« Protéger vos idées »

Conférences et Séminaires Unitec

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The reason for IP protection
Responding to CUSTOMERS perceived NEEDS, DESIRES

innovating branding

patents, designs, copyright, know-how

Getting CUSTOMERS ATTENTION

differentiated products

trademarks, company names, domain names

IP Assets – strategic function

«The business has two – and only these two – basic functions: marketing and innovation. Marketing and innovation produces results, all the rest are costs.»
Peter Drucker in Management: Tasks, Responsibilities, Practices

reputation / goodwill / trust
The IP tools available
Intellectual Property Rights
Objects of protection

**Intellectual Property Rights**

**Patents**
Invention or technical solution (exception US, AU) to a problem

**Copyrights**
Literary/artistic works (code of computer program) having an individual character (form not content)

**Designs**
Visual appearance not dictated solely by functional characteristics

**Trade Mark**
Distinctive sign (name, slogan, logo, sound, colour ...) used to distinguish products/services of its owner compared to others on the market

**Other signs**
Corporate name, domain names

**Geographical indication**

**Know-How**
Trade Secret

**Offering**
## IP – overview

<table>
<thead>
<tr>
<th>REGISTRATION REQUIRED</th>
<th>NO REGISTRATION REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PATENTS</strong> → new and non-obvious technical inventions</td>
<td><strong>COPYRIGHT</strong> → literary/artistic works / computer programs (protects form not content)</td>
</tr>
<tr>
<td><strong>DESIGNS</strong> → new and original visual appearance of object</td>
<td><strong>UNREGISTERED DESIGN RIGHTS</strong> → EU (3 years)</td>
</tr>
<tr>
<td><strong>TRADEMARKS</strong> → distinctive sign distinguishing goods or services of one enterprise from another</td>
<td><strong>UNREGISTERED TRADEMARK/NAME RIGHTS</strong> (through use)</td>
</tr>
</tbody>
</table>
| OTHER SIGNS (company name, domain name) | • Passing off (common law countries UK, CA, AU...)  
• Trade Dress (US)  
• Unfair competition |
<table>
<thead>
<tr>
<th>NO REGISTERED PROTECTION POSSIBLE (WITH EXCEPTIONS)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KNOW HOW</strong> → kept secret through contracts, employment law, and internal policies (secure storage and access, administration of access rights, fragmentation of key information, in house control of key processes and products «divide and rule»)</td>
</tr>
<tr>
<td><strong>IDEAS, CONCEPTS</strong> → prior to conceiving the technical means to achieve the desiderata, such ideas and concepts are not patentable</td>
</tr>
<tr>
<td><strong>BUSINESS &amp; MARKETING METHODS</strong> → non patentable (with some exceptions in US, AU)</td>
</tr>
<tr>
<td><strong>ODOURS</strong> → distinctive smell of goods / design feature (exceptions are olfactory marks allowed in some countries e.g. US)</td>
</tr>
<tr>
<td><strong>SOUNDS</strong> → as a design feature (exceptions are sound marks allowed in certain forms in many countries)</td>
</tr>
</tbody>
</table>
Nature of intellectual property rights

**Patents, Trademarks, Designs, Copyright:**

→ exclusive right to prohibit the commercial exploitation of the protected right (Negative right)

→ exclusive right to dispose of protected right (license, sell, mortgage) (Positive right)

**Limitations of protection:**

→ Territoriality

→ Duration of protection (designs, patents, copyrights)

<table>
<thead>
<tr>
<th>Design</th>
<th>Trade mark</th>
<th>Patent</th>
<th>Utility Model</th>
<th>Copyright</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. 10/14/25 years from filing</td>
<td>Renewable every 10 years</td>
<td>20 years from filing</td>
<td>7-10 years from filing</td>
<td>70 years from creator’s death (software 50 years)</td>
</tr>
</tbody>
</table>

→ **Trademarks: requirement to use**
IP rights – General Procedure of registration

1er filing - priority
(e.g. in Switzerland)

Priority claim
Trademark & designs:
6 months
Patents:
12 months

Filing → Examination → Registration

Publication

Opposition
(third party)

annuities / renewals

Simple formal procedure
or
Examination of conditions of registration
Technological innovations—How to create a competitive advantage?
Identification of key elements influencing buying decision

What Are You Selling? (USP)

- Know-how
- Product
- Technology to be integrated
- Device/Kit
- Method
- Research tool
- Biomarkers
- Data set
- Goodwill & established reputation in a therapeutic field
- ...

What to Protect

Who is Buying?

- Apparatus constructors
- Software distributors
- Standard consumers
- On-line users
- Patient
- Doctor
- Hospital
- Heath insurances
- Private/academic labs
- Pharma companies
- ...

When to Protect
Patents - principles
**Patentability criteria**

**Novelty**
Not accessible to public before filing date (in writing, oral, use..)

**Inventive activity**
Non-obvious over the prior art at the time of the filing date

*Indications of non-obviousness:*
- surprising technical effect
- technical advantage over the solutions of the prior art
- first solution to a problem
- solution going against a prejudice in the field

**Industrial Applicability**
**Patents-Principles**

Excluded subject-matter

- Discovery
- Scientific theory
- Mathematical method
- Artistic creation
What could be protected?

Examples

→ New technologies \((\text{novel})\)

OR

→ Known technologies from other fields and adapted for use in new products: \(\text{might be patentable if the technical solution developed for the new use is novel & inventive over prior art.}\)

→ The new function does not make it novel but technical means to achieve this new function might be patentable

Pace makers
Intraocular pressure sensors
Retinal Implants
Wireless brain interface
Health monitor
Telemetry cardiac monitor
What could be protected?

Examples

- New Chemical entity (NCE)
- Isolated natural product
- New use
- Delivery systems
- Formulations….

- New sequences (proteins, peptides, nucleotides, etc.)
- Antibodies, chimeric proteins
- New medical use
- Methods of detection….

- Medical devices
- Image processing
- Detection kits….
Selection patent (composition of matter)

Genus vs. specific

The genus (black) is not novel (covers species X1 disclosed specifically in the prior art) but species A and B are novel per se since not disclosed in the prior art. Potential difficulty to find a novel genus grouping A and B in a single invention. Non-obviousness should also be supported (might be more difficult for B).

The genus (black) is novel (does not cover species X2 specifically disclosed by the prior art) and species A and B are novel since not disclosed specifically in the red prior art. B is generically covered by genus of the prior art (red) which would impact freedom of use of B but not necessarily patentability (depends on how non obvious the black genus would be).
The claimed scopes (black) are novel as long as not specifically disclosed in the prior art. Non-obviousness should also need to be supported. It will depend on the nature of the specific disclosures in the area of overlap.
Patent life extension

Further medical uses, formulation, combinations, therapeutic regimen, scale-up methods of productions & new intermediates, chemical scope expansion etc..

State of the art, prior art

Sources of patent and non-patent information

Further free Databases

CH: http://www.swissreg.ch/
US: www.uspto.gov/patft/index.html
WO: www.wipo.int/pctdb/en/search-struct.jsp
JP: https://www.j-platpat.inpit.go.jp/
PubMed, PubChem, Scirus ...
http://www.see-the-forest.com/QuickSearch2.act
http://www.sumobrain.com/
https://www.freepatentsonline.com/
https://www.lens.org/lens/


Professional Databases (subscription/use fees)

Patbase
Derwent
Delphion
STN
...

No disclosure for patent application the first 18 months!

reuteler & cie SA ¦ patent & trademark attorneys ¦ www.reuteler.net
Patents – understanding how to read a patent specification
Patent Structure

**TITLE**

**BACKGROUND**
- field of the invention
- prior art - disadvantages
- problems to solve

**SUMMARY OF THE INVENTION**
- objects of the invention
- Essential features (claimed)

**BRIEF DESCRIPTION OF THE DRAWINGS**

**DETAILED DESCRIPTION**
- of one or more embodiments of the invention, referring to the drawings
- examples

**DRAWINGS**

**CLAIMS**
- independent
- dependent

**ABSTRACT**

- Prior art
- Presentation of the problem
- Inventive activity
- Solution to the problem
- Guidance to the skilled person to carry out the invention
- Support of the claims (preferred aspects)
- Scope of protection
How to read a patent

Patent application and Patent (granted)


Description ▶ Modifications during prosecution ▶ Claims

Description: interpretation
Claims: scope of protection

How to read a patent

Patent application and Patent (granted)
Drafting strategy of (priority) patent applications
Structure & Anticipation

Specific embodiments:
- fall-back positions
- Support sufficiency requirements
- Adapted to various jurisdictions

```
F1 + F2

F1 + F2
+ +
F1 + F2' + F2'' + F10
+ + +
F3 + F4 + F6
```
Timing & Development Efforts
Importance of Timing

Balance between:

- **A late filing** when you have extensive experimental data (increased risk of being scooped by prior art)

- **A too early filing** which will expose your patent application to enablement and sufficiency objections from Examiners (would lead to impossible or very narrow patent protection) & starts the clock for future patent costs

-> **Filing a patent application not earlier than having at least few data supporting the invention & if the applicant believes to be in a position, within a year from this filing date, to provide at least some further data for supporting a scope economically reasonable for the patent application**
Effective Patent Protection

When to file?

Influences scope of protection

- Filing date
- Prior art
- Priority year
- Grant

- Claimed
- Examples
- Commercial embodiment
Effective Patent Protection

**development process:** converge to the best solution

**patent protection process:** expand to include alternative solutions → increase potential scope of protection
Different Patenting Routes

First Filing or «Priority» Filing

Date 0

- «Provisional» applications
- Regular applications

Priority Filing (1st filing)
CH or EP or US

Search Report
~4-6 months

Extensions 12 months

«Priority year»

12 months

National Filing
(AR, TW...)

European filing
(39 member states + extension states)
(01.01.2023)

International application (PCT)
(157 member states)
(01.01.2023)
Patent filing strategy

1st priority filing

Drafting and filing priority

PCT application

International search report

Request for examination (optional)

International examination procedure

Regional/national patent applications (entry in the national phase)

National examination procedures

Grant
The European patent must be translated and validated in certain countries if protection is desired

Others…
GB (UK)
FR France
DE Germany
US (USA)
JP (Japan)
CN (China)
others

EP

Search Report

EP

Publication

Extension filing

0 months
6 months
12 months
18 months
19 months
30 months
4-6 years

6 months
18 months
19 months
30 months

1st priority filing

EP

Search Report

EP
European Patent protection

«Classical» EP

Filing → Examination → Allowance

validations

Germany
France
Italy
Sweden
Switzerland
Spain
Poland
UK

unchanged

For the next 7 years: unchanged

EP with unitary effect

Filing → Examination → Allowance

validations

Unitary Patent
Switzerland
Spain
Poland
UK

unchanged

NEW as of 1st June 2023
Effective Patent Protection
Development efforts and control of disclosures

- Priority filing
- Filing subsequent applications (geographical extension)
- Publication of the application

PoC advisable
No disclosure | Avoid disclosure | Limit disclosure | Control of disclosure contents

Development efforts

1st filing
Envision subsequent filings
Envision filing on further developments
Patents – ownership issues
**Importance of the Chain of Title**

*Inventors are at the beginning of the chain and therefore inventorship determines ownership*

Diagram:
- **Employee** (service activity) → **Inventor** → **Employer**
- **Under contrat** (consultant, service provider) → **Depending on contract terms**

Depending on contract terms.
Patent filing – who is the inventor?

Collaborator

moral, financial, human support

Seniority

- Conceive the idea of a new apparatus, a new treatment, a new molecule, a new method of manufacture

- Confirm the initial hypothesis by routine experiments requiring only common knowledge in the field
Costs and benefits of Patents
## IP – strategy

### benefit

### Effects
- Protection against infringement in countries of protection
- Positive image (innovation)
- Strengthens collaboration with 3rd parties
- Enables licensing & allows control and valorisation of created joint IP
- Ensures a certain freedom to operate (e.g. manufacturing/distribution sites)
- Increases intangible assets
- Ensuring an entry point of negotiation

### Consequences

<table>
<thead>
<tr>
<th>Increased margin and/or sales</th>
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<tbody>
<tr>
<td>(i.e. increased sales price and/or market share)</td>
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</table>

<table>
<thead>
<tr>
<th>Direct revenue from IP</th>
</tr>
</thead>
</table>

| Increased company value |
IP – strategy – Cost evolution during patent life

Prior art searching
Drafting and filing priority
Refiling

0 months
12 months
30 months
4-7 years
20 years

Regional/national patent applications (entry in the national phase)

National examination procedures

Grant, Validation

Annuities

EP
US (USA)
CN (China)
IN (India)
others

Costs
1. Geographical scope of protection
2. IP portfolio management (internal & external)
3. filing strategy & filing routes
4. Quality of drafting
5. prosecution difficulties
6. rapidity of examination procedure
7. inventiveness, nature & complexity of technology,.....
Patent filing strategy & Costs

Drafting and filing priority

0 months
6 months
12 months
18 months
19 months
30 months

PCT application
International search report
Request for examination (optional)
International examination procedure
Regional/national patent applications (entry in the national phase)
National examination procedures

Publication

International examination procedure

Search Report

EP

European search report

PCT

EP

Search Report

1st priority filing

CHF
Accrued
6’000-10’000

13’000-18’000

36’000-42’000

42’000-60’000

60’000-100’000

4-6 years

Grant
The European patent must be translated and validated in certain countries if protection is desired

Others….

GB (UK)
FR France
DE Germany
US (USA)
JP (Japan)
CN (China)

PCT application

Request for examination (optional)

Publication

International examination procedure

Regional/national patent applications (entry in the national phase)

National examination procedures

EP

International search report

EP

Search Report

1st priority filing

CHF
Accrued
6’000-10’000

13’000-18’000

36’000-42’000

42’000-60’000

60’000-100’000

4-6 years

Grant
The European patent must be translated and validated in certain countries if protection is desired

Others….

GB (UK)
FR France
DE Germany
US (USA)
JP (Japan)
CN (China)
Preparing to file a patent application and follow-up
Getting ready for filing a patent application

1. Invention Disclosure
   - Description of the invention
   - Details on research funding origin – rights ownership
   - Potential development and value (applications, various aspects, in/out development)

2. State of the art
   - Brief description of the background of the invention or starting point of the invention
   - Results of prior art searches (if available) in patent and non-patent literature

   CH:  http://www.swissreg.ch/
   US:  http://patft.uspto.gov/
   WO:  https://patentscope.wipo.int/search/fr/search.jsf
   JP:  https://www.j-platpat.inpit.go.jp/web/all/top/BTmTopEnglishPage
   PubMed, PubChem, Scirus, EBI ...

   - Identify disclosures (made or planned): reference, dates and copies of content (to be updated as long patent applications are pending)

3. Main differences/advantages/competitive advantage

4. Clearing chain of rights
   - Details on research funding origin – rights ownership
   - Identity of the inventors & respective contributions (see record keeping)
   - External collaboration involved (MTA, R&D agreements, visiting scientists, copyright material, use of protected material or processes)
Enhancing protection

Alternative or Complementary protection

- **Utility model (only available in some countries – DE, AT, JP, ES…)**
  - validity: *generally* same or similar substantive requirements as a patent (novelty, inventive step)
  - often simplified or no substantive examination
  - lower cost
  - shorter duration (usually 10 years or less depending on country)
  - not available in many countries
  - not all technologies (in particular pharmaceutical, chemical & biotech) can be protected via a utility model
  - methods (processes) cannot be claimed

- **Design**
  - only protects **external appearance**
  - therefore very limited scope of protection (for technical inventions)
  - low cost and easy to enforce

- **Preserve secret know-how**
  - difficult to implement esp. in view of employee mobility
  - needs a policy and procedures (*need to know basis / divide and rule / information repository / access rules*)
Design basics

Definition

Visual appearance not dictated solely by functional characteristics:

→ tactile, sound and olfactory features cannot be protected

→ must have an element/characteristic that is «useless» or at least not unique for the technical function
Design basics

- outlines
- shapes
- colours
- texture
- materials
- lines
- patterns

ornamental features

outlines, shapes, colours, texture, materials, lines, patterns
Freedom of use

Freedom to Operate ≠ Patentability
Freedom to Operate ≠ Patentability

Example

Freedom to operate (FTO) search and analysis are crucial before commercialization.

It might be complex and needs to be performed once the product is defined.

Third party’s rights? (even from other fields)
**Freedom to Operate**

**STEPS**

1. **Analysis of the key characteristics of the products / processes**
   - Which aspects are innovative and potentially protected?
   - Which brands are important

2. **Identification of third party rights**
   - Conduct searches

3. **Analysis**
   - Analysis of the scope of protection in relation to the characteristics of the product

4. **Actions**
   - Monitoring / Validity study / Opposition / Product modification
Scope of the analysis

Freedom to Operate

 Depend on
• The field
• stage of development

Topographic searches

Targeted on the «product»
Analysis of the scope of protection in relation to the characteristics of the product

- **Territorial nature:**
The patent may not have been granted / continued in the territory of interest
The scope of protection may cover the product in one territory and not another
Commercialization may be unlikely in the protected territory
  - Risk delimitation

- **Limited duration of patents**
Patent protection has a maximum term of 20 years, provided that the patent is “continued in force” (payment of maintenance fees on time). 25% of all patents granted by the European Patent Office (EPO) are kept in force until the end of the maximum term of protection
  - Possible expiration before placing on the market and exemption for research purposes may exist for the territories of interest

- **The scope of patents has limits**
If the application is pending: the scope of protection may be limited.
  - Study of the procedural history in the patent family to determine the chances of obtaining and the possible scope
“Simple can be harder than complex: You have to work hard to get your thinking clean to make it simple”.

Steve Jobs
- Q & A -