CLAIM ANALYSIS

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Claims

In a patent or patent application, the claims define, in technical terms, the extent of the protection conferred by a patent, or the protection sought in a patent application. The claims are of the utmost importance both during prosecution and litigation.

For example:

1. A vehicle computer system comprising:

a user interface receiving input from a user;

a CPU receiving said input and generating a command in response to said input;

and a firewall selectively preventing or permitting said command from being transmitted to the vehicle.

Structure Of Claims

A patent claim is generally divided into three parts:

- a preamble;
- a transitional phrase; and
- body.

The preamble comes first and is often used to describe the environment in which the invention resides, to describe a field of intended use, and/or to provide antecedent basis for (i.e., to introduce) one or more terms in the claim body.

For example:

A data input device comprising:

A vehicle computer system comprising:

Transitional Phase

A transitional phase sets off the elements of a claim from its preamble, and defines the scope of the claim. The transition may be open ended or close ended.

For example:

…….device *comprising*:

…….system *comprising:*

……...apparatus *consisting of:*

……...processor *containing:*

…….server *characterized by:*

…….apparatus including*:*

Body Of A Claim

The body of a claim sets forth what the invention covers and should be a clear technical description of what others are excluded from practicing. Usually the body recites a list of elements/steps in combination, with the element/step separated by semi-colons(;).

For example:

1. A vehicle computer system comprising:

a user interface receiving input from a user;

a CPU receiving said input and generating a command in response to said input;

and a firewall selectively preventing or permitting said command from being transmitted to the vehicle

Types Of Claims

1. Independent Claims

Typical Independent Claim Structure	
Preamble	**14.** A method for producing a first map of metacodes and their addresses of use in association with mapped content and stored in distinct map storage means, the method comprising:
First Element	providing the mapped content to mapped content storage means;
Second Element	providing a menu of metacodes;
Third Element	compiling a map of the metacodes in the distinct storage means, by locating, detecting, and addressing the metacodes; and
Fourth Element	providing the document as the content of the document and the metacode map of the document.

Types Of Claims

2. Dependent Claims

Typical Dependant Claim Structure	
Dependent Claim Element	**18.** A method as claimed in claim **14** further comprising comparing the multiplicity of metacodes in the map with a predetermined set of criteria.

Scope Of The Claims

To determine how broad or narrow a patent's claims are, one must look to the *claims themselves*, *the patent specification* (the written narrative portion of the patent), and *the prosecution history* (the written public record of communications between the patent applicant and the U.S. Patent and Trademark Office during the application process). In determining claim scope, a high-level checklist can be utilized:

- Length of the Claim
- Open or Closed Transition Language
- Specific Ranges
- Multiple Infringer Issues/Necessary Reliance on Indirect Infringement Theories
- Means-Plus-Function Elements
- Limiting Language within the specification
- Limiting Language within the Prosecution History

Source: http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1124&context=njtip

Length Of The Claim

The length of the claim, i.e. the more limitations a claim possess, subject to a number of factors related to the technology area and other services, can serve as an initial check on claim scope. Because infringement can only exist where an infringer's product meets every limitation of a claim, more limitations increase the likelihood of a potential infringer's product not meeting one of the limitations.

For example:

A method for producing a first map of metacodes and their addresses of use in association with mapped content and stored in distinct map storage means, the method comprising:

- *providing the mapped content to mapped content storage means;*
- *providing a menu of metacodes;*

Source: http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1124&context=njtip

Length Of The Claim

- *compiling a map of the metacodes in the distinct storage means, by locating, detecting, and addressing the metacodes; and*
- *providing the document as the content of the document and the metacode map of the document.*

Analysis of the claim:

Since the *claim has only 4 elements*, it doesn't constitute an inordinate number of limitations.

Source: http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1124&context=njtip

Open Closed Transition Language

The transitional term, in particular, can either be “open” or “closed.” For example **open transition terms** allow for infringement to stand if a product includes the recited elements plus additional non-recited elements as well. Consequently, if a claim includes elements A and B, and an accused device includes elements A, B, and C, the accused device will infringe. In contrast, **closed transition terms** allow infringement to stand if an accused product includes the recited elements and no other elements. So, in the above example, the existence of the extra element, C, will render the claims non infringed with the use of closed transition language.

Open Transition Terms	Closed Transition Terms
Comprising	Consisting of
Comprised of	Consisting essentially of
Having	Composed of
Including	Formed of
Characterized by	

Source: http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1124&context=njtip

Specific Ranges

Specific ranges included in the claims, i.e., heating a material to between 300 and 400 degrees, can also further limit claim scope. Endpoints in claimed ranges provide definitive bounds, and anything outside of those bounds will not infringe

Source: http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1124&context=njtip

Indirect Infringement

An ideally written claim contemplates infringement by a single entity. If, however, a claim requires multiple parties to act in order to infringe the claim (no single party individually performs all elements, or a party sells a product and infringement only occurs when a customer uses the product in a particular way), the claim has a multiple infringer issue and places the patent owner in the realm of having to prove *indirect infringement via active inducement or contributory infringement.*

To prove **active inducement**, the patent owner must demonstrate that the *"alleged infringer's actions induced infringing acts and that he knew or should have known his actions would induce actual infringements."*

Source: http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1124&context=njtip

Indirect Infringement

Contributory infringement exists when a party knowingly produces a material or component *"especially made" or "especially adapted" for use in an infringing product*, and that material or component is *"not a staple article or commodity of commerce suitable for a non-infringing use."*

Thus, to prove **contributory infringement**, the patent owner must prove that the accused infringer *(1) knew that the material or components it manufactured would be used in an infringing manner and (2) the materials or components otherwise have "no substantial non-infringing uses*."

Further, for indirect infringement to hold, *direct infringement must exist. Thus*, *at some point some entity must meet all elements of the asserted claim.*

Source: http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1124&context=njtip

Means-plus-function Elements

To meet a means-plus-function limitation, *a device must perform the identical function recited in the claim using the identical or equivalent structure disclosed in the patent's specification.* Thus, even if an accused product performs the identical function of a means-plus-function element, if it does so with sufficiently different structure than that disclosed in the patent's specification, the accused product does not meet the limitation.

Source: http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1124&context=njtip

Limiting Language Within The Specification

Language within the specification can also serve as a limitation on claim scope. While it is not proper to read limitations from the specification into the claim, statements that expressly or by implication state that certain subject matter resides outside of the scope of the claims will disclaim claim scope. Further, any absolute language in the specification *(always, never, none, must, only, etc*.) can be cause for concern when interpreting the scope of the claims.

For example:

A claim has a particular element:

compiling a map of the metacodes in the distinct storage means, by locating, detecting, and addressing the metacodes; and

Source: http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1124&context=njtip

Limiting Language Within The Specification

The specification provides a distinct definition for “locating, detecting, and addressing” the metacodes, which could serve to limit their scope:

“By “detecting” is meant recognizing. Identifying or differentiating a metacode from content; by “locating” is meant finding the position of a metacode in and relative to an input content stream; and by “addressing” is meant forming a unique identifier which defines the position of a metacode relative to the mapped content stream.”

Source: http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1124&context=njtip

Limiting Language Within The Prosecution History

The patent owner cannot reclaim the disclaimed scope after the patent issues. Therefore an analysis of the prosecution history will also determine the extent of patent scope limitation, if any.

For example:

A claim has a particular element:

compiling a map of the metacodes in the distinct storage means, by locating, detecting, and addressing the metacodes;

Prosecution History

The applicant amended claim 14 to add the limitation “locating, detecting, and addressing the metacodes” to overcome prior art. File History, August 19, 1996 Amendment at p. 2. The applicant did this to characterize the meaning of the word “compiling.” Id. at p. 8.

Source: http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1124&context=njtip

Limiting Language Within The Prosecution History

Specifically, the applicant stated that “compiling” as used in the patent is not synonymous with use of the term in the computer programming realm where the term refers to “generating object code from source code.” Id. This serves to limit the scope of the meaning of this claim term to exclude such actions.

Source: http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1124&context=njtip

Preamble Limitation

Preamble can sometimes limit the scope of a claim. For example:

Invitrogen Corp. v. Biocrest Manufacturing

The patent in Invitrogen claimed a process for making E. coli cells that had enhanced capacity to accept foreign DNA. Such capacity is termed “competence.” The preamble of claim 1 referenced a “process for producing transformable E. coli cells of improved competence.”

The Federal Circuit found that the reference to “improved competence” in the preamble limited the scope of the claim because the applicants relied on it to distinguish the invention over the prior art. *Originally, the preamble had only referenced “competent E. coli cells.” However, in response to a rejection by the Patent Office, the applicants changed the language to recite “E. coli cells of improved competence.”*

Preamble Limitation

Preamble can sometimes limit the scope of a claim. For example:

Invitrogen Corp. v. Biocrest Manufacturing

In discussing the prior art, the applicants stressed that it did not teach producing cells of improved competence. By contrast, the applicants stated that “the cells produced according to the claimed methods have improved competence.”

Thus, by amending the claim in response to a prior art rejection and by referring to the preamble language in its argument, the applicants had relied on the preamble language to distinguish their invention from the prior art. *Accordingly, the court construed the preamble language as a limitation on the claim scope.*

Preamble Limitation

Example 2*:* A dog locating device comprising:

Generally, if the language in the *preamble merely states the intended purpose*, and the language in the body adequately defines the product separate from the preamble language*, the preamble will not limit the scope of the patent*.

So, the invention is not limited solely to dogs.

Example 3: “a method for reducing hematologic toxicity in a cancer patient” merely describes *how the invention might be used, but the method can be infringed by application in other contexts; thus, “reducing” portion not a limitation*

Preamble Limitation

EXAMPLE 4: An emergence cuff member for use in preserving the interdental papilla during the procedure of placing an abutment on a root member implanted in the alveolar bone of a patient in which [a] the abutment has a frusto-spherical basal surface portion and [b] a conical surface portion having a selected height extending there from comprising .

Under the rule expounded in RIM v. NTP, *the preamble is limiting "if it recites essential structure that is important to the invention or necessary to give meaning to the claim*." Here, the court found that the preamble "recites structural features . . . [and*] it is apparent that the claim drafter chose to use both the preamble and the body of the claim to define the subject matter of the claimed invention.*

Source: http://patentlaw.typepad.com/patent/2006/03/claim_preamble_.html

Structure Versus Method Claims

There are basically only two types of subject matters that can be claimed, things and processes. Claims to **structure** are variously called device, apparatus, composition, structure, and system claims depending on the nature of what is being claimed. A sample structure claim is as follows:

1. A pipe fitting system comprising: a body; and a collet slidably disposed completely within the body.

Claims to processes are called **process or method claims**. A sample method claim corresponding to the structure claim is as follows:

1. A method of fitting a piece of pipe into a body, comprising: providing the body with a collet slidably disposed completely within the body; and inserting an end of the pipe within the body.

Infringement Analysis Based On Type Of Claims

Structure claims are often extremely useful because they deal with recognizable physical objects such as housings, rings, ball bearings, levers, joists, motors, polymers, chemical elements, and so forth. It is therefore relatively easy for a judge or jury to determine infringement. Moreover, a structure claim is infringed as long as the accused product contains the claimed physical elements. Any purpose of the device, and any intention of the user are generally irrelevant to interpreting either the scope of the claim or infringement

Method claims are useful for claiming use of a product, such as using a drug to treat a new disease, or using a circular saw blade to cut into wet concrete. But method claims can be problematic to enforce. After all, how can a jury decide on infringement as to some imported product if there is no testimony as to the way it was manufactured? Or how can a patent holder sue the thousands of individuals for use of a tool that has other, non-infringing uses.

Source: http://www.fishiplaw.com/chapter-4-basic-claiming

Case Study: Broadness Of Claims

PATENTING THE BUTTON

Let's assume that at some point in time, only cloaks without fastening mechanisms exist. Or, in patent terms, the state of the art consists of cloaks whose left and right sides cannot be connected together. Of course this makes using the cloak problematic, since it keeps blowing open in bad weather, and rain can leak in through the opening.

Alice's Invention: Button's and holes

Alice recognizes this problem and is the first to invent the button to allow the sides of a cloak to be held together. She applies for a patent and gets one granted, with the following claim:

*A **cloak** with a front opening, with a **row** of fasteners down one side of the front opening, and a **row** of holes at corresponding locations down another side of the front opening into which the fasteners can be inserted*

Source: http://www.iusmentis.com/patents/claims/

Case Study: Broadness Of Claims

Bob's Invention: Metallic hooks

Working independently on the same problem, Bob later invents a mechanism with metallic hooks and receptacles into which the hooks are placed. He obtains a patent with the following claim:

*A cloak with a front opening, having at least one **metallic** hook at one side of the front opening, and at least one receptacle for said hook at the other side.*

Alice can now sue anyone who sells cloaks with buttons and holes in which the buttons are to be inserted. She can't sue people who sell traditional cloaks, since those don't have the buttons and holes required by her patent claim.

Source: http://www.iusmentis.com/patents/claims/

Case Study: Broadness Of Claims

Bob's Invention: Metallic hooks

Bob can now sue people who sell cloaks with metallic hooks and receptacles, but not people who use wooden buttons and holes, even though a hole can be seen as a receptacle. A wooden button is not the same as a metallic hook. Bob can also sue people who use a single metallic hook, as opposed to Alice, whose claim requires multiple buttons and holes (since she uses "a row of fasteners", and a single fastener doesn't make a row).

Source: http://www.iusmentis.com/patents/claims/

Case Study: Broadness Of Claims

PROVING INFRINGEMENT USING THE CLAIMS

Ian's infringement: cloaks with buttons

Suppose Ian comes along and manufacturers cloaks with buttons. Ian must now take a license under Alice's patent, or risk getting sued by her for patent infringement. After all, Ian uses buttons, and so his cloaks meet the definition of Alice's claim because he uses a row of fasteners down one side and a row of holes down the other side. But since Ian's buttons are not metallic hooks, he does not have to take a license under Bob's patent.

Jack's infringement: cloaks with hooks and holes

Jack produces cloaks with metallic hooks on one side of the front opening, which are plugged into holes at the other side. Clearly Jack must now take a license from Bob, as his cloaks meet the definition of Bob's claim. However, Jack must also pay Alice royalties, since Alice's claim is not restricted to traditional round buttons, but in fact covers fasteners of all shapes, including metallic fasteners that are hooked into holes.

Source: http://www.iusmentis.com/patents/claims/

Case Study: Broadness Of Claims

PROVING INFRINGEMENT USING THE CLAIMS

Keanu's infringement: the anorak

Keanu produces cloaks with fasteners, but instead of holes in the other side of the cloak, he provides loops made of string through which rectangular wooden buttons are to be put (in other words: Keanu produces anoraks). Since he uses wooden buttons, he falls outside the scope of Bob's patent claim. However, since Keanu's anoraks do not have a row of holes down one side of the garment, but instead use loops made of string that are put on top of the garment, he also falls outside the scope of Alice's claim.

Leo's workaround: buttons on shirts

Now shirt manufacturer Leo comes along and notices that Alice's buttons would also be very useful for his shirts. He uses the very same buttons that Alice uses, but puts them on shirts and not on cloaks. Since Alice's claim is restricted to "cloaks", Leo doesn't infringe on her patent.

Source: http://www.iusmentis.com/patents/claims/

Case Study: Broadness Of Claims

EXTENDING THE SCOPE OF CLAIMS

Alice could have avoided all her problems with Leo if she hadn't used "cloak" but rather "garment" in her claim, or if she had stated something like "Whenever the word 'cloak' is used in this document, it should be read to also mean other types of garments, such as shirts, jackets, pants and so on." In the latter case, Alice can argue that Leo's shirts meet the definition of the claim, since she has defined "cloak" to mean all types of garments, including shirts.

Such arbitrary defining of terms in patents is usually permissible, although if stretched too far it probably won't help much. For instance, it would be a lot harder to get away with using "round" in a claim, and then stating "The term 'Round' as used here means any geometrical shape, including rectangular or square" in the description.

Source: http://www.iusmentis.com/patents/claims/

Case Study: Broadness Of Claims

EXTENDING THE SCOPE OF CLAIMS

However, the use of broad terms also has its limitations. If all that Alice shows in her description and figures are round wooden buttons, and used just "fastener" in her claim, a court could rule that the scope of her claim is too broad. This is why many patents contain lists of possible alternative ways to do the same thing. Alice would therefore state something like "The buttons could also be square, rectangular or of any other form, and could comprise hooks for easier fastening into the receptacles."

Source: http://www.iusmentis.com/patents/claims/

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