



# Patenting, Innovations and copyright



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# Patent

- A Patent is an exclusive right to exploit commercially a certain invention. The government grants the patent right to the applicant if certain terms stipulated by the patent law have been met:
  - Inventive step
  - Novelty
  - Industrial applicability

# Patent...

- Inventive step means that the invention is not obvious for a person skilled in the art. Novelty means that the invention has not been public available or not been published before. Industrial applicability means that the invention must be reproducible, i.e. whoever has necessary means can produce the invention according to the description of the patent application.

# Patent...

- A patent gives its proprietor an exclusive right to exploit the invention but only for limited time. Its maximum validity (in Finland) is twenty years from the application date, providing that annual maintenance fees are paid.

# Patent...

- Patent right covers only certain country, i.e. exclusivity is valid only in the country where the patent has been applied for and where the maintenance fees have been paid. The right must be sought literally from the national patent office (in Finland from the National Board of Patents and Registrations, PRH).

# Patent policy

- Patent policy is or it should be an essential part of a corporate business strategy. The aim is to protect products and company image against imitators and potential infringers. Also an important aim is to enter new markets and defend existing ones.

# Patent policy...

- Patent policy assists the company or the inventor to create barriers against possible competitors and to increase market share of a patented product.

# Why to apply for a patent?

- to obtain exclusivity for own product
- to gain foothold in the market from the competitors and to get time to develop further the company product
- the competitors must invest more money and capital to develop new competitive solutions
- a patent can be sold or a licence (right to use a patent against payments) can be sold
- pricing policy can be wider and more expensive (or more inexpensive) prices can be imposed
- patenting brings an image of high-tech company (optional, but often true)



# What can be patented?

- A patentable invention has not been defined in the patent law. The law only stipulates that a patent can be granted for an invention, which is industrially applicable. Furthermore, the invention must be new in comparison what has been public available before the application date and must be essentially different from it. Essential difference means inventive step, a solution which is not obvious for a person skilled in the art and not a mere combination of existing components. Final solution must be a novel and surprising combination in comparison to existing technology. All the inventions and discoveries are not patentable. A problem and its solution are crucial requirements for a patent.

# What cannot be patented?

- Unpatentable inventions are:
  - discoveries, scientific theories and mathematical methods,
  - artists creations, design of a carpet, a decorative product, i.e.
  - Rules of a game, business plans, computer programs (accounting systems, advertising methods)
  - Presentation of information
- Artist's creations may be protected automatically by copyright or they can be protected by design patent.

# Computer programs

- Computer programs are covered also by copyright. If the invention is a mere computer program it is unpatentable. However, if invention involves features performed by a computer, it is controlled by a computer or equipment consists partially of a computer it may be patentable if the invention comprises a technical feature and a technical effect is obtained by it.

# Medical and chemical field

- Also methods for treatment of the human or animal body by surgery or therapy and diagnostic methods are considered unpatentable. However, medical instruments, chemical substances and compositions used in these methods can be protected by a patent if the invention meets the criterias of novelty, inventive step and industrial applicability.

# Could a human be patented?

- Plant or animal varieties or essentially biological processes for producing plants or animals are excluded from patentability. This does not apply to microbiological processes or the products thereof which can be protected by patent if the same terms are met.

# Who could apply for a patent?

- A patent application must be filed to a national patent office (in Finland the National Board of Patents and Registrations, PRH). A particular application form available from PRH is needed for that purpose. The application consists of four parts: description, claims, drawings and abstract. Inventor or inventors must be designed in the application form. Application process can be performed by the applicant himself or a patent attorney can be used, which is recommendable but costs more money.

# The examination procedure

- When the application is filed in PRH a formal examination is performed first. Does the application fulfil certain criterias of the patent law and patent act. Have the payments been paid? If deficiencies are observed, a formal notice is given to the applicant to correct those.

# Examination procedure

- After formal stage the technical examination is performed by some of the technical sections. This will last approximately 6-8 months and a technical examination report is sent to the applicant. He has the opportunity to comment the possible publications presented in the report and make a written response to the office.



## Examination procedure...

- It is possible also to amend the application according to the report. Based on the response the examiner may give a new examination report or accept the application. In case of acceptance the patent will be published and granted.

# Opposition

- Within nine months from the grant of the patent any person may make an opposition against the patent. In the opposition he/she must argue why the patent should not have been granted to the invention. The office (PRH) then examines the opposition and gives the applicant an opportunity to comment and give a response to the opposition.



# Opposition...

- Based on the argumentation and documents cited the office either rejects the opposition and remains the patent in force or accepts the opposition and revokes the patent totally or partially.



# Revocation of a patent

- After a patent has been granted and the opposition period has ended the only way to revoke a patent is to lodge a case for revocation in the Helsinki City Court (Helsingin Käräjäoikeus). The process can be further appealed to the supreme court providing that a permission for appeal has been granted.

# Maintenance fees

- A patent right is not valid automatically but the annual maintenance fees must be paid. The fees are inexpensive during first years (hundreds of Finnmarks) and increase towards the end of the 20 year term. The final annual maintenance fee (20<sup>th</sup>) is 805 FIM.

# Patenting abroad

- A single national patent (in Finland, i.e.) is often insufficient in the scope of international (or foreign) marketing and competitive advantage. Patent protection is perhaps needed in countries where significant competitors exist or their operations should be blocked or prevented.

## Patenting abroad...

- It is advisable to exploit the Priority system in foreign patenting. It means that the foreign applications are filed during 12 months from the date when domestic application was filed in the national patent office (in Finland PRH).

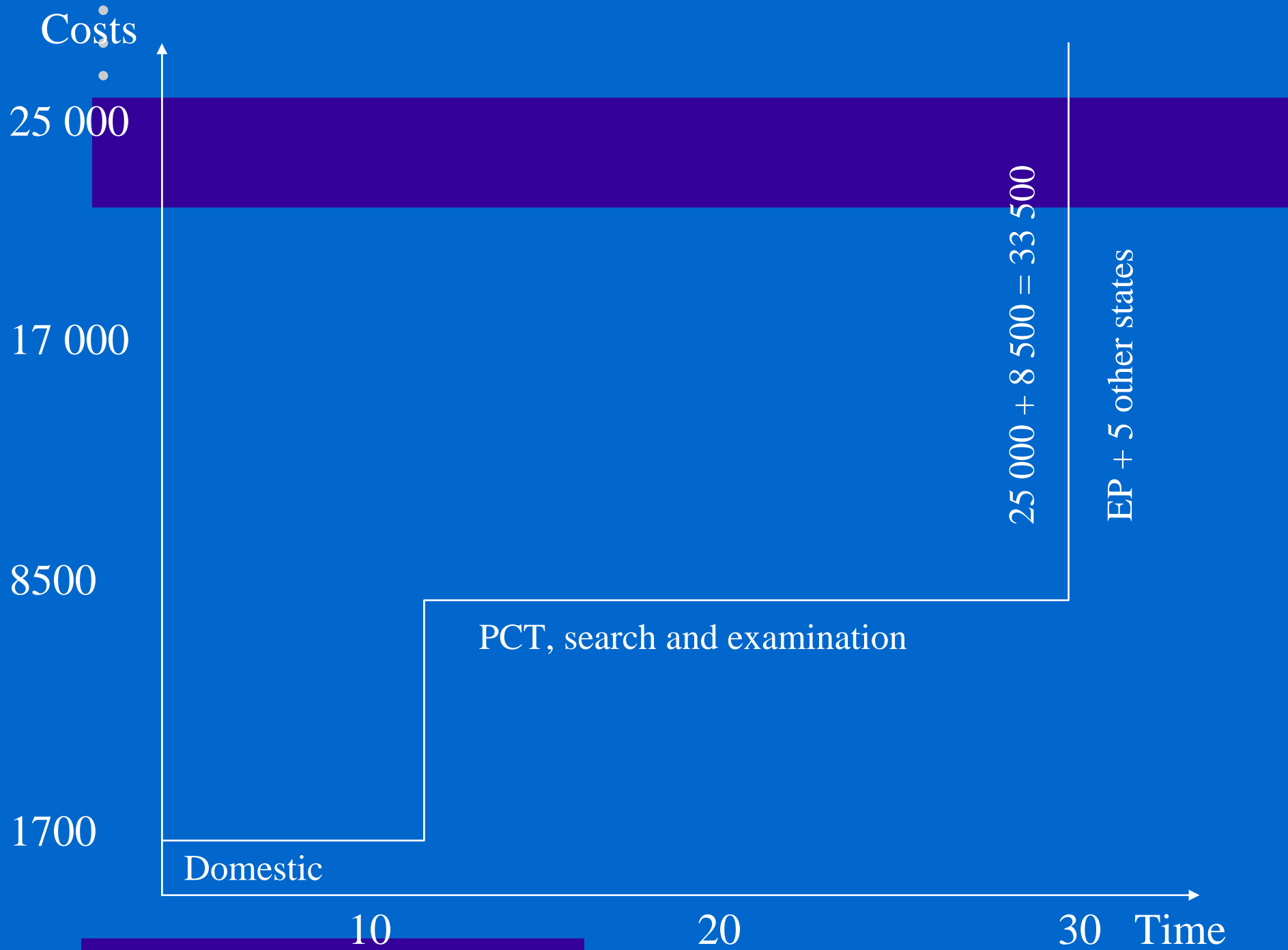
## Patenting abroad...

- If the priority is claimed, the latter applications are considered having arrived in the office at the same time as the earlier domestic application. The novelty and patentability will be assessed according to the priority, i.e. the publications published after the first date of application, do not form obstacles for novelty and inventive step.



# Costs and money

- Applying for patent(s) abroad causes significant expenses. Immediately after filing the first national application the commercialisation steps and measures should be taken. The protected invention should be marketed effectively to the companies or the development process should be pursued as quick as possible. This way the inventor can seek for co-operation with the potential companies or develop the invention to a product in the market.



## Costs and money...

- This way the extent and costs of foreign patenting could be defined in advance. The inventor(s) and applicant(s) should also consider and seek for financing, because their own resources are often obsolete. When decision has been made and necessary financing obtained, it is advisable to consult a registered patent attorney.

## Costs and money...

- The translation phase and possible text formatting may take one-two months before the end of priority year. The situation is similar with the applications made for financing organisations who need at least one-two months for technical and commercial evaluation.

# Designation for countries

- It makes sense to seek for protection only in countries, where the product or licence will later be sold or marketed or where potential competitors operate. From the commercial point of view, the sufficient extent of protection is mostly 2-7 countries.

# Patenting systems

- There are three ways to seek for protection abroad:
  - file a national application separately in each country
  - use an international patenting system (PCT, Patent Cooperation Treaty), > 130 member countries
  - exploit a European patenting system (EPC, European Patent Convention), 18 member countries
- There are also ways to combine these systems.

# Patent registration and maintenance

- Despite of the selected patenting system the patent must be granted, registered and maintained in force separately in each country, i.e. the protection is only national.

# Licensing

- Licensing has proved to be perhaps the most successful method to bring new inventions onto the market. A license agreement gives the right to exploit a patent, design patent, trade mark, utility model or technical know-how. The commercialisation procedure is defined also in the agreement or in a separate business plan.



# Licensing...

- Drawing up the agreement demands both for juridical and commercial expertise. Consequently it is recommendable to consult a professional, a lawyer, an attorney or a licensing expert before starting licensing measures or negotiations.

# Licensing

- The inventor or a SME (Small and Medium-Sized Enterprise) do not often have financial or technical resources to develop the invention further. In this case it could still be exploited and they can collect some amount of cash flow from the potential license buyer (licensee). Furthermore, licensing gives the licensor the opportunity to follow the development of the invention and monitor its later “commercial success”.

# Licensing...

- The licensee wants perhaps to enter on the new markets with new products, improve its position in the own product area or expand the product range without significant investments in R&D and increase its contact network. The foundation of a technology transfer operation should always be a positive, progressive activity. However, entering in the contract negotiations involves risks which the parties should in advance be aware of. The final agreement must satisfy both – from technical, functional and juridical point of view.

# Licensing...

- The license agreement gives the licensee a right to manufacture and sell certain product or method, which is protected, i.e. by a patent. The proprietor of the patent is, however, the licensor. Consequently the license gives only the right to commercially exploit the patent and the licensee cannot, for example, deposit or sell it to a third party.

# Checklist for licensing

- Essential questions are:
  - parties and their background
  - scope of the license, the invention
  - to sell, to market and/or to manufacture
  - territory
  - term of the agreement
  - who applies for the patent, who maintains the rights
  - payments like down-payments, royalties and minimum royalties
  - exclusive, non-exclusive or sole license
  - further co-operation, technical assistance

# Licensing demands for flexibility

- Entering into satisfactory agreement demands for flexibility from both parties. In many cases the licensee is ready to pay the licensor money which is based only on the cash flow obtained from the sales of the licensed product or method. A down-payment depends often on the licensor's earlier investments in product development and patenting.

# Money, royalties and payments

- If the licensee's profit is high, the royalty paid to the licensor could also be sufficiently high. Whereas the sales profit is relatively low, the licensee cannot pay licensor a high royalty. The general rule of thumb for suitable royalty percent is 2-8 % from revenue without taxes generated by the product.

# Money, royalties and payments...

- Royalties in the field of chemical and process technology may be below 2 %, however. When defining the royalty one should take into consideration the development stage of the invention; is the development process completed or should the licensee invest money into development before starting (mass) production. If the invention is just a mere idea a reasonable solution may be that a down-payment will not be paid.



# What kind of license?

- It is advisable to enter into solution of the exclusivity; is the license exclusive or non-exclusive. An alternative is the sole license where the licensee has the exclusivity in the exploitation in addition to the licensor.

# Where to find consultancy?

- National board of Patents and Registration (Patentti- ja Rekisterihallitus)
- Foundation for Finnish Inventions (Keksintösäätiö) (especially in financing for product development, commercialisation and licensing)
- Technology Development Centre (Tekes) (especially in financing for product development)
- Helsinki University of Technology, Innovation Centre