University of Catania

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Essentials on establishment and exploitation of IPRs

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IPR

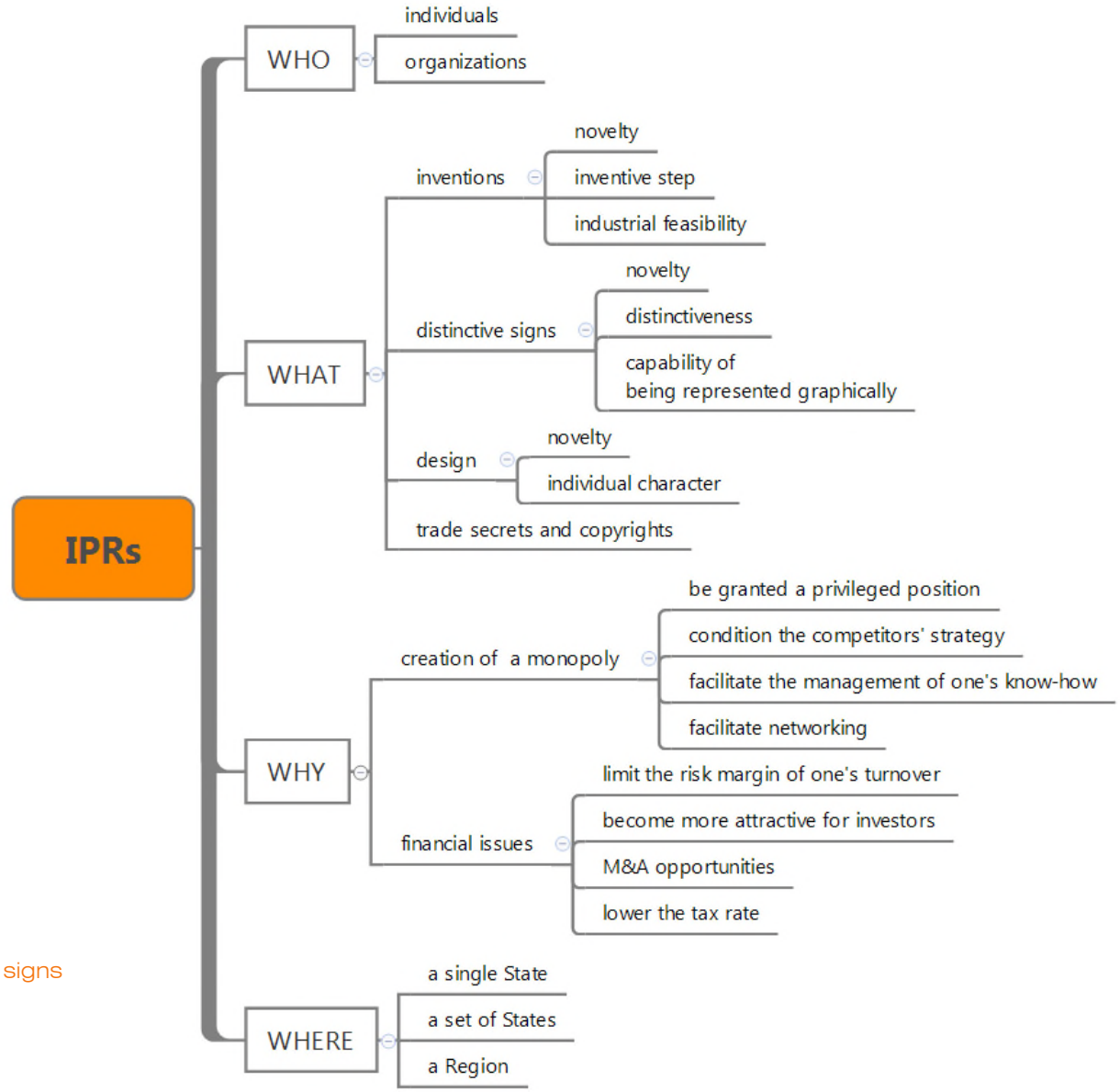
- IPR is the acronym for INTELLECTUAL PROPERTY RIGHTS

IPR

- **Intellectual property** is an expansive and rapidly changing area of the law which deals with the formulation, usage and commercial **exploitation** of original creative works.

IPR

- A majority of the issues that arise within this area revolve around the boundary lines of **intangible property rights** and which of those rights are afforded legal protection.



unregistered signs

IPR - Who

- Individuals and organizations are allowed to file applications to get their asset registered.
- The problem is if seeking for a registration is really of use for them.

IPR - Who

- Jump into Intellectual Property is very challenging and very often changes one's own scenario very deeply.
- Benefit from IPR needs entrepreneurial attitude, challenging approach to problems, being curious.

IPR – What

- Patents, trademarks and designs are registered assets.
- They are grantable at the end of a formal procedure before Intellectual Property National or Regional Offices that starts with the filing of an application.

IPR – What

- An examiner verifies if the object of the application fulfils determined requirements.
- The basic requirements are established by the “Paris Convention”.
- Each State or Regional Authorities rules the matter through a law system and its jurisprudence.

IPR – What

- Each grant can be revoked in case it is possible to prove that the examiner misinterpreted the "position" of the object of the application within the prior art and the fulfilment of the requirements established by the law.

IPR – What

- In certain systems, an administrative procedure called opposition might be launched before the Intellectual Property State Agency to limit or get a granted-to-be/a just granted IPR cancelled.
- Oppositions might be managed directly without the assistance of a lawyer, at a limited cost.

IPR – What

- Local/ regional Courts can always manage limitation or nullity actions of granted IPRs after the definitive conclusion of their administrative procedure (when IPRs are fully enforceable rights).
- Notably, only lawyers are admitted to Courts. This usually makes the procedure more structured and the costs usually much higher.
- Additionally, time to goal is surely longer and decisions are not always more straightforward.

IPR – What – Patents

- A patent is a registered title of property related to a solution of a technical problem.
- It grants the owner (or a licensee) the exclusive right to exploit the referred invention in a determined territory.

IPR – What – Patents

- A patent can be granted only if its application clearly describes the invention, so that anyone feel acquainted with the matter at the end of reading the wording.
- However, only after the expiry (of the patent) the invention becomes freely exploitable by anybody.

IPR – What – Patents

Requisites of a patentable invention

- Novelty
- Inventive step
- Industrial feasibility

Novelty

- Inventions are novel if their teachings are not comprised in the "prior art" for the skilled persons (at the filing date of the relative patent applications).
- Novelty does not matter with being smart or ingenious (the invention!).

IPR – What – Patents

Prior art matters with (i.e.):

- written and/or oral publications:
- national and foreign patents,
- articles, books, catalogues, theses, dissertations or publications on websites,
- lectures, workshops, presentations and conferences.

Inventive Step

- IP Codes usually define Inventive Step in the negative form.
- It is usually stated that it arises when the invention is not obvious, meaning that it performs a surprising effect for a man skilled in the art.

IPR – What – Trademarks

- Signs are suitable to become trademarks if they are novel and capable to create distinguishability for determined product/service in a relevant territory.

IPR – What – Trademarks

Sign

+

At least 1 class with determined categories according to the Nice Classification
45 classes: 1-34 goods, 35-45 services

+

District

IPR – What – Trademarks

- A registered trademark is a sign for which an established authority granted an exclusivity right, with the aim to let the owner collecting the public interest on products/services by making their origin clearly distinguishable.

IPR – What – Trademarks

Trademarks limit:

- the likelihood of confusion among products/services of the same nature; and
- the risk of association among producers of similar products/services.

IPR – What – Trademarks

- Identify the origin of products/services in determined fields;
- Ease the choice of a product or of a service provider.

IPR – What – Trademarks

- Novelty has to be assessed by making a comparison with valid prior trademarks from a verbal, conceptual and phonetical point of view.

IPR – What – Trademarks

- Distinguishability occurs when the names and logos **are fancy**, without any reference/link to the product / service to be distinguished.

IPR – What – Trademarks

The choice of a weak trademark imposes to accept coexistence with very similar trademarks.

Simple variations of the wording or immaterial changes to the graphical representation make a similar trademark novel with reference to prior weak trademark rights.

IPR – What – Designs

Designs are registered IPRs which relate to the aspect of a product, or of one of its own part if this aspect is characterized by:

lines, contours, colors, shape, texture, materials of the product itself, decoration of the goods, on condition that this aspect is new and presents individual character.

IPR – What – Designs

A design is new for a determined kind of products

- If it differs from the prior design concepts or from the shapes of already divulged/traded products.

IPR WHAT

- Design

IPR - Where

- Practically worldwide: the Paris Convention is ratified in 176 Contracting Parties/States.
- Focusing on a determined State or through a unitary procedure relative to a Region, if possible.
- Depending on the nature and on strategy of the company with regard to the object of the IPR.

IPR - Where

- Community Registered Designs, Community Trademarks are available within UE, whereas Unitary Patent is not currently feasible, probably within by the end of 2016.

IPR - Why

- Create a monopoly
- Origins financial benefits

IPR - Why

Each IPR is a monopoly:

- grants a privileged position
- conditions the competitors' strategy
- facilitates the management of one's know-how and networking
- eases the restoration of infringed rights by simplifying the related legal activity.

IPR - Why

- «Freezes» the company knowledge and know-how.
- Bans competitors to freely operate in a determined area of business.
- Forces competitors to make additional effort in devolopping new concepts to maintain their turnover and profits.

IPR - Why

A robust and mixed IPR company portfolio makes the company far more attractive to investors:

- M&A opportunities
- lower company tax rate (i.e. Patent Box)

IPRs

- Additionally, IPRs are a sort of guarantee for the investments in R&D and foster innovation.
- Particularly, granted patents communicate that the firm is in condition to increase its profits and to reduce its risk margin.

Spread of knowledge

- Steep increase of mobility of managers and employees towards more wealthy competitors or promising business areas.
- Loss of territorial control of knowledge distribution.

IPR WHAT

- PATENTS

IPR – What – Patents

A technical problem is either a:

- well known drawback not yet overcome by a known product or process; or
- new problem never solved before.

IPR – What – Patents

The Solution of a Technical Problem is a product or a process giving the same results over time when applied.

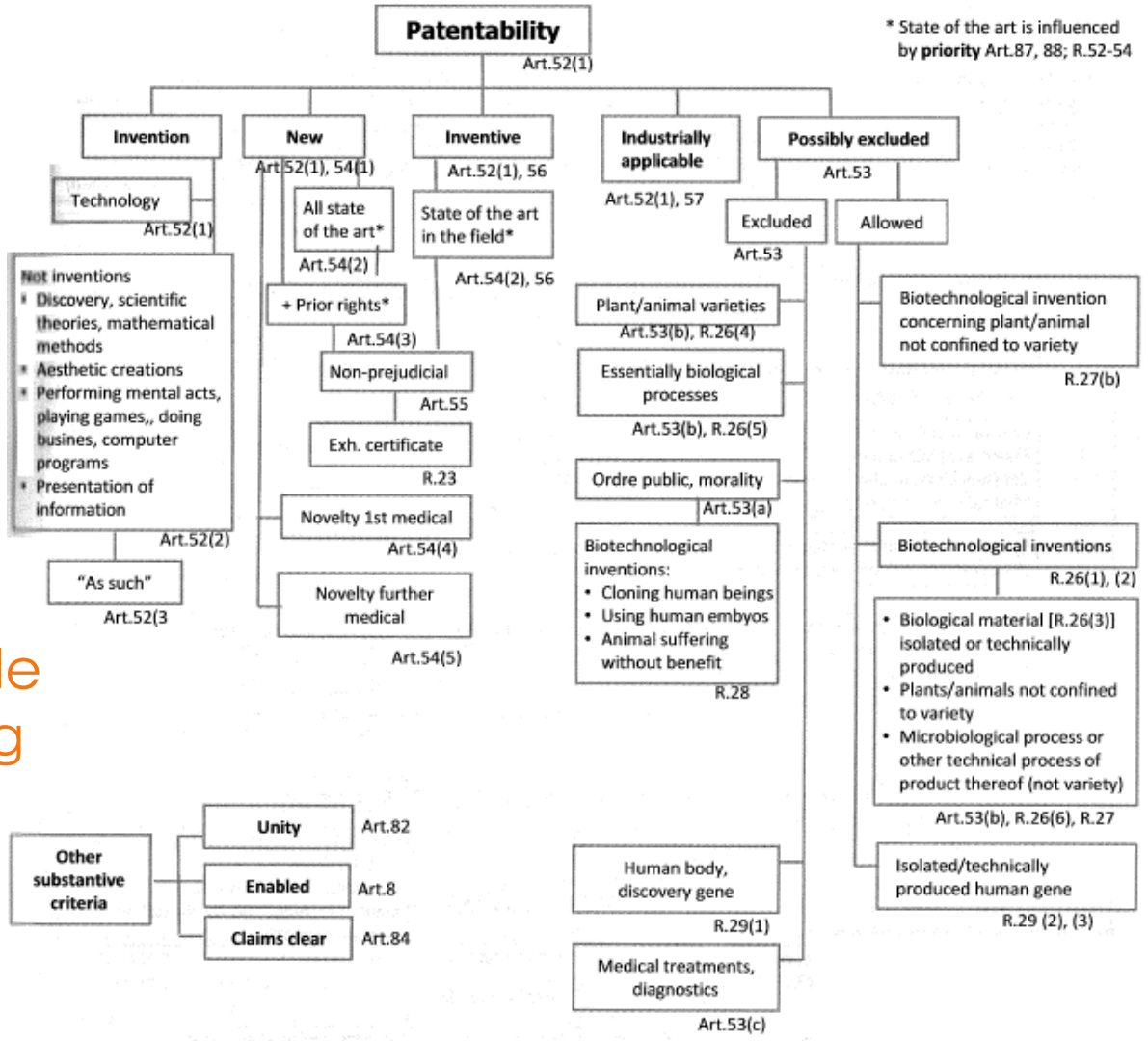
IPR – What – Patents

- Patent comes from the Latin word "*patens - patentis*".
- It means: <u>something that is</u> open, un-covered, self explanatory.

Patentable Inventions

- product,
- method,
- apparatus,
- use.

What is patentable according to the EPC?



Extracted by «References to the European Patent Convention» – Jelle Hoekstra, Deltapatents - 2014

What is patentable - US

- In 1998 the United States Court for the Federal Circuit handed down a landmark decision in the lawsuit State Street Bank and Trust Co. V. Signature Financial Group, Inc..
- The Court opened up the patent system to invention which are not traditional technologies.

What is patentable - US

- The decision of the US Court of Appeal reversed the decision of a lower court that considered the method for doing business object of the U.S. Patent 5,193,056[3] entitled "Data Processing System for Hub and Spoke Financial Services Configuration" falling within two exceptions to the patentability: mathematical algorithm and method: “plans are not patentable!”

What is patentable - US

- Particularly, the Federal Court of Appeal stated that the object of the invention has to be of practical utility and provide «useful, concrete and tangibleresults».

What is patentable - US

- However, this decision raised many topical debates over patentability of the tools of many business operators object of patent applications.
- The principal defect of these inventions is that they do not solves practical problems and ensures that the descending patent is more than an abstract idea itself. Furthermore, the method is usually described in the patent application by functional terms, that rise the bar to patentability of any other specific solutions to the problem at issue.

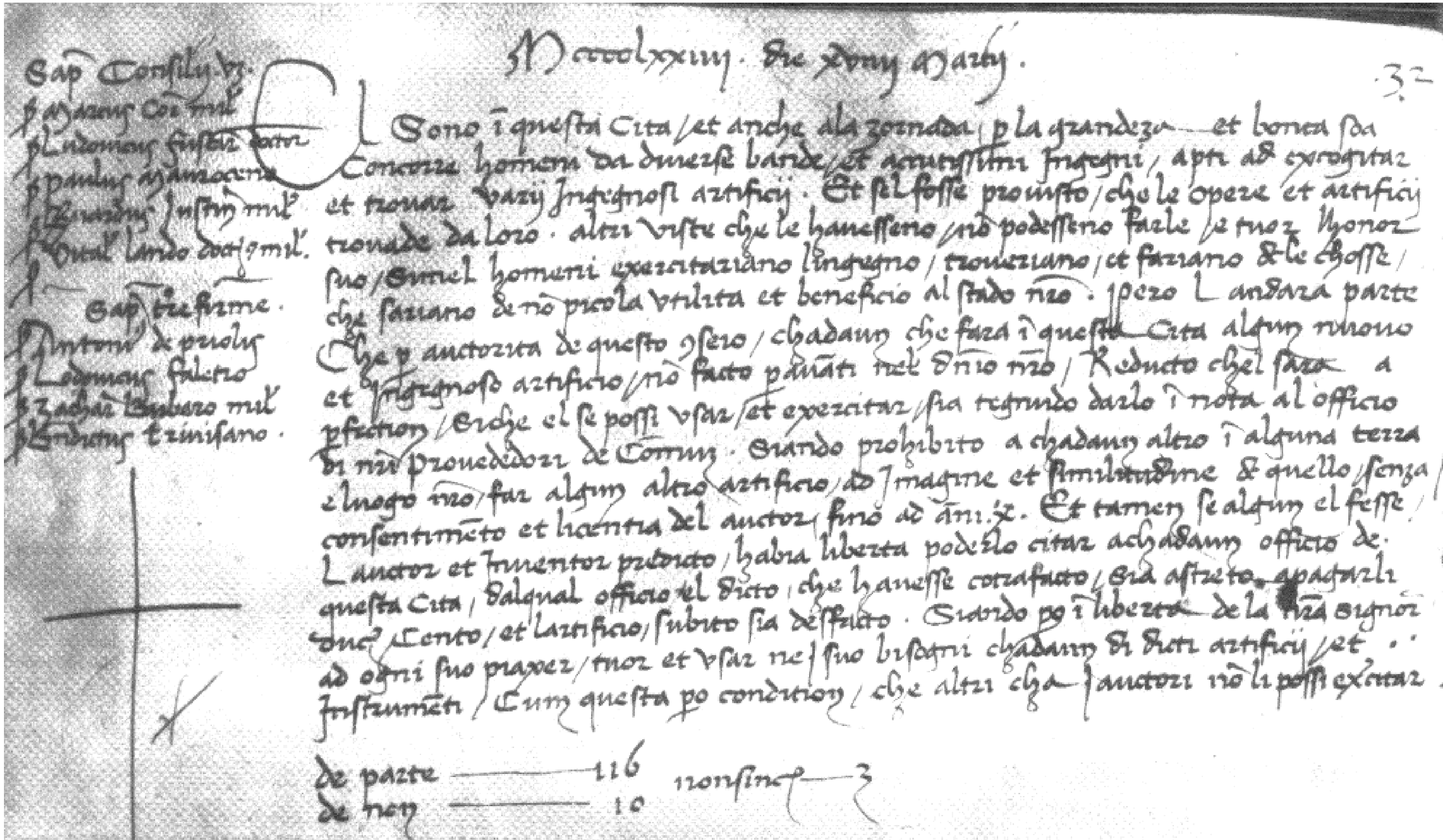
The first patent

- Was granted in Venice to Francisco Petri in 1416, for the fulling of wool.
- Fulling eliminates oils, dirt, and other impurities from a cloth of wool, and makes it thicker.

Patents in Venice

- Patents were usually granted in Venice as of 1474.
- This is the date of a decree by which new and inventive devices had to be communicated to the Republic to obtain legal protection against potential infringers.
- The protection lasted 10 years.
- Mainly, the patents were granted in the art of glass making.

Venetian law patent
19th March 1474



MCCCCLXXIIII. Die XVIIII Martij.

32

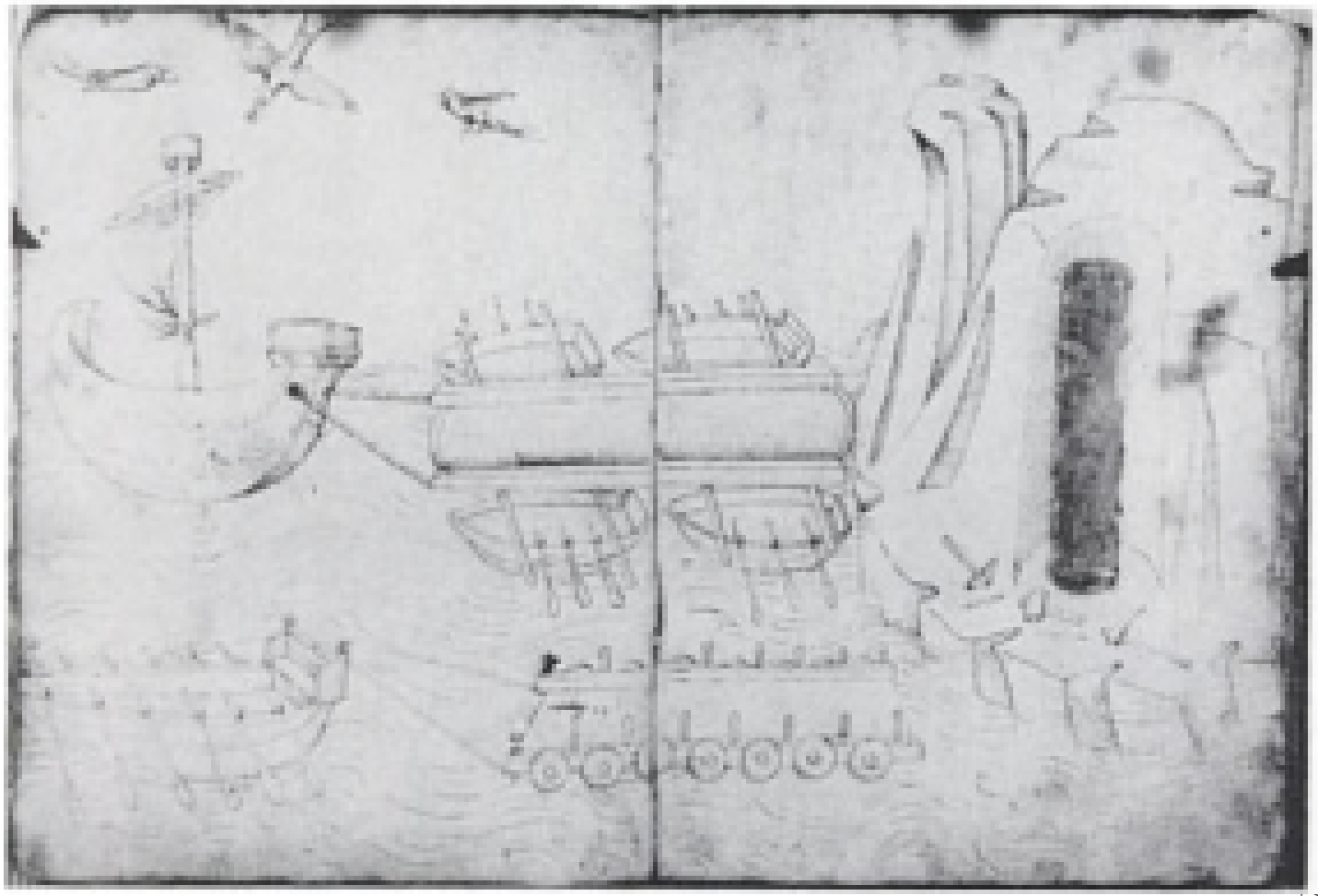
El sono i questa Cita / et anche ala zornada / p la grandeza et bonta soa
concorre homeni da diverse bande / et acutissimi ingegni, apti ad excogitar
et trovar varij ingegnosi artificij. Et sel fosse provisto / che le opere et artificij
trovade da loro. altri viste che le havessero / no podesseno farle / e tuor lhonor
suo / simel homeni exercitariano lingegno / troveriano / et fariano de le chosse /
che sariano de no picola utilita et beneficio al stado nro. pero L andara parte
Che p auctorita de questo Conseio / chadaun che fara i questa Cita algun novo
et ingegnoso artificio / no facto pavanti nel Dnio nro / Reducto chel sara a
pfection / siche el se possi usar / et exercitar / sia tegnudo darlo i nota al officio
di nri provededori de Comun. Siando prohibito a chadaun altro i alguna terra
e luogo nro / far algun altro artificio / ad imagine et similitudine de quello / senza
consentimento et licentia del auctor / fino ad ani X. Et tamen se algun el fesse /
L auctor et inventor predicto / habia liberta poderlo citar a chadaun officio de
questa Cita / dalqual officio el dicto / che havesse contrafacto / sia astreto a pagarli
duc. cento / et lartificio / subito sia desfacto. Siando po i liberta de la nra Signor
ad ogni suo piaxer / tuor et usar ne i suo bisogni chadaun di dicti artificij / et
instrumenti / Cum questa po condition / che altri cha i auctori no li possi exercitar.

de parte ——— 116 non sinceri — 3
de non ——— 10

Venetian law patent 19th March 1474

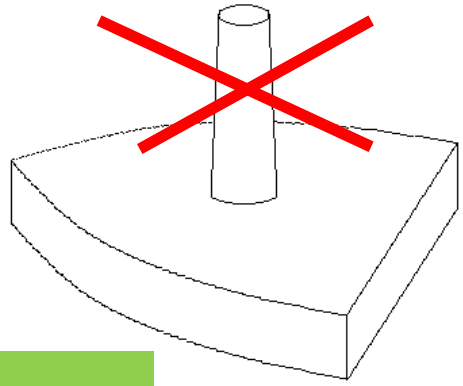
- By virtue of its grandeur and hospitable nature it happens that this our city is inhabited and also frequented temporarily by men from different places and astute minds capable of conjuring up and inventing a wide variety of ingenious devices.
- And if it were to be ordained that the works and devices invented by them could not be imitated by others who might have espied such ideas, stealing from them the honors, these men would exercise their ingenious spirit and would invent and produce things which would be of no mean use and benefit for our State.
- Therefore, it is decreed by the authority of this Council that any person who in this city invents any novel and ingenious apparatus, never before produced in our land, no sooner perfected such that it may be used and employed, shall have their name recorded at the office of the Governors of our City Council, all other persons in any land and within our domain being forbidden from producing any other apparatus which imitates and resembles said invention, without the consent and license of the author, for a period of up to ten years.
- However, should any person do so, the aforementioned author and inventor shall have the right to denounce said person before any office of this city, the said imitator being obliged by said office to pay the author one hundred ducats and the apparatus being destroyed.
- Our City State shall thus have the freedom, as deemed fit, to adopt and use any of said apparatus and instruments for their necessities, but subject to the condition that it may be produced solely by the authors and by no others.

Filippo Brunelleschi: ‘Il Badalone’ 1421,



Invention or Utility Model?

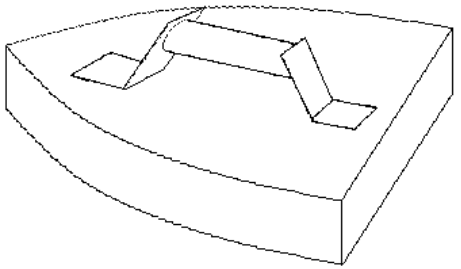
Invention: iron



•features:
1. Mass
2. Heat
3. Trasportability

Problem: difficult to be moved and “steered” on the fabric to be treated.

Utility Model: iron



•features:
1. Mass
2. Heat
3. Trasportability
4. **Ease to be moved where and when needed**

Inventive Step

- An invention must be sufficiently different from what has been used or described before, in a determined area of technology.
- When this applies, the invention is not obvious to a person having ordinary skills in that particular area of technology.
- When the combination of components gives a result that is *not obvious* for a man skiled in the art, *the inventive step arises*.

Inventive Step

- If the "*invention*" is F and teaches how to combine A=2 and B=5 to get 7

  F (A, B) = 7

  then it is obvious that F is "+"!
- But … if

  F' (A, B) = 7 . 15

  F' is not obvious!
- When the combination of components gives a result that is *not obvious* for a man skiled in the art, *the inventive step arises*.

Inventive Step (i.e.)

- The invention is not obvious when it performs a surprising effect for a man skilled in the art.
- For example, the substitution of one colour for another or changes in size are ordinarily non patentable.

Assess patentability

- By doing a search to find out if prior documents kill novelty and/or inventive step of the invention.
- Searches are usually done on patent data-bases which contain patent applications and granted patents (only to limit the costs of the search!).

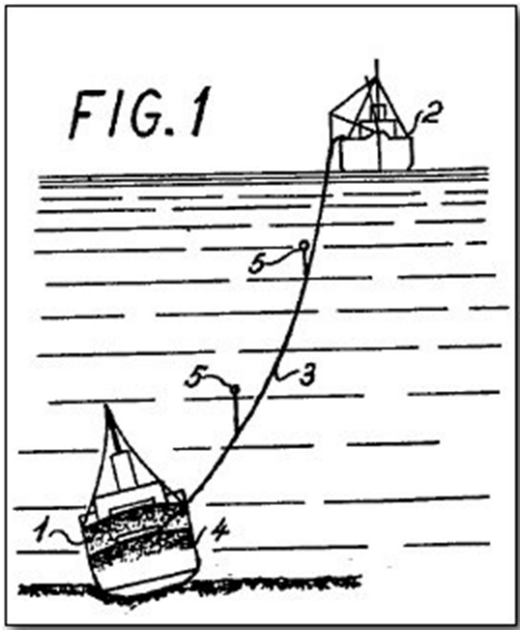
Assessing novelty

- Simply by checking if the components necessary and sufficient to get the invention applied have already been combined at the filing date of a patent application to solve the same or an equivalent problem in the same field.
- Any worldwide source of information counts.

Assessing novelty

Problem: in 1964 a freighter sank off the coast of Kuwait. The ship's hold had been filled with 5,000 sheep containing 5000 goats.

Solution: a Danish inventor, Karl Kroyer designed a ship-raising technique that involved filling the vessel with small, buoyant balls injected through a tube.



Kroyer filed patent applications in German, U.K. and Dutch patent offices.

Assessing novelty

- The Dutch Patent Office considered the comic book "prior art," preventing any granting of new patents for that method.

Assessing inventive step

- Apply the «problem-solution» approach:
- Imagine to present a skilled person the problem to be solved without adding any other kind of information, except from the peculiar field of the technics.
- If skilled person easily finds out how to cope with the problem and promptly suggests a solution which is the same of the invention, this is obvious.

DR1

From the Invention to the Patent

- Start a prior art analysis as soon as possible to assess the patentability of the invention.
- Keep the invention secret.
- Manage time very carefully.
- Protect the invention only where actually needed (production, sales, area of influence of competitors).

Diapositiva 62

DR1 Davide Roncuzzi; 21/11/2014

Prior art analysis

- Each database is “searchable” by implementing different search strategies.
- Keyword searches are usually more heuristic but the risk to mismatch the wording of the query and the one of the patent to be retrieved is very high.
- The risk is to get prior art documents inconsistent with the invention, making impossible to test novelty and non – obviousness of the invention.

Prior art analysis

- Search by classification is an effective way to search patents in a data base.
- A classification system is an arrangement of hierarchical categories used to organize things by their characteristic or relationships and are used for sorting large amounts of data.
- Thomson Reuters, Espacenet and USPTO patent databases are searchable through searches by patent classification.

Prior art analysis

- The most famous patent classification is the International Patent Classification (IPC).
- USPTO and EPO developed a new classification system called Cooperative Patent Classification (CPC). It will replace US patent classification in 2015.

Prior art analysis

Steps of an effective patent search

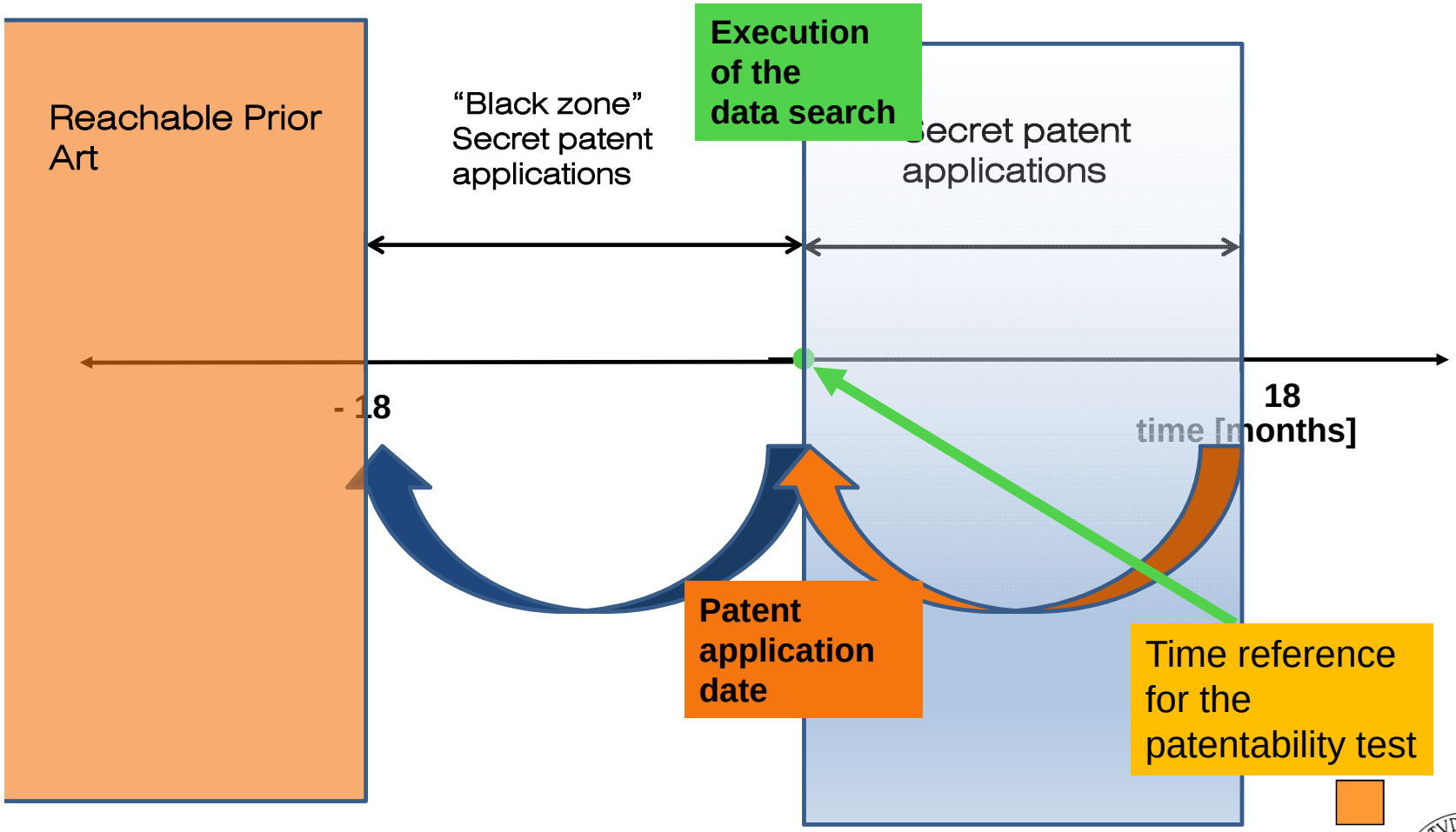
- Collect terms that has to be searched in the patent classification system to get the class and sub-class for each term.
- How? Describe the invention!
- What it does (essential function of the invention)
- What is the end result (essential effect or basic product resulting from the invention)
- What is it made of (physical structure and components)
- What is it used for (intended use of the invention).

Patent Classification search

- Espacenet

Espacenet: http://worldwide.espacenet.com/advancedSearch?locale=en_EP

Prior art data-search drawback



Sections of a Patent Document

- Abstract
- Critics of the known prior art
- Technical problem (TP)
- Solution of the TP
- List of drawings
- Description
- Claims

Claims

- The claims have to give the widest definition possible of the invention;
- the "degree of abstraction" (doa) determines the "extent" of the patent.

Claims and Patent extent

- Therefore, "doa" is much wider if the inventor is a "first mover", whereas "doa" is more narrow when the inventor is a "follower".

Claims and Patent extent

- It is connected to the "doa" developed by the person who writes the claims of the patent application.

(and by chance or luck...!)

What to do? 1/2

- Synthesize a solution to a technical problem;
- Identify the essential components necessary and sufficient to implement the invention.

What to do? 2/2

- Define the levels of inventiveness.
- Not all the components of a product to be patented are equally necessary.
- Set the subject of the claims.

To patent or not to patent?

Kind of product / Innovative impact	Niche	Medium level of diffusion	Consumer
Small	NO	NO	Yes
Medium	NO	Yes	Yes
High impact	Yes	Yes	Yes

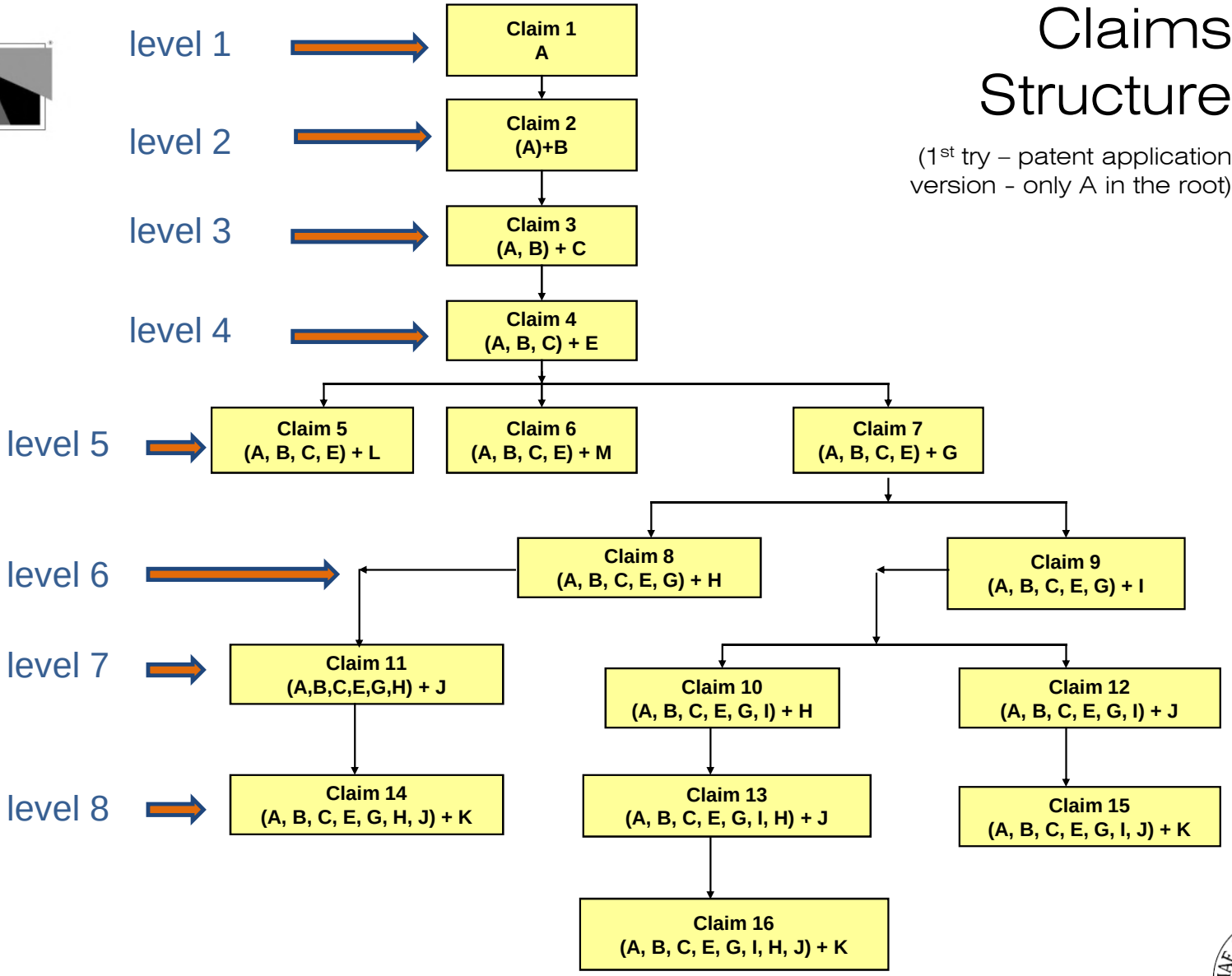
Structure & "Extent" of Claims

How many Claims?

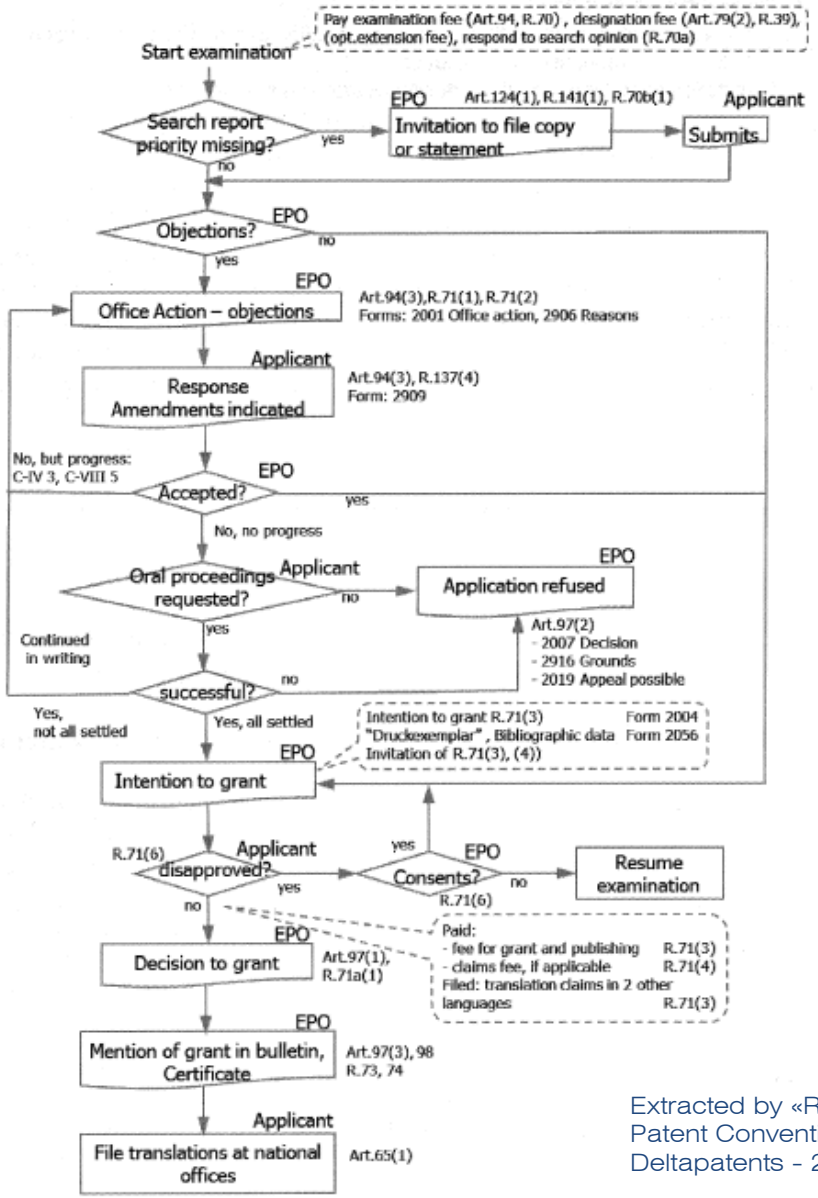
- More than one, nested together, to create necessary fall back positions needed to reply to possible future objections by patent authorities (USPTO, EPO, etc.).

Claims Structure

(1st try – patent application version - only A in the root)



Examination by the EPO examining division



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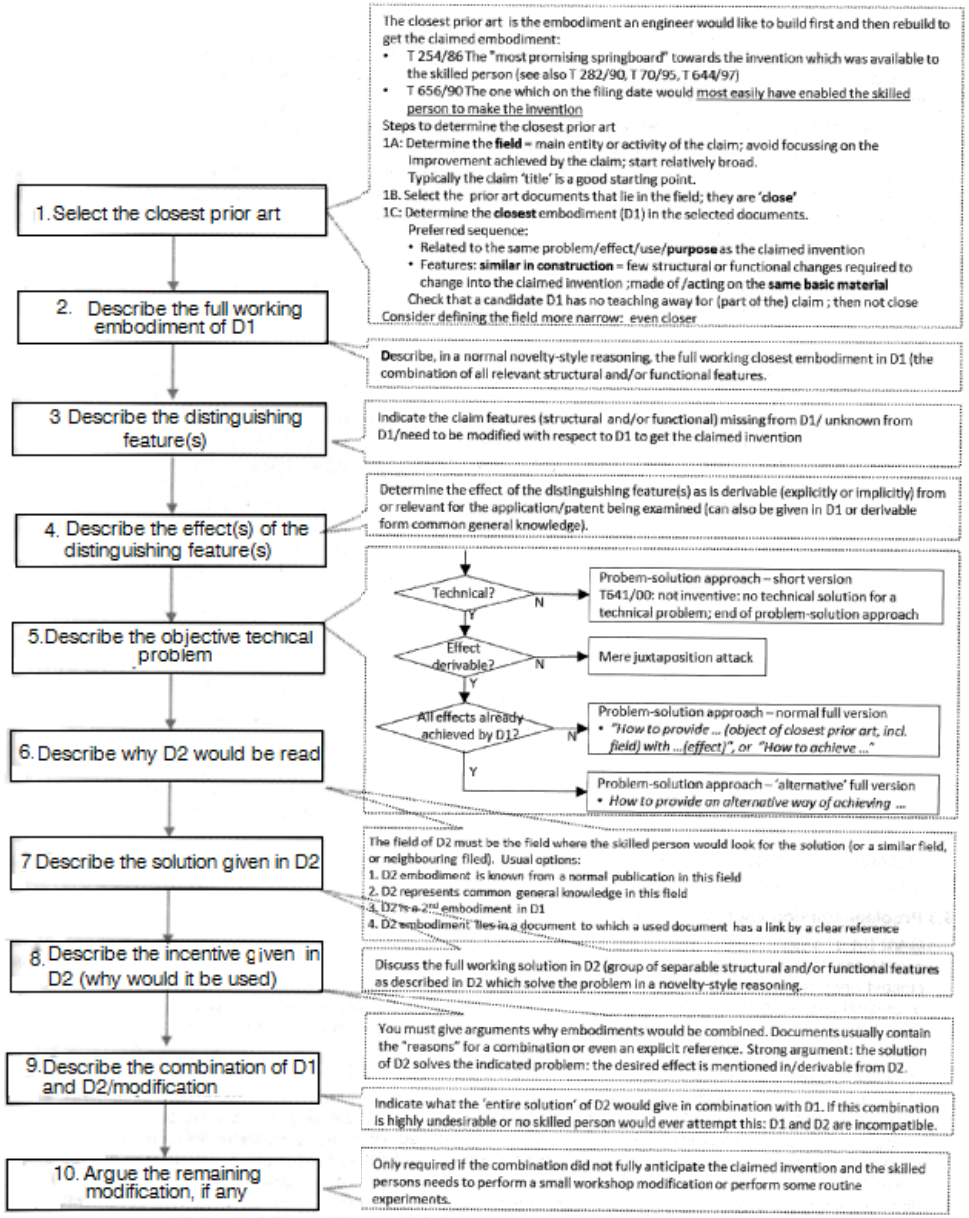
PSA - Problem Soution Approach

D1and D2: Prior Art documents



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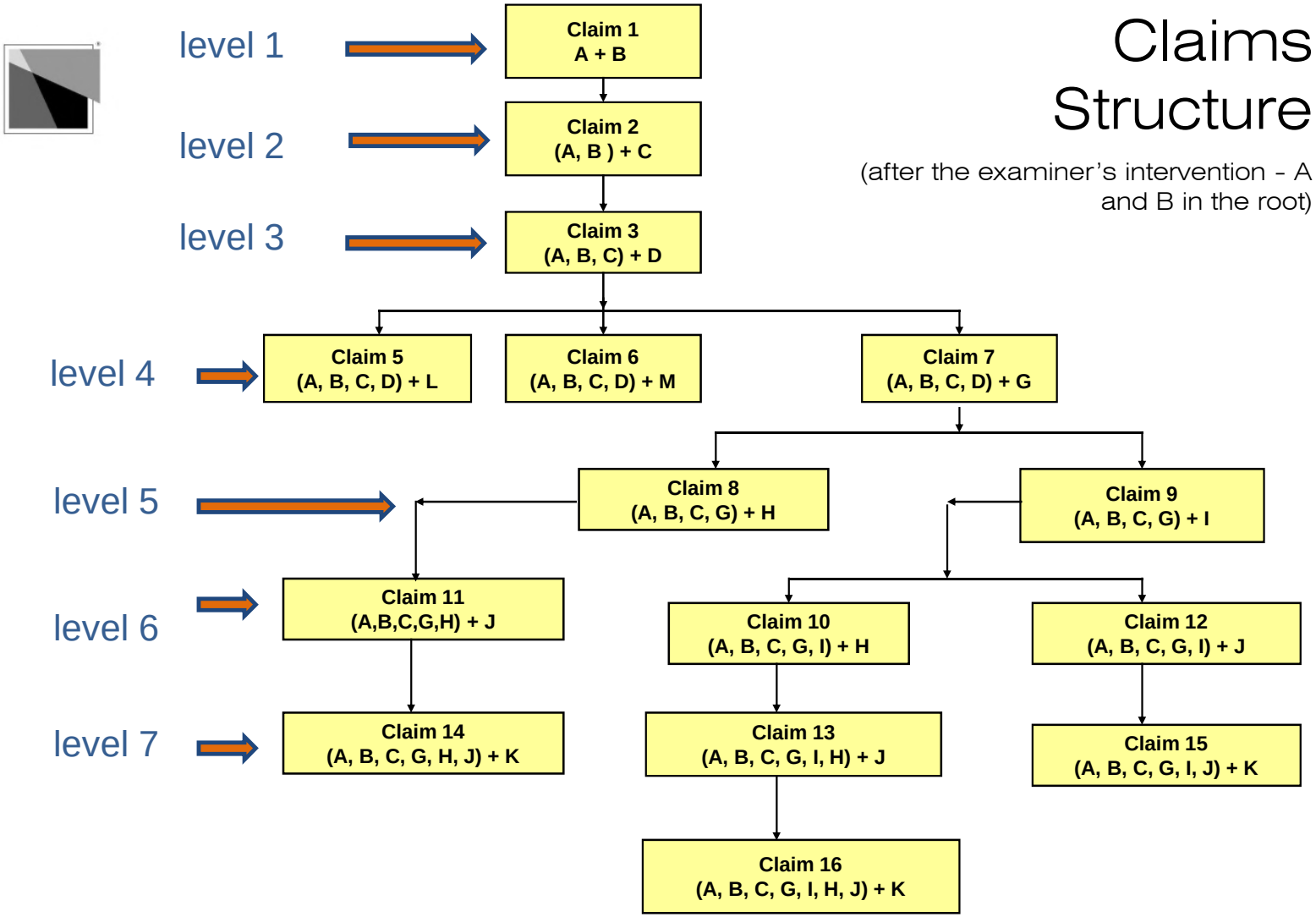
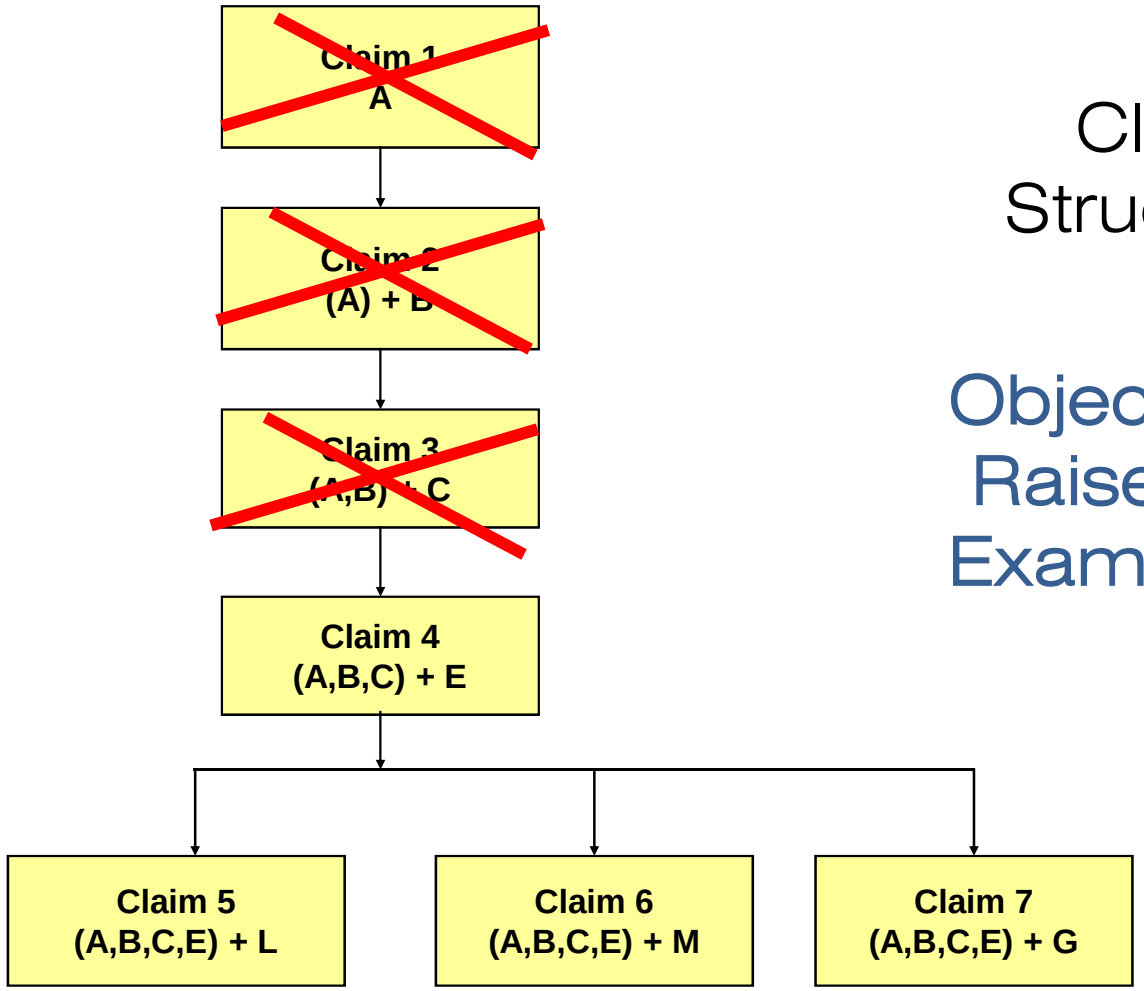
Claims Structure

(after the examiner's intervention - A and B in the root)



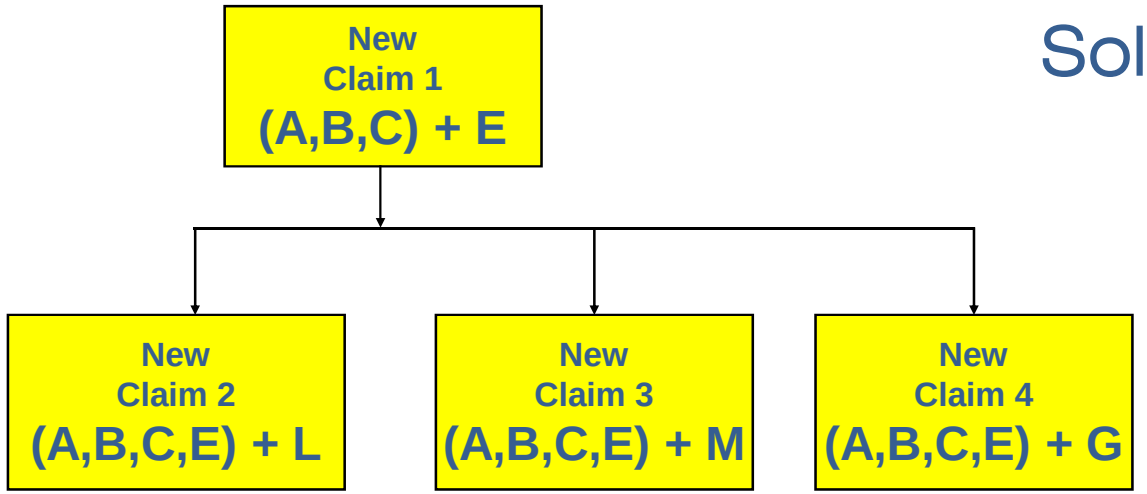


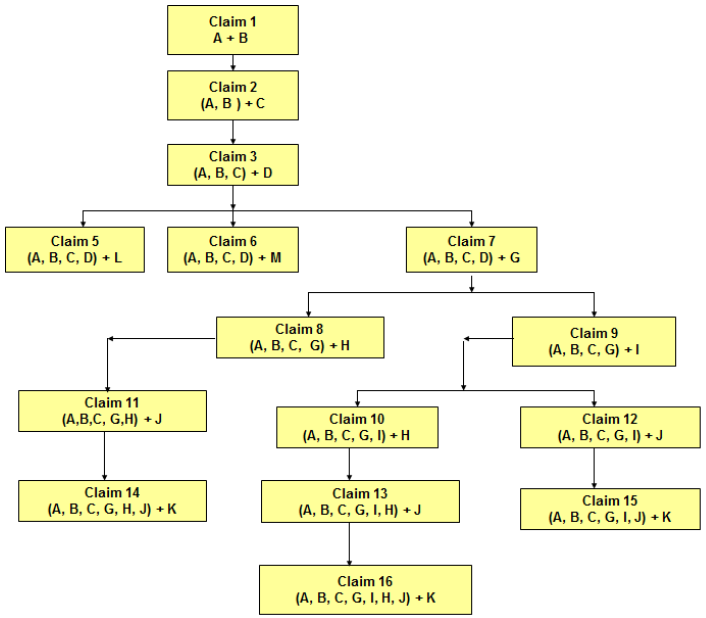
Claims Structure

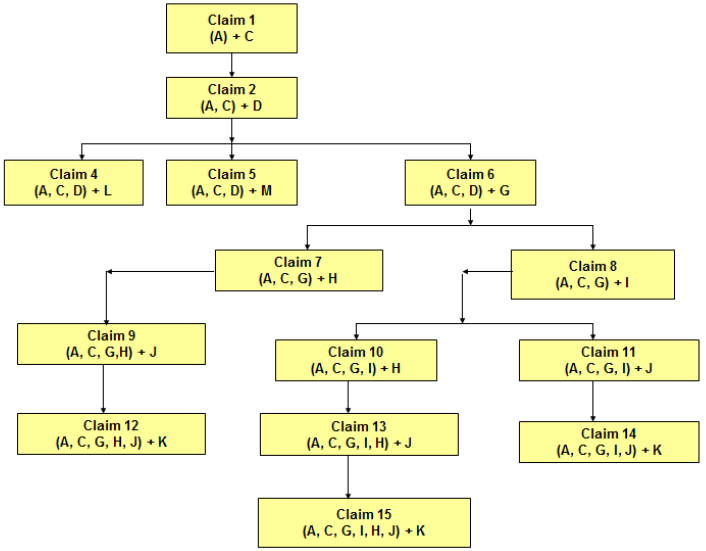
Objections Raised by Examiners

Claims Structure

Possible Solution




Claim 1
A + B
Claim 2
(A, B) + C
Claim 3
(A, B, C) + D
Claim 5
(A, B, C, D) + L
Claim 6
(A, B, C, D) + M
Claim 7
(A, B, C, D) + G
Claim 8
(A, B, C, G) + H
Claim 9
(A, B, C, G) + I
Claim 11
(A,B,C, G,H) + J
Claim 10
(A, B, C, G, I) + H
Claim 12
(A, B, C, G, I) + J
Claim 14
(A, B, C, G, H, J) + K
Claim 13
(A, B, C, G, I, H) + J
Claim 15
(A, B, C, G, I, J) + K
Claim 16
(A, B, C, G, I, H, J) + K

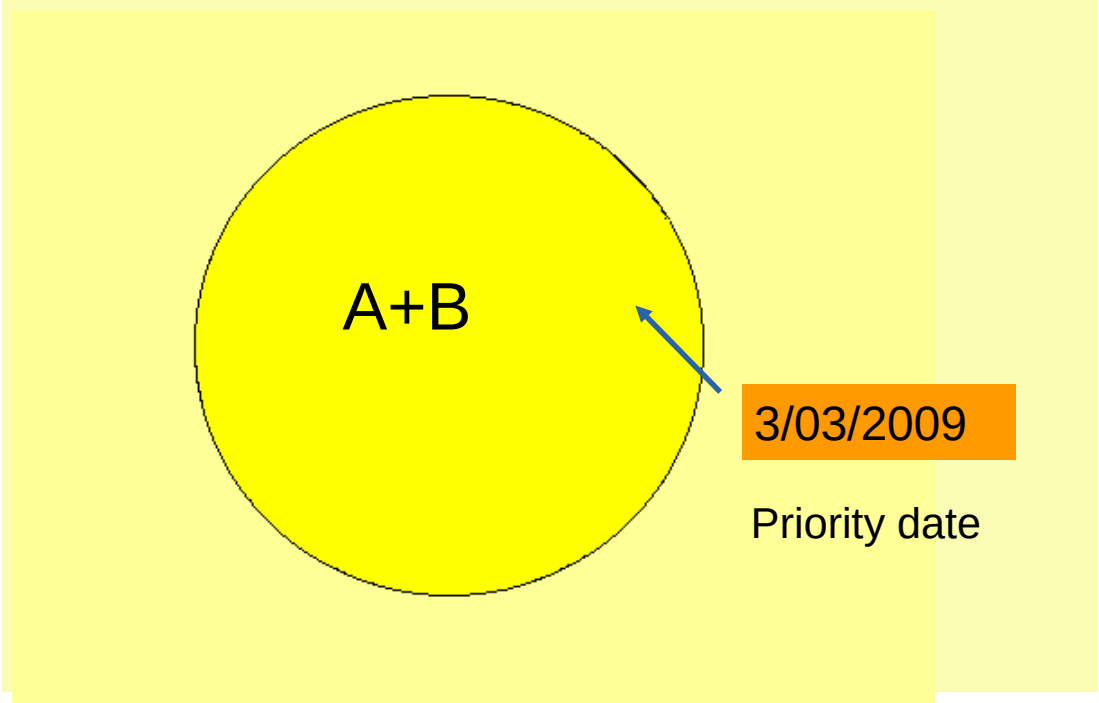

Claim 1
(A) + C
Claim 2
(A, C) + D
Claim 4
(A, C, D) + L
Claim 5
(A, C, D) + M
Claim 6
(A, C, D) + G
Claim 7
(A, C, G) + H
Claim 8
(A, C, G) + I
Claim 9
(A, C, G,H) + J
Claim 10
(A, C, G, I) + H
Claim 11
(A, C, G, I) + J
Claim 12
(A, C, G, H, J) + K
Claim 13
(A, C, G, I, H) + J
Claim 14
(A, C, G, I, J) + K
Claim 15
(A, C, G, I, H, J) + K

And then?

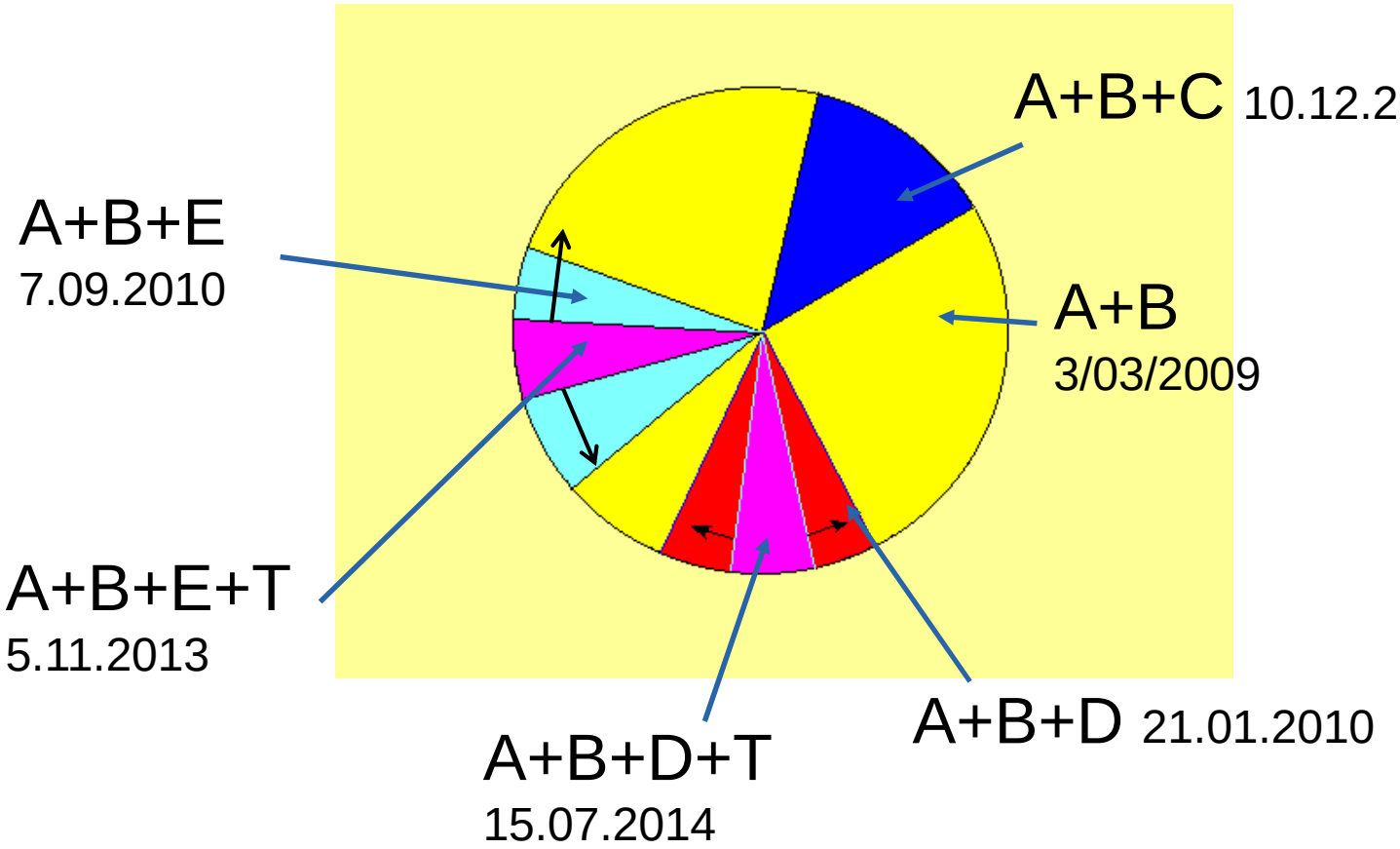
- Apply the patented technology asap; or
- start partnership/networking to maximise profitability of the patented invention; or
- licence the patented technology if you cannot do it yourself.

Exploit Patented Inventions!

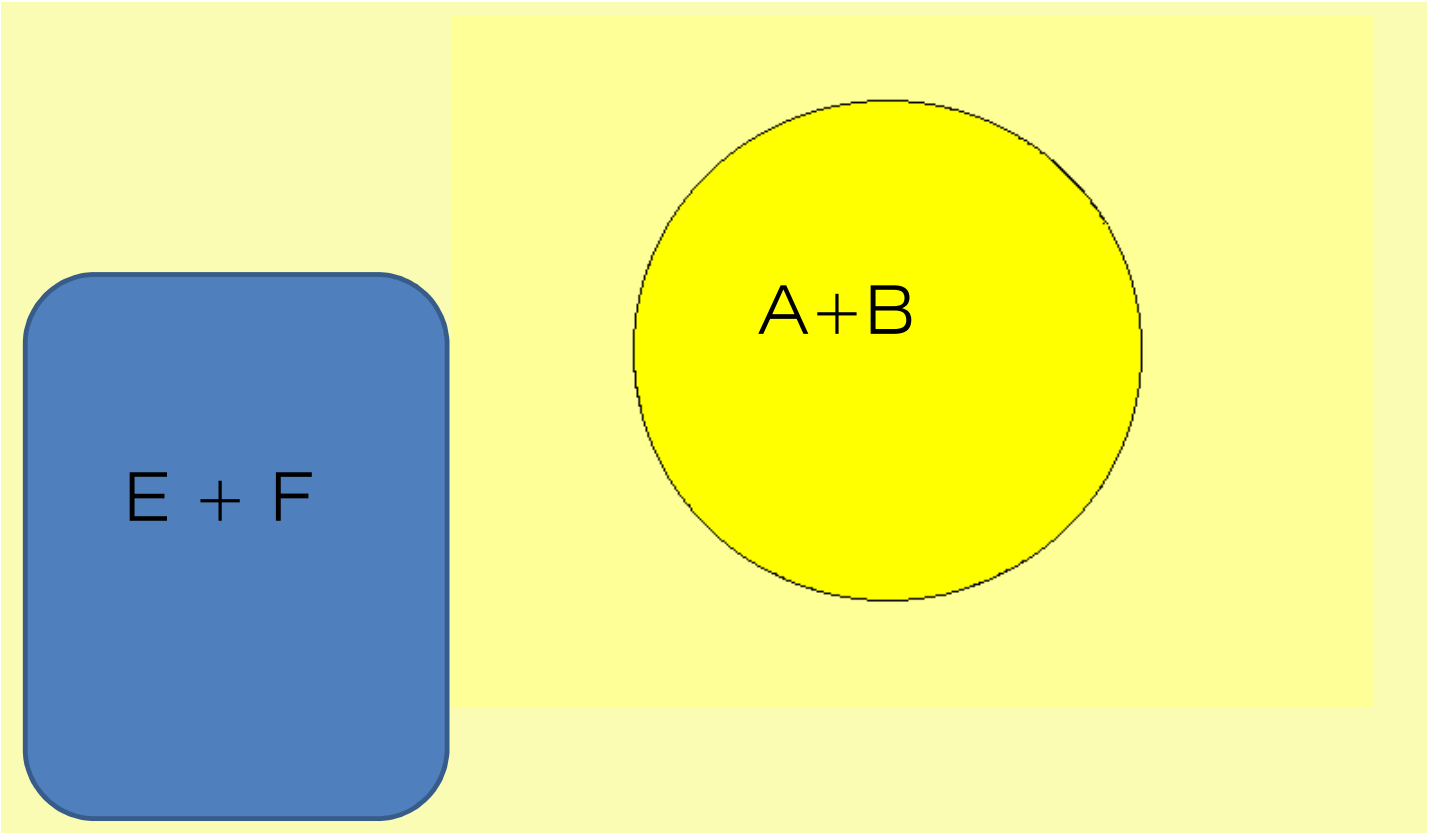
Beware of Followers!



Beware of Followers!



Beware of Followers!



Duration of the Patent

The maximum duration depends on the kind of idea we need to protect

- Invention: 20 years;
- Utility model : 10 years;
- Disegn model: 5 years

(Design patent is renewable for up to 25 years total duration).

Therefore, a patent:

- is a registered intangible asset which relates to inventions new and not obvious;
- grants a privileged position of a limited duration to those who produce technological development.

Moreover, a patent:

- **divulges** a segret invention and produces updated information for it;
- **protects** an invention within a territory for a limited time.

Patents, trademarks and design patents are valid instruments only if:

- we know our business well;
- our objectives are clearly defined;
- we are aware of the position of:

✓ *our products* in the competitive scenario;

✓ the *industrial properties of our competitors* (patents, trademarks, models);

- we are well acquainted with the local laws, habits, procedures.

Is it a brilliant Idea?

Strategical Ideas

All the ideas are like this!

Depending on:

- The firm's DNA;
- The competitive scenario where the firm operates or wants to approach; and
- The resources the firm decides to field.

Moreover ....

- The economic advantage of an invention does not exclusively depend on having a patent for it.

Industrial Property in Italy

- Paris Convention;
- Industrial Property Code, DL 2005.02.10, n. 30;
- OHIM - COUNCIL REGULATION (EC) No 207/2009, 2009.02.26 on the Community trade mark;
- OHIM - COUNCIL REGULATION (EC) No 6/2002, 2001.12.12 on Community designs;
- WIPO - PCT, Madrid System on International Trademarks, The Hague System on International Designs;
- EPO - European Patent Convention;
- Strasbourg Agreement on interpretation of patents claims;
- UPOV, Union internationale pour la Protection des Obtentions végétales (new variety of Plants
- …

Patent System

A patent system is a law that:

- administers the granting of patents, by defining their validity requisites, assessment and the opposition procedure (wherever it applies);
- disciplines the life of a patent after granting it, the relationship between inventors and applicants, duration conditions for renewal and expiration of the patent.

- Neither PCT or EPC are Patent Systems

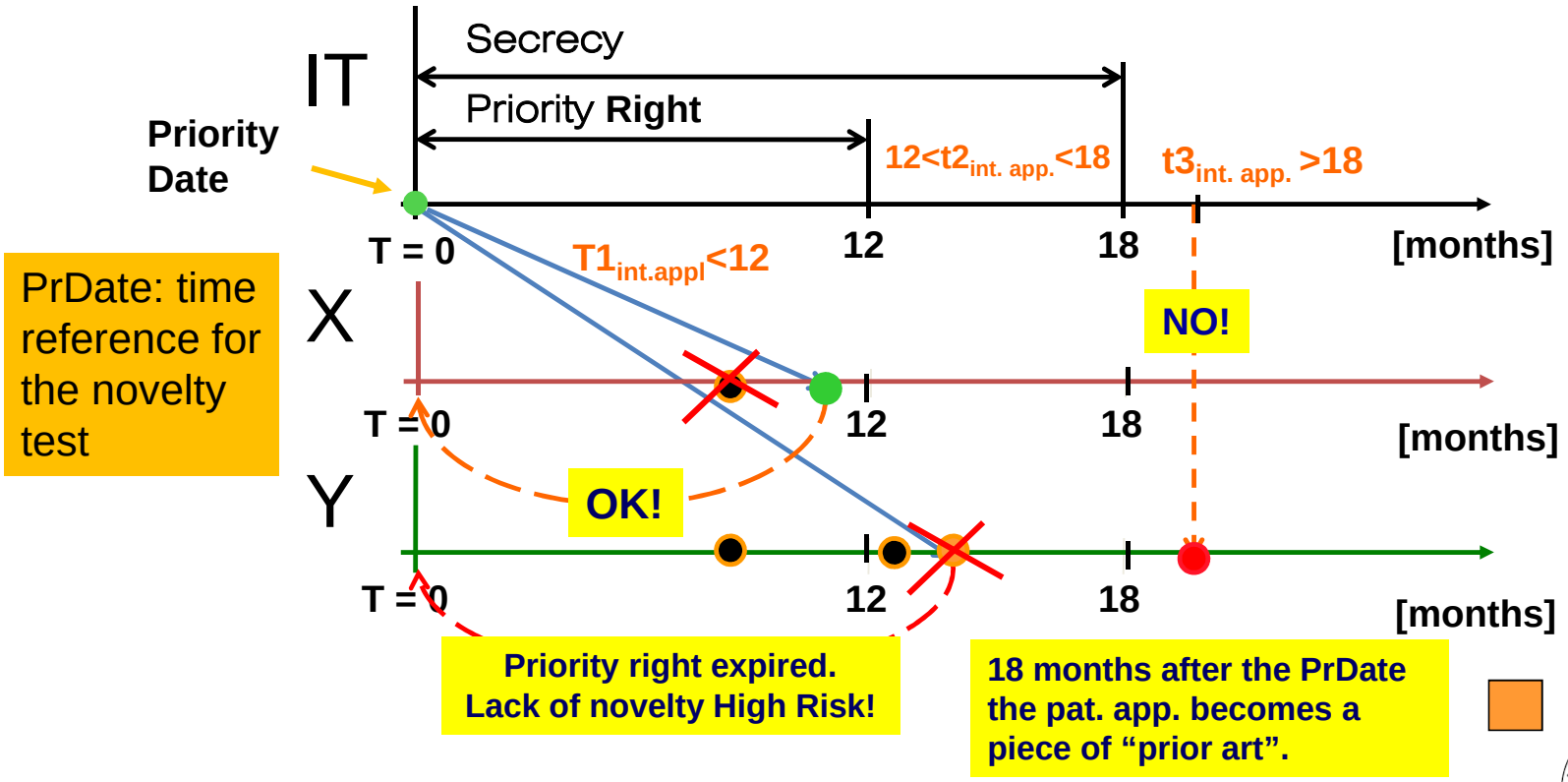
EPC

- The European Patent Convention (EPC) is not a Patent System because it does not rule the relationship between the owner and its counterparts.
- It is simply an administrative convention. In fact it disciplines all the different phases of the European Patent procedure *starting with the filing of the application and going ahead with the discussion on the patentability of the claimed invention, the grant of the approved patent, the opposition to the grant and the relative appeal procedures, the development of the jurisprudence of the European Patent Office pertinent to the patent procedure.*

Unitary Patent

- Currently the “UP” is not available yet.
- 26 out of 28 UE States has signed the Community Patent Convention, but only 8 ratified it as a national law.
- At least 13 States have to do the same to let the UP become a real opportunity.
- Italy plans to do this by December 2016, as at least other 5 major European States.

Patent procedure timetable



PrDate: time reference for the novelty test

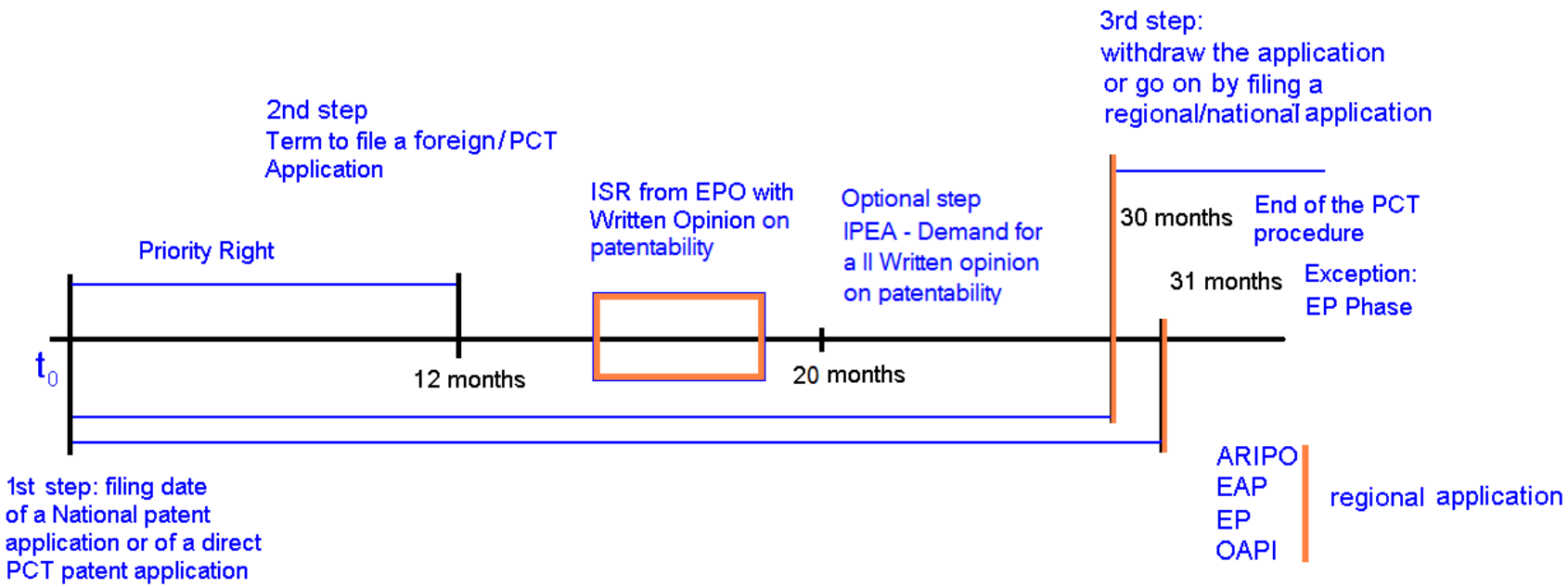
WIPO PCT

- **Useful tool** preparatory to get protection of Inventions abroad.
- **Allows** to buy time, in order to extend the priority right and get the opportunity to fine tune the text of the original patent application on the basis of a better knowledge of the prior art and the opinion of expert examiners.

WIPO PCT

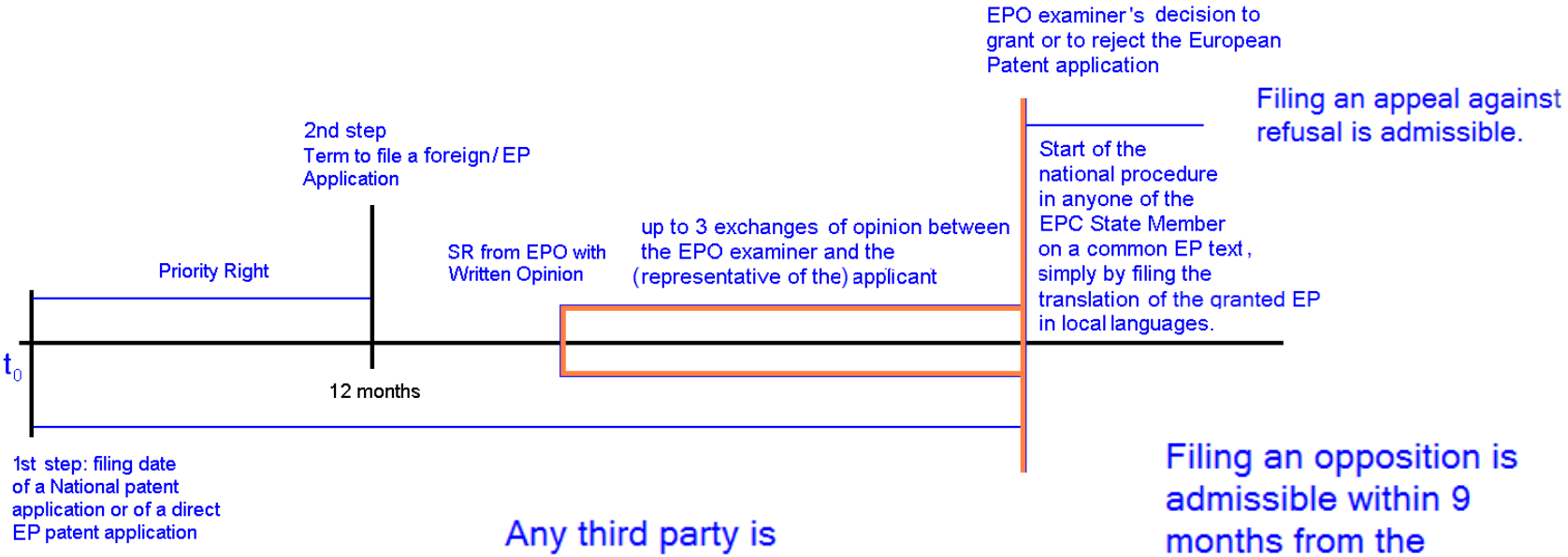
- It is an International treaty, administered by the WIPO, which has been signed by more than 140 Paris Convention countries.
- PCT allows to seek patent protection for an invention simultaneously in each of a large number of countries by filing a single "international" patent application instead of filing several separate national or regional patent applications.
- The granting of patents remains under the control of the national or regional patent Offices in what is called the "national phase".

PCT Procedure



EP procedure

No time limit for the decision!



Any third party is allowed to file observations during any step of the patent procedure.

Filing an opposition is admissible within 9 months from the publication of the decision to grant te EP.

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