopwatch.
  - the *post-filing date development* of varying formulae, including inventor’s later addition of a formula in his corresponding Japanese patent, is *irrelevant*.
  - FC: Not indefinite
    - Claim language in prior art can evidence definiteness if one skilled in art could understand terms in context of invention.

# Sample Claims

- Enzo Biochem, Inc. v. Applera Corp., 599 F.3d 1325 (Fed. Cir. 2010)
  - Linkage group “not interfering substantially”
  - DC: SJ of invalidity based on indefiniteness
  - FC: Reversed – not indefinite
  - Req. rehearing denied; Judge Plager, dissenting:
    - “Despite the varying formulations that this court has used over the years in describing its ‘indefiniteness’ jurisprudence ..., the general conclusion from our law seems to be this: if a person of ordinary skill in the art can come up with a **plausible meaning** for a disputed claim term in a patent, that term, and therefore the claim, is not indefinite.” (emphasis added)

# Sample Claims

- Hybritech, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367 (Fed. Cir. 1986)
  - Claim limitation: “affinity for the antigenic substance of at least about  $10^8$  liters/mole”
  - DC: claims are indefinite because antibody affinity cannot be estimated with any consistency; was no standard set of experimental conditions used to estimate affinities.
  - FC: claims are NOT indefinite
    - **“the claims, read in light of the specification, reasonably apprise those skilled in the art and are as precise as the subject matter permits. As a matter of law, no court can demand more.”**

# Federal Circuit Application of “Insolubly Ambiguous”

- Honeywell Int’l, Inc. v. ITC, 341 F.3d 1332 (Fed. Cir. 2003) (poor Honeywell; this is the second one)
  - Claims recited a particular “melting point elevation”
  - Art disclosed that “melting point elevation” results differed depending on which of four methods was used for preparing the sample that was measured
  - Patent did NOT disclose which method to use for preparing the sample that would be measured.
  - FC: claims invalid as indefinite where
    - 1) a claimed property value must be determined and,
    - 2) in determining that value, several possible sample preparation methods can be used;
    - 3) the determined value changes depending on the method used; and
    - 4) the patent does not provide any direction regarding the method to be used.
  - Claims were “insolubly ambiguous”

# Federal Circuit Application of “Insolubly Ambiguous”

- Marley Mouldings Ltd. v. Mikron Industries, Inc., 417 F.3d 1356 (Fed. Cir. 2005)
  - Claimed method for forming plastic products recited the components in parts per volume.
  - DC: Claims indefinite because “infringement depended on the bulk density used to calculate the [claimed] volumetric percentage of wood flour in the [accused infringer’s] method, and because the '927 patent did not state whether the average bulk density or what density range value was to be used, the claims are fatally indefinite.”
  - FC: Reversed SJ of invalidity and remanded à DC erred in law by requiring that the specification describe the relationship between volume and weight
    - A person skilled in the art reading the specification would understand the relationship between volume and weight à would understand how to measure part by volume and how to convert weight into volume from bulk density data.
    - Distinguished Honeywell: in that case, a person skilled in the art would have understood that the melting point determinations varied significantly with the methods used, rendering the claim insolubly ambiguous.
    - “**§112 P 2 is satisfied when the relevant values can be ‘calculated or measured.’**” quoting W.L. Gore (Fed. Cir. 1983) (emphasis added).

# Multiple Ways To Measure May Be Indefinite

- Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc., 723 F.3d 1363 (Fed. Cir. 2013)
  - Group I claims: Copolymer–1 having a **molecular weight** of about 5 to 9 kilodaltons, made by a process comprising the steps of:
    - reacting protected copolymer–1 ...; and purifying said copolymer–1, to result in copolymer1 having a molecular weight of about 5 to 9 kilodaltons.
  - Group II claims: Copolymer–1 having over 75% of its mole fraction within the **molecular weight range** from about 2 kDa to about 20 kDa....”
  - “molecular weight” insolubly ambiguous because it could refer to M<sub>p</sub>, M<sub>n</sub>, M<sub>w</sub>, or yet another average molecular weight measure?
  - DC: construed “molecular weight” as M<sub>p</sub> and held that the Group I and Group II claims are not indefinite.
  - FC: Affirm Group II claims not invalid; reverse for Group I claims - invalid for indefiniteness.
    - **Group I claims** do not indicate which average molecular weight measure is intended. Two prosecution statements directly contradict each other (one says M<sub>p</sub>, one says M<sub>w</sub>) and render the **ambiguity insoluble**.
    - **Group II claims** recite the percentage of copolymer–1 molecules in a sample falling between precise points on the “Molecular Weight” axis - scope of Group II claims is thus **readily ascertainable**.

# Sample Claims

- A game comprising a hoop and bouncy object chosen from a ball and red ball...
- ...a bouncy object chosen from a ball and/or a red ball...
- A cosmetic lotion comprising an oil and a viscosity modifier sufficient to provide said lotion with a viscosity ranging from 1 to 15,000 Pa.s...
- A polymer having a glass transition temperature  $T_g$  ranging from 100 to 125 C....

# Sample Claims

- Biagro Western Sales, Inc. v. Grow More, Inc., 423 F.3d 1296 (Fed. Cir. 2005)
  - Claim: A concentrated phosphorus fertilizer comprising a buffered composition comprising at least one phosphorous-containing acid or salt thereof ... and wherein any of said phosphorous-containing acid or salt thereof is present in an amount of about 30 to about 40 weight percent.
  - Accused product A is 15% weight percent acid and 25% weight percent salt? “any” – does not infringe; “and/or” – does infringe
  - Accused product B is 60% weight percent acid and 30% weight percent salt? “any” – infringes
  - DC: limitation referred to the amount of phosphorous-containing acid or salt actually present in the final fertilizer product
    - fertilizer containing two or more phosphorous-containing salts comes within the literal scope of the claim only if the aggregate amount of such salts is between about 30 and about 40 weight
  - FC: Affirmed
    - written description indicates that total amount of such acids or salts is important
    - DC correctly construed the claim to require an aggregate amount of such acids or salts to be between about 30 and about 40 weight %
    - -> Affirm SJ of noninfringement
      - 40.3% potassium phosphite present in accused product
      - correct claim construction requires aggregate amount of phosphites to be within the claimed range
      - accused product contains 2 phosphites, resulting in an aggregate phosphite content of at least 59.3%

# Sample Claims

- Chef America, Inc. v. Lamb-Weston, Inc., 358 F.3d 1371 (Fed. Cir. 2004)
  - Claim process for baking dough by “heating the . . . dough to a temperature in the range of about 400 degrees F. to 850 degrees F.”
  - If dough were heated to the temperature specified in the claim, “it would be burned to a crisp.”
  - Expert declaration that one skilled in the art reading the claim would believe temperature range referred to temperature of oven, not dough.
  - Patent gives two examples, each stating that the dough product is placed in a multi-layered convection oven and baked “at temperatures” or “at a temperature” of 680° F to 850° F.
  - DC: Construed claim to mean temperature of dough -> no infringement.
  - FC: Affirmed. “courts may not redraft claims.”
    - Could have chosen “at a temperature”, but didn’t.

# Sample Claims

- Claim 1: A free base and/or a pharmaceutically acceptable salt thereof...
- Claim 2: The free base of claim 1, wherein the free base is Ukrainium.
- Claim 3: The free base and/or a pharmaceutically acceptable salt thereof of claim 1, wherein the free base is Somalium or a pharmaceutically acceptable salt thereof...

# Sample Claims: Mechanical

- Claim: A method of operating a spark ignition internal combustion engine, said engine including a combustion chamber and having an operating cycle including a compressed air intake process, and a heat input phase comprising a **substantially constant volume** combustion process followed by a **substantially isothermal** combustion process.

# Sample Claims: Mechanical

- Claim: A method of operating a spark ignition internal combustion engine, said engine including a combustion chamber and having an operating cycle including a heat input phase comprising a **substantially** constant volume combustion process, followed by a **substantially** constant pressure combustion process, followed by a **substantially** isothermal combustion process, said heat input phase of said cycle followed by a **substantially** isentropic power delivery process.

# Sample Claims: Mechanical

- Claim: A heavy-duty demolition shear with a replaceable shearing tip, the apparatus having a lower jaw and an upper jaw pivotally connected to the lower jaw, the upper jaw having a primary shearing blade and a secondary shearing blade, comprising:
  - (a) a tip mounting portion on the upper jaw; and
  - (b) a replaceable shearing tip mountable to the tip mounting portion, wherein the replaceable shearing tip further comprises two sections encompassing the tip mounting portion there-between;
  - (c) wherein the two sections of the replaceable shearing tip are **L-shaped**, and wherein one of the at least three seats engages the short arm of the L, and wherein the seat engaging the short arm of the L is radiused.

# Sample Claims: Mechanical

- Claim: A container, which comprises: a cap including a first end and a second end, said cap being widest at said first end, and said cap further including a cap outer surface comprising a cap pattern that **simulates an ice cream cone pattern**; an applicator coupled to the cap; and a bottle for selectively receiving the applicator, said bottle being configured to **simulate a scoop of ice cream**, said cap and applicator being removable from said bottle and in a closed position said bottle is adjacent said first end of said cap.

# Sample Claims: Mechanical

- Claim: A container, comprising: a plurality of container sections, at least two of said container sections each including a reservoir; a first face paint disposed in the reservoir of a first one of said container sections, said first face paint having a color; a second face paint disposed in the reservoir of a second one of said container sections, said second face paint having a color different than the color of said first face paint; wherein said container sections are connectable together to form a container having the shape of a **sports game piece**.
- This requires a good definition for sports game piece, at least by way of example, e.g. basketball, baseball, hockey puck, soccer ball, football, rugby ball, tennis ball, Frisbee(?), etc.

# Sample Claims: Mechanical

- Claim: (Variation 1) A system for retaining engagement of first and second elements within a coupler, the system comprising: a coupler having a sidewall and an aperture formed therethrough; a safety pin insertable into an aperture formed through a sidewall of the coupler, the safety pin comprising a head, a shaft depending from the head along a longitudinal axis, a distal end of the shaft opposite the head, and an element that extends radially outwardly from a portion of the shaft, the shaft, the distal end of the shaft and the element disposed in the aperture of the coupler; and a **removable** plate **fixed** to the sidewall of the coupler occluding a portion of the aperture corresponding substantially in size and shape with the element of the safety pin to prevent passage of the distal end of the safety pin through the aperture, wherein when the **removable** plate is **fixed** to the sidewall of the coupler the portion of the aperture not occluded by the removable plate is sized to allow passage of the shaft through the aperture.
- What is removable yet fixed?
- If disclosure is of a threaded connection, does this cover a tack weld?

# Sample Claims: Mechanical

- Claim: (Variation 2 )A system for retaining engagement of first and second elements within a coupler, the system comprising: a coupler having a sidewall and an aperture formed therethrough, the aperture having an aperture axis; a safety pin comprising a head, a shaft depending from the head along a longitudinal axis, a distal end of the shaft opposite the head, and an element that extends radially outwardly from a portion of the shaft, the shaft, the distal end of the shaft and the element disposed in the aperture of the coupler with the longitudinal axis substantially aligned with the aperture axis; and a removable plate **selectively fixed** to the sidewall of the coupler occluding a portion of the aperture corresponding substantially in size and shape with the element of the safety pin to prevent passage of the distal end of the safety pin through the aperture, wherein when the removable plate is fixed to the sidewall of the coupler the portion of the aperture not occluded by the removable plate is sized to allow passage of the shaft through the aperture when the safety pin is moved in a direction corresponding to the aperture axis and the longitudinal axis, and wherein the shaft, the distal end and the element are removable through the aperture when the plate is removed.
- Similar language except now “selectively “ fixed – no definition of selectively

# Sample Claims: Mechanical

- Claim: (Variation 3) A system for retaining engagement of first and second elements within a coupler, the system comprising: a coupler having a sidewall and a circular aperture formed therethrough; a safety pin inserted into the circular aperture, the safety pin comprising a head, a shaft depending from the head along a longitudinal axis, and a distal end of the shaft opposite the head, the shaft having a flat formed thereon comprising a plane substantially parallel to the longitudinal axis and the distal end being substantially cylindrical, the shaft and the distal end being sized for insertion into the circular aperture of the coupler; and a plate **removably fixed** to the sidewall of the coupler occluding a portion of the aperture, the portion of the aperture not occluded by the plate corresponding substantially in size and shape with a cross-section of the shaft of the safety pin, the safety pin being translatable along the longitudinal axis within the aperture with the plate preventing passage of the distal end of the safety pin through the aperture.
- Now we have the phrase “removably fixed” so how is that different that a plate that is removable and fixed?
- Can different phrasing result in indefiniteness?

# Sample Claims: Electrical/Computer

- Claim language: “easily accessible”
  - Specification: “Data that is easily accessible can be accessed by a user in three or fewer clicks”
  - Fed. Cir.: Not insolubly ambiguous.
  - USPTO: Not unclear, as defined in specification.

# Sample Claims: Electrical/Computer

- Claim language: “substantial interference with communication signal”
  - Fed. Cir.: Not insolubly ambiguous.
  - USPTO: Unclear. Indefinite.

# Sample Claims: Electrical/Computer

- Claim language: “determining optimal Wi-Fi network”
  - Specification: “Whether a network is optimal depends on a number of factors, including the protocol, signal strength, access point line-of-sight, channel, and current user count.”
  - Indefinite under both Fed. Cir. and USPTO standards, as the specification does not provide guidance for weighing different factors to determine the “optimal” network.

# Relative Terms

- **ArcelorMittal France v. AK Steel Corp., 700 F.3d 1314 (Fed. Cir. 2012)**
  - “the steel sheet has a very high mechanical resistance after thermal treatment.”
  - no industry definition of “very high” mechanical resistance;
  - DC “relied on the statements in the specification that ‘high’ and ‘substantial’ mechanical resistance ‘may exceed 1500 MPa.’”
  - FC: Affirmed.
    - Specification supports district court's construction.
    - ArcelorMittal argued invention could include a resistance as low as 1000 MPa
      - specification language: “makes it possible to obtain a mechanical resistance in excess of 1000 MPa.”
    - But specification does not refer to 1000 MPa as “high” or “very high.”

# Relative Terms

- *Aventis Pharmaceuticals Inc. v. Amino Chemicals Ltd.*, 715 F.3d 1363 (Fed. Cir. 2013)
  - Claim: A process of preparing a piperidine derivative compound of the formula: ...said process comprising: providing a **substantially pure** regioisomer of the following formula... converting the **substantially pure** regioisomer to the piperidine derivative compound with a piperidine compound of the formula:.. ..
  - No definition of “substantially pure” in the specification.
  - No numeric value attached to purity of CPK intermediate.
  - DC: “substantially pure” applied to piperidine derivation end products and the CPK intermediate.
    - “substantially pure” =98% purity based on prosecution history.
    - Purity applies to whole compound not just regioisomeric purity.

# Relative Terms

- *Aventis* (con't)
  - FC: Reverse and remand.
    - District court claim construction “conflates” the purity required for the piperidine end product with that of the CPK intermediate.
    - Same claim term can have different constructions.
    - “substantially pure” regioisomer used only in reference to CPK intermediate.
    - ordinary meaning of “substantially” does not include a specific numerical boundary.

# Ensuring Compliance - §112(b) Definiteness Requirement

- Avoid issue by including **definitions** in specification!
  - Put yourself in shoes of a judge who is ignorant of the relevant technology and of patent law.
- **Words of degree** can be risky and require special attention.
  - Substantially
  - Essentially
  - Faster
  - Stronger
  - More stable

# Patent Profanity: Claims Too Definite?

- “Very important”
  - Inpro II Licensing, S.A.R.L. v. T-Mobile USA, Inc., 450 F.3d 1350 (Fed. Cir. 2006)
- “Critical,” “Special,” “Peculiar,” “Superior”
  - Bayer AG v. Elan Pharmaceuticals Research Corp., 212 F.3d 1241 (Fed. Cir. 2000)
- “Critical,” “Essential,” “Key”
  - Pharmacia & Upjohn Co. v. Mylan Pharmaceuticals, Inc., 170 F.3d 1373 (Fed. Cir. 1999)
- “Necessary”
  - Atofina v. Great Lakes Chemical Corp., 441 F.3d 991 (Fed. Cir. 2006)
    - “it is necessary to have a catalyst containing solely chromium.”
    - Shows how patentability argument can cause problems later.

# Tips To Avoid Patent Profanity

- **Minimize the use of words of characterization**
  - Chief, Majority
  - Critical, Essential, Necessary
  - Solely, Only, Is
  - Main
  - Significant
  - Vital
  - Fundamental
  - Important
  - Principal

# Words That Make Other Words Profanity

- Surprising
- Unexpected (?)
- All (?)
- Only (?)
- Each (?)
- “The invention is...” or “This invention...”

# “INVENTION IS...”

- C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858 (Fed. Cir. 2004)
  - Claimed plug for hernias, but no claim language about plug surface.
  - Specification “consistently described as having pleats”
  - Summary of Invention, Abstract
- FC: Construed claims to require pleats, and affirmed no infringement by plugs without pleats.
  - “because the patent globally defined the plug as having a pleated surface, the term “pleated” need not be repeated each time a term describing some other aspect of the plug is used.”
  - Statements of general applicability clearly define the claimed plug as “having” or “includ[ing] a pleated surface.”

# What About “Preferable”?

- Claim includes embodiments beyond “preferable”
  - Lampi Corp. v American Power Products, Inc., 228 F.3d 1365 (Fed. Cir. 2000)
- Only “preferred” embodiments within scope of claim
  - Wang Laboratories, Inc. v. American Online, Inc., 197 F.3d 1377 (Fed. Cir. 1999)
  - Scimed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc., 242 F.3d 1337 (Fed. Cir. 2001)
  - Oak Technology, Inc. v. ITC, 248 F.3d 1316 (Fed. Cir. 2001)

# Connection to Claim Construction Debate

- Broadest Reasonable Interpretation (BRI) in PTAB (IPRs, PGRs, CBMs) and USPTO (examination and reexamination)
- *Philips* in courts
- Do definiteness and claim construction apply different rules in the USPTO than in the courts (*Nautilus/Packard*).

# BRI in PTAB : amending/adding claims to be more precise?

- In IPR/PGR, BRI (in light of the specification) applies to issued claims
  - frequently means that more potentially invalidating prior art may be used.
  - historically considered appropriate standard because patent owner has an ability to amend claims.
  - *But query how real is ability to amend in IPR?*
    - only one motion to amend granted so far, *International Flavors & Fragrances Inc. v. The United States Of America, As Represented By The Secretary Of Agriculture*, IPR2013-00124, Paper 12 (PTAB May 20, 2014)

# BRI in PTAB?

- In PGR/CBM, does PTAB never have to defer to the examiner's determination on indefiniteness?
- Is PTAB always going to be applying a completely different (post-issuance) standard than the examiners?

# Federal Circuit Will Not Change *Cybor* Rule

- *Lighting Ballast Control L.L.C. v. Philips Electronics North America Corp.*, 744 F.3d 1272 (Fed. Cir. 2014)(en banc)
  - Questions briefed on rehearing:
    - a. Should this court overrule *Cybor Corp. v. FAS Technologies, Inc.*, 138 F.3d 1448 (Fed. Cir. 1998)?
    - b. Should this court afford deference to any aspect of a district court’s claim construction?
    - c. If so, which aspects should be afforded deference?
  - En banc rehearing
    - 6-4, no change to *Cybor*, decision reinstated.
      - NEWMAN, Dyk, Prost, Moore, Taranto; Lourie concurring. O'Malley, Rader, Reyna and Wallach dissenting.
    - Majority: “we apply the principles of stare decisis, and confirm the *Cybor* standard of de novo review of claim construction, whereby the scope of the patent grant is reviewed as a matter of law.”

# Preparing Strong Patent Claims

- What standard applies to language that appear in both granted claims (that get the new USCS standard) and new claims (that arguably get whatever standard the CAFC applies, e.g. *Packard*)?
- Can we have identical language in an IPR or PGR where it is definite in one claim and indefinite in another claims?
- Even more extreme, what if the language is in a granted claim and then the patentee adds a dependent claim – does the dependent claim potentially become indefinite based on language that would be considered definite in the parent claim?
- Can anyone say “Jedi Master Mixer” ....

# Take-Away for Drafting and Prosecution

- Use claims definite under any of the standards, as well as clear under the BRI of PTAB!!!
- Accurate translation is important, where poor choice can result in lack of clarity.
- Consider what would be clear to one skilled in the art “at the time the patent was filed”
  - Challenge arises when words take on meaning after the patent filing that may not have been known to those skilled in the art at the time of filing.

# Thank you.

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