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03

Inventions and Patents

MODULE 03. Inventions and Patents

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INTRODUCTION

The term "intellectual property (IP)" is defined as the property resulting from creations of the human mind, the intellect. In this regard, it is fair that the person making efforts for an intellectual creation has some benefit as a result of this endeavor. Probably, the most important among intellectual properties is "patent."

A patent is an exclusive right granted by a government for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem. The details on the way of acquiring patents will be provided for protecting precious intellectual properties.

LEARNING OBJECTIVES

1. You understand how to decide whether your new technology or invention should be protected by one or more patents and, if so, how to do so.
2. You know how the grant of a patent over an invention or technology helps you to prevent or have an upper hand in legal disputes that may arise later on.
3. If you are already involved in such a legal dispute, you know how to find a way to minimize the damage or loss.
4. You understand why a patent management strategy is important for the survival and competitiveness of your company and how to develop and implement one.

LEARNING POINT 1: Basics of invention and patent

1. One way of adding value to a product

In an increasingly knowledge-driven economy, you invariably need creative or inventive ideas or concepts to improve an existing feature, add a useful new feature to your product or develop a totally new product. If your business develops such an idea or concept that solves a technical problem in an unexpectedly new or better way then it should take adequate and timely steps to protect its creative idea, concept or knowledge by converting it into a proprietary technical advantage by patenting it.

More Reference 1-1: How to invent

Many people seem to think that a flash of inspiration or genius is necessary to spark creativity or inventions or that it invariably involves major scientific discoveries or great research and technological development in big public or corporate R & D laboratories or research-based universities. Even in the United States of America, till 1930, individual inventors outnumbered every other category in terms of number of patents granted by the US Patent Office. For the first time, in 1931, U.S. corporations received more patents than U.S. individual inventors did and their lead has kept widening ever since.

It must be noted that most of the patented inventions are not major breakthroughs but incremental though non-obvious technical improvements over the relevant prior art. Also, some famous inventions represented only a modest advance in fundamental technology and were made by ordinary people or individual inventors. In fact, some famous inventions were based on a chance discovery, insight or a mere accident that produced unexpected results that were not only noticed by a prepared mind but also put to a practical business use by the same or another person.

For example, in the 1940's, on returning home after walking his dog in the mountains, Swiss inventor George de Mestral noticed that his dog and his pants were covered with seeds called 'burrs'. On taking a closer look at the seeds under the microscope, he recognized the potential for a new fastener

based on the natural hook-like shapes on the surface of burrs. Initially, his idea was met with resistance. But he persisted in refining his invention by trial and error over eight years. He finally realized that nylon when sewn under infrared light formed tough hooks for the burr side of the fastener. He perfected his invention while working along with a weaver from a textile plant in France and patented it in 1955. Eventually, he had developed two strips of nylon fabric, one containing thousands of small hooks, just like the burrs, and the other with soft loops, just like the fabric of his pants. When the two strips were pressed together, they formed a strong bond, but one that's easily separated, lightweight, durable, and washable. This is how Velcro was born. The inventor went on to establish Velcro Industries to manufacture products that were based on his patented invention.

More Reference 1-2: Improving functionality of a product

1. Definition of functionality

'Functionality,' that is, technical functionality, may also be described as a useful feature or a performance attribute of an invention, technology or product.

Such a feature may be in a new or improved material, machine, apparatus, testing or measuring equipment, component of a product, product, or a method or process for making any of these. It could also be a new use of an existing material or a new combination of prior known but separate features that produce an unexpected new result.

So, broadly speaking, technical functionality of a product refers to its ability to perform a utilitarian process, task or activity. For example, it may provide greater comfort in use, be easier to digest, safer to use, or superior to other products in terms of ease of disposal, maintenance, repair, storage, transport or use.

2. Inventions made by improving functionality of a product

Any one or more of such type of functional characteristics may differentiate one product from another.

For improving or creating these types of functional features you would generally need one or more new or improved inventions which may be incorporated into one or more new or improved technologies.

More Reference 1-3: Sources of inventions

1. From in-house R&D facilities

If your business has some in-house research and development (R & D) capability, then it would be creating new or improved technology or adapting existing technology to meet your emerging needs.

2. From the marketing and sales side

Even if your business has no formal R & D facilities, yet some of your employees on the shop floor may be inventing, often without realizing it, while copying competing products or when required making adaptations to your existing products for a variety of reasons. Inventive ideas may come from any part of the company. A particularly good place to find inventions is on the marketing and sales side, who is in touch with the market trends and emerging needs of customers, and may come up with technical solutions to such needs.

3. From outside of the company

However, even when you have in-house R & D capability, there are many situations in which you may have to look for inventions or technology from outside your company.

a. Free source

Sometimes, you may get it free, for example, from the numerous, free, and easily available online patent databases, which include a lot of technologies that were either not protected at all in your market or by now their patent protection has lapsed or expired. As the information contained in a patent is free for anyone to use, both directly and indirectly, depending on the patent's legal status, therefore, you must always try this route, before developing it in-house and before looking around to buy it from outside.

Most patent savvy businesses skillfully use patent databases, for example, to identify opportunities for adapting or acquiring patented inventions, or technologies. Also, mining a patent database may provide you with a solid basis for developing new ideas and concepts. However, the availability of useful information in patent databases depends on the nature of your business or industry, as some areas of

technology have much more patent activity than others.

b. Licensing

But really useful new or improved technology is generally not available free of charge. In order to get useful inventions, you may have to buy or license it from others that are willing to do so on mutually acceptable terms and conditions.

More Reference 1-4: Identifying inventions

In order to get a Patent, first, you have to identify an invention. If you are an inventor-entrepreneur then it may be easier for you to identify an invention than if it were made by one or more of your employees in R & D or by a shop floor worker who is responsible for making improvements or adaptations to some machine or process in your manufacturing facility or by someone in the marketing department of your business. In fact, you may be surprised to know that not all inventions of great business merit result from expensive R & D that relies on high-tech equipment and considerable expense of time, knowledge, skill and other resources. Often, technicians and other shop floor workers, and sometimes even your staff responsible for marketing may make significant contributions to development of an invention to satisfy an identified market need. In other words, anyone in your own business or vendors, suppliers, and other business partners may come up with new ideas and concepts and help you to reduce it to practice

2. Reasons for patenting an invention

(1) Competitive edge, market power and earning more money

When you are able to use a patented invention embodied in a technology in your business, it is likely to improve your market power, provide your business with a competitive edge, and help you to make more money.

A patent provides protection when you disclose your invention publicly. For example, it would enable you to go to a fair, exhibition, or an industry trade show and display it without fear. It also enables you to go to a wholesaler or distributor and say with confidence that no one else in that market is

allowed to make, sell, use or distribute your new or improved product without your express approval. This may either diminish, or eliminate competition. If that happens there would be typically increased sales, and if marketed properly, you may be able to charge a higher price because your competition is barred from offering an equal product. So, whenever you are able to use a patented invention embodied in a technology in your business, it is likely to improve your market power, provides your business with a competitive edge over competitors, and help you to make more money.

(2) Add New Revenue Stream

You may be able to add a new revenue stream by licensing a patent, or better still, a portfolio of your patents.



(3) Raise funds and attract potential investors

- a. Patents may be bought, sold or licensed.
- b. Patents may also serve as collateral for bank loans.

Patents may attract potential investors to your company, as they are happy to see some type of barrier to entry for competitors, which may not only protect your investments in R & D and, thereby, improve the return on your investments, but also may provide income through licensing of your patents to others.

Most venture capitalist, investment bankers, financial analysts, and other investors favorably recognize the value of a patent.

(4) Bargaining Chip for Securing “Freedom to Operate”

A patent application, a patent or a portfolio of patents, is not only an asset for earning licensing revenue, but it is also often a valuable trading or cross-licensing asset if your patent is faced with a dominating senior patent and/or complementary patents. It can also be used as a bargaining chip during licensing negotiations with a competitor or when you are accused by another of patent infringement. Generally, when such negotiations result in a stalemate, the two sides agree to cross-license their patent portfolios to each other, with little or no need for exchanging money.

So, a company, such as yours, may wish to obtain patents simply to defend itself against your competitor's patent portfolio, even though you may not want to take, or be capable of taking, any offensive action by relying on your patent portfolio. In other words, it improves your freedom to operate in the marketplace. The principal goal of a defensive IP strategy should be to obtain the freedom to market planned products. This process requires the identification and neutralization of any patent infringement risks.

(5) Selling the invention

Having a patent means you have a tradable asset which can therefore be sold. Generally, a large company will not agree to even talk to you unless one or more patents protect your technology or at least you have filed a patent application to protect your invention. It could be that your talks with a potential buyer end in failure. If that happens, you may need a way to stop such a party from stealing your idea, especially if a confidentiality agreement had not been signed or, even if such an agreement had been signed, if the other party acts in breach of it. Having a patent and thus the right to exclude the others enables you to take preventive action

(6) Strategic Partnerships, Mergers and Acquisitions, IPO, and Higher Sale Price

A patent or a patent portfolio may provide substantial value for entering new markets through strategic partnerships, or in mergers and acquisitions, and for getting a start-up company listed on the stock exchange through a good initial public offering (IPO) or for getting a higher sale price of an established company.

In fact, one of the most valuable assets that a technology company could have is a portfolio of patents consisting of patents that may be owned, co-owned or licensed from others.

(7) Convoyed sales

When a customer goes to a shop to buy one item, he often ends up buying other related items. Similarly, when a customer is attracted by a patented improvement of a product, increased sales of non-patented articles may follow. This happens when the patented product is a component of a more complex product or the patented product is sold in association with other products. These types of linked sales are known as add-on, collateral, derivative, follow-on or convoyed sales.

(8) Basis for Recognition and Rewarding Employees

A patent allows you to recognize or reward the tangible achievement to your inventor-employees.

(9) Part of Branding and Marketing Strategy

Not only employees, but also your product or even your whole business could use a patent or a portfolio of patents to signal higher technological capabilities, greater innovative abilities and superior performance, in your advertising, marketing and branding strategies.



More Reference 1-6: Role of Patent

An invention, by itself, is not like physical property that we own. But when a patent is used to protect an invention, the act of patenting makes it a kind of private property that the owner can control. But, in some respects, the rights in a patent are comparable to those of a title deed of a piece of land. A patent confers on its owner a legal right, as in the case of land, to stop all others from trespassing on the invention, just like the owner of a piece of land has the right to stop trespassers from entering, using or occupying his land.

However, unlike a title deed of land, a patent gives its owner not the right to use the protected invention but to prevent or stop all others from using it. The reason for this is that the invention could be based on a concept which was itself patented by someone else, and that other patent is still legally valid. In other words, this situation is the result of a patented invention being further improved in a novel and non-obvious way that becomes another patentable invention. So, while the boundaries of two distinct pieces of land never overlap, those of two patents may overlap.

In other words, a patent provides its owner a 'right to exclude' others but not a 'right or freedom to use' the patented invention. So, a patent gives its owner only an exclusive right to prevent or stop others, from making, using, offering for sale, selling or importing a product or process.

More Reference 1-5: Basics of a Patent

1. Definition

A patent is an exclusive right granted by a government for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem.

2. Criteria for granting a patent

In order to be patentable, an invention must meet the following three criteria:

- a. It must be new;
- b. It must involve an inventive step(that is, non-obvious to a person skilled in the relevant field of technology); and
- c. It must be capable of industrial application.

3. Period of Patent

A national or regional patent office grants a patent. Once granted, it can remain legally valid for a maximum period of 20 years that commences from the date on which the relevant patent application was filed, provided the periodic maintenance fees are duly paid during this period and the patent is not revoked or declared invalid by a court.

4. Territorial principle

A patent is a territorial right, thus it is limited to the geographical boundary of the relevant country or region for which it has been granted. For obtaining patent protection in other countries or regions, many patent applications may have to be filed at the relevant national or regional patent office in the legally prescribed time limit.

5. Use of Patent

Like the owner of any other private property, a patent owner has the right to prevent others from using it, abandon it, sell it, that is, assign it for a fee or free (gift), and allow one or many others to use it, while retaining its ownership, by 'licensing out' the patent for one or more specified purposes, during a specified time period, in one or more specified jurisdictions. Licensing is always done for a valid consideration that may be in cash or kind, as may be mutually agreed and specified in a written and formally signed license agreement.

LEARNING POINT 2: Patent application

1. Evaluating the patentability of an invention

You are under no obligation to conduct a prior art search before filing a patent application, and indeed, not all applications are preceded by such a search for want of time or lack of access to patent search facilities for cost or other reasons. For example, you may have no time to do so, if you identify patentable inventions only during a patent clearance procedure just prior to the

launch of a product in the market. Nevertheless, if you are able to do a prior art search it may help you to decide whether or not to file a patent application, and whether or not to make further improvements to the invention for getting a stronger patent. You may do a prior art search in-house, by using free on-line patent and non-patent databases and other paper-based sources of prior art. Or, if you can afford it, you may use the services of a fee-based value-added patent search service provider.

More Reference 2-1: Factors to be considered

1. When you evaluate the patentability of an invention, you would have to consider the following factors.
2. Is there a market for the invention, the technology or products incorporating it?
3. What are the alternatives to the invention, and how do they compare with your invention?
4. Is the invention useful for improving an existing product or developing a new product? If so, does it fit in with your company's business strategy?
5. Are there potential licensees or investors who will be willing to take the invention to market?
6. How valuable will the invention be to your business and to competitors?
7. Is it easy to "reverse engineer" your invention from your product or to "invent around" it?
8. How likely are others, especially competitors, to invent and patent what you have invented?
9. Do the expected profits from an exclusive position in the market justify the costs of patenting?
10. What aspects of the invention can be protected by one or more patents, how broad can this coverage be and will this provide commercially useful protection?

11. Will it be easy to identify infringements of the patent rights and are you ready to invest time and financial resources for enforcing your patent(s)?

2. Deciding whether to patent an invention

Be fully involved in the making of a decision as to whether it would be better off for the business to keep the invention as a trade secret or to go ahead with patenting it. This decision should not be left entirely to engineers or legal advisers, as they may not have the necessary broader view of the business goals to make a good decision.

To keep an invention secret or confidential, take all practical measures that are considered reasonable under the circumstances to ensure that information about the invention is given only to those employees who may need to deal with it and who are under a duty to keep confidentiality. This would minimize the chances of accidental or inadvertent disclosure of information to competitors and to your own employees who need not know about it. Keeping secrecy is crucial as once a trade secret is lost, it cannot be retrieved in most countries.

In some countries, utility model is another option that you may be able to consider before applying for a patent.

Learn more: Utility model

Some of the characteristics of utility models are:

1. The conditions for granting utility models are less stringent, as the "inventive step" requirement may be lower or absent altogether;
2. Procedures for granting utility models are generally faster and simpler than for patents;
3. Acquisition and maintenance fees are generally lower than those applicable to patents;

4. The maximum possible duration of utility models is usually much shorter than it is for patents;
5. Utility models may, in some countries, be limited to certain fields of technology and may only be available for products (not for processes); and
6. Usually, a utility model application or a granted utility model may be converted into a regular patent application.

There may be a third option of defensive publication. You may publish your invention if you do not consider it worthwhile to patent and if, at the same time, you would like to prevent all others from patenting it.

3. Preparing a patent application

(1) Detailed description of the invention

The detailed description must include:

- a. Detailed technical information about the features of the claimed invention;
- b. How the invention can be made or carried out; and
- c. Its application in industry or commerce.

More Reference 2-2: Main parts of a patent application

A patent application has many parts, such as the title, bibliographic information and an abstract. But, from our current purposes, the two most important parts of a patent application are the detailed description of the invention and the 'claims' which are usually at the end of the specification. The description discloses the invention in clear and precise terms.

Often, it is necessary to illustrate the new ideas or concepts by examples to explain how to work or carry out the invention in practice so as to enable a person skilled in the relevant field of technology to understand the claimed invention and use the technical information contained in the patent specification

to practice or repeat the invention without having to do undue experimentation. At the end of every patent specification, there are one or more numbered definitions, referred to as ‘claims’, which define particularly and distinctly the invention. Each claim is a single-sentence with a list of elements (or a list of steps in a method or process claim) and explains how they cooperate. Usually, most of the individual elements of a claim are old! What is new may be only the claimed combination of old elements or some old and some new elements. Also, in some countries, a claim may define a new use of an old product. It may also define a simplification of a known product or process.

(2) Claims

a. Role of claims

The claims demarcate in words the boundary of your invention. Claims are the heart of a patent, even though the description is important, and sometimes the drawings may also be important.

For example, the claims demarcate in words the boundary of your invention, just like a picket-fence defines the extent of land covered by a deed for a piece of land. If the description includes some features that are not covered by the claims, then all such features are not protected by the patent. That is, all such features become a part of the ‘prior art’ that may be used by others without your permission, and you would not be able to do anything about it.

b. Independent claims and dependent claims

Of the multiple claims in a patent, at least one or more are independent, while the rest are dependent. An independent claim is completely self-contained, whereas a dependent claim refers to one of earlier independent or dependent claims and is considered to include all of its own limitations as well as those of any one of the claims to which it refers.

It is important to note that an invention may be covered by one or more claims of a prior patent, and may still be patentable.

More Reference 2-3: Understanding Claims

1. Definition

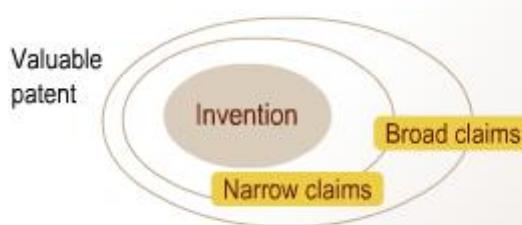
The description explains in detail how to make and use the invention, whereas the claims define the scope of legal protection.

2. Rules of drafting claims

One cardinal rule to follow while drafting claims is to use the smallest number of words. So,

a broad claim will have normally few parts; and the parts that are listed are defined broadly. A narrow claim will have more parts, or parts that are defined in a more restricted way. A broad claim is more likely to be infringed than a narrow claim.

However, a narrow claim, while less likely to be infringed, as it may permit competitors to easily ‘invent around’ it to enter the market with alternative features, is more likely to be held valid by a court.



(3) Who prepares

Generally, drafting a patent application is a time consuming, complex and expensive process, for which you need a good grasp of technical knowledge of the relevant field(s) of technology, a sound understanding of the applicable patent law or laws, and also of applicable court decisions. If you are not well versed with all of these, then you are strongly advised to use the services of a competent patent agent or attorney for preparing, filing, and prosecuting the patent application at the patent office. By doing so, you are more likely to get a commercially useful patent that is capable of meeting all of your business objectives.

(4) After filing a patent application

Once your patent application has been filed and the prescribed fees, if any, has been paid to the patent office, which is an office created by

government under the relevant patent law, the patent office begins the process of examining it. The detailed procedure of a patent office depends on the provisions of the relevant national or regional patent law. It varies a lot from one patent office to another. Broadly speaking, it has the following features.

a. Formality examination

First, a patent office examines the application to check if it has complied with all the administrative requirements or formalities. If not, then you are notified the deficiencies which must be addressed adequately in the time indicated by the patent office.

b. Substantive examination

Next, the patent examiner checks to see if the national or regional patent law does not exclude from its purview the subject matter of the patent application or considers the patent, if granted, to be contrary to public order or morality.

Some patent offices do not do any further examination. But most national and regional patent offices, especially the big ones, also do a fairly complete substantive examination to check if the patent application meets all the three basic conditions for patentability, namely, (1) novelty, (2) inventive step or non-obviousness, and (3) industrial applicability.

This process begins by undertaking a search of the relevant prior art that is accessible to the patent examiner. Often, while doing so, the patent examiner may seek clarifications or raise substantive objections that must be adequately answered by you, or your patent agent or attorney within the prescribed time frame. You may provide oral or written arguments or provide documentary evidence in support of your contentions while discussing or negotiating with the patent examiner. If you are unable to satisfy the patent examiner, then some of the claims may be narrowed in scope, other claims may be deleted, or if all claims are rejected then the patent application itself may be rejected by

the patent office. Depending on the applicable patent law, you may file an appeal against the decision of the patent examiner to a Board of Appeal in the patent office or to a competent court in law.

If you agree to the grant of a patent with narrower claims than what were originally drafted, then it is important to ensure that the description of the invention is reviewed and revised to exclude all information that is no longer required to be disclosed in these changed circumstances. Otherwise, in due course, when the patent application or the patent is published, you would find that you have inadvertently allowed some of your valuable trade secrets to be lost through such publication, as only the information covered by the granted claims is protected by a patent.

c. Grant of Patent

When a patent application is accepted for grant, then, depending on the applicable patent law, it would be published in the official journal of the patent office for inviting objections from the public (which is called ‘pre-grant opposition’). Objections to grant of the patent must be filed by any aggrieved party during the specified period of time. Or, it may be published as granted with or without any pre-grant opposition, depending on the applicable patent law, and then allow post-grant opposition by aggrieved third parties. If the opposition succeeds partly then the patent may still be granted but with narrower claims that may not serve your purpose. If it fails, then you would be granted a patent and a certificate of grant would be issued and the granted patent published in the official journal or gazette of the patent office.

d. Publication

To get such useful rights as mentioned above, the applicant for a patent is required to disclose the claimed invention by providing its detailed, accurate and complete written description in the patent specification filed at the patent office. This description is initially kept secret but is

eventually disclosed to the public by the patent office. Publishing it in an official journal or gazette brings it the notice of the entire world, so to say. In a very large number of countries, an unexamined patent application is published after 18 months of the date of filing the patent (priority) application. All patent offices publish the patent at the time of its registration or grant.

Learn more: Pre-grant opposition & Post-grant opposition

1. Pre-grant opposition

In some countries, the grant of patent may be opposed by filing a pre-grant opposition. If the opposition is successful, then the patent may not be granted or the scope of the claims may be narrowed from what was requested.

2. Post-grant opposition

In other countries, the grant of patent may be opposed by filing a post-grant opposition. If the opposition is successful, then the granted patent may be invalidated or the scope of the claims may be narrowed from what was granted.

In some countries both options may be possible.

LEARNING POINT 3: Patent infringement

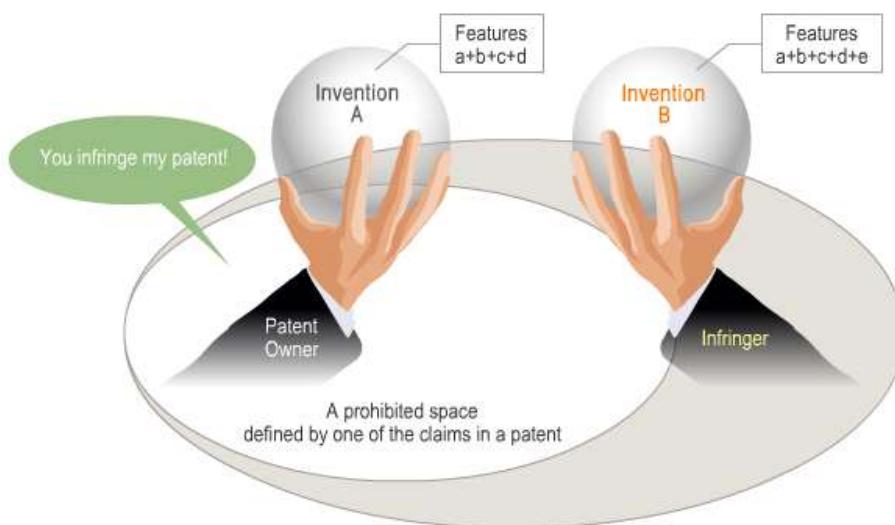
1. Definition of patent infringement

A patent owner has the right to exclude all others from using the patented invention, and any one who practices the invention without the owner's consent, infringes his rights.

By exactly following the details as revealed in a patent you would infringe on a patent, unless what you do is exempted as being an experimental or research use. But copying from a patent is not the only way for a business to violate a

patent. In fact, whether knowingly or unknowingly if you have incorporated a patented invention or practiced or incorporated an invention sufficiently similar to a patented invention, then you may be also hauled up for patent infringement. A patent owner can legally stop your business from using the patent, and also sue for damages. In many situations, an injunction may be equally or more costly than any potential damages levied by a court in due course. This may happen when you have a big inventory that must be destroyed and the retooling costs for modifying your production process.

So, technically speaking, patent infringement means others have entered a prohibited space defined by one of the claims in your patent. As we discussed earlier, a patent provides its owner with the right to prevent or stop others from making, using, selling or importing the patented product without the owner's permission for a period of 20 years calculated from filing date of the earliest relevant patent application. Therefore, the original patent owner or his assignee may enforce his right in a patent. If a product in question physically has or performs all of elements contained in your patent's broadest claim, then it would infringe your patent and you can take legal action against its manufacturer or distributor or retailer. Let's look at a simple case:



Learn More: All Elements Rule

If the accused invention has all elements of the claims of the patent, it falls under the infringement. Since the elements described in the claims are organically combined, if some of the elements of the claims are missing in the accused invention, basically the infringement is not recognized.

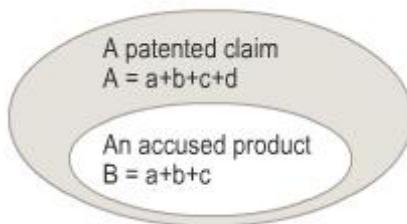
Example

Let's suppose that your patented product is "A" and your competitor's product is "B", and "a", "b", "c" and "d" indicate the elements of a patented claim.

1. Case 1

Product "A" has features covered by a claim having elements "a + b + c + d."

Product "B" has features covered by elements "a + b + c."

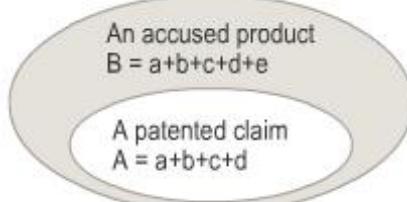


In the above case product "B" does not infringe "A", because "B" does not include element "d" of the claim of the patent covering product "A"

2. Case 2

Product "A" has features covered by a claim having elements "a + b + c + d."

Product "B" has features covered by elements "a + b + c + d + e."



In this case, product "B" would infringe patent covering product "A", because "B" has features that are covered by all the elements of the patent protecting product "A," even though it has an additional element "e."

2. If you come across your competitor's patent

If you come across a new or improved product of your competitor that is protected by a patent, then you may have no option but to deal with it especially if it is relatively easy for your competitor to find out that your product is infringing his patent, the competitor is known to take prompt legal action on discovering infringement, and the competitor has access to a good patent lawyer. Firstly, carefully go through the competitor's patent and the relevant prior art to determine whether your product would actually violate the patent rights of the competitor.

If yes, then examine whether it is possible for your company to invent around such a patent easily and quickly by, for example, eliminating some essential element or replacing an essential element by other elements with a different function. The basic legal test for infringement of a patent is whether your product uses every element of a granted claim in the patent. If you manage to develop a product that does not include at least one of the claimed elements of the competitor's patent, then you have not infringed it. In fact, you may instead have a better product, which may ultimately dominate the marketplace, and, of course, a patentable invention of your own. If you cannot find an element that you can eliminate in a competitor's patent, try to find an element that may be changed to function differently even though it may be the structurally the same or equivalent.

If you cannot design around the patented invention, then examine whether you have some key strength or assets that your competitor would like to have access to, so that you may be able to leverage it to enter into a strategic business partnership or an arm's length licensing arrangement with such a competitor. If you don't even have this option then be prudent and do not risk introducing such a product in the market.

If the patent owner does nothing about the violation of his patent right in the marketplace, competitors will sooner or later attempt to make similar or identical products. In some cases, competitors may benefit from economies of scale, greater market access, or access to cheaper primary resources, and therefore be able to make a similar or identical product at a cheaper price, putting heavy pressure on the innovator of the original product. On occasions, this may erode only profits or drive the original innovator out of business because, usually, the duplicated product may dominate the market and attract customers more than the original one.

More Reference 3-1: Enforcing your patent

The main responsibility for identifying, monitoring and taking action against imitators or infringers of a patent lies with its owner.

The remedies available to a patent owner include:

1. Injunction

A court order requiring an entity to stop doing a certain act. For a company an injunction may mean an order to stop selling its product deemed to be infringing.

2. Damages

Damages are typically based on lost profits or established royalties, but in no event shall be less than a reasonable royalty for the infringers' use of the patented invention.

Learn more: Alternative to Litigation: Arbitration or Mediation

In some countries, litigation has become an increasingly common tool for protection of patent rights, encouraged by such staggering damage awards. However, patent litigation is normally best avoided by companies, big or small. Instead of a lawsuit, if both parties agree, the entire infringement dispute may be settled through negotiations in the form of mediation or arbitration.

An advantage of mediation is that the parties retain control of the

dispute resolution process. As such, it can help to preserve good business relations with another enterprise with which your company may like to collaborate in the future. Arbitration generally has the advantage of being a less formal and shorter procedure than court proceedings, and an arbitral award is more easily enforceable internationally.

More information on arbitration and mediation can be found at:
<http://www.wipo.int/amc/en/center/index.htm>

LEARNING POINT 4: Patent management system

1. Basic elements of a patent management system

(1) Creating a company-wide intellectual property culture; create and implement a trade secret protection program

- a. The key to a successful trade secret protection program are:
 - Systematic implementation;
 - Creating proper awareness and providing adequate education or training to all employees about the program; and
 - Key employees must be expressly bound by a duty of maintaining confidentiality.
- b. A trade secret protection program must be periodically audited for its effectiveness, so as to protect all potentially useful commercial or technical information of the company.

(2) Implementing an invention program, invention disclosure program and maintaining an inventory

- a. Invention program

This program includes procedure that allows the systematic identification

and documentation of new and creative ideas for developing a patent management strategy.

b. Invention disclosure program

A company should have an incentive or reward system to encourage employees to submit their inventive or creative ideas in writing, for which an invention disclosure form may be prescribed.

c. An inventory

Creating and maintaining an inventory is a prerequisite for developing a patent strategy. The major categories of information in this inventory would include:

- Invention disclosures,
- Defensive publications,
- Trade secrets,
- Patent applications,
- Granted patents,
- Patents licensed in or licensed out,
- Disputes and litigation concerning inventorship and patents.

(3) Systematic review of all invention disclosures

To get a valuable patent, every invention must be reviewed systematically by an invention review committee that includes representatives of legal, R&D, manufacturing and marketing departments, apart from the patent agent or attorney.

Keeping the business objectives and financial resources in mind, the committee may decide to keep it a secret, put it in the public domain to prevent others from patenting it, develop the invention further before taking a decision, or give the green light to proceed with the drafting of a patent application to file a provisional or regular patent application.

(4) Making sure that the company, not the employees or contractors, owns inventions and patents.

The fact that you have the invention in your possession or you paid for its development does not mean you own it. Often, problems arise when a company does not take adequate and timely steps to ensure assignment of property rights from its employees or independent contractors that worked on creating or improving an invention.

Employment agreements should require all employees to assign any inventions, improvements, new ideas or concepts developed by an employee. So, before filing a patent application, make sure that the company owns the invention. In case this was not done before filing a patent application, then do so as early as possible.

(5) Monitoring patenting activities of current and potential new competitors

Monitoring the patent activities of competitors has many benefits such as the following:

- a. It may enable you to identify and monitor potential competitors and the likely risk of infringing their patents at an early stage in relation to your company's new or improved product under development.
- b. It may help to determine the strength and direction of technological evolution of your competitors much before they introduce a new or improved product on the market and to steer your own R & D priorities accordingly.
- c. It may show whether a competitor has patent of dubious quality or if there is scope of doing R & D to surround the key patents of the competitors where they are unprotected or insufficiently protected.
- d. It may enable you to identify and monitor other people's patent

applications, which you may wish to challenge in opposition.

(6) Evaluation and valuation of patents

- a. For a company to make the most of its patent or portfolio of patents to be valuable, the following issues need to be considered:
 - It must own or have access to the right patents; so, either the company should itself invent and patent what it needs for making new or improved products or it should have the means to buy or license patents owned by others.
 - It must have big enough markets and also enough revenues, funds or partners to enforce its patent rights.
 - It needs to execute successfully its patent exploitation strategy.
- b. For a patent or portfolio of patents to be considered productive, it must accomplish at least one of three goals of the company:
 - It must be needed to shape or execute the corporate strategy
 - It must help in maintaining or establishing a marketing advantage,
 - It should generate royalty revenue or prevent payment of royalty revenues to others

(7) Monitoring and enforcement program for patents

As the rights granted by a patent include the power to prevent or stop competitors from making products that infringe on the patent, therefore, the company must develop and implement a monitoring program to cover competing products of competitors, and also monitor the activities of ex-employees who work for a competitor or run their own companies.

a. Enforcement program:

A primary objective of a patent enforcement policy and strategy should be to prevent or resolve disputes through private negotiations, that is, without going to court.

Activities aimed at preventing or resolving disputes early must also include:

- Keeping a systematic watch over the relevant activities of current and potential new competitors at the relevant patent offices, at home and abroad, and filing oppositions in appropriate cases during the patent grant process.
- Using mediation and/or arbitration, whenever possible, to resolve patent disputes out of court or to reduce the issues that may have to be taken to court.

(8) A patent licensing program

If on periodically analyzing each patent or portfolio of patents to identify possibilities for licensing patents to others, on mutually agreed terms and conditions, a company finds that it has enough such patents then it must create an in-house licensing program or use the services of outside licensing professionals for doing so.

Many companies with large patenting programs have been successful in creating large revenue streams from licensing. A good example is IBM, which reportedly has earned over a billion dollars every year through its patent licensing activities in the recent past.

(9) Assigning responsibility at a high level or in a suitable committee

To ensure integration of the business strategy of a company with its patent strategy, create an intellectual property committee and, if need be, a separate patent committee that includes senior business and technical employees.



For the senior management to play this important role of ensuring coherence between technology and business development goals of the company, they must be educated about intellectual property risks and avoidance of those risk so that not just patent but holistic intellectual property policies are incorporated into the new or improved product planning process from the very beginning.

The patent committee may include inside or outside patent counsel to provide legal input and guidance for meeting its strategic objectives. In addition, it should have adequate representation of all types of competence in the company, especially, legal, R & D, technical and marketing.

(10) Funds and human resources for running a patent management program

To effectively implement the activities of a company's patent program, adequate funds are needed for a wide variety of purposes, such as, hiring the services of patent agents, patent lawyers, and licensing experts, using a patent watch service, accessing on-line patent databases, subscribing to non-patent literature and publications, buying software for managing the in-house patent database, recruiting qualified personnel and their periodic training.

2. Patent portfolio

One would like to think that one patent would or should be sufficient. But it is often the case that a single patent does not suffice. A single product of a

company may be protected by many patents where a core patent may be surrounded by a number of less important patents or different features of a product may be protected by one or more patents covering each of the features.

QUIZ

Q1. Identify the incorrect statement:

- 1) Inventions are protected and leveraged by the patent system to protect a company's products, to generate revenues and/or protect its R&D investments in the marketplace.
- 2) In order to get useful inventions, you may have to access it from others who are willing to provide it by licensing it to you on mutually acceptable terms and conditions.
- 3) Inventions are made by a flash of genius and involve great scientific discoveries or great technical developments.
- 4) Inventions maybe also created by employees on the shop floor, by people in marketing, sales and design, and not only by highly qualified engineers in multi-disciplinary, high-tech laboratories.

Answer: 3)

Most people seem to think that inventions are made by a flash of genius and involve great scientific discoveries or great technical developments. Although this is occasionally the case, many famous inventions involved no great scientific discovery, or represented only a modest advance in fundamental technology and were made by ordinary people working alone or in a small company. Most inventions are the result of practical analysis of a technical problem. The standard employed to determine patentability is a legal standard and not a technical standard.

Q2. Identify the incorrect statement:

- 1) A patent is granted by a notional office or regional office and has no effect beyond the national or regional boundary of the country or countries concerned.
- 2) A patent confers on its owner the rights to make, use, offer for sale, sell, license and import a claimed invention.
- 3) A patent is valid for a maximum period of 20 years, counting from the filing date of the application or from the date of an earlier related application.

- 4) A patent owner may assign or transfer the patent or conclude licensing contracts.

Answer : 2)

A patent is like a deed of land, which confers the right to prevent others from trespassing on the territory delineated by picket fences. However, unlike a deed to land, a patent gives its owner the right not to occupy the land but to trespass on the land in the picket fence. That is, a patent shall confer on its owner the exclusive rights to prevent others from making, using, offering, for sell, selling or importing a defined invention. Therefore, a patent owner can exercise the freedom to operate his patented invention as long as it does not infringe other patents.

Q3. Identify the incorrect statement

- 1) A patent application must provide detailed technical information about the features of the claimed invention;
- 2) An applicant must not disclose in a patent application how the invention can be made or carried out;
- 3) A patent application must indicate how the invention may be applied in industry or commerce
- 4) By reading a patent application a person with ordinary skills in that field of technology must be able to practice, use or reproduce the invention without having to do undue experimentation.

Answer: 2)

A key reason for the grant of a patent is as an incentive for the disclosure of new technical knowledge. Therefore, the details of an invention are published in the official gazette or journal either 18 months after the date of filing the patent application and/or soon after the patent is granted. Thus wide dissemination of the new technical knowledge is ensured spurring further technical advancement