Building a Competitive Edge – Protecting Inventions by Patents / Utility Models

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Inventing the Future, An Introduction to Patents for SMEs, WIPO

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Patents

Invention - Patent

- Invention:
  - a product or process, which is
  - novel,
  - involves an inventive step (non-obvious), and
  - is industrially applicable (useful).

- Patent:

  It consists of a set of excusive rights granted by a sovereign state to an inventor or their assignee for a limited period of time in exchange for the public disclosure of an invention.
  - Territorial right
  - Protection for 20 years from the filing date
  - Exclusive right to prevent others from making, using, selling or distributing the invention

Why should you consider patenting

- **Strong market position and competitive advantage.**
- **Higher profit or returns on investment.**
- **Additional income from licensing or assigning the patent.**
- **Access to technology through cross-licensing.**
- **Access to new markets.**
- **Diminished risks of infringement.**
- **Enhanced ability to obtain grants and/or raise funds at a reasonable rate of interest.**
- **A powerful tool to take action against imitators and free riders.**
- **Positive image for your enterprise.**

Is it wise to apply for patent protection

- **Are there potential licensees or investors who will willing to help to take the invention to market?**
- **Is it easy to "reverse engineer" your invention from your product or "design around" it?**
- **Do the expected profits from an exclusive position in the market justify the costs of patenting?**
- **Will it be easy to identify violation of the patent rights and are you ready to invest time and financial resources for enforcing your patents?**

Patent vs. Trade Secret: Advantages

- **Trade secrets involve no registration costs**
- **Trade secret protection does not require disclosure or registration with a government office and the invention is not published**
- **Trade secret protection is not limited in time**
- **Trade secret have immediate effect**

Patent vs. Trade Secret: Disadvantages

- **If the secret is embodied in an innovative product, others may be able to "reverse engineer" it, discover the secret and, thereafter, be entitled to use it**
- **Trade secret protection is effective only against improper acquisition, use or disclosure of the confidential information**
- **If a secret is publicly disclosed, then anyone who obtains access will be free to use it**
- **A trade secret is difficult to enforce, as the level of protection is considerably weaker than for patents**
- **A trade secret may be patented by others who may independently develop the same invention by legitimate means**

What can be patented

- **Consists of patentable subject matter**
- **Is new (novelty requirement)**
- **Involves an inventive step (non-obviousness requirement)**
- **Is capable of Industrial application (utility requirement)**
- **Is disclosed in a clear and complete manner in the application (disclosure requirement)**

Patentable subject matter

- **Examples of some of the areas that may be excluded from patentability**
- **Discoveries and scientific theories**
- **Aesthetic creations**
- **Mere discoveries of substances as they naturally occur in the world**
- **Inventions that may affect public order, good morals or public health**
- **Diagnostic, therapeutic and surgical methods of treatment for humans or animals**

New or Novel

- **An invention is new or novel if it does not form part of the prior art.**
- **Prior art: all the relevant technical knowledge available to the public anywhere in the world prior to the first filing date of the relevant patent application**
- **Prior art definition: any information disclosed to the public anywhere in the world in written form, by oral communication, by display or through public use**
- **Acts that could destroy the novelty: the publication of the invention in a scientific journal, its presentation in a conference, its use in commerce, its display in a company's catalogue**

Grace Period

- **The legislation of some countries provide “grace period” of 6 or 12 months, from the moment an invention was disclosed by the inventor or the applicant until the application is filed, in which the invention does not lose its patentability because of such disclosure.**

Inventive step

- **When taking into account the prior art, the invention would not have been obvious to a person skilled in the particular field of technology.**

- **Ensure patents are not granted to developments that a person with ordinary skill in the field could easily deduce from what already exist.**

- **Example: mere change of size, making a product portable, the reversal of parts, the change of materials, mere substitution by an equivalent part of function**

Capable of industrial application / Disclosure requirement

- **An invention must be useful and provide practical benefit.**

- **A patent application must disclose the invention in a manner sufficiently clear and complete for the invention to be carried out by a person skilled in the specific field.**

How to get a Patent

Where should you start

- **Perform a prior art search**

- **The importance of searching patent databases**

- The R&D activities of current and future competitors

- Current trends in a given field of technology

- Technology for licensing

- Potential suppliers, business partners or sources of researchers

- Relevant patents of others to ensure that your products do not infringe them

- Relevant patents that have expired and technology that has come into the public domain

- Possible new developments based on existing technologies

How to apply for patent protection

- **Patent application has to be prepared and submitted to the relevant national or regional patent office.**

- **Patent application**

  - full description of the invention
  - patent claims that determine the scope of the patent
  - drawings
  - abstract

Structure of a patent application

- **Request**

  - title of invention, date of filing, priority date, name and address of the applicant and inventor

- **Description**

  - must describe the invention in a sufficient detail so that anyone skilled in the same technical field can reconstruct and practice the invention from the description without putting in further inventive effort

- **Claims**

  - determine the scope of protection of a patent

  - In patent litigation the claim is generally the first step in determining whether the patent has been infringed.

- **Drawings**

- **Abstract**

Processing an application

- **Filing of Patent Application**
- **Formal Examination**
- **Publication of Application**
- **Search and Substantive Examination**
- **Grant and Publication**
- **Opposition Proceedings**

How much does it cost to patent an invention

- **Prior art search**
- **Official filing fees**
- **Patent agent/attorney**
- **Maintenance or renewal fees**
- **Patent abroad: relevant official filing fees, translation costs, patent agents**

Do you need a patent agent to file a patent application?

- **Legal or technical assistance is generally not mandatory it is strongly recommended**
- **Making a prior art search in order to identify any prior art that renders your invention unpatentable**
- **Writing the claims and full description of the invention**
- **Corresponding with the national or regional patent office especially during the substantive examination of the patent application**
- **Making the necessary amendments to the application requested by the patent office**

Patenting abroad

Why apply for patent abroad? When should you apply for patent protection abroad?

- **Territorial rights: If you are not been granted a patent with effect in a given country, enabling anybody else to make, use, import or sell your invention in that country.**

- **Priority date: the date of your first application for a given invention**

- **Any subsequent applications in other countries filed within 12 months will benefit from the earlier application and will have priority over other applications for the same invention filed by others after the priority date.**

Where should you protect your invention?

- **Where is the patented product likely to be commercialized?**
- **Which are the main markets for similar products?**
- **What are the costs involved in patenting in each target market and what is my budget?**
- **Where are the main competitors based?**
- **Where will the product be manufactured?**
- **How difficult will it be to enforce a patent in a given country?**

How do you apply for patent protection abroad?

- **The national route**

  - apply to the national patent office of each country of interest

  - by filing a patent application in the required language and paying the required fees.

- **The regional route**

  - when a number of countries are members of a regional patent system, use this route

  - example of the regional patent office: the European Patent Office

- **The International route: the Patent Cooperation Treaty**

  - By filing one international application, you may seek protection in the member countries of PCT

Commercializing patented technology

To take a patented invention to market

- **Commercializing the patented invention directly**

- **Selling the patented to someone else**
  - **assigning patent, it will permanently transfer ownership**
  - **receive an agreed-upon payment once, get the value immediately**

- **Licensing the patent to others**
  - **obtain the benefit of royalties for the remainder of the life of the patent**

- **Establishing a joint venture or other strategic alliance with others having complementary assets**

Licensing 1

- **Authorizing others to commercialize patented invention through a licensing agreement will enable you to obtain an additional source of revenue**
- **Licensing is useful if the company that owns the invention is not in a position to make the product or in sufficient quantity to meet a given market need, or to cover a given geographical area.**
- **Lump-sum payment, recurring royalties, combination of both**
- **Exclusive license: a single licensee has right, even the patent owner can not use the patent**
- **Sole license: a single licensee, patent owner have right to use the patent**
- **Non-exclusive license: several licensees and the patent owner have right to use the patented technology**

Licensing 2

- **Exclusive licensing: when the product needs one company to invest heavily to commercialize the product (for example, a pharmaceutical product that requires investments in performing clinical trials)**
- **Non-exclusive licensing: If a technology can become a standard that is needed by all players in a specific market to perform their business, widely held license would be the most advantageous**
- **Cross-licensing: where a number of patents covering a wide range of complementary inventions are held by two or more competitors**

- Such competing companies seek to ensure their freedom to operate by obtaining the right to use patents owned by their competitors while providing the right to use their own patents to the competitors

Enforcing patents

Why should you enforce patent rights

- **The exclusive rights granted by a patent give the patent owner the opportunity to prevent or stop competitors from making products and using processes that infringe on its rights and seek compensation suffered.**

- **Enforcing your rights when you believe that your patented invention is being copied may be crucial to maintaining your competitive edge, market share and profitability.**

- **As a patent owner, you are responsible for monitoring the use of your invention in the market place, identifying any infringers and deciding whether, how and when to take action against them.**

What should you do if patent is being used by others without authorization

- **As a first step, you need to collect information about infringement parties and their use of the infringing product or process.**
- **In some cases, when infringement is detected, companies choose to send a letter ("cease and desist letter") informing the alleged infringer of a possible conflict between your rights and the other company's business activity.**
- **Sometimes, surprise is the best tactic in order to avoid giving the infringer time to hide or destroy evidence.**

- It might be appropriate to go to court without giving notice to the infringer and to ask for an "interim injunction" in order to surprise the infringer by a raid, at his business premises.

What should you do if patent is being used by others without authorization

- **Where the company decides to initiate civil proceedings, the courts generally provide a wide range of civil remedies to compensate aggrieved owners of patent rights.**
- **In order to prevent the importation of goods infringing patents, measures at the international borders may be available to patent holders in some countries through the national customs authorities.**

The Function of the Claims

- **All essential integers must be taken before there can be an infringement of the claim**

- **AZUKO PTY LTD v. OLD DIGGER PTY LTD [2001] FCA 1079 [Australia]**

- Infringement requires that all integers of the claim be taken, with the exception of the substitution of a mechanical equivalent of an inessential integer.

- Populin v. HB Nominees (1982) 41 ALR 471 held that "the patentee must show that the defendant has taken each and every one of the essential integers of the patentee's claim. Therefore if, on its true construction, the claim in a patent claims a particular combination of integers and the alleged infringer of it omits one of them he will escape liability."

Interpretation and Infringement

- **The need for interpretation: In order to determine the scope of the claims, it is necessary to interpret them.**

- **WHIRLPOOL CORP v. CAMCO INC 2000 SCC 67 [Canada]**

- A patent must not of course be construed with an eye on the allegedly infringing device in respect of infringement or with an eye to the prior art in respect of validity to avoid its effect.

- Claims construction cannot be allowed to become a results-oriented interpretation.

Infringement Determination in US

1. **Determine the scope of the claims**

2. **Compare the elements of the claim to the composition or method accused of infringement using the "all elements" rule: every element required by the claim must be present in the accused composition or method either literally or**

3. **Under Doctrine of Equivalents**

4. **<u>Prosecution History Estoppel</u>**

Claim Construction

1. **Words of a claim are generally given their ordinary and customary meaning.**

2. **It is necessary to review the specification to determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning. The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication.**

3. **Prosecution History**

Infringement Example

- **The claim**

- An apparatus, comprising : A, B and C.

- **The infringing product contains**

- A, B and C : Infringement

- A and B : No infringement

- A, B and C' : Apply Doctrine of Equivalents

Doctrine of Equivalents in US

- **The doctrine of equivalents is an alternative theory of infringement available to a patentee. The Doctrine may expand a patent claim beyond its literal scope of coverage to encompass an accused product that does not literally infringe.**

- **The doctrine is based on the idea that an infringer should not be permitted to escape liability by merely changing insubstantial details of an invention while retaining the essential identity of invention.**

- **The Triple Identity Test : if it performs substantially the same function in substantially the same way to obtain same result.**

Prosecution History Estoppel in US

- **Prosecution History Estoppel is a limitation on the doctrine of equivalents. It may bar application of the doctrine when a claim is narrowed for any reason related to patentability.**

- **Where the original application once included a potential equivalent, but the patentee narrowed the claim to obtain the patent, the patentee generally cannot assert the surrendered equivalent in an infringement suit.**

- **A patentee cannot recapture what it gave up to succeed in obtaining a patent from the Patent Office.**

Thank You for Your Attention!

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