IP – Basis, and why should you care

Maria MAINA and Christophe SAAM, P&TS SA

Christophe SAAM

- European Patent Attorney
- Electrical Engineer
- Technical Judge at the Swiss Federal Patent Court
- Founder and CEO of P&TS, a Swiss patent law firm based in Neuchâtel and Zurich.

Maria MAINA

- European Patent Attorney
- Swiss Patent Attorney
- Italian Patent Attorney
- Electronics engineer
- Working at P&TS since 2009

P&TS Neuchâtel

Our mission at P&TS

«To protect innovations from competition»

Filing and litigating more than 300 patents every year; in more than 65 countries.

Some reasons for start-ups to care about IP

Investors

IP Ownership

Marketing

Licensing

IP for your investors

«We don't invest in people – they can leave at any time.

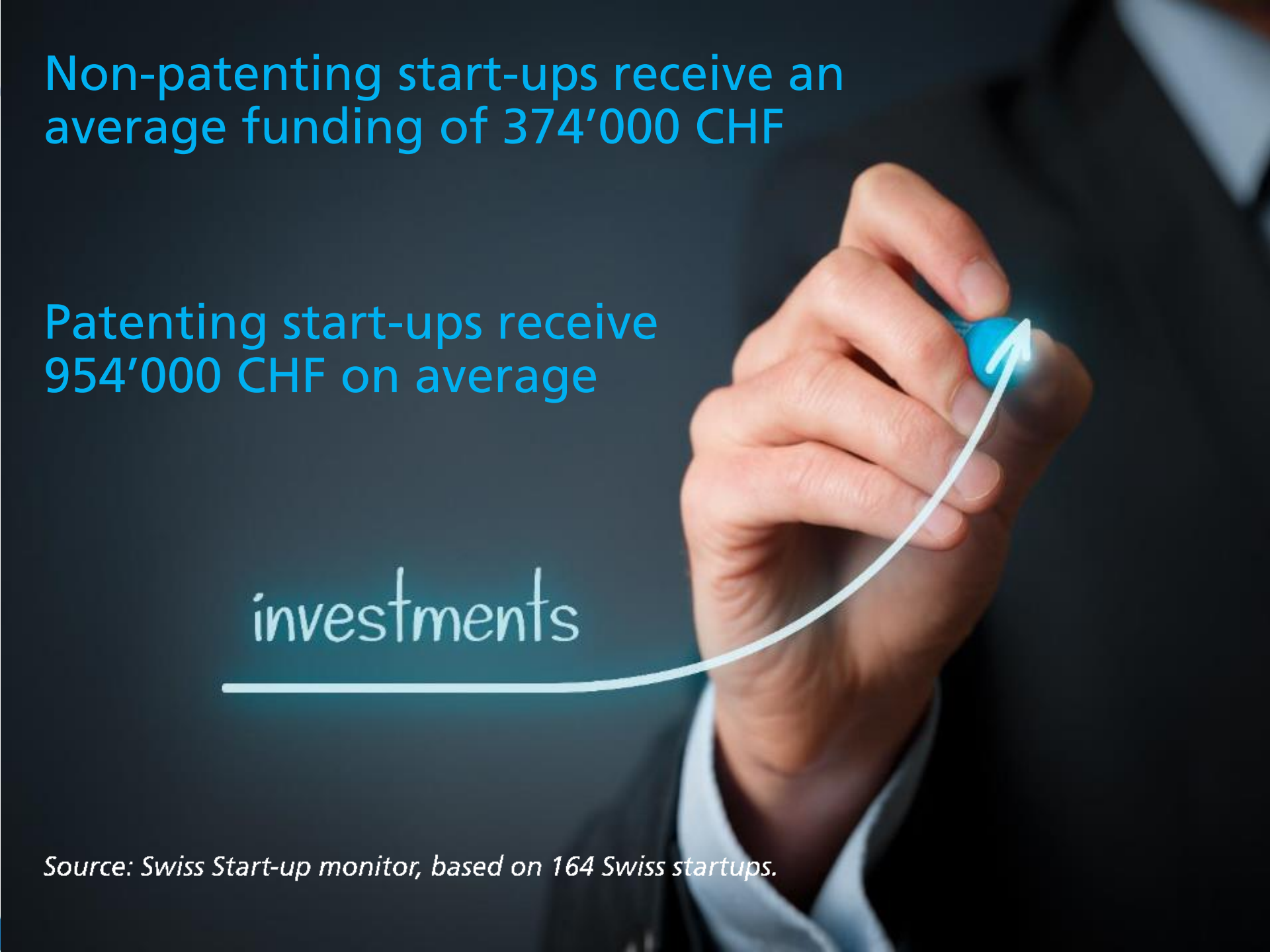
We don't invest in previous sales either – most of our early stage companies don't have any significant sales.

The only things that really matters are IP, IP and IP, because it is a promise of higher margins»

(Statement from a VC)

Non-patenting start-ups receive an average funding of 374’000 CHF

Patenting start-ups receive 954’000 CHF on average



Source: Swiss Start-up monitor, based on 164 Swiss startups.

Draft your patent with your investors in mind

Have a strategy.

The features in your claims should match the USPs in your business plan.

Clearly drafted patents are easier to pitch to investors.

You need to be able to understand exactly why your scope of protection is important.

IP ownership

In Switzerland, inventions made by employees belong to the employer.

However, inventions used by start-ups often have external contributors who are not employees:

- Invention made by the founders before the incorporation
- Academic partner, for example in a CTI/Innosuisse project
- PhD, students, ..
- Freelancers

Patents clarify the IP ownership situation

Patents as a marketing tool

Filing a patent application is a strong statement:

«We are an innovative company»

- For your investors
- For the media
- For your employees
- For your environment

Licensing your IP

Many start-ups can't fully exploit their inventions:

- Geographic limitations
- Use of a technology in a different field
- Integration of the technology in a complete product

Patents could be licensed in order to get revenues from those hard to reach markets

Complex products

Complex products often integrate many technologies.

Example: car; engine; computer; materials

It is impossible for a single company to be #1 in all those fields.

Technology transfer

Leading companies are no longer the ones that develop the best technology in all fields.

Leading companies are those which are the most efficient at buying, integrating and selling world-class technologies developed all over the world by various partners.

Licensing of technology: a huge market

Worldwide between 180 et 300 billions USD/year[1]

Yearly growth: 10,6% [2]

[1] *Licences only; Athreye and Yang (2011); Degnan & Wickander, 2016*
[2] *2000-2010*

What are the options?

- Secrecy
- Copyright
- Publication
- Patent, TM, design

Option 1: Secrecy

Secrets are protected because they are not easily available to competitors

Option 1: Secrecy

Moreover, trade secrets are protected against unfair use.

Conditions:

- Protection only if the secret has been stolen, or otherwise misused
- The misused information is (more or less) confidential
- It has value because of its secrecy.

But trade secrets are not protected if a competitor reinvents the same independently (and possibly patents it!), or access it in a legal way (for example through reverse engineering).

Non-disclosure agreements (NDA)

NDAs are commonly used:

- before filing a patent/design application when you have an idea that you need to show to a third party (e.g. potential business partner)

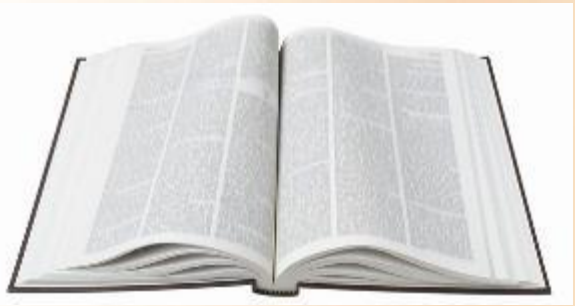
- to protect trade secrets

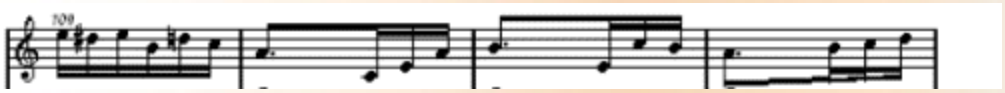
Option 1: Secrecy

Pros	Cons
Avoids the costs of patent filing	Might be very expensive (drafting and enforcing NDAs, protection measures, etc)
	Employees might leave your company
	Risk of reverse engineering
	Not always possible; often a time limited solution
	Difficulty to enforce NDAs or trade secrets
	Risk of being blocked if a third party patents your solution

Option 2: Copyright

Type	Object	How	Duration
Copyright	Artistic creations, including software	No formalities	50/70 years after death of creator





```
class classCar{
    protected:
    enumCarMake carMake;
    structTire carTires[4];
    classEngine carMotor;
    classPart carPartsList[100];
    public:
    classCar();
    virtual ~classCar();
    void GetCarLoc(classCarLoc& carl
);

class classTruck : public classCar{
    structTire* pTires;
public:
    classTruck();
    virtual ~classTruck();
```

Option 2: Copyright

Copyright protects those who create works of art. Art has a broad meaning within this context, and includes software.

Conditions:

- Individual character
- Automatic. No need for registration. No register.

Option 2: Copyright

Protection is limited to a particular expression of an idea – not to the idea itself.

For example, Microsoft could use copyright to prevent you from installing MSWord on more than one computer ; but not for preventing someone from programming a similar word processing program.

Option 2: Copyright

Pros	Cons
No cost, no time	Scope of protection is limited
	Enforcement is challenging
	Proof of authorship / time stamping

Time-stamping

The problem with copyright is not the legal existence of the copyright on your creation, but the proof of the creation at a certain time.

Therefore, it is well recommended to time-stamp your creation.

How can we date IP documents?

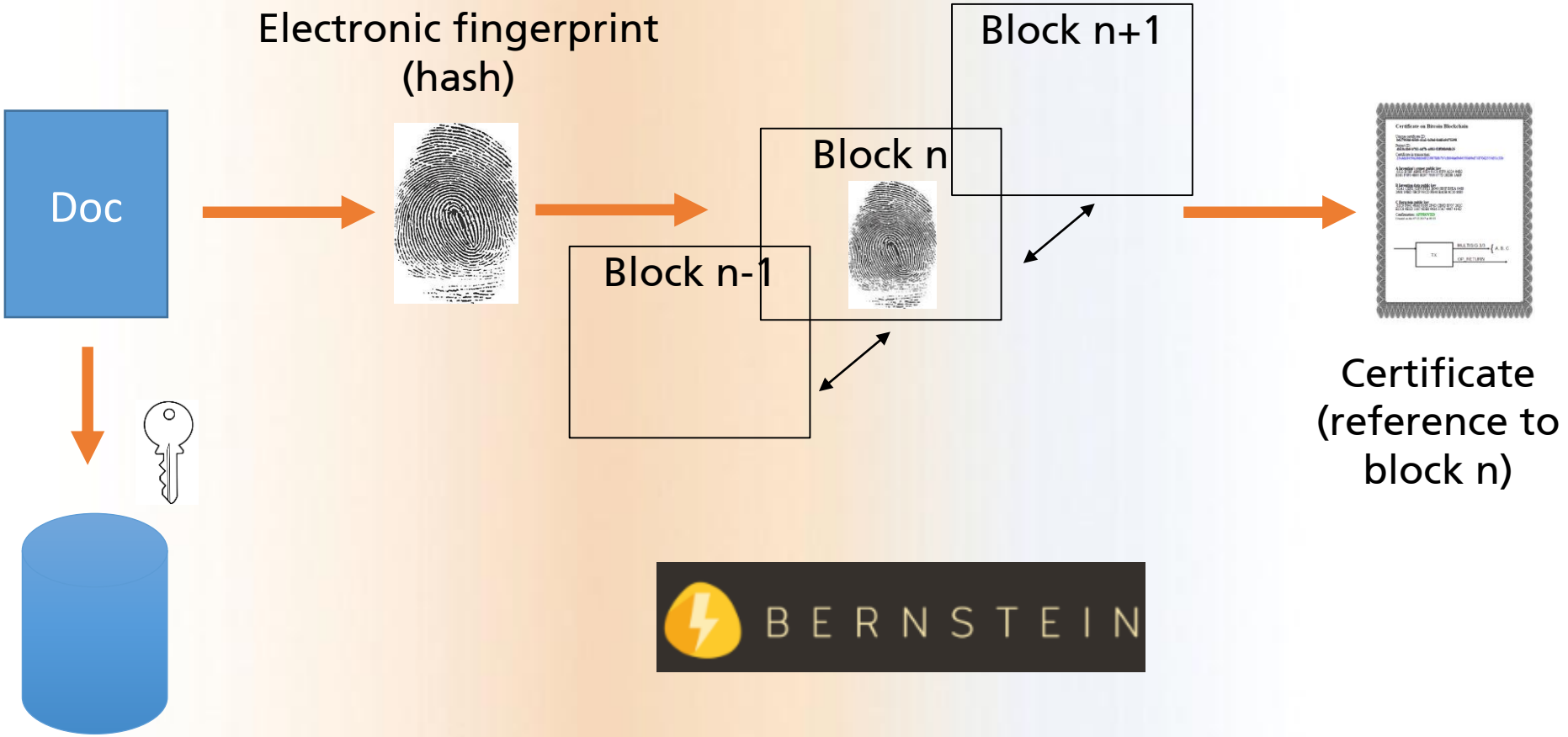
Non-limitating examples:

- Notary
- Blockchains

Notary

Pros	Cons
Safe	Cumbersome procedure
Limited costs	Not adapted for companies that create inventions or lines of code every day

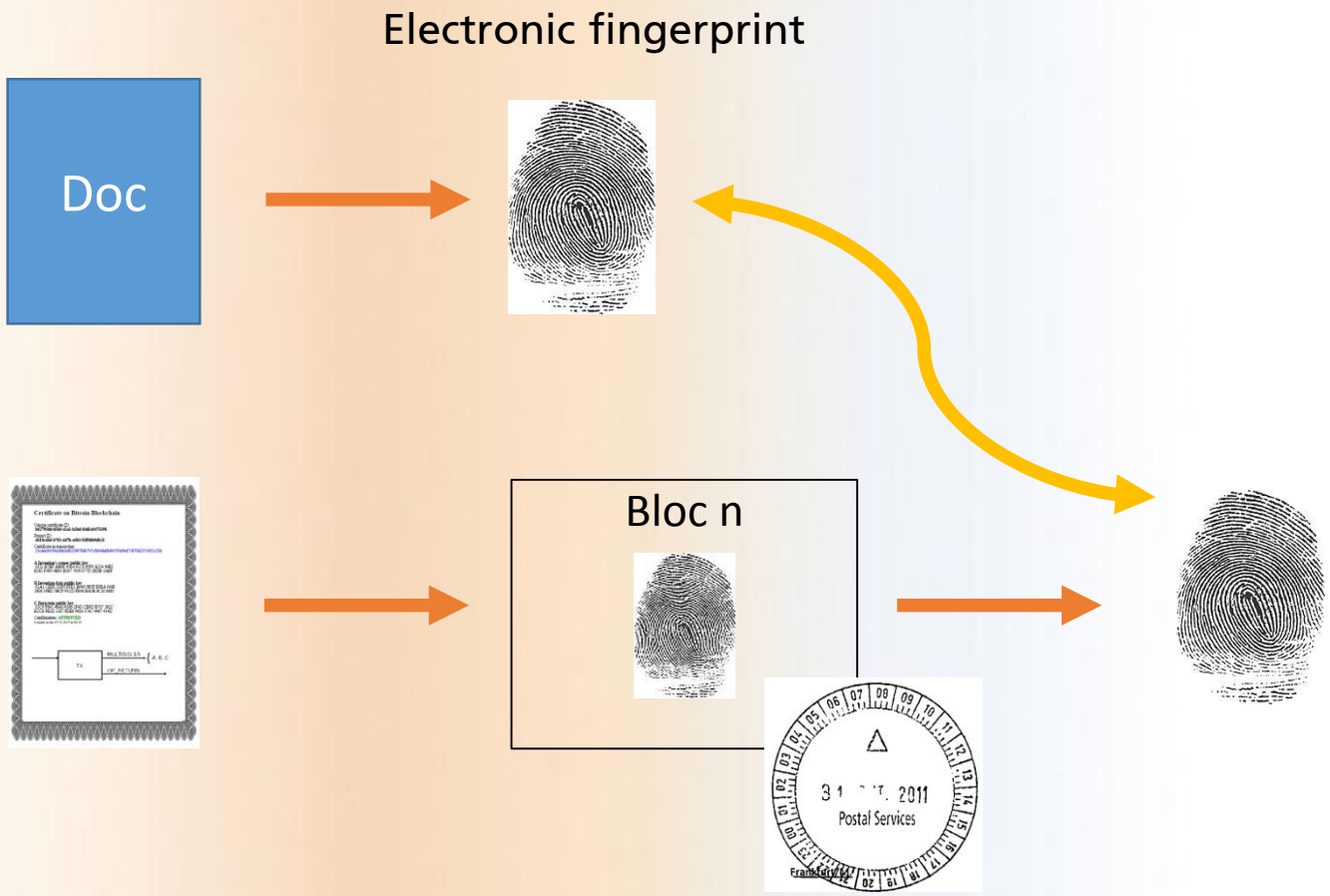
Blockchain - Bernstein



- Bernstein encrypts the document, optionally saves the encrypted document, performs the electronic fingerprint and provides the certificate
- Confidentiality of the document (not published and not made available to Bernstein)
- Only the electronic fingerprint is stored in the blockchain

Means of proof

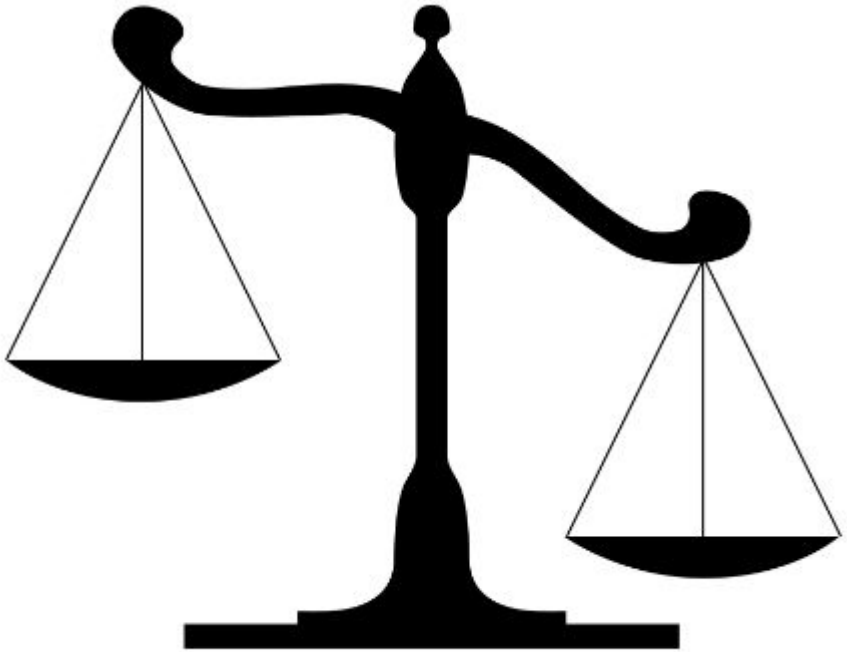
A user wants to prove that a document he is presenting to a court is the same unaltered document that was presented to the blockchain at a prior point in time



Blockchain - Bernstein

Pros	Cons
Simple	Might be difficult to explain the technology behind the blockchain to some judges
Low cost	Blockchain transaction confirmation could be not immediate
Possibility to link subsequent updates and proofs of use	Timestamp does not automatically prove ownership of the content of the document
Can manage high volumes of data (original docs are not stored in the blockchain, just their el. fingerprint is stored; unlimited amount of data)	
Any change can be detected	

Legal acceptance ?



- Positive legal opinions
- Strong presumption of acceptance as a lot of people are willing to invest their money in crypto-currencies
- A more conventional certificate can be ordered (Bundesdruckerei DE, etc.)
- Probably a proof to be used with other more “classic” proofs in a “classic” legal framework

Option 3: publication

Publishing does not protect your invention.

But it prevents other from filing a patent for it.

Web sites, such as ip.com, offer so-called «defensive publication» services.

Option 3: publication

Pros	Cons
Low cost	One-way decision: patent not available anymore after publication
Competition can not patent your solution..	But competition can use your solution

Option 4: File for a protection

Various forms of IP protection

- Patents
- Trademarks
- Designs

Combining different titles

trademarks

patents

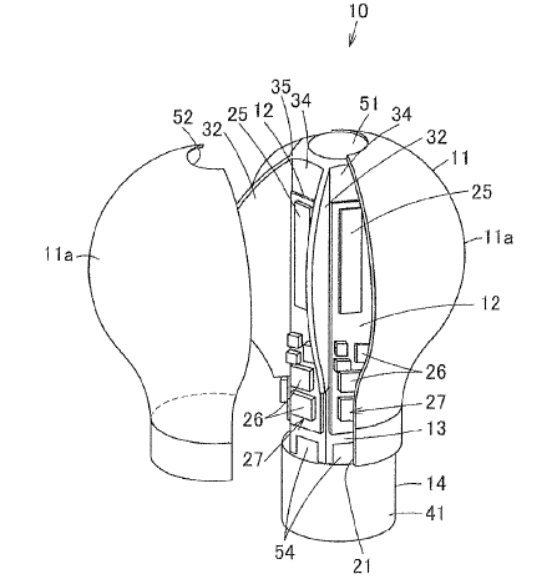
copyright

designs

Manufacturing methods:
trade secrets

Patents

Type	Object	How?	Duration
Patents	Inventions	Filing	20 years from filing date



Patentability criteria

1 – Exclusions / Industrial applicability

2 – Novelty

3 – Inventive step

Exclusions

No industrial applicability

Software as such

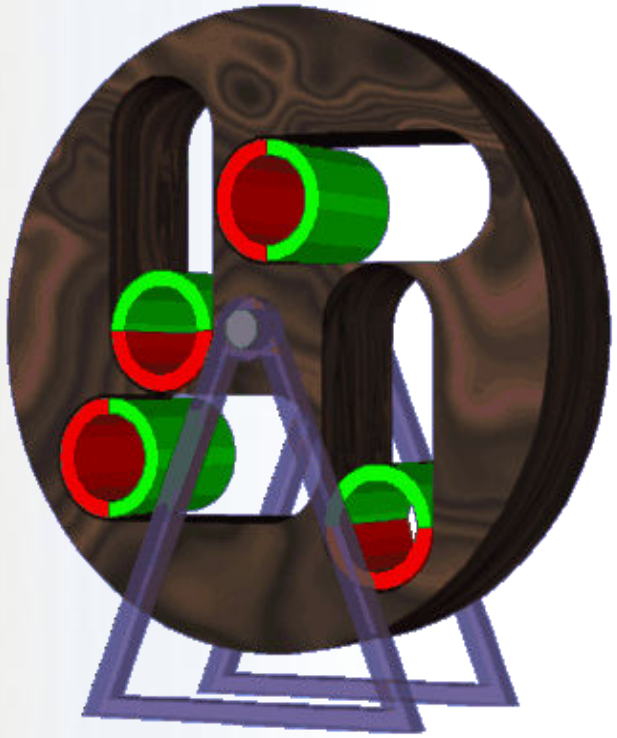
Mathematical methods

Business methods

Rules of games

Therapeutical and diagnostic methods

Etc

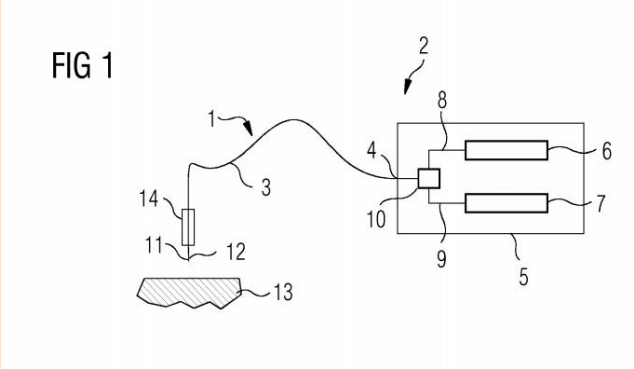


Therapeutical and diagnostic methods

A53c) EPC

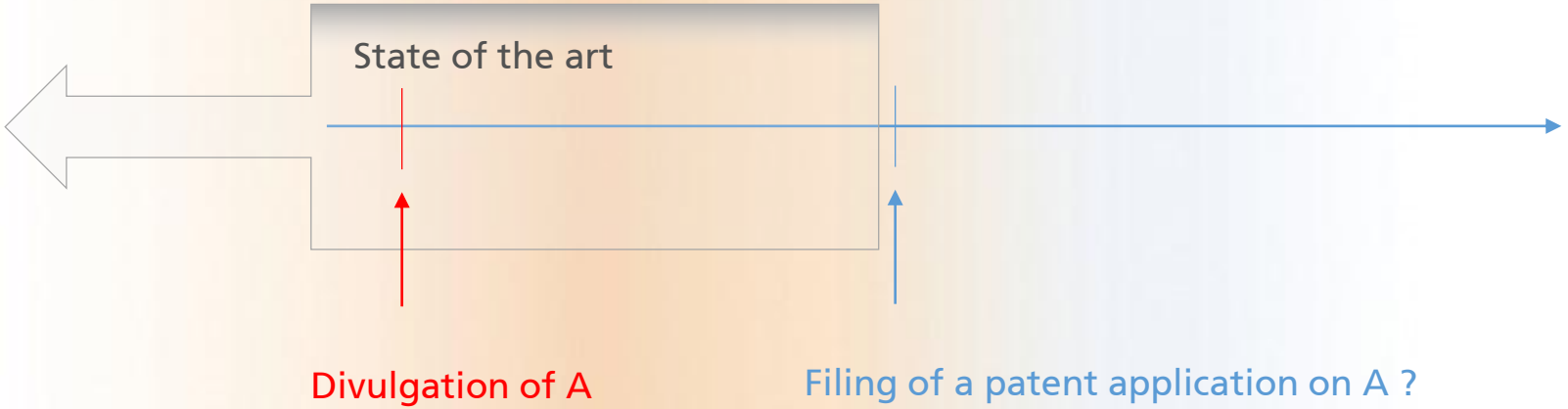
European patents shall not be granted in respect of:

methods for treatment of the human or animal body by surgery or therapy and diagnostic methods practised on the human or animal body;
this provision shall not apply to products, in particular substances or compositions, for use in any of these methods.



Novelty

- To get a patent protection, an invention/design must be **NEW** (not part of the prior art).

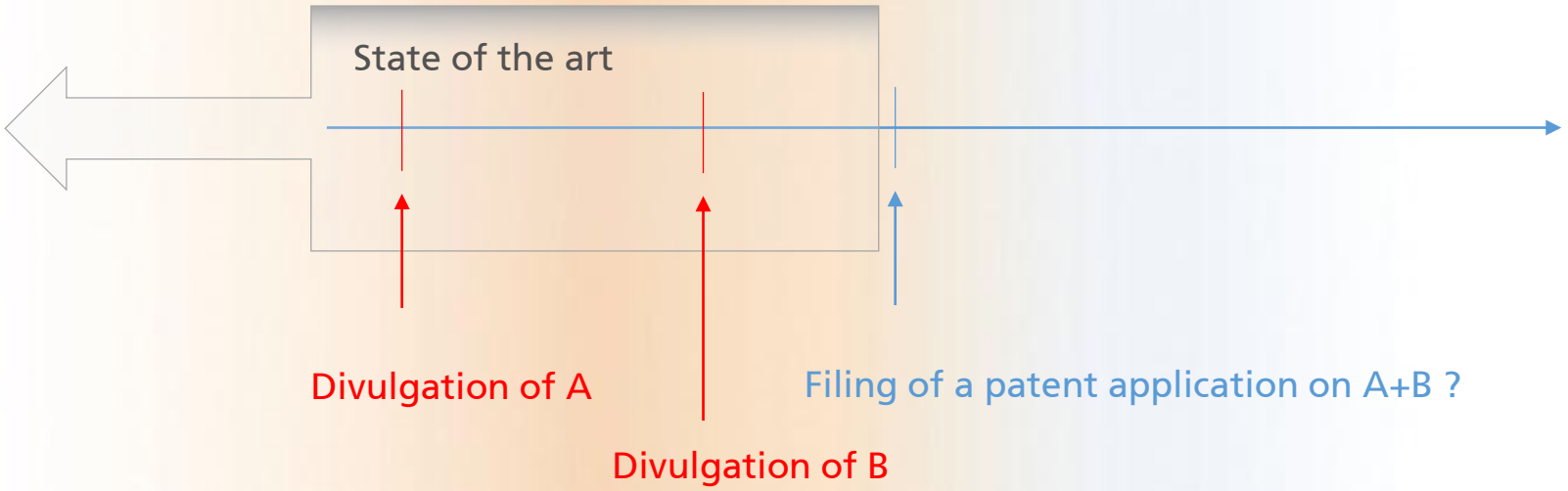


First file for a protection, then disclose

- Don't publish anything about your invention (or design)
- Don't talk publicly about it until you have filed a patent application
- Even negotiations with a potential business partner can be risky!

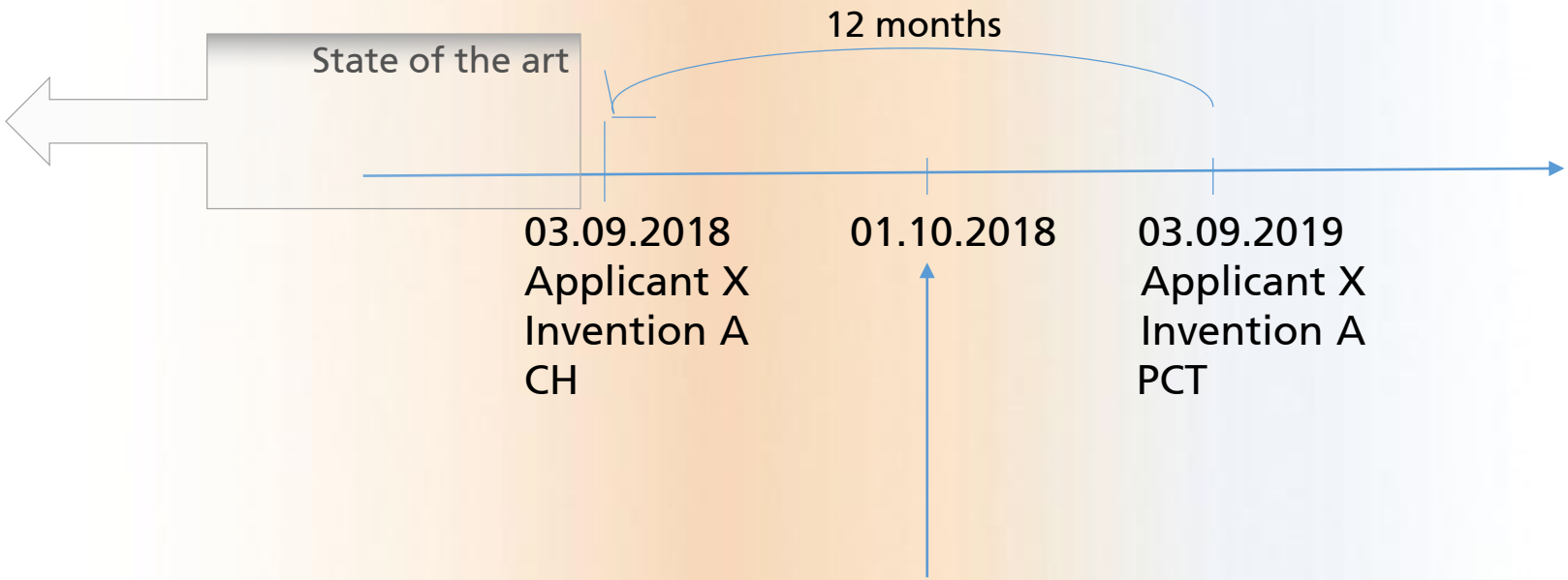
Inventive step

- It is not sufficient for an invention to be new
- One most show that for a skilled person, it was not obvious to come to the solution
- In Europe, problem-solution approach



Example of the main steps in the patent procedure

Priority: example



Freedom to operate

Can I sell?

Costs of a FTO depends on the security that you need (Risk mitigation strategy)

Make only sense if you are in a position to adapt your strategy depending on the results

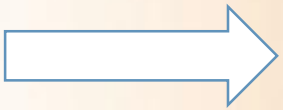
How to make a freedom to operate

Start with your a search on the web (www.espacenet.com, Google patents, etc)

Ask a patent attorneys to complete this with a professional search as soon as possible, before you invest too much in the technology

Make a more comprehensive search once the design of your product is final

IP Options

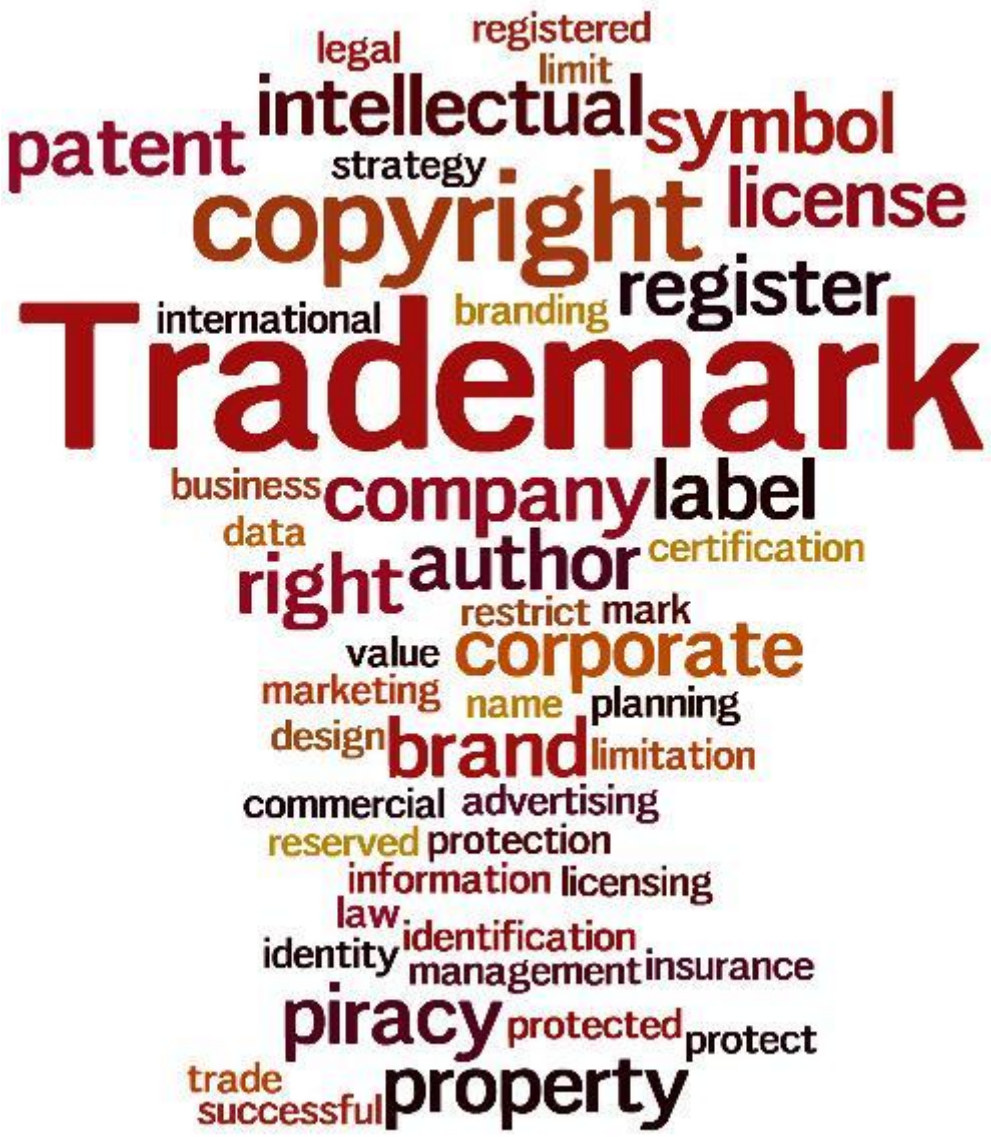


- Patents
- Trademarks
- Designs

Trademark

Type	Object	How	Duration
Trademark	Distinctive signs for products or services	Filing	10 years * X

Trademark



Trademarks:

- Low value at the beginning
- Increases with time
- Even for high-tech companies, the value of trademarks often eventually exceeds the value of patents.

Trademark

Protection is limited to the products/services for which the trademark is registered

Suitable for distinguishing goods or services of a particular enterprise from that of other enterprises

Nice classification
(45 classes: 34 for products, 11 for services)

Verbal – Figurative – Combined Trademarks

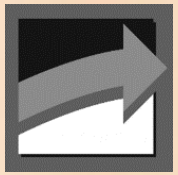
> APPLE

> Nike

> ABB

> 501

Etc.



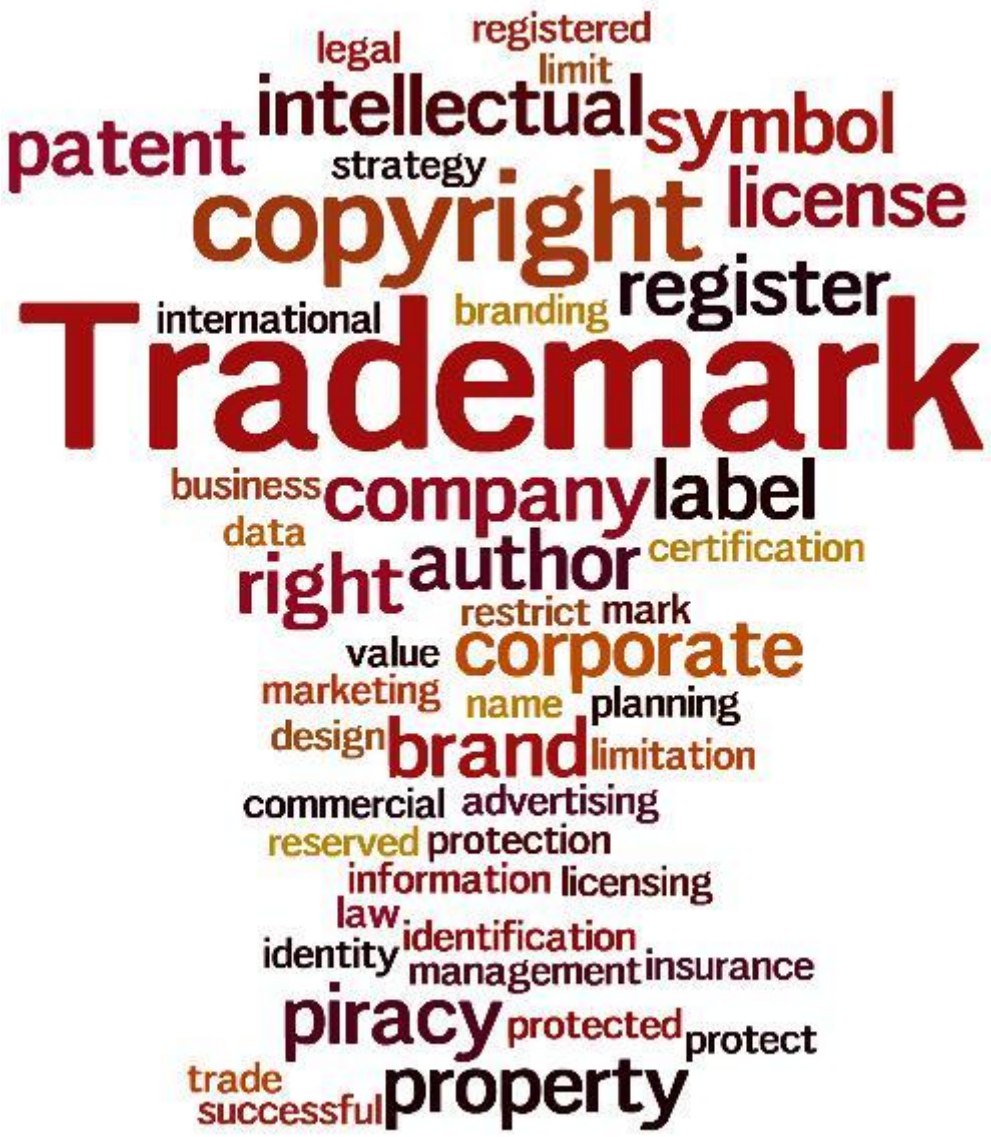
SOLARIMPULSE

Grounds for refusal

Absolute grounds for refusal (examined by the Office)

Relative grounds for refusal (used by the owner of a previous trademark)

Trademark



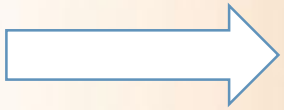
Some criteria for choosing a trademark:

- Non-descriptive.
- No confusion with existing trademarks.
- Emotional, easy to remember.

IP Options

Patents

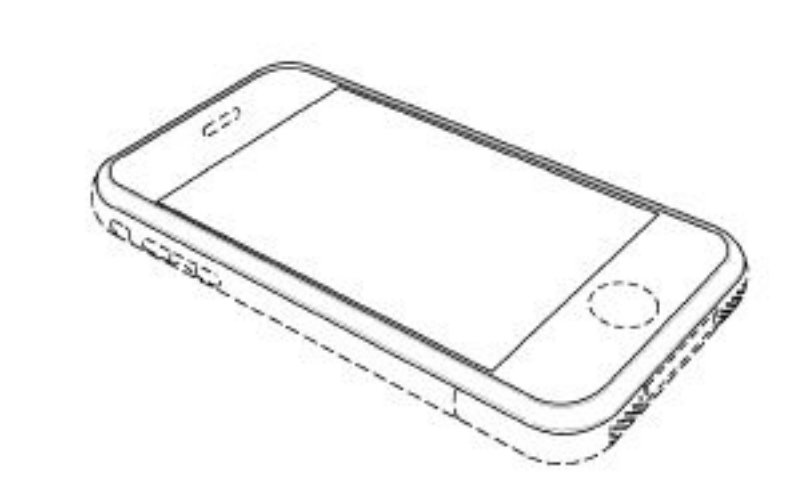
Trademarks



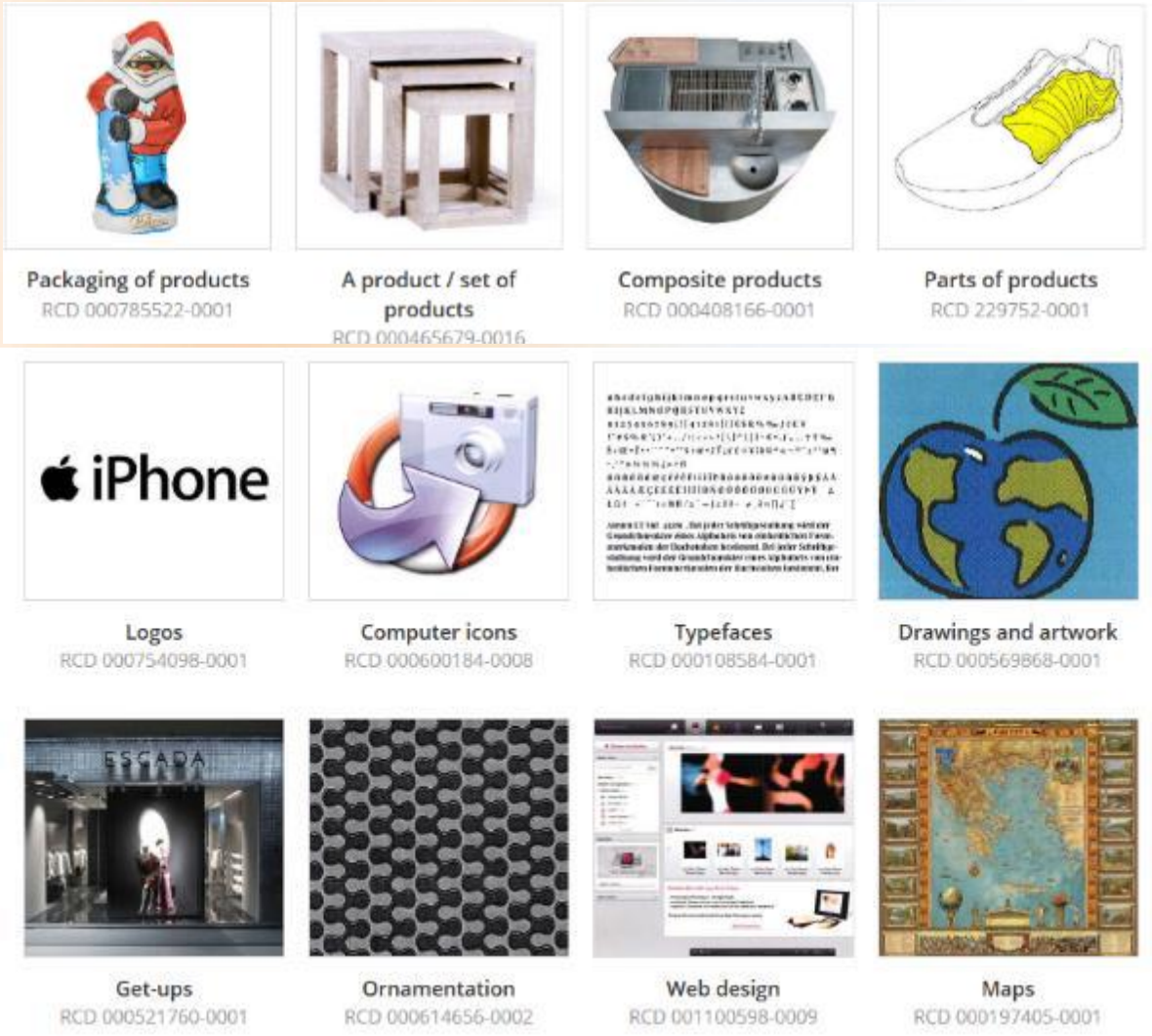
Designs

Design

Type	Object	How	Duration
Design	Products characterized by the arrangement of lines, surfaces, contours, colors, materials	Registering*	5 * 5 years



Examples of designs



*https://oami.europa.eu/ohimportal/en/design-definition

Criteria

> Must be new

> Must show originality i.e. its overall appearance differs sufficiently from existing designs

> Not contrary to public order, morality

P&TS
INTELLECTUAL PROPERTY

P&TS SA
Av. J.J. Rousseau 4
CH 2001 Neuchâtel
+41 32 727 1427

P&TS SA
Nordstrasse 9
CH 8006 Zürich
+41 44 267 3919

www.patentattorneys.ch