

## IP digital law – Intellectual Property

### **2023-2024's data harvesting quest :**

We assume that machine learning is based on a training data set and use every data accessible either as a way of training itself or learn new information to answer questions.

Some AI have been trained on publicly available data  $\neq$  private data.

We can see that we have issues with IP rights when training such artificial intelligence. When scraping a lot of websites and publicly available data, the models need quality to be able to train their LLM: data from social media is good, because it mimics real conversation.

Synthetic data is often not enough to train the AI models.

Legal actions against those models using their data came from the data owners, which means that the data used for training was also privately owned and used.

- Example from the New York Times, the lawsuit claims “millions” of articles published by the New York Times were used without its permission to make ChatGPT smarter and claims the tool is now competing with the newspaper as a trustworthy information source. It alleges that when asked about current events, ChatGPT will sometimes generate “verbatim excerpts” from New York Times articles, which cannot be accessed without paying for a subscription.
- According to the lawsuit, this means that readers can get New York Times content without paying for it, by simply using ChatGPT, which removes a revenue stream as well as advertisement for the newspapers.

US writers' guild reaches settlement on use of AI: Hollywood writers signed an AI deal so that their content must not be used / written using AI. It guarantees a conservation of their IP.

SACEM (French collecting society) also signed this kind of deal, AI have to get permission to use their data.

- Le Monde newspapers signed a financial agreement with OpenAI to use their data (thus intellectual property) to train the models.
- The same applies for Financial Times, and Azure.

This kind of agreement rely on risk-profit analysis, how much can it be profitable to sell your data when you sell the very intellectual property that is making your business good.

### **Copyrights:**

What's the purpose of copyright?

- Promote the advancement of arts and sciences by encouraging creation, investment and sharing
- Example: motion picture production

What is protected?

- “Original expression, by a human, on a fixed medium”
  - **Expression:** An idea or method is not protected by copyright (maybe by patent)
    - An algorithm is not protected, but its ‘expression’, i.e., its source code is.

- **Original** expression: Something original, from your own brain; not copied from someone else, must reflect creative choices
- **By a human**: original expression by a machine is not protected
- **In a fixed medium**: written down or recorded

What formalities ?

- None – the act of expression in a fixed medium is enough
- There is still the need to prove
- Registration helpful in the US
- © not required but helps for damages in the US

What does “protection” gives you ?

- Exclusive right to control use – reproduction, display, distribution
  - By territory, by technology, by time

### **Fair use – an exception to copyright**

IP can be used under some conditions when you do not require any license to use data. It is in some case used by AI to train their models.

- Why fair use?
  - Limit the copyright monopoly to strict minimum necessary
  - Encourage other forms of creativity and expression
- 4 factors of fair use exception
  - 1. The purpose and character of your use
    - Does your work transform the data that was originally used?
    - Has the material you have taken from the original work been transformed by adding new expression or meaning?
    - Was value added to the original?
  - 2. Nature of the copyrighted work
    - “Because the dissemination of facts or information benefits the public, you have more leeway to copy from factual works such as biographies than you do from fictional works such as plays or novels.”
  - 3. The amount and substantiality of the portion taken
    - You can use parts of a work, but by using everything you depreciate the original work.
  - 4. The effect of the use upon the potential market
    - Often US judges decide whether or not one usage of copyrighted works falls under the fair use.
      - Google vs AI

Specific rules for general purpose AI (GPAI) models and systems

- Technical documentation (training and testing process)
- Provide information and documentation to the deployers (capabilities and limitations of the GPAI)
- Policy to comply with copyright law
- Detailed summary about the content used for training

## Introduction to Intellectual Property

### Introduction to IP principles : patents, definition, laws

NDA : Non-Disclosure Agreement, to prevent the sharing of some data : this kind of agreement can be made between countries

*List of objects : Haribo sweets, Zola La Curée, Coca Cola / Orangina / 7up bottles, shoes, Lego*

Copyrights last for (a maximum of) 70 years after the death of the author, no matter the domain (70 years for books).

Some products can be protected by:

- **Trademarks** (shoes, sweets, orangina logo)
- **Design** (orangina bottle shape, lego pieces)

Software may also be protected by IP laws.

There can be a lot of IP rights on the same object. For example:

Know-How (not a real IP right, but is protected by secret), Trademark, Design, patents (and Name)

### Definition of IP:

*Refers to the creation of the mind.*

**Intellectual property rights are the rights given to persons over the creation of their mind.**

**IP rights usually give the creator for an exclusive right over the use of their creation for a certain period.**

### Presentation:

Different products = different IP rights

Distinction between the property of the product/object and the IP rights.

Trademark = 10 renewable years

Patents = 20 years (Industrial property)

Copyrights = 50 to 70 years after the author's death (depends on the country) (artistic property)

If you buy a book, you do not own the intellectual property right from what you bought > You need to ask the author to write / publish a translation for example

Intellectual property:

- Copyrights and rights related to copyright
  - Rights of author of literary and artistic works
  - Neighbouring rights: rights of performers, producers of phonograms and broadcasting organizations
- Industrial Property
  - Patents
  - Know How
  - Design

- Trademarks

The electric bulb from Edison was one of the first patent ever issued.

## 2] IP at national & international level

### **WIPO: World Intellectual Property Organization**

- Self-funding agency of the United Nation, 193 member states
- Mission: lead the development of a balanced and effective international IP system, role of harmonization of IP
- PCT : Patent Cooperation Treaty

### **Treaties and agreement**

- **TIPS**: Agreement on trade related aspects of intellectual property rights – 1996
- **Integrates many international treaties**: Berne Convention, Paris Convention, PCT (Patent Cooperation Treaty), Madrid Protocol

### **Regional treaties**

- African regional industrial property organization
- Eurasian patent office

### **In Europe:**

- **EUPIO** – European Union Intellectual Property Office
- **EPO** – European Patent Office – Unitary Patent, effect in 17 member states

Si l'on veut que la propriété intellectuelle soit protégée à l'internationale ou dans certains pays, il faut le demander : généralement les brevets, dépôts de marque etc. ne sont protégés que dans le pays d'origine (par réciprocité), sinon les demandes doivent être faites.

### Intellectual Property: A national Title

- In France: INPI
  - Institut National de la Propriété Intellectuelle
- IP right arises in a member state by creation of registration
- Industrial rights (patents, trademarks, designs)

Assimilation of non-national persons subject to reciprocity of its home country

### Copyright ("droit d'auteur")

- Copyright rises from its creation, no need to register (example: USA)
- Duration: at least 50 years, 70 years after the author's death in France
- Conditions: originality and reduction to material form
- Owner: The author
  - Exceptions; collective work, collaboration work
  - Moral rights / economic rights

Ghost writing: Agreement between the real author (the person who writes the book) and the one who publishes the book

- Happens quite often for software, politicians

### Copyright on softwares

- Softwares are protected by copyright (specific copyright adapted to softwares)
- No need to register
- Softwares cannot be patented in France (only protected if integrated in something larger)

### Patents:

- An innovation can be patented if:
  - It is new
  - There is an inventive step
  - It is suitable for industrial activity
- What cannot be patented:
  - Methods
  - Aesthetic creations, etc...
- Registration in an office, registration in each country
  - National title, exception; unitary patent in Europe
- Duration:
  - 20 years from its registration

### Trademarks / Domain Names

- A trademark is a sign to distinguish products and services
- It cannot be descriptive and must be available (descriptive = describes the activity)
- Registration in a national office, national title
- Duration: 10 years, can be renewed indefinitely
- Domain names: can be an obstacle to the registration of a trademark

### **Main principles of trademarks:**

1] Identical (or quasi-identical) reproduction of a trademark for products or services identical or similar to those designated in its registration.

2] Imitation of a trademark for identical or similar products or services

- The assessment of the risk of confusion between two signs is based on the overall impression produced by the trademarks in question, considering the distinctive and dominant elements.
- The risk of confusion is heightened when the earlier trademark possesses a high degree of distinctiveness due to its broad familiarity in the relevant field.
- A low degree of similarity between the designated goods or services may be offset by a high degree of similarity between the trademarks, and vice versa.

### **Designs:**

- Registration in a national office, national title
  - Hague System (79 contracting parties in 96 countries)
- Concerns aesthetic creations, of a non-technical nature (in addition to copyright)
- Conditions:
  - New (not a copy of a previous design)
  - Has its own character
  - Independently created by the designer
- Duration:
  - In France, 5 years, renewable for 5 years periods, with a duration of 25 years.
  - Elsewhere: at least 10 years

### **Know How:**

- It is not a proper IP right
- Definition:

It is a secret, has a commercial value, has been subject to reasonable steps to keep it secret (ex: formulas, methods).

- It is different from professional knowledge.
- Only one protection: secret! Has value until it falls into the public domain

### **Disputes:**

- Infringement: Kind of infringements, penalties
- Cancellation of a trademark, a patent
- Opposition to a trademark or a patent when it does not fulfil the conditions of validity (not new, no inventive step for a patent, etc.)

NDA issue: Firms can refuse to sign the NDA, so we need to make sure the firm agrees to every agreement before signing the NDA (or the agreement can be voided).

## **Patents:**

Intellectual property:

- Artistic and literary property
  - Copyright (including Software Code)
  - Related rights
    - Performers' rights
    - Rights of producers of phonograms or videograms
    - Database rights
- Industrial property
  - Patents
  - Know-How
  - Designs (including graphic interfaces)
  - Trademarks

Exemple d'une bouteille d'eau en plastique (ou Coca-Cola, Pepsi, etc.) :

- Brevets pour le processus de fabrication (code, machines) et le bouchon anti-renversement
- Trademark pour le slogan, le logo, la marque
- Copyright pour l'image sur la bouteille
- Design pour la forme
- Know-How pour le logo autocollant et la production du liquide

Patent invention:

- Legal tool for the protection of technical inventions in a given country, for a given period of time

**Invention: a technical solution that solves a technical problem**

- An invention arises from the work of its authors: the inventors

**What is NOT patentable:**

- Discoveries (caves, archeological sites...)
- Scientific theories, mathematical or economic methods
- Aesthetic creations
- Drawings, information presentations
- Methods of treatment and medical diagnosis (\*)
- Animal breeds (cloning)
- Softwares (\*\*)
- Plant varieties (GMO,...)
- Inventions contrary to public policy and morality
  - You can patent weapons without mentioning in the patent that it will be used to kill people

(\*) Instruments implementing the methods are patentable

(\*\*) Beware of language abuse: **the process** that produces a technical effect, implemented by a software, is patentable

### How to understand a patent:

Patent structure follow an international technical formalism:

- Bibliographic data (title, IPC classification, applicant identification, inventor, filing/publication/grand dates, short abstract)
- Description, sufficient for the person skilled in the art to carry out the invention

To read a patent, we must understand the underlying issues in each section :

- Technical domain of the invention:
  - In which field does the invention belong?
- Prior art highlighting the current problem(s):
  - What are the problems we want to solve? How is this problem currently being solved? Why are the solutions not sufficient?
- Short description of the invention:
  - What new solutions are being proposed: goals, means, benefits
- Short presentation of the figures
- Detailed description of at least one embodiment

### Patentability Criterium:

An invention is protected by the claims of the patent

- Claims: list of 'objects' defined by technical features for which protection is sought, based on the description
  - Example: Holding device comprising a strut resting on a base sealed to the structure

### An invention is patentable if the claims of the patent meet the follow (legal) requirements:

- Industrial application: non-abstract and applicable to all types of industry
  - Non abstract and if it can be made or used in any kind of industry, including agriculture
  - Claims define the specific features of the invention that are to be protected
  - **Non abstract = technical**
    - Produce a technical effort AND/OR
    - Use of technical or physical data AND/OR
    - Use of 'real' (technical) devices
- Novelty: the technical features of the invention are not included in the prior art
  - The state of the art shall be held to compromise everything made available to the public (in all countries) by means of a written or oral description (in all languages), by use, or in any other way, before the date of filing
- Inventive step: the technical features of the invention must not be **obvious** from the knowledge (alone or in combination) of the *prior art*

### Description of inventive step:

Claim 1: A device for a technical domain T, which comprises features A, B and C

A or/and B or/and C must be inventive:

Claim 1	Prior Art Document D1	Prior Art Document D2	Prior Art Document D3
Feature A	X	X	X
Feature B	O	X	X
Feature C	X	O	X

Is the knowledge from D1, D2 and D3 (taken alone or combined) in the context of the problem to be solved, **would** lead the skilled int eh art to find the feature B or feature C? **YES – Inventive** / **NO – Obvious, not inventive**



Here, in this case, the prior art document D3 contains every inventive step made by feature A, B or C, thus the claim 1 not having an inventive step. But in the following case:

B or/and C must be inventive:

Claim 1	Prior Art Document D1	Prior Art Document D2
Feature A	X	X
Feature B	O	X
Feature C	X	O

The Claim 1 is inventive.

NOTE: Only technical features are examined for inventive step, i.e. if no technical feature => not inventive

Patent types:

➤ **Device patent**

Association of mechanisms, equipment contributing to produce a technical effect

➤ **Process patent**

A combination of organized steps capable of producing a technical effect

It is possible to file a patent for **products** or **processes**

**Where** to file a patent?

- France, INPI
- Europe, EPO, European Patent Office
- There are international patent offices

The Life of a Patent: See pdf

Who is eligible for inventor status?

In all technological projects, there are always:

- Scientists: those who explain the theoretical underpinnings of certain inventions
- Inspirers: those who point the way, without providing the technical solution to the problem (PhD supervisors, Managers)
- Experimenters: those who test and verify the feasibility of new combination of means

**An inventor (one or more) is a physical person that imagine new combinations of means to solve a technical problem (which can be found in the claims of a patent), he is the physical person that sets up the solution (i.e. the claims).**

EPO publishes decision to reject two patent applications designating a machine as inventor on 28/01/2020

➔ An incorrect designation of inventors can stop the entire procedure or invalidate a patent

**Reasons for NOT patenting**

Rights reasons:

- Too much prior art
- Scalable or not yet fully mature technology
- We know and we can guarantee protection by secrecy
- We cannot keep up with the market
- There is no competition
- The technology is isolated with no prospect of development in the technological field

Wrong reasons:

- It is not the “invention of the century”
- It is hard to patent
- It only gives extra work
- We will see later
- We have got a know-how record
- No one is interested in this market

		Patent?		Comments
If it is... A piece of equipment, device...			YES	Options recommended due to possible ‘reverse engineering’
If it is... A material	And the analysis makes it possible to know all the compounds and the method of manufacture		YES	
	And analysis does not allow it	NO		Secret is preferable ➔ <b>Registration of know-how</b>
It is is... A process			YES, but...	...describe the principle, not the optimal parameters (e.g. only the ranges)
If the examination of counterfeits is impossible		NO		<b>Disclose!</b>
If the invention is not fully complete		NO		<b>Keep the secret</b> This avoids analyses by third parties at the time of publication

#### (Other) Uses of patents

- Attack and defense
  - Obtain a right to prohibit – timely and territorially
  - Protect against attacks – undermine the technical field
  - Hindering competition – “dam” of “lure” patents
- Value enhancement strategies
  - Grand exploitation through licenses
  - Facilitate technical cooperation through cross-licensing, co-ownership
  - Reassuring investors through IP acquisitions
  - Bringing the patent in a company – business start-up
  - Ensuring the value of a technology by standards
- Skill showcase
  - Sending out a signal of skills – companies and inventors
  - Communicate your values – image patents

#### Infringement and freedom to operate

Infringement = operate in a country, an object covered by a patent (**at least a claim**) in force in that country, without agreement of the owner

The covered acts are manufacturing, offering, placing on the market, using, importing, exporting, transshipment or holding (device/process)

- Perform a freedom to operate analysis of the technical solution (patented or not) against patents which could hinder
- If not favorable, request a license from the patent holder

License: Contract by which the holder of an intellectual property right on a trademark, patent or intellectual work grants a right of use to a third party, in return for royalties

China leads in terms of patent application per year, with 1'344'817 patents filed in 2020 (269'586 for USA, 12771 in France).

Example with a whistling kettle (copper kettle + whistle, théière sifflante)

Novelty? No

Inventive? Since the combination of a kettle and a whistle would make the whistle melt (because of both the pressure and the heat), using a copper whistle is inventive to tackle this issue

---

Patent classification system:

#### **Where can I find patent information on the Internet?**

- **INPI (French Patent Office) database**
  - Single search: <http://bases-brevets.inpi.fr/fr/accueil.html>
- **EPO database (European Patent Office) / EspaceNet (over 150 million patent documents)**
  - Simple search: <https://worldwide.espacenet.com/>
- **WIPO database / Patentscope (over 115 million patent documents)**
  - <https://patentscope.wipo.int/search/>

Databases are broadly similar but with some specific advantages for each one of them.

---

Classification codes that lead to a specific technological field (Example : Electrical field - H052)

#### **International Patent Classification (IPC)**

- The IPC established by the Strasbourg Agreement 1971, provides for a system for the classification of patents according to different areas of technology to which they belong.
  - **This classification covers all technical/industrial domains**
  - Hierarchy system
  - **Reliable:** For each patent application, Patent offices need to go through every patent to know whether its inventive / is a novelty
- 
- *A: Human necessities*
  - *B: Performing operations, transporting*
  - *C: Chemistry*
  - ...
  - *H: Electricity*
    - *H01: Electric elements*
    - *H02: Generation, conversion, or distribution of electric power*
    - *H03: Electronic circuitry*
    - *H04: Communication network*
      - *H04W: Wireless network **protocols** or protocol adaptations*

To make a **prior art search** (to know whether a patent has already been filed), you need to combine:

- **Text search:** Title and/or Abstract Implicit “and”, use “or” if necessary
- **Assignee information:** Applicant (company) and/or inventors (if some are well-known on your technological field, you could search for their released patents)
- **Classification codes**

**Priority number:** First application / patent someone made, we need to check the priority number, because other patents may relate to it

To look for all EDF first applications in France, extended in the USA published in 2023, we look for :

- 2023
- Application number: US
- Priority Number: FR (first issued in France)

We can search in all text field including in description and Claim

- More possibilities: Search in all text field including in Description and Claims
- Refine/Change logical operators

**The claims describe the protection offered to the applicant of the patent.**

**If you want to look for prior art, you search for the description**

**If you want to look for other patents that may block your idea, you search for the claims.**

Some statistical tools may help for your search, but are not perfect, you can use public databases for prior art searches.

Worldwide.espacenet.com

---

### **Freedom To Operate (FTP) search is not the same as Prior Art search!**

**Infringement:** Operate in a country, an object covered by a patent (at least a claim) in force in that country, without agreement of the owner

**Covered acts:** manufacturing, offering, placing on the market, using, importing, exporting, transshipment or holding (device / process)

You need to define your goals when starting patent search:

- Prior art?
  - In force patents?
  - Protected objects?
- Freedom to operate?
  - Competitors, partners
  - Crowded technologies
- Searching for skills?
  - Inventors
  - Applicants
- Competitors/Partners
  - Technology strategies
  - Knowledge about patents
  - Current owners of patents

## TIPS :

### ➤ Prior art search

- Use synonyms, mandatory key words in the domain/invention
- Use classifications
  - DO not use same key words as classes/sub-classes titles
- Proximity operators ("near", "adj", words in a sentence/paragraph...)
- Extend formulations
  - EX: car[,s] AND door = door of a car ; door NEAR3 car[,s]...
- Figures
- **Start from a basic search result to find documents and refine your key words**
  - Final set: about 15 documents

### ➤ Competitors/Partners

- Subsidiaries
- Current owners/Assignees

## Cost of a patent:

### ➤ Annuities (in euros)

YEAR	European Procedure	France	Germany	USA (from the grant)
1	0	0	0	0
2	0	38	0	0
3	490	38	70	0
4	610	38	70	1680
5	855	38	90	1680
6	1090	76	130	1680
7	1210	96	180	1680
8	1330	136	240	3158.4
9	1450	180	290	3158.4
10	1640	220	350	3158.4
11	1640	260	470	3158.4
12	1640	300	620	6468
13	1640	350	760	6468
14	1640	400	910	6468
15	1640	460	1060	6468
16	1640	520	1230	6468
17	1640	580	1410	6468
18	1640	650	1590	6468
19	1640	730	1760	6468
20	1640	800	1940	6468

### ➤ Procedure fees:

- Application fees (request for a patent, search report...)
- Office actions (each time an office requires a response)
- Grant (pre grant decision, grant, printing fees)

- First application + Extension cost (including IP firm cost)

Country	Cost in Euros
France (priority filing)	6750
PCT	9100
Europe : *3 (UK/DE/FR) + 2 countries non EN/FR/DE speaking*	16480
USA	17300
Canada	7700
Chine	14300

Assumptions: priority application in France, 1 office action per patent office

## PATENT ENGINEERS

- Patent examiner
  - Requirements: scientific background, expert in a given technical field
    - Examine patent applications until grant or post grant (opposition procedure...)
    - Prior art searches
    - Update case laws
- Patent engineer
  - IP Law firms:
    - Requirements: Scientific background, national patent Attorney/European patent attorney certification
      - Patent Drafting, Support patent granting, prior art searches, freedom to operate studies, attacking or defending a patent... **for a client**
  - In a company
    - Requirements: Scientific background, national patent Attorney/European patent attorney certification
      - Patent drafting, support patent granting, prior art searches, freedom to operate studies, attacking or defending a patent... **for the company**

## TECHNICAL FEATURES

An invention is patentable if the claims of the patent meet the following legal requirements:

- Industrial application: non-abstract and if it can be made or used in any kind of industry, including agriculture (EPC article 57)
- Claims define the specific features of the invention that are to be protected
- **Non abstract = Technical**
  - ➔ Produce a technical effect AND/OR
  - ➔ Use of technical or physical data AND/OR
  - ➔ Use of 'real' (technical) devices

Claim 1: a device for securing an object to another which comprises

- A flattened head on one end (feature A)
- A sharp point on the other end (feature B)
- A longitudinal body connected to both ends (feature C)

**A or/and B or/and C must be technical (real) or have a technical feature**

Technical effect: a physical, measurable effect on the environment or the device (e.g. raise of temperature, pressure, memory size, ...)

Use technical or physical data: temperature, pixel size, wavelength... / Use of 'real' device: sensors, actuators,...

25/03/2025: Course on business secrets and Know-How

An innovation protected by patent is treated as an invention protected by copyright.

## 1] Employee's inventions and creations

### Life of an invention:

- Research → Results → Protection → Maturation → Transfer

Results: Invention Declaration (ID)

Protection: Either by secret or by Industrial Property title or deposit

Transfer: Either use the patent, once maturation has been used, or transfer it to another company

### Employee's inventions - Patents

More than 80% of inventions are made by employees inside companies or in R&D departments

Important to state a regime: balance between the legitimate interest of the employee and of the employer to be found

There is no harmonization of the law to protect employee's inventions:

Main principle: Obligation for the employee to declare the invention to its employer

- Patent law
  - France, UK
- Special law
  - Germany, Norway
- No law at all
  - USA

Special rules can be applied for employees in subsidiaries or expatriates.

### In France: The French regime

Two types of invention

#### 1] Within mission

- The invention was part of the employee's job description, or the employee was asked to carry out a research mission; and thus, the invention belongs to the employer
- Right to an additional compensation, conditions to be determined in collective agreements or employment contracts

*At EDF, there is a collective agreement to decide what is provided for employees that create inventions.*

#### 2] Out of mission

- In which case the invention can be considered either:
  - "Attributable" and giving rise to assignment to the benefit of the employers
    - Compensation: right to a fair price
    - The invention still belongs to the employee
  - "Non-attributable" and therefore, price freely negotiated by the employees

*An invention out of the scope of the company, for EDF a product that has no link to the energy sector.*

If the patent is not registered by the company to keep the invention secret, the collective agreement can attribute a compensation to the employee that created the invention.

## ***In Germany: The German regime***

### ***1] Service inventions***

- *Result from the obligatory duties of the employee or based on know how and resources of the employer*
- *Employer can revendicate the invention, right of the employee to an adequate compensation based on the exploitation of the invention*

### ***2] Free inventions***

- *Belong to the employee that shall license it to its employer*

## ***In UK:***

- *Invention made by an employee in the normal course of their employment is owned by the employer*
- *In other case, the patent is owned by the employee unless an agreement is found*

*Main principle: The employer is the owner of the IP rights:*

*“Where a literary, dramatic, musical or artistic work is made by an employee in the course of his employment, his employer is the first of any copyright in the work subject to any agreement to the contrary.”*

## ***In Japan:***

- *Employees are the owners of all inventions they make including those in the course of their duties*
- *Employment contracts are often used by employers to entitle them to ownership over the invention or to an exclusive license. Reasonable remuneration to the employee.*

## ***In the US:***

- *The employee has a right to the patent*
  - *Usually, companies require their employees to assign their patent ownership to the company as a condition of employment*

Case law: PROSYSCOR LIMITED vs NETSWEEPER INC.

## **Reward and recognition**

- *Reasons for a reward: a recognition program*
  - *Legal requirement to take into consideration*
  - *Encourage and motivate innovation and creativity*
- *From Push to Pull*
  - *Improving the quantity and quality of ideas that are coming from the inventor community should be a role of the highest priority for a patent department*

Case study: You are the new patent engineer of your company

The CEO asks you to put into place:

- *A system to encourage innovation in your company*
- *A system of remuneration for the inventions made by the employees*

Workshops every Thursday afternoon mixing every group in the firm to create new ideas and inventions, with presentation from a specialist in R&D to keep the latest inventions and studies related to the firm in mind.

We were thinking as compensation for every invention:



- Between 1% and 10% of yearly income of the inventor for every invention an employee came up with
- Shares given to inventors when their patents are published and deemed to have an impact on the revenue of the firm

### Definitions:

#### ➤ Confidential information

- It is an information that is not publicly available, may or may not have commercial value, is communicated in confidence, and is reasonably protected

#### ➤ Trade secrets

- It is a specific type of confidential information that:
  - Has actual or potential economic value
  - And/or provides a competitive advantage by virtue of its secret nature
  - Reasonable efforts are taken by the owner to keep it a secret

#### ➤ Know How

- Unlike confidential information or trade secrets, may or may not be confidential. The term encompasses skills or other type of knowledge, typically acquired through experience, that provide an advantage to the person using it or an entity that controls/owns it (similar to trade secrets). May be confidential or not

### Two types of trade secrets:

- Valuable information that does not meet the patentability criteria (commercial information, manufacturing process not sufficiently inventive)
- Inventions that fulfill the patent criteria could be protected by a patent, choice of the company to keep it secret.

### Pros and cons, Trade secrets vs Patents

- If the secret is embodied in an innovative product, others may be able to inspect it, dissect it and analyze it (I.E., “reverse engineer” it) and discover the secret and be thereafter entitled to use it.

Trade secret protection does not provide the exclusive right to exclude third parties from making commercial use of it.

- A trade secret may be patented by someone else who developed the relevant information by legitimate means, for example, inventions developed independently by others.
- Once the secret is made public, anyone may have access to it and use it at will. The more people know about the trade secret, the more difficult it will be to keep it secret.

Trade secret protection is effective only against illicit acquisition, use or disclosure of the confidential information

- Due to their secret nature, selling or licensing trade secrets is more difficult than patents. A trade secret is more difficult to enforce than a patent. Often, it is quite difficult to prove the violation of trade secrets.

The level of protection granted to trade secrets varies significantly from country to country, but is generally considered weak, particularly when compared with the protection granted by a patent.

- **Trade secrets and patents are often complementary to each other**

- **Decision to patent to be made on a case-by-case basis:**
  - When the likelihood is high that the information can be kept secret for a considerable time
  - When the secret relates to a manufacturing process rather than to a product, as products would be more likely to be reverse engineered.
  - Before filing a patent and during the patent prosecution process until the patent application is published by the patent office (generally after 18 months from the filing date or the priority date)

How to protect trade secrets, know how, and confidential information?

- Making the information confidential
- Limiting access to the information, by placing physical and technological restrictions
- Signing NDA with employees, suppliers, and partners, prohibiting the recipient from making unauthorized use or disclosure of confidential information
- Reviewing periodically which employees “need to know” the trade secret information
- Creating an employee culture that makes maintaining confidentiality a priority.

01/04/2025: Copyright

### Types of IP rights and software

#### Patents:

“The exclusive right to produce, use, and sell an invention.”

To qualify for a patent in the EU, you need to demonstrate that your invention meets the following requirements:

- Industrial application: non abstract and applicable to all types of industry
- Novelty the technical features of the invention are not included in the prior art
- Inventive step: the technical features of the invention must not be obvious from the knowledge (alone or in combination) of the prior art

Patents generally expire after a given period – usually 20 years

- **Software is not patentable** (along wit scientific theories, mathematical or economic methods, remember: ideas are not protectable!)

But the process that produces a technical effect, implemented by a software, is patentable (example: Metroscope)

Softwares aren’t patentable, but can be protected by other ways :

#### Copyright:

- Protects the specific expression of intellectual and original work
- Gives the owner exclusive rights to copy/modify the work, and distribute or sell those copies or modifications to the public
- Needs no application process (unlike patents). Copyright is automatically obtained by the creation of the original work.
- Covers the specific code used in the program or elements in the user interface
- Usually applicable for the duration of the copyright owner’s life plus 50 years, or 75 years (France)

### Trade secret:

- A process, tool, mechanism, or formula that is **not publicly available and is kept secret by its owner**
- **Protected by law if the owner makes reasonable effort to keep it a secret** and if no one else has discovered it independently. It is illegal for someone to spy on your company and steal a trade secret, but if they figure it out by reverse engineering or by developing it themselves, it's fair game
- Could be used to protect software code
- In the EU, trade secret is protected by specific laws and in France by the Code de commerce (owner should demonstrate the **commercial value** of the information covered by the secret, **the existence of a secret** and of **concrete measures to protect the secret**)

### Trademarks:

- A symbol, phrase, name, or other type of expression used to **distinguish a particular product or brand**
- Names of brands or products are often marked as trademarks using a trademark symbol <sup>TM</sup> for unregistered trademarks, and ® for registered ones
- This can protect the name/trademark under which the software is sold (e.g. Photoshop)

### When is my software copyrighted?

- To be copyrighted, intellectual works must be **'original'**
- The author needs to demonstrate a personalized effort, a unique structure, a mark of his intellectual contribution, a preparatory design material

Who owns the rights ?

- Moral rights → to the author
  - Software specificity: **limited** to the rights of disclosure (decide on publication) and authorship (attach the author's name to the work). Withdrawal, repentance and forbidding forward modification by an editor are **excluded**
- 'Patrimonial rights' (exploitation, royalties, ...) → to the author, except employees invention (to the employer), collective invention, collaborative work

### Software users' rights:

- Rights to make reproductions, translations, or adaptations
- Right to make a backup copy
- Right to observe and test the software and its security to determine its principles
- Right to access the software code if this is essential to ensure interoperability with other software

### Software and open source

#### Founding principles:

- **Free Redistribution:** *no royalty*
- **Source Code included**
- **Modifications and Derived Works allowed**
- **Integrity of the Author's Source Code:** *distribution of « patch files »*
- **No Discrimination Against Persons or Groups**
- **No Discrimination Against Fields of Activities**
- **Distribution of License:** *no need for additional license for ulterior users*
- **License Must Not Be Specific to a Product**
- **License Must Not Restrict Other Software** (*which could be distributed along with the licensed software*)
- **License Must Be Technology-Neutral:** *no provision specific to an individual technology or interface*

The concept of « **copyleft** »

« The rule that when redistributing the program, you cannot add restrictions to deny other people the central freedoms » (Source: GNU project)

« The legal technique of granting certain freedoms over copies of copyrighted works with the requirement that the same rights be preserved in derivative works. » (Source: Wikipedia)

The open-source licenses need to be checked to know if users have right to copy, modify, use, and under which conditions (CC BY, CC BY-SA, CC BY-NC)

- **Creative commons licenses = CC + XX-YY...**
  - CC BY: free usage, including commercial use. BY = Credit must be given to the creator
  - CC BY-SA: free usage, including commercial use. BY + SA = Adaptations shared under the same terms
  - CC BY-NC: BY + NC = no commercial use.
  - CC BY-NC-SA: BY + NC + SA
  - CC BY-ND: commercial use allowed credit to the author, but no derivatives or adaptations are permitted
  - CC BY-NC-ND: no commercial use + no derivative

08/04/2025: **Contract**

**What is a contract?**

- Agreement reached between two or more parties (bilateral, multilateral)
- Commit themselves to perform or not perform certain obligations
- Can be oral or written
- Diversity of contracts: sell a product, buy or sell services, buy intellectual property
- No international harmonization

In France, the law provides a strict template for contract, thus contracts with the United States, United Kingdom or other countries may have lots of terms and conditions.

**How is a contract made?**

- Offer
- Acceptance of the offer
- The parties must have contractual capacity to enter into a contract
- The contract is the law of the parties
- Importance of negotiations: freedom of contracts
  - Sometimes you cannot negotiate, but most of the time you can
- Electronic contracts

**What are the main clauses of a contract?**

- Recitals (i.e. the content of the contract)
  - Example: Negotiation of payment to obtain a license, and the exclusiveness of the license
- The parties (check the power of the parties to engage themselves)
- Definitions of the terms employed in the agreement
- Object of the contract: purpose of the contract
  - Employment of someone, rent contract,
- Entry into force and duration
  - Both written in letters and numbers to avoid any confusion

- Rules for contract renewal
- Obligations of the parties / Price / Payment

### **Main clauses of a contract**

- Subcontracting
- Warranties
- Liability & insurance
  - In France, there is no cap to damage, so parties must agree on liability, otherwise any party can be held liable for all the damage
- Force majeure: circumstances going beyond the control of the parties under which they are allowed not to perform obligations under the contract
- Applicable law / dispute resolution

### **Signature of the contract**

Handwritten signature and/or electronic signature (different from a PDF signature)

- ➔ There are companies providing a safe and reliable service to sign electronic documents

### **Life of a contract**

- Amendment of the contract
  - One of the parties might change, thus having an amendment to change the parties / amendment to renegotiate the contract, either to extend it, or adjust terms
- Breach of the contract, decision of the parties to put an end to the contract
- Expiration of the contract

Price is something that is difficult to negotiate, there are examples in everyday life: insurance, car, food, mostly everything has a price.

### The diversity of IP contracts

- Various contracts deal with IP rights themselves: assignment of copyrights, licenses of trademarks, patents, softwares, transfer of know-how, ...
- Many contracts include intellectual property component: joint research contracts, the purchase of intellectual services, etc.

### Negotiation phase – Contracts

- Non-disclosure agreements (NDA)
- Memorandum of understanding (MOU)

R&D contracts:

Sharing of financial resources and expertise (with academic or industrial partners)

- **Importance of definitions**: Background intellectual property, foreground intellectual property (own results, common results, who is the owner of the results, of the IP)

- R&D collaboration contract: question to be solved when innovating together
  - Who can use the discovery? For what purposes?

#### **R&D contracts – ownership**

- Each party remains the owner of its background IP. Co-ownership results: co-ownership shares, patent manager party
- Direct exploitation / indirect exploitation, preemption clause
  - Direct: you the party can use the results
  - Indirect: a third party uses the IP of the results (by a sold license for example)
- Use of the results: research purposes, industrial purposes, commercial purposes
- Another IP scheme: one party has the IP on the results/license for the other party
- Case of patents: employee's inventions (each party undertakes to be the owner of its employee's invention and pay for their inventions)
- Intellectual property, integrity on softwares: adaptation, extension
  - In the case of the software being built on a past software, the ownership of the IP linked to the new software may have to be shared

#### **R&D contracts – Exploitation**

- Own knowledge: list in appendix
- License on background: for the project/exploitation of the results
- License on own results for the project/exploitation of the results
- Right of exploitation for subsidiaries?

#### **Assignments agreements**

- Permanent transfer of ownership from one party (the assignor) to another party (the assignee) – price to be paid by the assignee
- The assignee becomes the new owner of the transferred IP assets. Duration and territory to be specified.
- If the assignor uses IP after the transfer has taken place, such use is an infringement

#### **Assignment of copyright**

- A written statement is required, and some information is mandatory
- Example: contracts with authors
- The transfer of rights must be detailed: each right transferred must be stated, the field of exploitation must be delimited in terms of its extent and destination, its territory and duration.
- In principle, the remuneration must be proportional to the operating income of the work.

#### **Softwares licenses: Questions to be solved**

A third party wants to use your software → What can the third party do? Use, modify, distribute

- A variety of modalities
- Single user: executable license
- Developer: right to edit, access to source, fate of changes
- Distributor: right to market, royalties
- Open-source licenses
- Free software is not license-free, beware of contamination
- Remember to check the origin of your rights

#### **Exploiting a patented invention: Patent Licensing**

- The contract must be in writing to be valid
- Territory to be planned, exclusivity or not, right to sub-license, right to transfer...

- Bundled licenses: patent pools
- The outline of the license
- Products, applications, domain, territory
- Exclusive: for a limited time
- Duration
- Price
- Lump sum payment/instalment payment
- Royalties: periodicity, basis of assessment
- Warranties
- Existence of the patent
- Counterfeit
- The Fate of Improvements

### License agreements

- License: A contract by which a company authorizes another company to exploit their intellectual property rights (the owner of the IP remains the owner)
- Can relate to any type of intellectual property right and to several intellectual property rights at the same time (e.g. trademarks, patents, know-how)
- In practice:
  - An author authorizes an editor to publish his work
  - The owner of a patent authorizes another company to manufacture, sell and/or use its invention
  - The owner of a trademark authorizes another company to affix its trademark to the products it manufactures
- Variety of licenses
- Exclusive or non-exclusive

Exclusivity remains if you share the license with a single party AND you keep the right of use

Otherwise, it becomes non-exclusive

- Total or partial:
  - Territorial or non-territorial limitations
  - Limitation by field of activity or not
- With or without sub-licensing rights
- The licensee's obligations: pay and operate

### Co-ownership agreement

- A patent or a trademark can be filled by several people through a single application – common property of the applicants
- Need of a co-ownership agreement to state what each co-owner can do

### Co-existence agreement

- In the case of opposition from the owner of an earlier trademark. It is also possible that a trademark application infringer your trademark right.

### The know-how communication contract (different from a license agreement)

- Know-how: secret, substantial, identified
- Identify know-how
- Trade the release of documents
- Manage privacy to preserve value

- Be precise in your writing
- What is not prohibited by the contract is lawful

Purchasing: questions to be solved

- Who owns the study? The trademarks?
- You are not the owner of the product, you are the owner of the IP
- Order a logo, a study, an advertising creation → Who will own the study, the logo, the model? Can it be reproduced / Edit freely? For how long?

Purchases: alerts!

- Paying is not enough!
- Beware of general conditions to protect your IP
- Beware of counterfeiting

Sales: questions to be solved:

- Who will own the results?

Sales: alerts!

- IP of the deliverables: the buyer
- IP of the know-how, results created to make the study/service: the seller
- Negotiations!

For a software, if you develop it, you are the owner of the software, but the buyer is the owner of the deliverable that uses the software.

### **Joint venture agreement**

#### **JV: Joint Venture**

- Companies creating a JV together – IP scheme to be constructed
- Background IP licensed or assigned to the JV (due diligence before the creation of the JV)
- Owner of the results created by the JV
- License to the shareholders? IP and exploitation in case of dissolution of the company.

### **Negotiate principles**

- Aim of the negotiation: creating something constructive together, understanding what the other party wants.
- Six negotiating methods:
  - Winning-losing
  - Losing-Winning
  - Losing-Losing
  - AIM: Winning-Winning
  - You need to focus on win-win scenario, or no deal can be viable
  - Shotgun: when a negotiation fails, escalation procedure, eventually bring in a third party

### **How to negotiate**

- Prepare for the negotiation: know our case, define your stakes, objectives (high hypothesis, low hypothesis), plan concessions, propose compensation, evaluate the balance of power (time)
- Discussion of the problem: exchange and discovery phrases. Listening efforts, reformulation, argumentation, silence is a powerful argument
- Finalization of the negotiation: disagreement, compromise, agreement
- Feedback