

Intellectual Property Rights Decision Guide

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1. General considerations

Protection of commercial interests is the first uses of (intellectual property) IP envisaged by business: Intellectual property brings guarantees for the exclusive use of various technical elements such as industrial products, medicines, communication processes, technological products etc.

These guarantees allow prevention and suppression of various kinds of IP misuse such as:

- Copying of protected assets
- Counterfeiting
- Theft or diversion of intellectual property (e.g. theft of trademark)
- Abusive use

The different IP objects commonly used in business are shown on the following picture

	<u>Registered IP</u>
Inventions	Patents, Utility Models
Brands, logos	Registered Trademarks
Designs	Registered Designs
	<u>Unregistered IP</u>
Musical, dramatic, literary & artistic works	Copyrights
Databases	Database rights
Reputation / Goodwill	Unregistered Trademarks
Designs	Unregistered Designs
Trade Secrets	Confidentiality Agreements

Picture 1. Different IP objects

As unregistered IP is protected by law (e.g. copyright) or is rather easy and cheap to protect with necessary contracts, this guide concentrates on mainly on patents and gives some hint also about trademarks.

The aim of this guide is to provide information about the main points when considering to protect your invention or brand. The guide user must have previous knowledge about IP.

2. Patents

2.1. Patent or publish

Patenting vs publishing is major concern for most of the universities. There are several considerations to take into account before filing a patent. In short these are the following:

- Patenting or not..... and Why? – company and university, who decides to patent one or several of their inventions, has to have also strong patent and technology management team on place ready to deal with the marketing, legal disputes etc.
- Publication....When? How? – when publishing in scientific journals the author is normally required to assign all or some of the rights related to copyright (publication, translation, transmission, distribution) to the publisher. In this regards it might be reasonable to licence the publication. Licences give the author more flexibility as they retain copyright on their work and can therefore provide other publishers with the right to use the same contribution. Alternatives are also defensive publication or open access model.
- Patent costs – patenting is costly. Direct costs are related to the patent registration, granting and patent attorney fees. In case of European Patent the total fees depend on several factors such as the number of designated states (translation and validation costs), the planned term of the patent (maintenance fees) and some technical requirements (type of filing - online or on paper, number of pages/claims, etc.). For a rough estimation, according to the EPO, it costs about 6,000 EUR from filing to grant stage, excluding the countries' validation and maintenance fees – rates defined by national offices – and translation expenses.
- National or International – patent is mainly a business tool for earning money, this means that for most of European countries, except maybe Germany the potential markets are over the border, thus European Patent application or PCT¹ application are in favour.
- Value of the technology – before the patenting also the technology valuation should be considered. In 80% of the patent cases, the inventions are not used, because the technology works only in laboratory or is too expensive for industrial applications (compared with existing technologies).
- Commercial potential/ Market size – potential applicant should also do the market search for potential users/ licensees,
- Economic Return of Investment – if the value of the technology and commercial potential are high, what will be the return of the investment? That can be calculated using standard DIN 77100 “Patent valuation - General principles for monetary patent valuation”
- University perspective – universities have different IP policies, some are with very strong and centralised technology transfer unit, that tries to exploit all the potential

¹ PCT application is Patent Cooperation Treaty application managed by WIPO (there is more specific information on page 8).

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inventions. Others are more decentralised and with more loose IP policy. In any case, universities usually do not have international business perspectives and thus the commercialisation rate is rather low. In case of Estonian universities usually one patent from 100 is commercialised.

The following table gives overview about the different factors, pros and cons related to patenting vs publishing.

COMPARISON	PATENTING	PUBLISHING
APPLICABILITY	For commercially exploitable technology	For knowledge sharing purposes
RIGHTS GRANTED	Exclusive rights	Copyright
PROCEDURE	Yes	No
COSTS	High	Low to none
USE OF THE TECHNOLOGY	Only the patent owner, unless licensed	Everyone
TECHNOLOGY PROTECTION	Yes, on the patent claims	No, only the article text
FINANCIAL GAIN	Yes	Likely, but only on the paper publication
TECHNOLOGY DISCLOSURE	After 18 months	Immediately

Table 1. Patenting vs publishing.

In case the decision is to not patent, it is recommendable to secure all the confidential information with different agreements. The best way is to start with non-disclosure agreements and follow-up with collaborative R&D agreements.

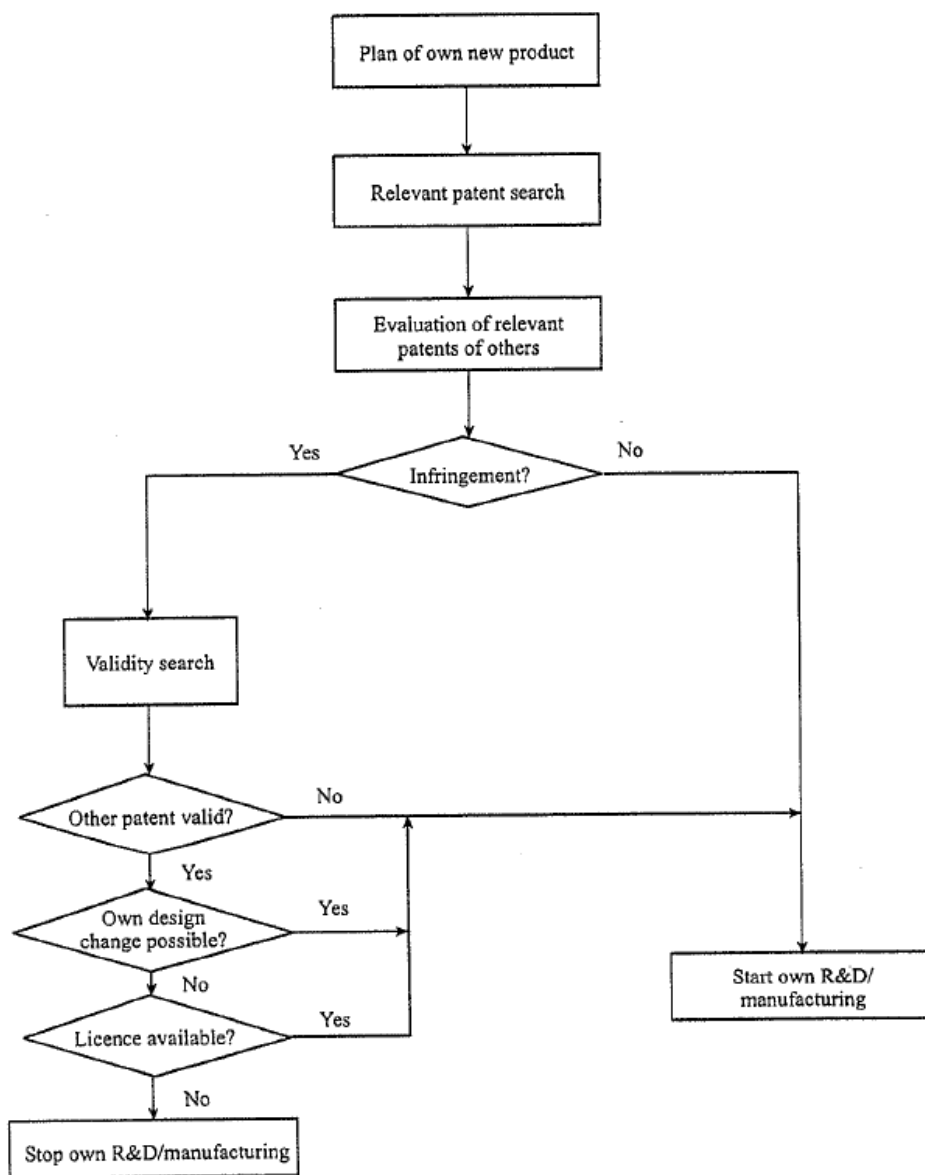
2.2. Issues to consider when patenting

2.2.1. What is patent?

Patents protect technical inventions, which are **new** (do not form part of the state of the art), **industrially applicable** and involve an **inventive step** (not obvious to a person skilled in the art). Discoveries, scientific theories and mathematical methods, aesthetic creations, schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers (as such) and presentations of information are not patentable.

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Before filing a patent, it is important to perform a novelty search to be sure that the invention is new. The European Patent Office (EPO) offers the free-of-charge Espacenet database containing over 100 million patent documents (patent translation is also available). World Intellectual Property Organisation (WIPO) offers also free-of-charge patent search tool Patentscope. Espacenet is available from the following address: <https://worldwide.espacenet.com/> and Patentscope from the following <https://patentscope.wipo.int>.



Scheme 1. Typical blockchain of patent-protection decision based on patent search and licensing.

2.2.2. International or national patent

There are different ways of applying a patent – national route, regional route (European patent, Eurasian patent) or international route (PCT).

National patent

Filing at individual national patent office is a good strategy if only filing the patent application in one or two countries. The granting process is in principle as follows (differences exist in each country):

1. The application is examined to find out if it contains classified material. If it does a special department with examiners who are cleared to do this job, will do the search and examination
2. In the normal process a formal examiner will find out if the application fulfils the formal demands for a patent application (contain a title, abstract, description, claims and drawings)
3. Then the search and examination will be carried out by a technical examiner in order to find out if the application is patentable
4. Further examination can take place if the applicant does not agree
5. At last a decision takes place: granting or refusing

After the granting a competitor can make an opposition, if he finds that the patent should not be granted.

Important dates are:

1. Filing date
2. First search and examination 6 to 10 months from filing date
3. Publication A: 18 months from filing date
4. Decision: normally 3 or more years
5. Publication B: When patent is granted

National patent can be filed only by nationals or residents of the country either by the country's patent attorney.

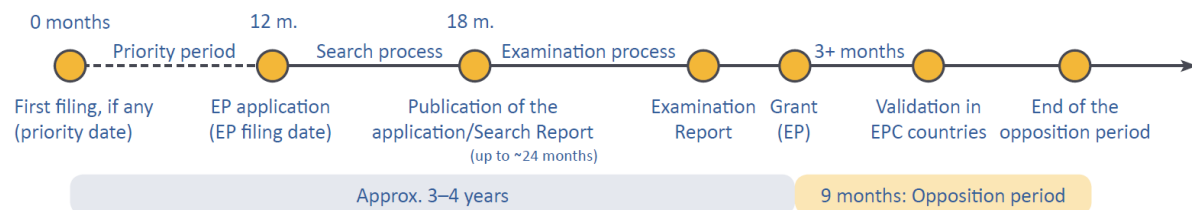
European patent

Patent rights are territorial by nature. This means that the protection is only valid in countries in which that patent is granted. Therefore, in order to obtain protection in different countries, one should either file individual applications in different National IP Offices or follow different filing (e.g. PCT) or registration routes.

The European Patent (EP) makes it possible to obtain patent protection in nearly 40² countries just by filing a single application and following a single grant procedure at the EPO. The applicant then just needs to validate this grant decision in the countries in which the protection is sought. Therefore, an EP provides applicants a less costly and less procedural route in comparison with filing of individual applications.

EP patent applications may be filed by any natural person or legal entity from any country in the world. Applications can be filed either at the EPO through on-line filing, by post, fax or by hand, or at the national patent offices of participating contracting states.

The granting process of EP application is described in the following scheme.



Scheme 2: EP application process

A search report is a document drawn up by the EPO where all the documents relevant for assessing novelty (prior art) and inventive step are listed, based on the claims of an EP application. Applicants have six months after publication of this report to respond, and decide whether to continue with the application or not.

If the applicant continues with the application, the EPO examines the application according to its patentability. The examination procedure may encompass several communications with the applicant (in writing and/or oral proceedings), and as a result a final report on patentability (examination report) is drafted.

If the application is granted, applicants have three months (or more, depending on national rules) to validate the EP by providing the translations in the EPC contracting states (if needed) in which the protection is sought.

From the date of grant, there is also a nine-month opposition period for the third parties.

International Patent Application (PCT)

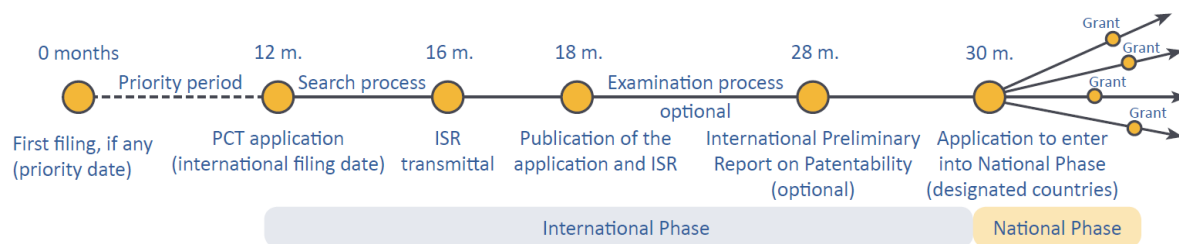
The Patent Cooperation Treaty (PCT) is an application system, managed by the WIPO, which allows filing one single international patent application that has the same effect as national applications filed in separate PCT states. Through the PCT route, applicants enjoy the benefit

² The exact list of member states is available on the following address: <https://www.epo.org/about-us/foundation/member-states.html>

of filing one application, in one language paid for in one currency (CHF) in more than 150³ countries.

Nationals or residents of a PCT Contracting State may file an application. Applications can be filed either through National IP Offices (NIPOs) or directly with the WIPO, where allowed.

The granting process of PCT application is described in the following scheme.



Scheme 3: PCT application process

After filing of the application, an international search report (ISR) and a written opinion on the invention’s potential patentability is established.

If the applicant continues with the application, upon request, an international preliminary (examination) report on patentability is established. Applicants may also enter into national phases without requesting the examination report.

During the examination process, the applicant may be asked to give further clarifications and/or proceed to some amendments before the final report is drawn up. The report contains “an opinion” on the compliance of the international application concerning its novelty, inventive step and industrial applicability to provide the applicant with a strong basis for evaluating the chances of obtaining a patent. However, the report has no binding effect.

The applicants must enter into national phase in order to seek protection in designated states by paying the national fees and providing additional documents (e.g. translations, if required). The time limit for entering into national phases is 30-34 months from the international filing date (or from the priority date, if there is any).

The processing of the application within the national phase is carried out by the national offices according to their national rules (e.g. further examination, if required, etc.) and the international patent application becomes separate national patents once it is granted in the designated states, and subject to the national laws (e.g. protection term, etc.).

³ The exact list of member states is available on the following address:
http://www.wipo.int/pct/en/pct_contracting_states.html

2.2.3. How much does patent cost?

Patent drafting is rather sophisticated process and applicant usually needs external help from the patent attorney. Due to this reason its possible to divide the costs into free categories:

1. Preparation costs – costs for novelty search or in case there is already a similar patent in force, costs for freedom-to-operate search. Additionally patent drafting fees. In case applicant is familiar with patent search databases or there is technology transfer office available, there is possible to conduct the necessary searches in-house. Patent drafting requires usually professional help by patent attorney and in case there is already a search report it usually takes minimally 10-15 hours (depending on the nature of the patent)⁴
2. Registration, granting and annual fees. In each phase of patent application, there are several fees that must be paid to different institutions.

In case of national patent, the fees are available country's patent office web-site and in general all the costs (registration, granting plus 20 years annual fees starts from 5000 – 6000 in Eastern-Europe and is slightly more expensive in Western-Europe).

In case of international patent route there are no annual fees, as all the patent must enter to national stage and annual fees must be paid to designated states. The total fees of EP application depend on several factors such as the number of designated states (translation and validation costs), the planned term of the patent (maintenance fees) and some technical requirements (type of filing - online or on paper, number of pages/claims, etc.). For a rough estimation, according to the EPO, it costs about 6,000 EUR from filing to grant stage, excluding the countries' validation and maintenance fees – rates defined by national offices – and translation expenses. The total fees of PCT application consist of 1330 CHF for international filing fee and 150 – 2000 CHF for search fee (depending on the selected search authority).

3. Costs related to the additional communication with the patent offices, disputes and alternative resolutions. As patenting is rather sophisticated process, there is high probability that during the application and granting processes patent examiner has additional queries or concerns or third party may file an opposition. These costs are always extra and non-predicable.

Patent attorneys at Dehns have estimated that patent protection in 6 European countries plus USA will cost £40 000 within first six years⁵ (does not include any costs related to disputes or opposition).

⁴ Patent attorney's fees vary in Europe quite much starting from 100 EUR/h and ending 200 EUR/h (in average 2018) in Estonia and ending with UK starting from 500 EUR/h and ending 1000 EUR/h (in average 2018).

⁵ For more info https://www.dehns.com/cms/document/the_financial_realities_of_patent_protection.pdf

3. Trademarks

3.1. General considerations related to trademark

A trademark is any sign that individualizes the goods of a given enterprise and distinguishes them from the goods of its competitors. Virtually any sign can distinguish goods and services and thus constitute as a trademark. The following type of signs can be used:

1. Word – this category includes all the names and slogans;
2. Letters and numerals – one letter or numeral or any combination thereof;
3. Devices – fancy devices, drawings and symbols and also two-dimensional representations of goods and containers;
4. Combination of types 1-3, including logotypes and labels;
5. Coloured Marks – includes words, devices and any combination thereof in colour, as well as colour combination and colour as such;
6. Three-Dimensional Signs – typically the shape of the goods or their packaging;
7. Audible Signs – sound marks transcribed in musical notes;
8. Olfactory Marks – smell marks and fragrances for distinguishing the goods;
9. Invisible Signs – signs that are recognized by touch.

In order to register trademarks, they must be distinctive (distinguish goods or services of its competitors) and they should not have misleading character or violate public order or morality.

Trademark protection is not an end in itself. In principle, the trademark must be used in the country of registration. The use must be made publicly in relation to the goods or services. The principal consequence of unjustified non-use is that the registration is open to cancellation at the request of a person with a legitimate interest.

Applications for registration of a national trademark are to be filed with the national patent office. Foreigners have either to give address for service in the country or to use a patent/trademark attorney.

Before filing an application it is useful to check that similar trademarks are not registered for the same classes of goods or services. Searches for earlier trade marks can be performed using the following databases: TMview⁶ and Global Brand Database⁷.

⁶ TMView is available on <https://www.tmdn.org/tmview/welcome>

⁷ Global Brand Database is available on <http://www.wipo.int/branddb/en/>

3.2. EU Trademark

EU trademark applications can be filed at the European Union IP Office (EUIPO) through on-line filing via the User Area, by post or by courier. Alternatively, it is also possible to designate the EU in an international application via the Madrid System at the WIPO.

EU trademark applications must contain signs capable of being represented in any appropriate form together with a clear indication of the goods and services that the trademark intends to cover following the Nice Classification.

For applications filed through EUIPO, any individual or company from any country in the world can apply. For applications filed through WIPO, the applicant must either have a business in, or be domiciled in or be a national of any territory that is part of the Madrid System.

After application is filed, it takes 2-4 months to examine the requirement of distinctiveness and other requirements before the publication is published. After the publication starts the opposition period (3 months), during which 3rd parties have possibility to apply for cancellation of the trademark.

Even if there is a ground for refusal only for one country (e.g. because of a similar or identical earlier trademark), the EUIPO refuses the EU trademark application as a whole for all the EU Member States. Therefore, you will either have a EU trademark for all the countries (if there are no refusals in any of the EU Member States) or no EU trade mark at all.

However, if an EU trademark application is refused or declared invalid or revoked, the application may be converted into national trademark applications in the remaining EU Member States, in which the ground for refusal does not apply. The ensuing national trademark applications will retain the filing date of the EU trade mark application.

The fees depend on the type of filing and on the number of classes (goods and services) applied for. In general the fees are following:

- The basic fee covers one class for EUR 850.
- The fee for the second class of goods and services is EUR 50.
- The fee for three or more classes is EUR 150 for each class.

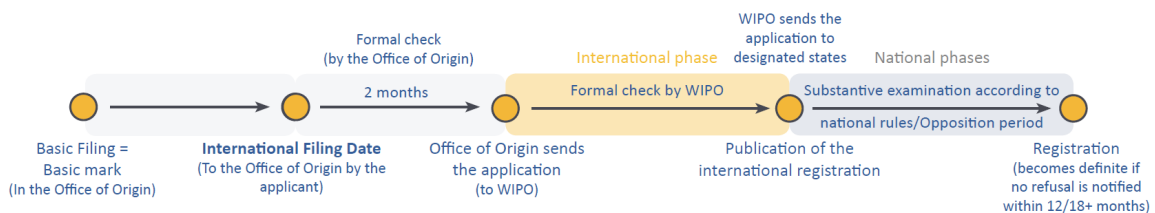
After granting EU trademark, it is valid in all the member states and can be renewed after every 10 year until infinity. An EU trademark has to be put to genuine use in the European Union in connection with the goods or services for which it is registered within a period of five years following registration, against the risk of losing it.

3.3. International Trademark

International Trademark application is filed under the Madrid System. Before filing an international application, the applicant needs to have an existing national trademark (or trademark application) in the IP office of one of the territories of the Madrid System (the basic mark).

The application must contain a reproduction of the trademark applied for, which must be identical to the applicant's basic mark, the designation of the territories in which the applicant wishes the trade mark to be registered and with a clear indication of the goods and services that the trade mark intends to cover following the Nice Classification. The applicant must either have a business in, or be domiciled in or be a national of any territory that is part of the Madrid System.

The timeline and application is described on the scheme no 4.



Scheme 4. International trademark procedures.

The fees depend on the designated countries, type of filing and on the number of classes (goods and services) applied for. Detailed information on the fee structure is available on the WIPO website in the Schedule of Fees section⁸ (in Swiss Francs). WIPO's fees calculator⁹ can also be used as a tool to estimate the fees under the Madrid System.

After granting the trademark is valid for 10 years and can be renewed after every 10 year until infinity. In most countries, the trademark has to be put to use in connection with the goods or services for which it is registered within a certain period of time, against the risk of losing it (generally 5 years following registration). Please check national rules.

⁸ WIPO fees are available on <http://www.wipo.int/madrid/en/fees/sched.html>

⁹ WIPO calculator is available on <http://www.wipo.int/madrid/en/fees/calculator.jsp>