

Openness and Commercialisation - Patents at the interface of Open Science and commercialisation

Breakout CESAER Online Event

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3 December 2020

Openness AND Commercialisation

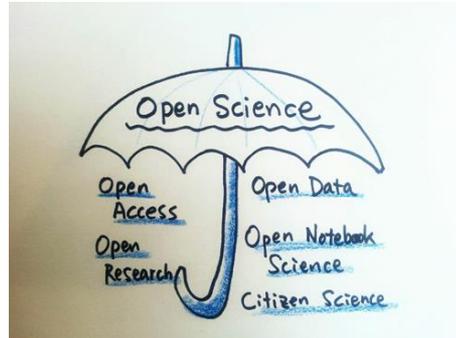
A contradiction?

promotion of ideas
and methods

sharing Knowhow

cooperation

encourage others



VS



protection of
ideas & methods

disclosure of
Knowhow

competition

hindering others



Patent system allows to unify the opposites!

The Patent System Has Protective And Informatory functions

Disclosure for limited monopoly



patent applicant

reveal
invention
(disclosure)



get
exclusivity
(patent)



public interest

How Does Protection Work?

A patent is a legal title which grants the holder...

- The exclusive right to **prevent** others
 - from **making, using** or **offering for sale, selling or importing** a product that infringes his patent without his authorisation.
 - in **countries** for which the patent was granted.
 - for a **limited time** (up to 20 years).
- The right to assign, sell or license these rights.

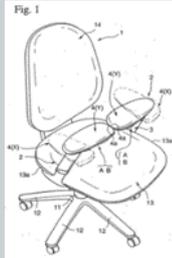


Exception: non-commercial purposes (private use, academic research)!

Requirements For Patentability

Patents protect inventions which solve technical problems

- products
- devices
- systems



- processes
- methods
- uses



- chemical substances
- pharmaceuticals



The invention must be

- **new** to the world
 - i.e. **not** part of the **state of the art**
- State of the art: everything made available to the public before the date of filing

- **inventive**
 - i.e. **not** an "**obvious**" solution)
- It shall not be obvious to a person skilled in the art in view of the state of the art.

- susceptible of **industrial application**

Patents Protect Technical Solutions

These items can't be patented:

- Rules of games.
- Business methods.
- Mere ideas.
- Software as such (not achieve technical results).



The Invention Must Be New

Avoid before applying for a patent

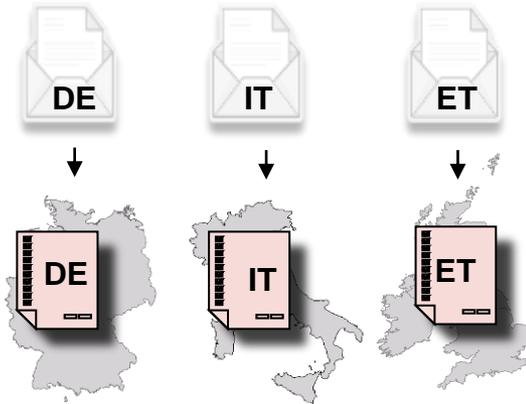
- **No publication** prior to filing, e.g. no article, press release, conference, research data, poster, proceedings or blog entry!
- **No lecture or presentation** prior to filing
 - except under a non-disclosure agreement (NDA)!
- **No sale** of products incorporating the invention prior to filing!



Patents Are Valid Only In The Country Where They're Granted

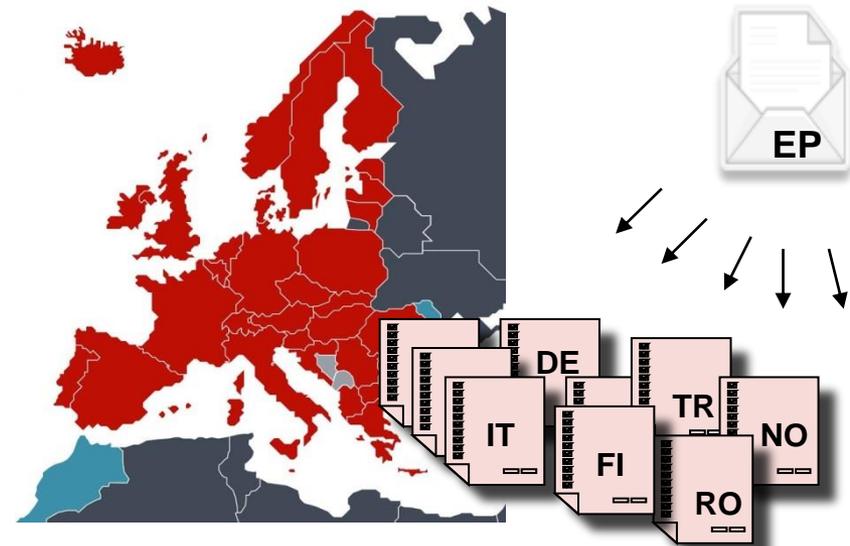
The national route

- Separate procedures for each state; differ according to national law.
- See [EIPO](#) procedures.



The regional route: European Patent Convention

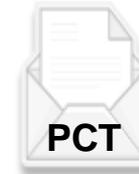
- One procedure.
- Applicant selects the desired states.
- One European patent for up to 42 states.
- Results in a bundle of national patents.



The International Route

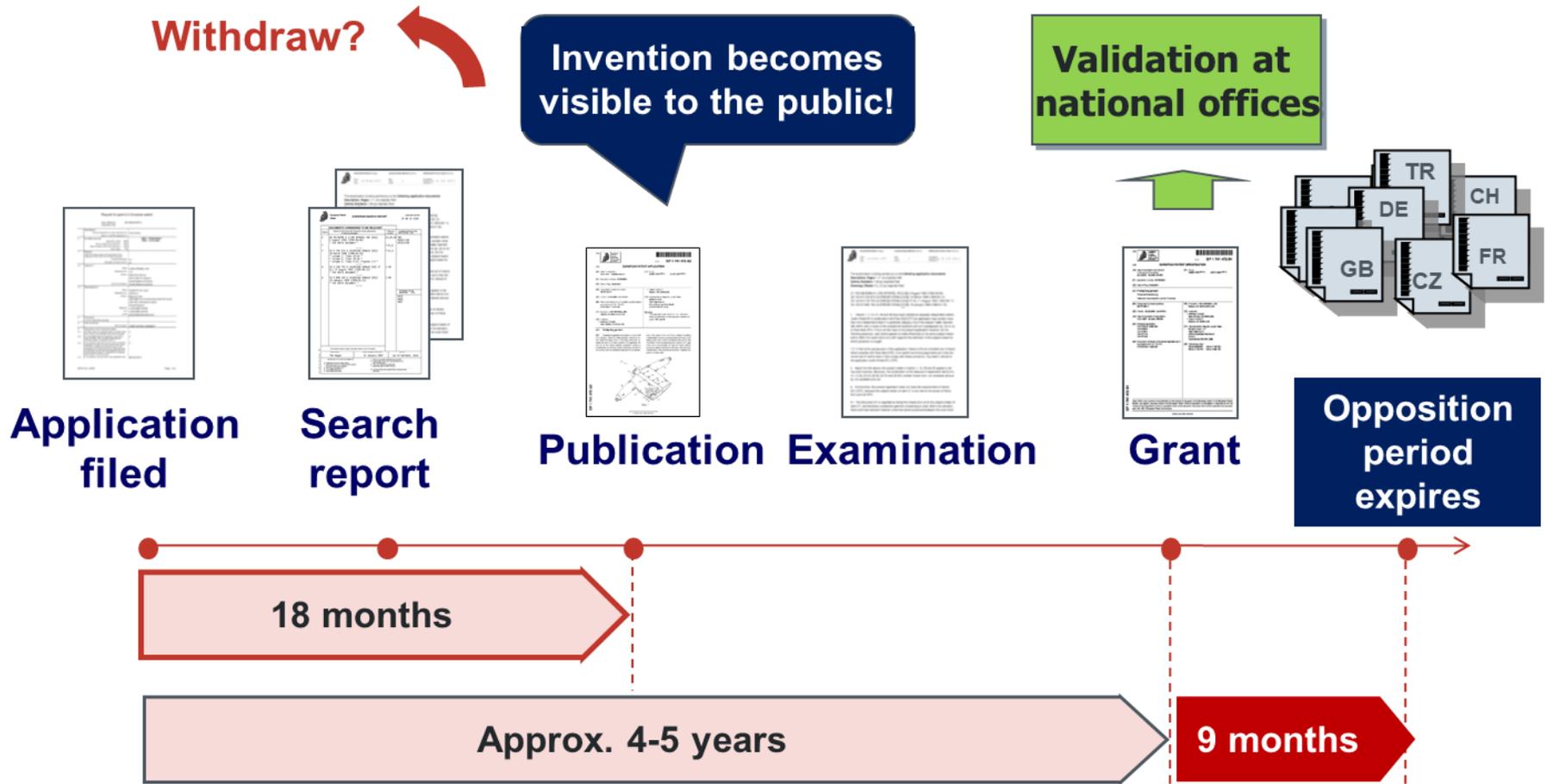
Patent Cooperation Treaty (PCT)

- One single application for up to 148 countries*.
- Harmonisation of formal standards (language, patent agent, fees).
- Search report and opinion on patentability.
- After 30-31 months, decision by applicant on which countries to proceed in.



- * December 2013

The Grant Procedure Before The EPO



Patent System At University Environment

Employee Invention Act

- Came into force for Universities in Germany in 2002.
- Inventions of scientists belong to the University
 - only if an employment contract exists.
 - every invention, that has potential for exploitation must be reported!

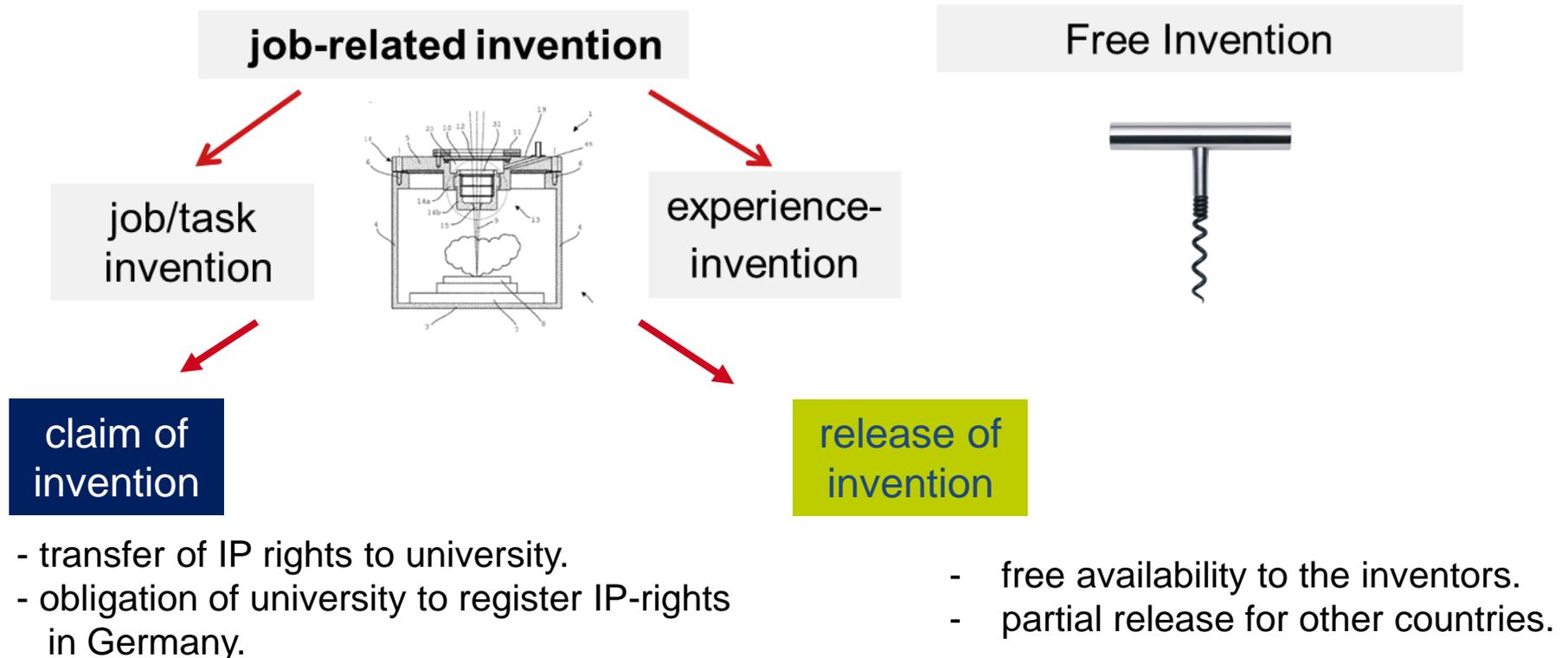
Critical Issues:

- Handling students, who have no employment contract.
 - **must be governed by contracts!**
 - invention transfer intention and non-disclosure agreement (NDA).
- Danger of prior publication.
- Dealing with companies: never without signed NDA.

Invention Notification And Process At Universities

University (Technology transfer) examines and evaluates

- Is the reported invention job-related or free?



How Does Information Work?

Facts on patent information

- More than 120 million documents, free of copyright!
- Language-independent retrievable due to patent classifications.
- Unique information source.



→ Technical Information

→ Bibliographic information:

- applicant and inventor
- filing dates and countries
- technological categories/classes
- citations

→ Legal information

Structure Of Patent Documents

Date of publication

Designated states

Applicant

Title

Abstract

(19) **Europäisches Patentamt**
European Patent Office
Office européen des brevets

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication: 06.04.2005 Bulletin 2005/14

(21) Application number: 04256130.8

(22) Date of filing: 04.10.2004

(84) Designated Contracting States: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LJ LU MC NL PL PT RO SE SI SK TR
Designated Extension States: AL HR LT LV MK

(30) Priority: 03.10.2003 GB 0323237
27.02.2004 GB 0404293

(71) Applicant: **STRIX LIMITED**
Ronaldsway, Isle of Man IM9 2RG (GB)
Designated Contracting States: DE FR IT

(54) **Water Storage Apparatus**

(57) A water treatment and storage vessel has a reservoir 50 for untreated water and filter means 51 in fluid communication with the reservoir 50. A main vessel portion 2 is provided for receiving and storing treated water which comprises a Pelitier-effect device 25 for removing heat from treated water therein, thereby cooling the water.

(11) **EP 1 520 497 A2**

(51) Int Cl.: **A47G 19/22, C02F 1/00**

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(74) Representative: **Samuels, Adrian James**
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Remarks:
A request for correction of the drawings has been filed pursuant to Rule 88 EPC. A decision on the request will be taken during the proceedings before the Examining Division (Guidelines for Examination in the EPO, A-V, 3).

Fig. 1

Printed by Jovan, 72001 PARIS (FR)

Application number

Technical class

Inventor

1 EP 1 520 497 A2

Description

[0001] The present invention relates to the filtering arrangement for liquid, particularly water. It relates to a filter for the removal of suspended matter and other impurities from water. The invention is particularly applicable to the treatment of water for drinking purposes. The invention is particularly applicable to the treatment of water for drinking purposes. The invention is particularly applicable to the treatment of water for drinking purposes.

[0002] One problem with this proposal, which has been pointed out by the Applicant, is the location of the Pelitier-effect device 25. The conventional arrangement is to locate the device 25 in the lower portion of the vessel 50. This arrangement is disadvantageous because the device 25 is in contact with the untreated water and the water which is to be filtered. This arrangement is disadvantageous because the device 25 is in contact with the untreated water and the water which is to be filtered.

[0003] The Applicant has proposed a novel arrangement in which the device 25 is located in the upper portion of the vessel 50. This arrangement is advantageous because the device 25 is in contact with the treated water and not the untreated water. This arrangement is advantageous because the device 25 is in contact with the treated water and not the untreated water.

[0004] The Applicant has proposed a novel arrangement in which the device 25 is located in the upper portion of the vessel 50. This arrangement is advantageous because the device 25 is in contact with the treated water and not the untreated water. This arrangement is advantageous because the device 25 is in contact with the treated water and not the untreated water.

[0005] The Applicant has proposed a novel arrangement in which the device 25 is located in the upper portion of the vessel 50. This arrangement is advantageous because the device 25 is in contact with the treated water and not the untreated water. This arrangement is advantageous because the device 25 is in contact with the treated water and not the untreated water.

[0006] The Applicant has proposed a novel arrangement in which the device 25 is located in the upper portion of the vessel 50. This arrangement is advantageous because the device 25 is in contact with the treated water and not the untreated water. This arrangement is advantageous because the device 25 is in contact with the treated water and not the untreated water.

[0007] The Applicant has proposed a novel arrangement in which the device 25 is located in the upper portion of the vessel 50. This arrangement is advantageous because the device 25 is in contact with the treated water and not the untreated water. This arrangement is advantageous because the device 25 is in contact with the treated water and not the untreated water.

[0008] The Applicant has proposed a novel arrangement in which the device 25 is located in the upper portion of the vessel 50. This arrangement is advantageous because the device 25 is in contact with the treated water and not the untreated water. This arrangement is advantageous because the device 25 is in contact with the treated water and not the untreated water.

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[0010] The Applicant has proposed a novel arrangement in which the device 25 is located in the upper portion of the vessel 50. This arrangement is advantageous because the device 25 is in contact with the treated water and not the untreated water. This arrangement is advantageous because the device 25 is in contact with the treated water and not the untreated water.

Description

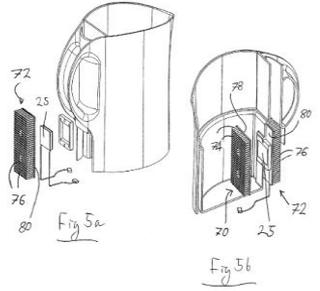
Claims

1. A portable water treatment and storage vessel comprising:

a reservoir for untreated water; filter means in fluid communication with said reservoir; and a main vessel portion for receiving and storing treated water;

wherein said main vessel portion comprises electro-thermal cooling means for removing heat from the treated water therein, thereby cooling the water.

Claim(s)



Drawing(s)

5 important items

- Bibliographic information
 - inventor, proprietor, date of filing, technology class, etc.
- Abstract
 - around 150 words as a search aid for other patent applications.
- Description
 - summary of prior art (i.e. the technology known to exist).
 - the problem that the invention is supposed to solve.
 - an explanation and at least one way of carrying out the invention.
- Claims
 - define the technical scope of patent protection.
- Drawings
 - illustrate the claims and description.

Patent Classification IPC / CPC

Hierarchical organisation of technical matters

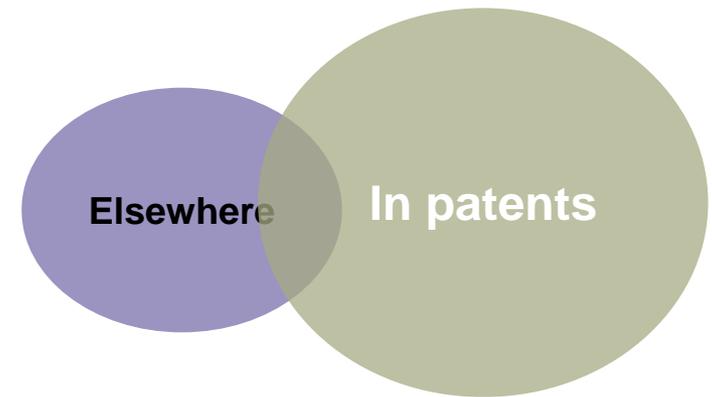
- Language independent document retrieval.
- Documents are classified by patent examiners.
- Division into 8 sections and 140,000 subdivisions.

Classification symbol	Title and description		
<input type="checkbox"/> A	HUMAN NECESSITIES	S	
<input type="checkbox"/> B	PERFORMING OPERATIONS; TRANSPORTING	S	i
<input type="checkbox"/> C	CHEMISTRY; METALLURGY	S	i
<input type="checkbox"/> D	TEXTILES; PAPER	S	
<input type="checkbox"/> E	FIXED CONSTRUCTIONS	S	
<input type="checkbox"/> F	MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING	S	i
<input type="checkbox"/> G	PHYSICS	S	i
<input type="checkbox"/> H	ELECTRICITY	S	i
<input type="checkbox"/> Y	GENERAL TAGGING OF NEW TECHNOLOGICAL DEVELOPMENTS; GENERAL TAGGING OF CROSS-SECTIONAL TECHNOLOGIES SPANNING OVER SEVERAL SECTIONS OF THE IPC; TECHNICAL SUBJECTS COVERED BY FORMER USPC CROSS-REFERENCE ART COLLECTIONS [XRACs] AND DIGESTS	S	i

Value Of Patent Information

Free Access on copyright-free full texts

- Available in patent databases of the patent organisations.
- In-depth publication of R&D
 - part of it can only be found in patents.
 - detailed description.
- Patents are landmarks of technological development
 - being novel and inventive.



Benefit Of Patent Searches

Patent searches...

- ... make sure that the idea is new and avoid duplicated developments.
- ... protect against infringements and litigations.
- ...deliver added value information on players and technical developments etc.
- ...in science: applications for funding programmes (e.g. Horizon 2020) require Prior art searches.

➤ **Novelty Search,
Prior Art**

➤ **Prior Art, Monitoring**

➤ **Patent Statistics**

Mandatory search of patent documents for all R&D activities!

Patent Databases

	Access	Patents	Trade Marks & Registered Designs
Free access	Online Open Access	Databases of the National Offices	Databases of the National Offices
		DPMA: DepatisNet EPA: Espacenet WIPO: Patentscope ...	DPMA: DPMARregister EUIPO: eSearch plus WIPO: Global Brand Database / Hague Express Database ...
Licences	Exklusiv Service from PNZ	  	



commercial tools:

- elaborate search
- complex topics
- detailed analyses

Database Of The European Patent Office

Espacenet: Free Access at www.epo.org



Espacenet: free access to over 120 million patent documents



Information From A Document Number

International Document Codes

- Standard for document codes is set by WIPO

EP

2589964

A1

Country Code

DE
EP
US
JP
WO

Reference Number

Kind Code

A1: European patent application published with European search report
A2: European patent application published without European search report
A3: separate publication of European search report
A4: supplementary search report
A8: corrected title page of A document, i.e. A1 or A2 document
A9: complete reprint of A document, i.e. A1, A2 or A3 document

Source: https://worldwide.espacenet.com/help?locale=en_EP&method=handleHelpTopic&topic=kindcodes

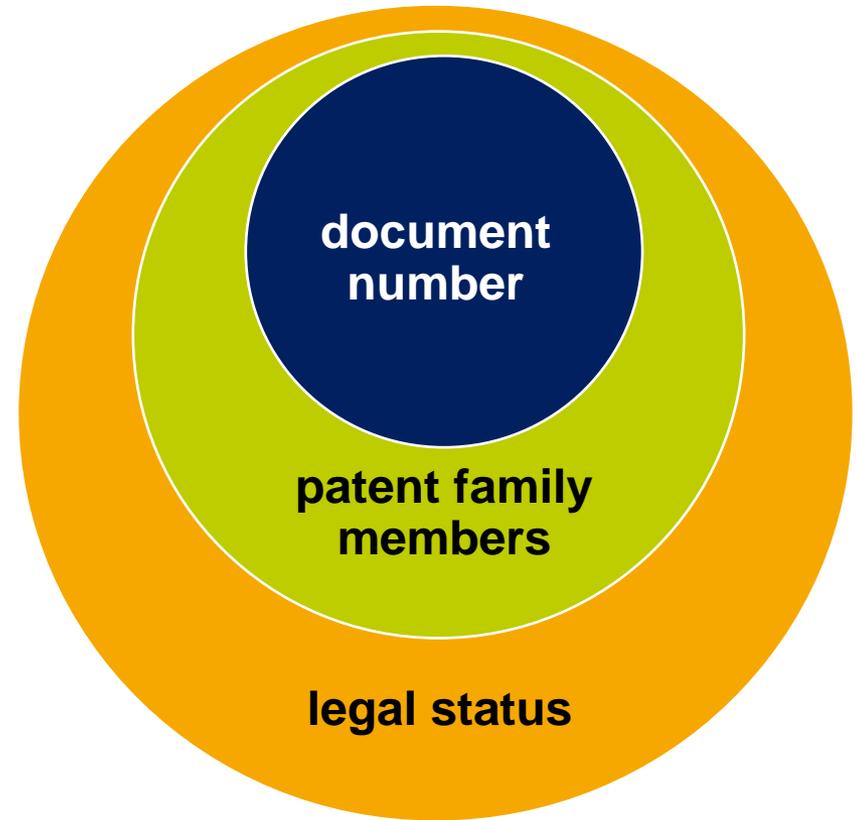
Pearl Growing

Added value from a single reference

Names: applicants & inventors & attorneys

Countries: geographic scope & language

Business: protect from infringement



Search For Names In Espacenet

Analysis of patent families

581 results found

Advanced search Filters

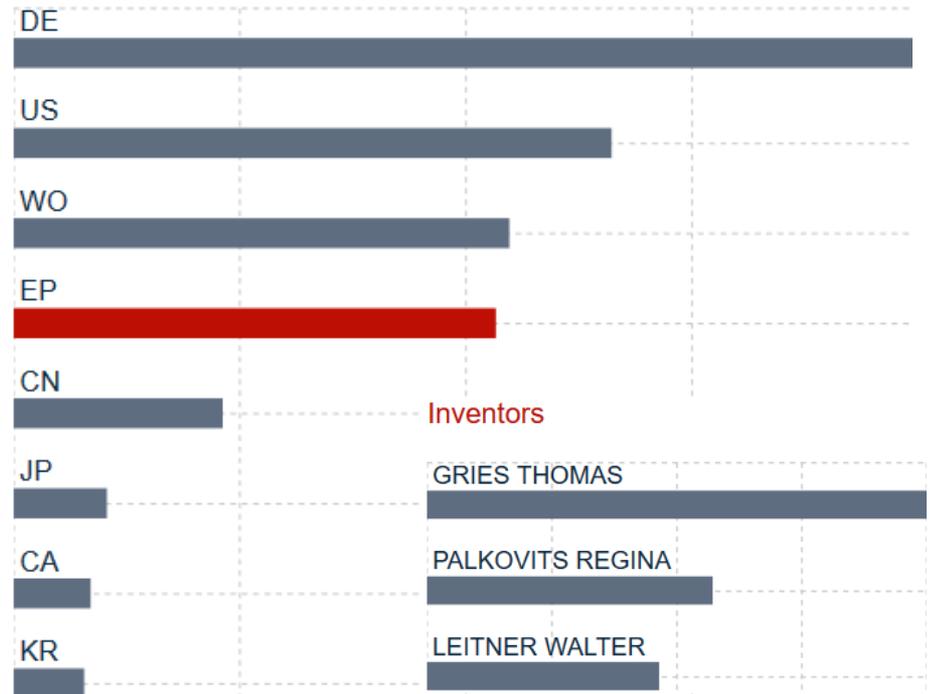


IPC main groups

CPC main groups

G01N33	A61B5
A61B5	C12N9
C12Q1	G01N33

RWTH Aachen University



Recap

Patent system bridges open science and commercialisation

- With copyright-free, valuable information.
- With protection of the inventions prior to disclosure.
- For both scenarios, patent search is crucial.
- Support with exploitation: University Technology Transfer.
- Support with patent information (consulting on IP-strategy and searches): Patent Information Centres (alias Patlib Centres).

Patent Information Centres (Patlib)

Germany

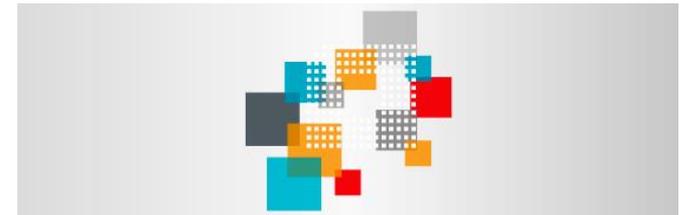


&

Europe

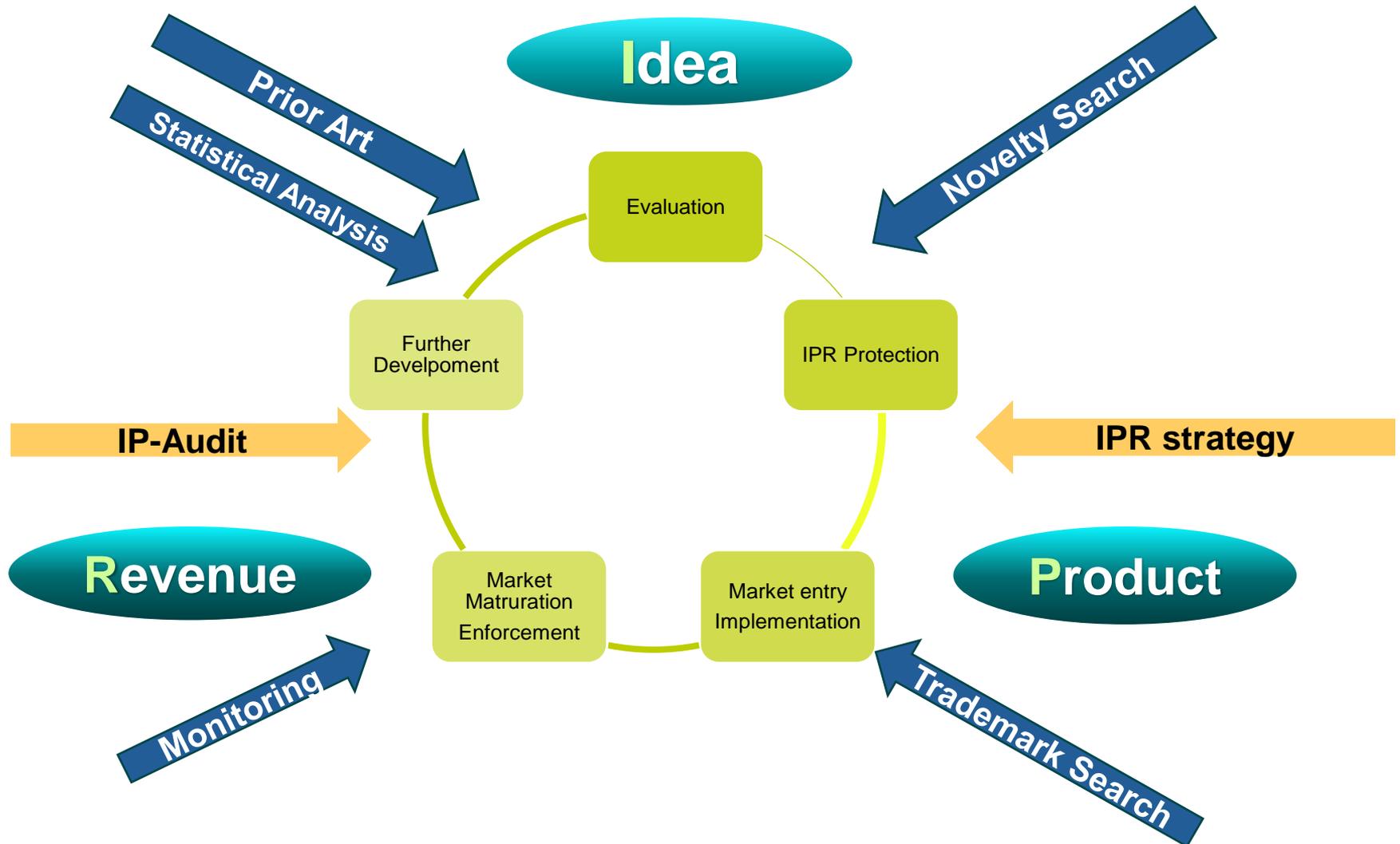
- PIZnet: 20 Patlib Centers.
- Organized in a registered, non-profit society.
- Service and IP support.
- www.piznet.de

- Patlib Network: 354 Centres
- <https://www.epo.org/searching-for-patents/helpful-resources/patlib.html>



PATLIBs in Germany (=PIZnet)	n ^o	%
total	20	100%
university-based	12	60%
Part of university library	6	30%

Services Of Patlib Centres On IP Strategy And Searches



Thank You!

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