

# Claim Drafting

**Jerry C. Serapion**

# Claims

- claims determine the extent of the protection conferred by a patent or application
- A series of **numbered statements** in a patent specification, usually following the description, that **define the invention and establish the scope of the monopoly** conferred by the patent.
- Each claim consists of one sentence starting with a capital letter and ending with a **full stop** (period).

# Claims

- Claims shall not rely on references to the description or drawings (Omnibus Claim)
- In particular, they shall not rely on such references as: "as described in part ... of the description," or "as illustrated in figure ... of the drawings."

# Technical features

- Claims should be drafted in terms of the technical or functional features
- **Structural (concrete) or functional (performance)** elements necessary to produce the technical effects of the invention. Examples: Structural elements could be: a transistor, a vessel for liquids, the structure of a molecule. etc. **Functional elements** could be: a step in a procedure, elements identified as "amplifying means", "a solvent", "heat conducting means", etc.

# Technical features ...

- This means that claims should not contain any statements relating, for example, to commercial advantages or other non-technical matters, but statements of purpose should be allowed if they assist in defining the invention.
- Functional limitations may be included provided that a person skilled in the art would have no difficulty in providing some means of performing this function without exercising inventive skill. Claims to the use of the invention in the sense of the technical application thereof are allowable. e.g. holding means...

# Generalizing the embodiment of the invention

- Once we have spotted the specific feature or combination of features important for the invention, we need to generalize the important feature(s) and crystallize what we think the general idea underlying the invention is. This can be done once a narrow main claim has been drafted. It is important to generalize the concept of the invention by concentrating on the essential features, by using broad technical concepts, broad language and by avoiding unnecessary limitations e.g. **fastening element**” is broader than **“screw”** or **“nail”**

# claim differentiation

- if one claim element is named in a broad claim and described in more detail in a dependent claim, the independent claim element will be more broadly interpreted
- “fastening element” in independent claim
- “screw” or “nail” in dependent claim – fallback position

# means clause

- This clause should describe the functional role of an element in the invention – this is interpreted more broadly, but may ensnare prior art to invalidate the patent – as discussed, always use “means for” or “step for” to introduce the clause.



# Means-plus-function

- “Nail” or “screw” can be referred to as “fixing means”
- The means-plus-function limitation can cover an infringing device element if the infringing element
- (1) identically performs the function specified in the means-plus-function claim, and
- (2) has the identical structure as the element specified in the specification or an equivalent thereof

# Step-plus-function

- a step not by how it is performed, but by what it accomplishes
- step-plus-function claiming should clearly be invoked by use of the term “step for” followed by functional language, without the “structural” description of the specific acts performed

# Elements of method claims

- Each element of a method claim is usually a verb phrased as a gerund (“reciprocating the guide, impressing a signal, separating the components) – a purpose may be included, e.g., “distilling the aqueous solution to separate the alcohol therefrom”

# Order of steps

- The elements of a method claim are usually recited in temporal sequence – where temporal ordering is intended, it is wise to make this express (describe step two as occurring after step one, or phrase the method “comprising the following steps in the order named”) – if steps are simultaneously performed, but one modifies another, the modified step should precede the modifying step – if the ordering is unstated, the claim covers the steps in any order, including simultaneous steps.

# Find the right words, terminology and sentences

- Imagine how competitors could avoid the claimed invention but still take advantage of its teachings
- How would a competitor design around the contemplated patent claim
- Use dictionaries and/or published patent documents/ scientific papers

# Express definitions

- A patent applicant “may be his own lexicographer”, but cannot define a term with a meaning “repugnant” to its usual meaning – the applicant should clearly state the definition in the specification (“As used in this description and in the appended claims, the word X means Y.”).

# Listing of parts

- List the elements or parts of the invention in a table format (e.g. Excel) with Reference numbers
- Do the same with the prior art and compare
- Claim drafting will center on the unique parts

# Categories of claims

- products, process, apparatus or use
- For many inventions, claims in more than one category are needed for full protection. In fact, there are only two basic kinds of claim, viz, claims to a physical entity (product, apparatus) and claims to an activity (process, use).



# two-part claim for improvement(s) independent claim only

- The first part or preamble should contain a statement indicating "the designation of the subject-matter of the invention" i.e. the category or general technical class of apparatus, product, process, use etc., to which the invention relates , followed by a statement of "those technical features which are necessary for the definition of the *claimed subject-matter* but which, in combination, are part of the prior art". Rule 416 – IRR IP Code

# characterising portion– independent claim only

- The second part or "characterising portion" should state the "technical features which, in combination with the features stated in subparagraph (a) (the first part), it is desired to protect" i.e. the features which the invention adds to the prior art.
- Prepended by transitional phrases like "characterized in that", "characterized by" or "wherein the improvement comprises".

# two-part claim

- the preamble of the claim sets out the most relevant known prior art, and the body characterizes the improvement of the invention
- *1. A pencil having an eraser, wherein the improvement comprises a light attached to the pencil.*
- Thus, in this claim a pencil having an eraser is the relevant known prior art and the claimed improvement is the attached light.

# Exemptions for two part claim

- Pioneering inventions
- a complex system of functionally interrelated parts, the inventive step concerning changes in several of these or in their interrelationships.
- For the sake of clarity
- Others where two-part claim is not suitable

# Markush claim

- a list of alternatives is provided; the format commonly used includes the phrase “selected from the group consisting of A, B, and C” (where A, B, and C are the alternatives.)
- E.g. A solvent **selected from the group consisting of** alcohol, ether **and** acetone...

# Dependent claims

- Any claim which includes all the features of any other claim is termed a "dependent" claim. Such a claim must contain, if possible at the beginning, a reference to the other claim, all of whose features it includes
- "The machine according to claim 1....."

# Multiple dependent claims

- series of dependent claims written using the alternative, "or" that refer back to more than one preceding independent or dependent claim. Multiple dependent claims may never be written using the cumulative term "and".
- Any dependent claim which refers to more than one other claim (multiple dependent claim) shall refer to such other claims in the alternative only. A multiple dependent claim shall not serve as a basis for any other multiple dependent claim. IRR IPC Rule 415c.

# Claiming embodiments

- Each embodiment that is disclosed must be encompassed in one or more claims – failing to do so may cause the embodiment to be dedicated to the public.
- embodiment is a tangible manifestation of an invention; a manner in which an invention can be made, used, practiced or expressed.



# Singular and plural elements

- An element can be claimed as a plurality (“three or more springs”; “a plurality of rods”; “at least one arm”) – the minimum number needed for proper functioning should be specified
- claiming “a pair” will not cover a device featuring one such item
- by contrast, claiming “one” or “a” item may or may not include a plurality of such items
- Use of “at least” is recommended for clarity; where the claim must be limited to an upper bound, language like “at most three” is acceptable

# Comprising

- To infringe, the accused product or process must include at least those elements or their equivalents, but may include additional elements, e.g., if the claim says comprising **a+b+c**, something containing **a+b+c+d** could likely infringe, but a product **with a+b+d** would usually not (unless d was the equivalent of c) <http://www.ipglossary.com>

# consisting

- if a claim for a chemical compound refers to it as "consisting of components **A, B and C**" by their proportions expressed in percentages, the presence of any additional component is excluded and therefore the percentages **should add up to 100%**. That is  $A + B + C = 100$ .

# Relative terminology

- Relative adverbs and adjectives are indefinite unless qualified with more exacting language: “**closely spaced**” and “**substantial distance**” both held to be **indefinite**, since a competitor could not determine whether his device infringed – other vague terms include “more” and “less”, “rich in ...”, and “high”
- but if used in a way that more definitively *limits* their interpretation, all of these words are acceptable: “more than the minimum”, “shorter than the preset value”

# Words of approximation

- approximation terms like “substantially”, “about”, “generally”, “approximately”, “almost”, and “essentially” are ok if clearly supported in the specification
- approximation terms are encouraged, as they convert equivalent infringement to literal infringement (“pH 6” does not literally include “pH 5.8”, but “about pH 6” does)

# Claims

- The claims, as well as the description, "**may contain chemical or mathematical formulas**" but not drawings. "**The claims may contain tables**" but "**only if their subject-matter makes the use of tables desirable**".
- Physical values shall be expressed in the units recognised in **international practice**, wherever appropriate in terms of the metric system using system international (SI) units. Any data not meeting this requirement must also be expressed in the units recognised in international practice. For mathematical formula, the symbols in **general use** shall be employed.

# Example – Independent claim

- 1. **An ion generating electrode** (111) comprising an **emitting element** (1, 2), a dielectric layer (5), a **bias element** (3, 4), vias (7) and pads which provide interconnection between elements in different layers, and a flat substrate (6) to hold all the layers together **characterized in that** the said emitting elements (1, 2) and bias elements (3, 4) have fine projections for increased electric field and more efficient ion production.
- ***Use of reference sign***

# Dependent claims

- 2. **The** ion generating electrode (111) **according to** claim 1 wherein said fine projections can be square, triangle, rectangle, semi-circle and the like.
- 3. The ion generating electrode (111) according to claims 1 **or** 2 wherein said projections are a plurality of parallel lines that are about 0.0254mm (1.0mil) to 1.0mm (39.37mils) in width and spacing and the length can be from 0.0254mm (1.0mil) to 5.0mm (196.85mils). - **Multiple dependent claim**
- 4. The ion generating electrode (111) according to claim 1 wherein .....



# Dependent – Other Categories of claims

- 33. The **ion generating module** as in claim 28 and 29 integrated into a mother board.
- 34. A **method of producing ions** as in claims 1, 12, 15 and 18.

# Different classes of invention

- The invention should be claimed from as many patentable classes as possible (e.g.: composition, process for creating the composition, process for using the composition, apparatus for producing the product, etc.)

# Antecedent Basis

- Any element which is described as "**the** ..." should have been introduced previously as "**a** ...". Thus, the first time we see the transmission it is called "a transmission". Then, we can say that the motor is coupled to "the transmission".  
<http://www.bpmlegal.com/>
- The claims must conform to the invention as set forth in the description and the terms and phrases used in the claims must find **clear support** or **antecedent basis** in the said description so that the meaning of the terms may be ascertainable by reference to the description (Rule 415d, IRR IP Code)

# Antecedent Basis

- 1. A device, comprising:
  - a pencil; and
  - a light attached to the pencil.
- 2. The device recited in claim 1 wherein the light is detachably attached to the pencil.
- 3. The device recited in claim 2 wherein the pencil is red in color.

# consistency in the naming of elements

- two similar elements should be given distinct names, like “**holding means**” and “**support means**”; where this isn’t possible, “first holding means” and “second holding means” can be used
- don’t use “**structural member**” in an independent claim, and reference it as “**support member**” in a dependent claim; same goes in the description - same element should not be mentioned by two different names
- adjectives can be dropped in later references if the shortened form is unambiguous (“connecting appendage” may later be referenced “appendage,” presuming there is no other “appendage” element); however, the adjective can never change (e.g., to “tying appendage”)

# **structural and functional interrelationships**

- There must be a structural and functional interrelationships between the claimed elements of the invention.
- Not a mere listing or juxtaposition of parts

# structural and functional interrelationships

- An apparatus for holding items, comprising:
  - **at least one leg**; and
  - a top configured to support **at least one leg**
- *Vs.*
- An apparatus for holding items, comprising:
  - four legs;
  - 16 screws; and
  - a top.

# Tying the elements together

- As noted, every element in an apparatus must be connected to at least one other element in the apparatus to constitute part of the whole – failure to connect an element to anything prompts **an indefiniteness rejection**, often characterizing the claim as “a **mere catalog of elements**” or “an **aggregation**”



# particularly point out and distinctly claim

- Provide clear **notice** to the public of the **boundaries of the inventive subject matter**
- May be rejected as vague – **vagueness may be created by lack of antecedent basis**, failure to read on a disclosed embodiment, too little detail about elements or interactions, or careless use of words of degree
- Overly broad functional statements - usually occurs when functional language is used to ***claim a result or quality*** rather than a functional limitation
- The subject of a patent is the *device or mechanical means* by which the **desired result is to be secured**; the claims should reflect a ***structure or function*** that must be used to accomplish the *objective*

# Goals of claim writing

- The claims should cover the invention, as broadly as possible, in light of its operative concept and objective – the claims should **cover the disclosed embodiments, and all expected and unexpected equivalents**, so that a competitor can't design around the patent by making a trivial change;
- in essence, any invention that embodies the inventive concept, and any invention that achieves the same result by a similar mechanism, should be covered – the only limits on the scope of the invention should be the **prior art** and the **formal requirements** of the IPOPHIL.

# Apparatus claim

- Apparatus claims should be written having in mind the most *relevant figures*; this permits accurate descriptions of the components and their interaction, and ensures that the claims cover it
- Conversely, every essential feature in the drawing should be present in at least one of the claims – unnecessary elements should be removed, but of course, no element that is necessary for the operation of the **stripped-down invention** should be eliminated – apparatus claims should also consider the **sequential operation of the overall process**, and might claim the apparatus with one means element for each step – a very well-written apparatus claim may be able to teach the operative concept to the reader without reference to the figures.

# Credits

- Manual for Substantive Examination Procedure, Intellectual Property Office Of the Philippines, 2002
- Landis on Mechanics of Patent Claim Drafting, Robert C. Faber, Fifth Edition
- WIPO Patent Drafting Manual

- Thank you!!!