SESSION: INTRODUCTION TO INTELLECTUAL PROPERTY RIGHTS

Hugo Loosvelt
WHAT IS INTELLECTUAL PROPERTY?

WIPO-Convention 14.07.1967 (art. 2, viii)
(viii) “intellectual property” shall include the rights relating to:
– literary, artistic and scientific works,
– performances of performing artists, phonograms, and broadcasts,
– inventions in all fields of human endeavor,
– scientific discoveries,
– industrial designs,
– trademarks, service marks, and commercial names and designations,
– protection against unfair competition,
and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields.”
IP RIGHTS PROVIDE THE OWNER THE RIGHT TO PREVENT THIRD PARTIES FROM MAKING, USING, OFFERING FOR SALE, SELLING OR IMPORTING INFRINGEMENT PRODUCTS IN THE COUNTRY WHERE THE IP RIGHTS ARE GRANTED AND AS LONG AS THE IP RIGHTS ARE VALID

1) Allow the owner to conclude contracts (R&D collaboration, licensing, …)
2) Promote investment in R&D and generate ROI
3) Tax deduction / optimalisation
IP: WHY?

**LEGAL RIGHT**
- Patents
- Copyright
- Trade marks
- Registered designs
- Trade secrets

**WHAT FOR?**
- New inventions
- Original creative of artistic forms
- Distinctive identification of products or services
- External appearance
- Valuable information not know to the public

**HOW?**
- Application and examination
- Exists automatically
- Use and/or registration
- Registration*
- Reasonable efforts to keep secret
PRODUCT CARRY MANY IP RIGHTS

**TRADE MARKS:**
- Made by “Apple”
- Product “iPhone 13”
- Software “iOS”

**PATENTS:**
- Data-processing methods
- Semiconductor circuits
- Chemical compounds
- Handling methods
- …

**TRADE SECRETS:**
- ?
- Designs (some of them registered):
  - Form of overall phone
  - Arrangement of buttons in oval shape
  - Three-dimensional wave form of buttons
  - …

**COPYRIGHTS:**
- Software code
- Instruction manual
- …
WHO OWNS THESE RIGHTS?

You:

When you have created the work

When you were hired as a freelancer / consultant

Your employer:

When the work was created on the job

Need to check / arrange terms and conditions in contracts & regulations!!
A Flemish university owns research results

VUB recognizes rights of inventors

Inventors have the obligation to collaborate in the valorization procedure

VUB pre-finances patent procedure and recuperates costs only if there is an income

Income will be distributed among inventors, the research lab and the VUB
Rights & obligations of a ma/BA student?

- Master owns the IP rights to his research results
- Ma student gains access to VUB confidential information: need for NDA to be signed
- In case of involvement in third party R&D collaboration and/or VUB valorization file (e.g. pending patent): need to transfer IP rights to VUB!
- Defence: confidential version behind closed doors; external reviewers to sign a NDA / inform VUB TechTransfer to evaluate valorization opportunities / ‘reduced’ version to be publicly available
- Students promotor: best placed and key role!
- Increasing awareness with students! Good thing!
- Documentation and paper trail is key to discriminate between contribution and IP rights of VUB personnel and Ma student -> lab notebook
Confidential information:

- Customer list
- Marketing plan

Know-How

- 'technical' knowledge of personnel

Trade secrets

- Formula Coca-Cola
- Process creating optimal conditions
TRADE SECRETS

Legal framework: EU trade secrets directive (Directive 2016/943)

Trade secret = piece of information that meets the following:
- It is NOT generally known or readily accessible:
- Has commercial value because it is secret:
- Has been subject to reasonable steps to keep it secret by the person lawfully in control of the information

-> most research data are trade secrets at least for some period of time!
(at least in the early stages of collection / generation and BEFORE any public disclosure / data sharing)

Trade secret are legally protected in instances where the confidential information was obtained illegally

Complementary to IP rights:
- Allow for everlasting protection (as long as the conditions remain fulfilled)
- No need for originality, does not discriminate between types of data
- No private or exclusive rights to its use: independent discovery of same information remains possible
- Cannot prevent competitors from copying and using the same solutions -> reverse engineering is lawful!
This Non-Disclosure and Confidentiality Agreement (the "Agreement"), is executed as of the ____ day of __________________________, 20____ (the "Effective Date"), by and between:

VRIJE UNIVERSITEIT BRUSSEL (VUB), with offices at Pleinlaan 2, 1050 Brussels, herein represented by Prof. Dr. Paul De Knop, Rector, acting on request of Prof. Dr. ______________, Promoter, who is responsible for VUB's performance under this agreement and who is co-signing this agreement for acknowledgement and acceptance, hereinafter called "Disclosing Party" or "Receiving Party" as the case may be;

AND

[Other party’s details]

with offices at _________________________________

represented by ____________________________

hereinafter called "Disclosing Party" or "Receiving Party" as the case may be;

hereinafter jointly referred to as "Parties" or each separately as "Party",

WHEREAS, the Parties have acquired and/or developed a substantial amount of valuable Confidential Information, as hereinafter defined, which the Parties acknowledge to be of a confidential character, requiring suitable security and protection;

WHEREAS, the Parties desire to enter into discussions and exchange information for the sole purpose as described hereunder and desire to ensure that the Confidential Information, as hereinafter defined, revealed during such discussions will be protected from disclosure;

NOW, THEREFORE, in consideration of the premises and mutual covenants contained herein, the Parties hereto agree as follows:

- Template available @ www.vubtechtransfer.be
- Unilateral or bilateral
- Be careful: definition of confidential information
- Purpose
- No IP rights licensed, assigned, ...
- Duration
- To be signed by Rector
(Electronic) Lab notebook / data management system / i-depot provides legal documentation of ideas (as reduced to practice), research results.

Helps to establish date of invention, authors, inventors, etc.
Protects any result of creative activity:

- literary works, art, drama or musical works, presentations, software code, instruction manuals, questionnaires, etc.

- **Software code**

- movies, photographs, translations, editions, collages, adaptations etc.

- typographies, sound recordings, broadcasts, performances

- Database: (original) structure
excludes:

✓ What is part of nature or not produced by human
✓ What is produced by a machine (data, images, ?)
✓ Technical solutions (-> patent)
✓ Sport achievements
✓ Governmental documents
COPYRIGHT

Works must be

✓ Original:
  ✓ = must show personality of the author, ie upon creation creative choices have been made between various options going beyond mere technical requirements
  ✓ Does not require to be new / exceptional imagination / never been publicly disclosed !!!

✓ Expressed in concrete shape:
  ✓ Does not require carrier (eg presentation, choreo, ...)
  ✓ No abstract ideas
  ✓ No style (eg rap): not attributable to an author
Moral rights:
• the right to have a work published anonymously or pseudonymously
• requirement to acknowledge or credit the author of a work which is used or appears in another work
• the right to the integrity of the work
Copyright: Two Components

Financial rights: such as

• To produce copies or reproductions of the work and to sell those copies (including, typically, electronic copies)
• To import or export the work
• To create derivative works (works that adapt the original work)
• To perform or display the work publicly
• To sell or assign these rights to others
• To transmit or display by radio or video
COPYRIGHT: WHAT RIGHTS

- Infringement if a person does any of the exclusive acts restricted by copyright without the permission of the owner. There are limited exceptions (non-commercial research, private study, teaching, disabled persons).

- Until **70 years** from the end of the year in which the last surviving author died (for related rights it depends).
COPYRIGHT: GOOD PRACTICES?

- Date your work and use copyright symbol
- Gather evidence of being the original author in case needed: e.g. i-DEPOT.
- Other precautions: use watermarks, keep logbook (laboratory notebook)
- Use copyright notices (eg on your website / mail): cfr next slide
PATENT: WHAT IS IT?

- the right to *exclude* others from making, using, selling, offering for sale, or importing the patented invention

  Not the right to practice your invention yourself!! -> one might need a license to obtain freedom to operate

- granted by a *national* government to an inventor or their assignee

  No global patent exists, only an international or European application procedure!!

- for *max. 20 years* (subject to payment of maintenance fees)

- in exchange for the *public disclosure* of the invention

  The invention cannot be kept secret!! Quid pro quo!!
QUID PRO QUO

Reveal invention

Get exclusivity

… so that others can learn from it and improve upon it!
## COPYRIGHT VS PATENTS

<table>
<thead>
<tr>
<th></th>
<th>Copyright</th>
<th>Patent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection for</td>
<td>Form (source code)</td>
<td>Functionality (algorithm)</td>
</tr>
<tr>
<td>No protection for</td>
<td>Functionality (work around, reprogram)</td>
<td>Form (source code)</td>
</tr>
<tr>
<td>Ownership</td>
<td>Creator / author</td>
<td>Applicant &lt;-&gt; inventor</td>
</tr>
<tr>
<td>Registration</td>
<td>Not required, burden of proof !!</td>
<td>First to file / register</td>
</tr>
<tr>
<td>Validity</td>
<td>70y after death author</td>
<td>20 years from date of filing</td>
</tr>
</tbody>
</table>

**In both cases:**

- Transfer of right / license is required for third party use
- No guarantee for freedom to operate
- Right can be used for innovation income reduction
- Published patent application are publications
COPYRIGHT VS PATENTS

EXPRESSION  IDEA

SYMBOLIC  FUNCTIONAL

LITERAL  NON-LITERAL
Based upon copyright

Many different F/OSS licenses, for overview: [http://www.gnu.org/philosophy/license-list.html](http://www.gnu.org/philosophy/license-list.html)

Many different F/OSS licenses: incompatible

The Problem with F/OSS Software: F/OSS is typically a joined effort of many different people / grows organically; looking at the source code of many projects, you have:
  - a White zone: code of which the IP is 100% clear; you know because you have written the code yourself.
  - a Gray zone: code that was contributed by others. Where did they get this code? Did they write the code?
  - a Black zone: code that was integrated in the software, but for which there was no license or authorization.
<table>
<thead>
<tr>
<th>Permissions</th>
<th>Limitations</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial use</td>
<td>Liability warranty</td>
<td>License and copyright notice</td>
</tr>
<tr>
<td>Modification</td>
<td></td>
<td>Same license: copyleft!</td>
</tr>
<tr>
<td>Distribution</td>
<td></td>
<td>Disclose source</td>
</tr>
<tr>
<td>Private use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patent use</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Copyleft**: derivative works can only be distributed under the same license terms
- **(L)GPLv3**: “each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor’s essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version”

**CHECK OR CHOOSE YOUR SOFTWARE LICENSE CAREFULLY!!**
**PATENT REQUIREMENTS**

Art 52 (1) European patents shall be granted for any *inventions*, in *all fields of technology*, provided that they are:

- *new,*
- involve an *inventive step*
- are susceptible of *industrial application.*

Patent office conducts a search and examination before granting a patent

Strong differences (in interpretation -> case law) between countries/regions depending on different jurisdictions!!

European patent convention (EPC) -> http://www.epo.org

Sources: EPC 2000 art. 52, 54-57, 100, 138, R. 42, 43, 44
Art 54 (1) EPC: An invention shall be considered to be *new* if it does *not form part* of the *state of the art*.

Art 54 (2) EPC: The *state of the art* shall be held to comprise *everything* made *available to the public* by means of a written or oral description, by use, or in any other way, *before the date of filing* of the European patent application.

**INVENTOR** is **BEST CANDIDATE** to destroy the novelty of his invention!

Need to perform thorough prior art search !!
Novelty: example
NOVELTY: EXAMPLE

State of the art is not limited to scientific literature…

Figure 1 of Krøyer's patent
NL 6514306

buoyant bodies 1 are inserted into a sunken vessel 4 through a tube 3 from a salvage ship 2

Images from 'The Sunken Yacht', © 1949 Walt Disney Corporation
NOVELTY: EXAMPLE

GB-A-2365393

UK Patent Application 2365393

Application No. 0019381.9
Date of Filing: 07.06.2000

Applicants:
Peter John Ginn
133 Water Road, New Cross, LONDON, SE14 6LX, United Kingdom

Inventors:
Peter John Ginn

Agent and/or Address for Service:
Peter John Ginn
133 Water Road, New Cross, LONDON, SE14 6LX, United Kingdom

Abstract Title:
Rotating aircraft wheels prior to landing

(57) An aircraft tyre or wheel is provided with pockets or ridges 6, which catch the airflow past the wheel and cause the wheel to rotate. The pockets/ridges may be formed in the tyre or an additional member for attachment to the wheel. Means may be provided for diverting air from a pocket into the wheel assembly for cooling purposes.
NOVELTY

No publication **prior to filing**
e.g. no article, press release, conference presentation/poster/proceedings or blog entry

No sale/exchange of products incorporating the invention prior to filing, be careful when showing prototypes on trade fairs, exhibitions

No lecture or presentation **prior to filing**
except under a **non-disclosure agreement** (NDA)

Contact IP office! File a record of invention.
PATENTS: INFORMATION SOURCE!

Avoid duplication of R&D efforts and spending

- 80% of all technical information in patent documentation (OESO)
- Duplication of R&D efforts: costs 20 billion EURO/year; 25% of all R&D efforts ... on inventions that have been invented yet (European Commission)
- Define technology trends: what is in a patent application now, is the product of tomorrow...
- Preparing new patent: writing/ studying patentibility

Find solutions to technical problems

- 85% of all patents no longer in force
- Vast number of inventions available for free
- Patent contain reliable information due to exigency of sufficiency of disclosure, enablement, clarity (for person skilled in the art to be able to repeat the experiments)
Free patent databases:

- espacenet: http://ep.espacenet.com
- google patents: http://www.google.com/patents
- WIPO patentscope http://www.wipo.int/pctdb/en/search-struct.jsp

More detailed information in patent register: http://www.epoline.org/portal/public
INVENTION: SUBJECT OF CLAIMS

• Claim = (technical) features of an invention
• # features in claim is inversely proportional to scope of protection
• Infringement of claim: if infringing on all features of the claim
• Dependent versus independent claims
INVENTION: WHAT CAN BE CLAIMED

(depending on evolving case law and patent law in various jurisdictions

• a product / compound
• a method of producing a product
• a process
• a computer implemented method (if further technical effect)
• a use of a product
• “[Composition] for use in the treatment of [disease]”
• Even hybrid claims such as: Drug X for use in a method of treating a patient with cancer, wherein the method comprises: (i) determining whether a test sample from the patient comprises a mutation in gene 1; and (ii) if the test sample from the patient comprises a mutation in gene 1 administering to the patient an effective amount of drug X.”
A ball that is fun to use, easy to catch and looks nice.

How can you protect it from imitation?

• "Fun to use" → cannot be protected
• "Looks nice" → registered design
• "Easy to catch" = technical function → patent
Making a ball "easy to catch" is a technical problem. Problems cannot be patented – but specific solutions can! What is the technical feature that makes the ball easy to catch?

Patent Claim: "A ball comprising a core region and plural elastomeric filaments radiating from the core region."

You don’t want anyone circumventing the patent by replacing the ball shape with something else!

Patent Claim: "An amusement device comprising a core region and plural elastomeric filaments radiating from the core region."

A prior art search will show whether the invention – as claimed – is actually new.
Your patent attorney found US 3,759,518, "Foot impellent toy", which discloses a similar invention.

"... said toy having a plurality of flexible strands ..."
Your invention as claimed

"An amusement device comprising a core region and plural elastomeric filaments radiating from the core region."

"... radiating in plural angularly offset planes from the core region."

US 3759518

"A toy of a disc-like body ... including ... a plurality of flexible strands radiating outwardly from said ... center ... having sufficient inherent rigidity to retain the pattern of a circular plane."

- New!
- Inventive step (modification yields new function of making it easier to catch)!
Claim to be filed:

"An amusement device comprising a core region and plural elastomeric filaments radiating in plural angularly offset planes from the core region."
Private – patent attorney (EU, US, BE) or patent attorney in a company: certified attorneys

- technical / scientifical university degree + examination by EPO, DIE, USPTO after minimum 3 years of practice

Role: General and Legal advice in IP matters:

- Opinions
- Patent drafting
- Filing and prosecution
- Oppositions
- Appeals
- Infringement
- Due diligence

BUT: the inventors input is crucial!
Example: Patenting the button (From: www.iusmentis.com)

Assumption: only cloaks without fastening mechanism exist

Alice’s invents the button and gets a patent granted with claim:
‘a cloak with a front opening, with a row of fasteners down one side of the front opening, and a row of holes at corresponding locations down another side of the front opening into which the fasteners can be inserted’

Independently Bob gets claim granted:
‘a cloak with a front opening, having at least one metallic hook at one side of the front opening, and at least one receptacle for said hook at the other side’

-> Bob: • can litigate people who sell metallic hooks
  • but not wooden buttons
  • can litigate people using a single hook as opposed to Alice whose claim requires a row of buttons
What about?

Ian: manufacturer of cloaks with buttons
   -> license from Alice (‘fasteners’) but not from Bob (‘metallic hooks’)

Jack: produces cloaks with metallic hooks on one side which are plugged into holes on the other side
   -> license from Bob, but also from Alice (covers fasteners of all shapes)

Keanu: produces cloaks with fasteners, but instead of holes he provides loops made of string through which rectangular wooden buttons are to be put
   -> outside the scope of Bob’s claim (wooden buttons)
   -> outside the scope of Alice’s claim (do not have a row of holes)

Leo: shirt manufacturer who puts buttons on shirts, not on cloaks
   -> outside the scope of Bob and Alice
WHERE TO APPLY FOR A PATENT

Patent rights can only be enforced in countries where patent is granted.

To obtain a granted patent in a country: 3 routes

- Patent application(s) in National patent office(s):
- Patent Cooperation Treaty

There is no such thing as an international patent!
PATENT APPLICATION ROUTE

- Date of PCT filing: 18 M
- Priority Date: Max 12 M
- Publication: 28 M
- Start National/regional Phase PCT Chapter II: 30 M
- International Preliminary Examination Report
- EP Grant: 12 M
- Opposition: 9 M
- Validation in EP countries

Patent family
~ 125000 after 20 y / ~ 15000 after international phase: may be more depending on costs patent attorney, opposition costs, # designated countries
**THE EUROPEAN PATENT (EP)**

**Current situation in Europe – national route**
- National patents
- 27 languages
- Separate
  - Filing
  - (Examination)
  - Grant
- Separate annuities
- Local agents

**Current situation in Europe – EPC route**
- 38 contracting states
  - 27 EU + 11 non-EU
- EPO centralises
  - Filing
  - Examination
  - Grant
  - Opposition
- 3 EPO languages
  - DE, FR, EN
- Single annuity pre-grant
- Single agent
EP protection can be obtained in:
• 38 states
• 626 million people
• GDP 22.4 trillion

**EPC route after grant**

⇒ A bundle of EP patents in the 38 EPC contracting states

- European patent application
- Central examination @EPO
- Grant
- DE
- FR
- UK
- BE
- Bundle of EP patents in EPC states
- Litigation before national courts
- Validation in different EPC states (requiring translations, local agents, yearly renewal fees)
UNITARY PATENT: BASICS

The Unitary Patent: basic concept

- The Unitary Patent is a "European patent with unitary effect"

- It has unitary character and shall provide uniform protection, and shall have equal effect in all the participating EU member states

- A European patent will benefit from unitary effect at the request of the proprietor: post-grant attribution of unitary effect

- Single EPC procedure for European and "Unitary Patents"

→ EPC proceedings, incl. opposition and appeal proceedings remains unchanged
UNITARY PATENT: BASICS

Classic European patent
Multiple national post-grant administration procedures

National patent offices
- Translation requirements
- National validation fees
- Procedures
- Renewal fees
- Currencies
Requiring your own local attorney

Unitary Patent
One-stop-shop at the EPO for all post-grant administration

One office
- Simplified translation regime
- No fee for obtaining a Unitary Patent
- One procedure
- One set of renewal fees
- One currency (€)
- One Register
Your European patent attorney
UNITARY PATENT: BASICS

- The Unitary Patent will co-exist with national patents and classical European patents

- Various combinations of classical European patent and Unitary Patent:
  - a Unitary Patent for the participating EU member states, together with
  - a classical European patent taking effect in one or more EPC contracting states not covered by the unitary patent

- **Effect:** unitary patent takes effect *retroactively* in the participating EU member states as from the date of publication of the mention of grant of the European patent
**THE EUROPEAN PATENT (EP) / UNITARY PATENT**

**EPC route after grant**

⇒ A **bundle** of EP patents in the 38 EPC contracting states

- European patent application
- Central examination @EPO
- Grant
- DE
- FR
- UK
- BE
- Bundle of EP patents in EPC states
- Litigation before national courts
- Validation in different EPC states
  (requiring translations, local agents, yearly renewal fees)

**Unitary patent – A post-grant option**

- European patent application
- Central examination @EPO
- Grant
- Unitary patent in a subgroup of EU states
THE UNITARY PATENT (UP)

UP participating EU member states

Expected situation at the start of the UP system:

17 states have ratified UPCA: AT, BE, BG, DE, DK, EE, FI, FR, IT, LT, LV, LU, MT, NL, PL, PT, SE, SI

7 states (CY, CZ, GR, HU, IE, RO, SK) have signed but not (yet) ratified UPCA

1 state (PL) has not signed UPCA

UP - At start
- 17 states
- 295 million people
- 47% of EPC
- GDP 13,3 trillion $ 
- 59% of EPC
Unified Patent Court (UPC): international court handling only validity/infringement

With jurisdiction:

- injunctions won at the UPC can be enforced across all participating states.
- successful central revocation: leads to a loss of patent protection

New court, new judges, new rules, no case law: hard to predict outcome!
- Prior to the UPC’s entry into force, a three-month “sunrise” period will allow European patent holders to “opt out” of the UPC jurisdiction. This is particularly important because, by default, the UPC will have jurisdiction within the territory of the member states of the UPC Agreement for all existing EP patents.

- **How long can you opt-out?**

  - **one month before the end of the transitional period (7 years / extendable to 14 years)**
  - condition: no action may have been brought before the UPC against the patent
  - opt-out can be withdrawn
  - condition: no action may have been brought before the national court
  - risk: pinned inside or outside the UPC by an infringer starting a procedure

- **How soon can we opt-out:** at the start of the “sunrise period”. **3 months** before the entry into force of the UPC (expected 1/4/2023)
Advantages
- Uniform protection (legal certainty)
- In one single territory (consisting of all UPC countries)
- Reduction of costs
- Translational costs
- Single renewal fee for whole UPC territory
- The EPO shall act as a centralized one-stop-shop for administering UPs (Art. 9 UPR)
- UP cannot be enforced/revoked in national courts
- File license statement with EPO (Art. 8 UPR)
- UP more valuable?

Potential disadvantages
- Possibility of central validity attack in UPC
- Renewal fee may be too high if protection is only needed in less than four UPC countries
- Loss of flexibility under the "all or nothing" regime of the UP
- The problem of collision with older national rights after grant of the UP
- Litigation costs may be higher in UPC than in a national court
PROTECTING SOFTWARE?

- Copyright: concrete shape (source code, user interface, …)
  Fast, cheap, simple
  Does not protect technical solution provided by software
  Can be licensed: e.g. basis for free / open source software…

- Patent right: computer implemented invention (solution to a technical problem, more than just the software)
  Expensive
  Technical aspects of the invention: must be **novel**, needs to involve an **inventive step**
  Can be licensed

- Trade secret?

- Registration: notary act, i-depot, escrow agent depot
Computer Implemented Invention

- Common belief in industry/academia that software is not patentable
- Art. 52 EPC:
  1. European patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application.
  2. The following in particular shall not be regarded as inventions within the meaning of paragraph 1:
     a. discoveries, scientific theories and mathematical methods;
     b. aesthetic creations;
     c. schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers;
     d. presentations of information.
  3. Paragraph 2 shall exclude the patentability of the subject-matter or activities referred to therein only to the extent to which a European patent application or European patent relates to such subject-matter or activities as such.
- However, when a further technical effect is present, software is patentable
- Claim categories (Guidelines for examination at the EPO november 2017 F-IV 3.9.1):
  - Computer-implemented method comprising the steps of ...
  - Computer system configured for ...
  - Computer program product comprising instructions which, when the computer program product is executed by a computer, cause the computer to carry out ...
COMPUTER IMPLEMENTED INVENTION

Interpretation – Technical Character

Further requirement for patentability implicitly contained in the EPC:

- the invention must be of "technical character" to the extent that it
  - must relate to a technical field  • R.42(1)(a) EPC
  - must concern a technical problem  • R.42(1)(c) EPC
  - must have technical features in terms of which the matter for
    which protection is sought can be defined in the claim
    • R.43(1) EPC

- there is no general definition of what is "technical":
  - interpretation of technicality by a series of individual Board's of
    Appeal decisions
  - interpretation done on a case by case basis

✓ Subject-matter is not excluded from patentability
× Subject-matter is excluded from patentability

At least one feature has technical character =>
subject-matter has technical character.
EPO practice: two-hurdle approach

- First hurdle (eligibility):
  - Is the claimed matter as a whole not excluded under Art. 52(2),(3)?
  - Is there a technical character?

- Second hurdle (ability):
  - Is the claimed matter as a whole novel in the sense of Art. 54?
  - Does the claimed matter as a whole involve an inventive step in the sense of Art. 56?

EPO Practice: Second Hurdle

Problem solution approach

- Establish closest prior art
- Determine differentiating features
- Determine the technical effects of the differentiating features
- Formulate an objective technical problem based on those effects
- Decide whether the proposed solution is obvious for the skilled person
THANK YOU

Hugo.loosvelt@vub.be / 026293865
LAB NOTEBOOK: WHY?

- To pass on research group’s knowledge
- Avoid loss of information through loose sheets, departing researchers
- All data comes together in one source of information
  - simplifies writing papers/theses/project reports
- To serve as a reference in the case of conflict (e.g. scientific paper, patent, background-foreground): entries should be competent to prove facts!!
- To allow for easy monitoring/follow-up by promotor/project coordinator
- Error detection: e.g. in protocols when negative results
Before signing a contract on a certain date it is important to be able to define precisely the state of the *background knowledge*.

*background knowledge* = all *know how* and IP present before a certain date

*know how* = technical and scientific information which is substantial, kept secret and clearly identified.

During a certain project it is important to define precisely the *foreground knowledge* developed and to make the distinction with *foreground knowledge* developed in other projects.

*foreground knowledge* = all *know how* and IP developed during the project

Lab notebook provides legal evidence for ownership of background/foreground knowledge.
Research results can lead to a technical invention with commercial value

File patent application (before you publish!!)

Lab notebook assists in:

- Defining the inventors
- Defining the patent assignee
- Prove what / when inventions were conceived and reduced to practice

Europe: patent rights belong to first to file

US: first inventor to file (interference proceedings)!
Secondary sources?

May be too large or inappropriate to attach directly to your notebook

Keep separate folder especially for these records and refer in the notebook to this folder, describe the record (date, apparatus, peaks, bands, …) and note down in detail the conclusions from this record
Copyright © 2018, Vrije Universiteit Brussel (VUB), Dept. ____, list of authors and contact details
All right reserved.

Permission to use, copy, modify, and distribute in source and binary forms this program (“_____”) and/or its documentation, or part of it FOR
RESEARCH PURPOSE is hereby granted, provided that:
(1) the above copyright notice, this list of permission, and the following restricting use and disclaimer, appear in all copies and supporting
documentation, and
(2) all publications based partially or completely on this program will have the main publications of "the authors" related to this work cited as
references (ref to be included).

Restriction:
Any other type of handling or use of “______”, CAN NOT BE DONE WITHOUT SPECIFIC PRIOR WRITTEN APPROVAL from VUB,
including but not restricted to the following:
(A) any use of “______” which is not academic research;
(B) any use of “______” which is not for clinical purposes;
(C) any commercial activity involving the use of “______” or part of it is strictly prohibited.

Disclaimer:
THIS PROGRAM IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES,
INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY,
OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS PROGRAM, EVEN IF ADVISED OF THE
POSSIBILITY OF SUCH DAMAGE.
Layers of copyright in databases

• Item level: copyright limited to items that involve expressive choice, eg photograph / images in e.g. Encyclopedia of Life : limitation to expression created !!
  -> data expressed as numeric values are not covered, e.g. pixel colour, can be copied and reused
  -> a drawing of an animal depicted in the photograph not covered
• Organisation layer: the manner in which data are selected / arranged, e.g. excel spreadsheet, selecting field names and arranging their order
  -> republishing data in spreadsheet with renamed and reorganised fields is not infringing
  -> the higher the complexity in the structure of a database, the higher the amount of copyrightable expression!
• Processing of data: annotations, visualisations (figures, charts, graphs, … ) and other forms of metadata can receive copyright protection if sufficiently original !
• Compilations in datasets: copyright only to this selection and arrangement, not to any of the underlying items or organisational features of individual datasets
Sui Generis Database rights in Europe

Legal framework: EU Database Directive

- Pertains to any database that requires substantial investment in the *obtaining* of data (not in the creation of the underlying data)
  - means that sole source database cannot rely on this but only if you rely on data from others
  - what about machine generated databases?
- Complementary to copyright! Database portions that are not original.
- 15 years (however any substantial change to the contents could be considered new investment and renewal of term of protection)
- Protect against extraction / reutilization of substantial parts of a database or frequent extraction (of insubstantial parts)
- Subject to limitation for non-commercial university research or nonprofit hospital use!
  - is this exception valid in case of commercially sponsored academic research?
PATENT? WHEN?

Value patent:

- Potential to technical and commercial success of the technology
- Scope of the patent: geographical, scope of protection claims
- Validity of the patent
- Potential market
- Competition: F2O?, better product/process, alternative solutions, knowhow,
- Visibility: how easily can you detect infringement?
- Licensing: crosslicensing, crucial link?, compulsory license, ...
WHEN TO PUBLISH?

WHEN?

- R&D results: fundamental character, no loss of commercial potential; too far from market
- create exposure; show competence of company
- academic researchers: need to publish
- sufficient protection in place by other patents or limited improvement/alternative to existing technology
- hidden publication: significance/link to product is unclear

WHEN NOT?

- avoid know-how to dissipate
- contains information which contradicts patent position
- contains information on an invention to be patented

Cheap and effective way to dissipate information to society with little commercial value
Combine with patenting in a smart way !!
INVENTIVE STEP: PROBLEM-AND-SOLUTION APPROACH

1. Identify the closest prior art (CPA)
2. Determine the differentiating features and their technical effects
3. Formulate an objective technical problem in view of the CPA
4. Decide whether there is an inventive step

Guidelines in the EPO G-VII, 5