

Claiming what counts in business: drafting patent claims with a clear business purpose

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1. Introduction

An increasing number of IP savvy businesses have come to realize that to become and remain competitive in a fast changing and highly competitive business environment, they must systematically invest in research and development projects, be it in-house or in partnership with others, for achieving technological leadership so as to be able to produce better products at a lower cost and ahead of competitors. Therefore, they take timely steps to ensure that suitable inventions resulting from such investments are protected and leveraged by developing a robust patent portfolio that effectively caters to the objectives underpinning the business strategy adopted by the enterprises concerned. However, building a robust patent portfolio is not a simple task. It requires, first and foremost, a complete understanding of the competitive landscape, including a good grasp of the direction, trajectory and trends in technological development in the industry as a whole and of the patenting activities of not only the current key players in the same field or niche but also of potential future competitors in the same or a different industrial or business sector.

Responding to these challenges by merely creating or acquiring a large number of patents in a technological niche may not be adequate. Even if the patents are in the right niche, they must be robust in relation to the business purpose that they are expected to serve. In other words, quality of individual patents counts. It must be noted that the quality aspects of a patent are distinct from the quality or value of the underlying invention that is to be protected by the patent. Thus, the quality of a patent refers to its **'fitness for the business purpose'** that it is expected to serve. In more precise terms, the quality of a patent may be looked at in the context of high quality drafting of a patent application. While the description of the invention must be adequate for a person skilled in that relevant field to practice or work the invention by going through the description, without undue experimentation, it is critical that the one or more claims in the patent application are so skillfully drafted that the patent office allows the claims as drafted/submitted in the patent application. This is easier said than done. Not only for a beginner but also for an experienced patent agent this remains a continuing challenge.

The applicant or his agent should so draft a patent application that it is granted with an adequate scope or ambit so as to fully serve the business purpose(s) for which the patent is meant to be used. It is here that the importance of drafting the claims in a patent must be fully appreciated, as the drafting of claims must always be done with a clear focus on the exact business needs that are sought to be served by it. That is, a business strategy perspective must inform the thinking of the one who takes up the task of drafting the patent claims. The ultimate purpose of every business strategy is to ensure that a business makes the desired amount of profit to justify the risks taken in making the investments of resources and time. Similarly, the purpose of drafting claims should be to fully serve the business strategy at hand. Even so, only a small number of well drafted patents are actually used by businesses to help them to make or safeguard their profits.

There are many types of reasons as to why a patented invention, which is technically feasible is not found to be commercially viable or profitable. Yet, no patent must be sought

that has poorly drafted claims, as such a patent may prove to be only a financial burden. So, the primary focus of this article is to make businesses aware of the pitfalls of recklessly filing patents, without devoting attention to drafting of good claims. Countries have different approaches and different legal principles in relation to the interpretation of patent claims. In the case of European countries, a harmonized system for the grant of European patents was instituted under the European Patent Convention (EPC), which came into force in 1977. Historically, however, variations have existed in the courts' approaches in the different EPC countries to claim construction even though there has been a convergence in the approach in the courts of European countries. This article largely exemplifies claim drafting as practiced in the USA, or what is known as US- style patent claim construction in order to create a potentially valuable patent.

2. What are patent claims ?

To begin with, the applicant should file the patent application in the prescribed form and manner at the national or regional office in order to get a patent. The format of a patent application differs from one country to another. Basically, however, it follows a fairly standardized list of items, of which, in our present context, the detailed description of the invention and the claims are the most important. The description of the invention should disclose the invention clearly and precisely to enable a person skilled in the art to understand the claimed invention and the technical information contained in it so as to practice the invention without undue experimentation. The application concludes with one or more claims those define particularly and distinctly the invention. Claims define the scope or boundaries of the patent owner's exclusive rights.

From the viewpoint of patent owners, claims are the heart of a patent. The description may teach how to make and use the invention whereas the claims define the scope of legal protection. For example, the claims demarcate in words the boundary of invention, just like a picket-fence defines the extent of land covered by a deed for a piece of land. Much of what is shown and described in a patent may not be protected by the patent because only the technology covered in the claims is protected. If an applicant or is agent has not properly drafted the claims, then any aspects or elements of the invention which are contained in the detailed description in the patent application, but are not covered by the claims become a part of the prior art, but only when the patent application is published or when the patent is granted. That is, all other would be free to use all that unprotected information without the patent owner's permission, and the patent owner would not be able to do anything about it.

As a result, most patent agents would like to draft the claims as broadly as possible to cover all aspects of an invention as described in the detailed description of it but also all its equivalents or likely future versions. However, a competent patent examiner in a patent office would not allow inadequately broad claims that cover more than what the inventor actually invented, and would generally like to narrow the claims to the actual invention as described in the detailed description.

The claims may be broad or narrow in their scope or breadth. Normally, broad claims include fewer elements or limitations than narrow claims do, and can be very valuable because they can cover a range of valuable products or situations, but can be more difficult to obtain and to enforce because there may be a broader range of prior art that may block or

invalidate them. Narrow claims are generally very specific to one particular element or product. In general, a narrow claim specifies more details than a broader claim.

Such patents are easier to obtain and enforce because there may be less prior art that may block or invalidate them. If a patent claims the exact products and processes of the company, the patent may be less useful as a business tool because it may permit competitors to easily enter the companies' market with insignificantly modified products and services. Better patents tend to include a significantly large number of claims with a mix of broad and narrow claims.

3. What is a patent claims construction in the U.S.?

Without proper training it is very difficult for a non-specialist to read and understand patent claims, as they are written in a techno-legal jargon peculiar to this area of law. Even so, understanding the basics of interpretation of claims is crucial for business managers as they often have to look at what has been done by the patent experts.

a. Claim construction

Under patent law, a patentee's exclusive rights rest entirely upon the patented invention as revealed in the granted patent. In case of a dispute determining the scope of the exclusive right, a court bears the responsibility for all patent interpretation issues. One such issue, called claim construction, is the interpretation of the words in the patent claims. Claim construction is very important in patent litigation because it is the basis for determining whether the patent is invalid for failing to meet the conditions and requirements of patentability or to determine whether the patent is infringed.

A watershed event in claim construction was the opinion of the U.S. Court of Appeals for the Federal Circuit ("Federal Circuit") in *Markman v. Westview Instruments, Inc.*, which holds that claim construction is a matter of law to be decided by judges. The *Markman* court established two categories of evidentiary inputs for use in claim construction. The first, so-called 'intrinsic evidence', consists of the specification, the claims and the prosecution history. The second, so-called 'extrinsic evidence', includes all other sources that are external to the patent and the prosecution history such as expert testimony, dictionaries, technical writings and etc. Usually, the intrinsic evidence is sufficient to determine the meaning of disputed claim language. In interpreting claims, three significant constraints place limits such as the all-limitations rule, the doctrine of equivalents and the prosecution history estoppel.

In determining whether a patent claim covers the alleged infringement, the U.S. courts traditionally applied a two-step process. The first is to determine, as a matter of law, what the words in the claim mean. The second is to determine, as a matter of fact, if the claim covers the alleged infringement. Infringement exists when all of the claim's elements are found, either literally or equivalently, in the accused infringement.

b. The doctrine of equivalents

The patentee's exclusive rights are founded upon the text of claims. In practice, the courts have refused to confine the infringement inquiry to the precise choice of words of claims. Instead, the scope of the protection may be extended beyond the literal wording of the

claims under the doctrine of equivalents. Under the doctrine, an accused infringement that presents insubstantial differences from the claimed invention may be judged an equivalent and therefore an infringement.

The doctrine of equivalents arose to stop competitors who would introduce insignificant modifications into the claimed invention to avoid literal infringement. So, every patent infringement case potentially involves the doctrine of equivalents. The doctrine of equivalents is applied not to the invention as a whole, but to the individual elements recited in the claims to determine whether insubstantial differential differences exist between the claimed invention and accused technology.

However, a patentee may not obtain, through the doctrine of equivalents, claim coverage that he could not lawfully have obtained from the patent office. The prior art also limits the scope of permissible equivalents of a claim.

In recent cases, the courts are willing to do an additional restraint on the doctrine of equivalents through stressing that if an accused infringement was foreseeable by a claim drafter, it is a duty of the drafter to obtain literal protection from the patent office. The unclaimed subject matter that is disclosed in a patent is considered to have been disclaimed and dedicated to the public.

c. The all-limitations rule

In *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, the U.S. supreme Court confirmed in 1997 that “each element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to the individual element of the claim, not the invention as a whole. It is important to ensure that the application of the doctrine, even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety” This principle is known as the all-limitation rule, which requires an element-by element inquiry.

d. Prosecution History Estoppel

Prosecution history or file wrapper means the publicly available papers that document the dialogue between the inventor and examiner during the patent acquisition. If the court concludes that an applicant relinquished certain subject matter shown on the prior art in order to obtain the allowance of the claims, a patentee may not employ the doctrine of equivalents to recapture the renounced subject matter, which is called the principle of prosecution history. Amendments to avoid the prior art may be treated as disclaimers and construed against the inventor and in favor of the public.

In addition to estoppel through claim amendment, courts have also employed estoppel by argument. If an applicant makes an argument to the examiner characterizing the claimed invention or distinguishing it from the prior art, the prosecution history estoppel may apply as well. No claim need be amended in these circumstances.

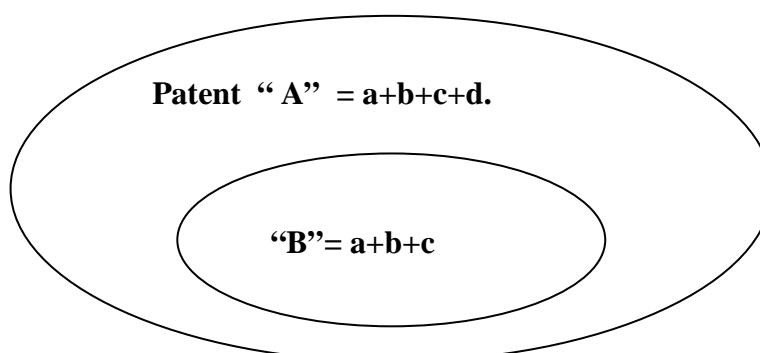
Prosecution history estoppel is a more rigid doctrine that comes into play when a patentee resorts to the doctrine of equivalents. The court explained that when a claim amendment creates prosecution history estoppel with regard to a claim element, there is no range of equivalents available for the amended claim element.

e. Simple infringement test

Apart from the prosecution history estoppel, let's suppose that the patented invention is "A" which includes the elements of "a", "b", "c" and "d", and then the accused product is "B".

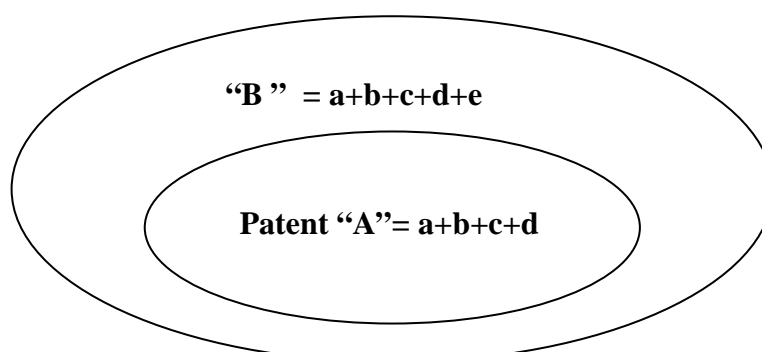
(a) Case 1

If Patent "A" includes a claim consisting of elements of $a + b + c + d$ and Product "B" has features covered by identical elements of $a + b + c$ as the following diagram, Product "B" may not infringe Patent "A" directly, because Product "B" does not include the element "d" of the patented invention "A" (Case1 only covers cases of direct infringement).



(b) Case 2

If Patent "A" includes a claim consisting of elements of $a + b + c + d$ and Product "B" has features covered by identical elements of $a + b + c + d$ plus e as the following diagram, Product "B" would infringe Patent "A" literally, because Product "B" has all features that are covered by Patent "A," even though it has an additional element "e".



In summary, infringement arises when each element of a claim is shown in the accused infringement, either literally or equivalently. If all of claim's limitations are found literally such as *case2* illustrated above, then there usually is literal infringement. If one or more of the

claim's limitations are found equivalently and the rest are found literally, then there usually is infringement under the doctrine of equivalents.

Although this example is straightforward enough, application of the rules mentioned above has proven rather more difficult in the litigation.

4. Conclusion

The common use of a patent is to protect a company's products and services, which depends on the claims. An invention described in the description of a patent may not be protected if it is not included in the claims. Such unclaimed invention is considered to have been deliberately disclaimed and therefore dedicated to the public. Thus, a patent applicant should specify in the claims all inventions, which are described in the description. It recommends that applicants had better claim as broad as possible, so as to cover all relevant features of the inventions and all its reasonable variations. Applicants, however, should also be very cautious not to surpass the invention described in the description because interpreting the claims is the first step in determining whether the patent is invalid or infringed in most patent litigation. The best way to draft the claim is to write broad generic claims as well as a more specific claims to each embodiment that can be envisioned.

The scope of protection associated with a patent may be extended beyond the literal wording of the claims under the doctrine of equivalents. However, in the United States of America, the courts become far less willing to allow patentees to obtain a scope of protection outside the literal scope of the claim

For companies seeking patent protection, it is key to ensure that patents are drafted in a way that will be robust if challenged in court but also that it is likely to serve the business purposes for which the application has been filed. The business strategy must, therefore, always be kept in mind while drafting patent claims.

Links for further reading:

CLAIM STRATEGY – WRITING CLAIMS WITH DIFFERENT SCOPES FOR SPECIFIC BUSINESS PURPOSES by William J. Stoffel
(<http://www.patent-ip-law.com/claim%20strategy%20Feb%2003.PDF>)

Claim space: a tool for defining claim strategy by Robert R. Sachs
(http://www.fenwick.com/docstore/460/Claim_Space.pdf)

JUDGE PAUL MICHEL'S TOP TEN DRAFTING TIPS by John Orange
(<http://www.ficpi.org/newsletters/50/Tips.html>)

INVENTION DEFINITION
(http://tools.ecn.purdue.edu/~me597r/htmls/227323_1.doc)

Drafting Patent Applications after *Festo* and *Johnson & Johnston* By
Bruce D. Sunstein, Bromberg & Sunstein LLP, Boston
(<http://www.bromsun.com/media/Festo.pdf>)

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