

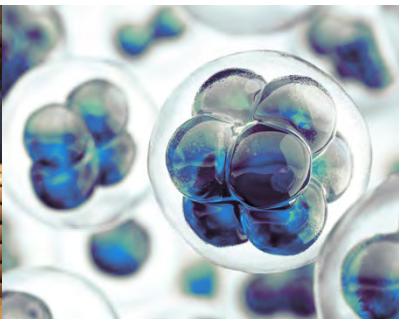
Business use of patent information

Introduction and Espacenet

BS08-2021



Johannes Schaaf



Patent Knowledge Promotion



21 April 2021

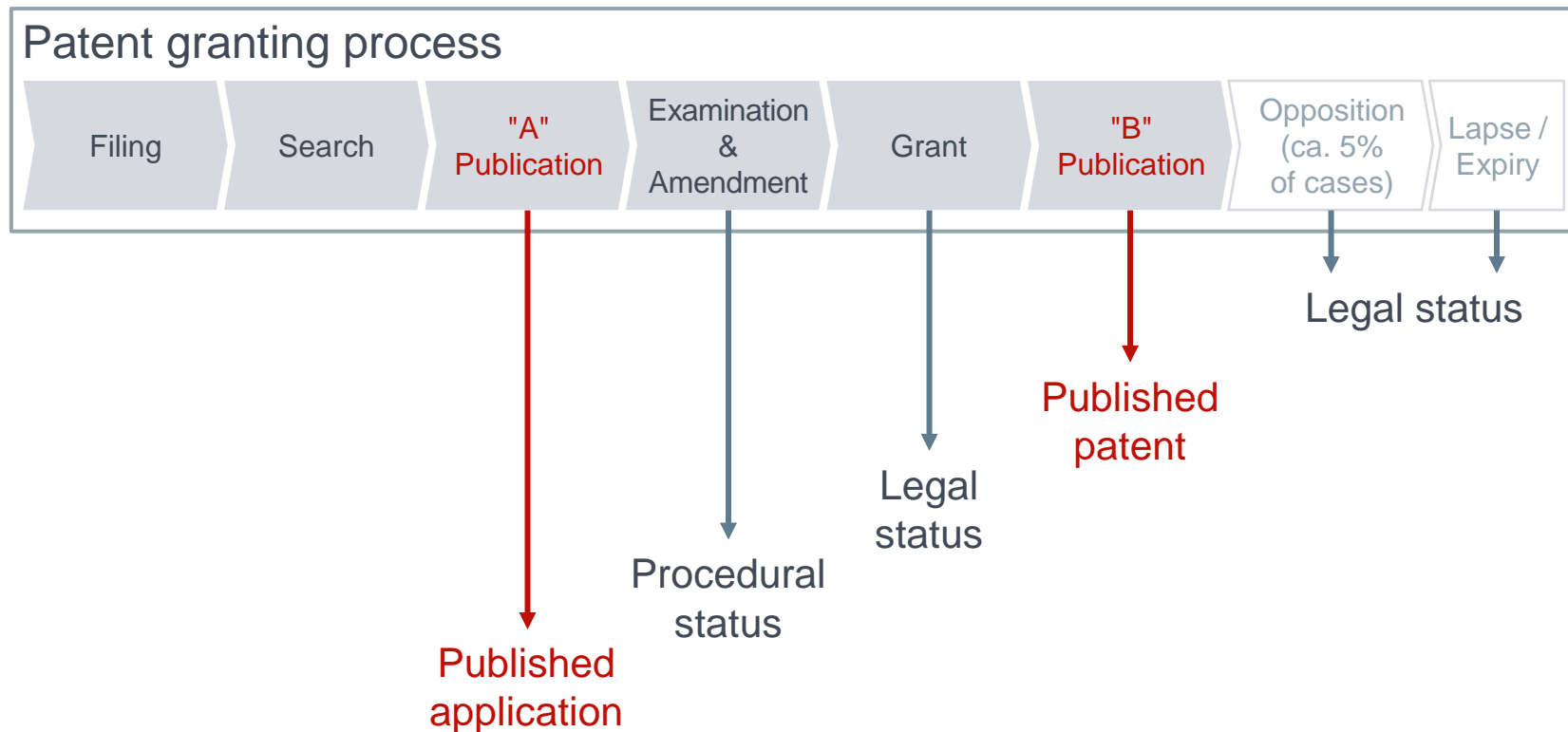
Content

- **Introduction**
- Use Espacenet to filter and analyse your search results
- Make the best out of Global patent index
- PATSTAT for more advanced statistics
- Questions and conclusions

Starting point

- Most large companies and institutions are **global players**
- **Steeply increasing volume of technical and economic information**
 - posing a major challenge
- Reduced product development time (& shorter product life cycle)
- Increasing importance of technology for competitive advantage
- More and more **difficult to keep abreast** of what is happening
 - how to generate business intelligence for strategic decisions?
 - how to identify changes based on patent knowledge?

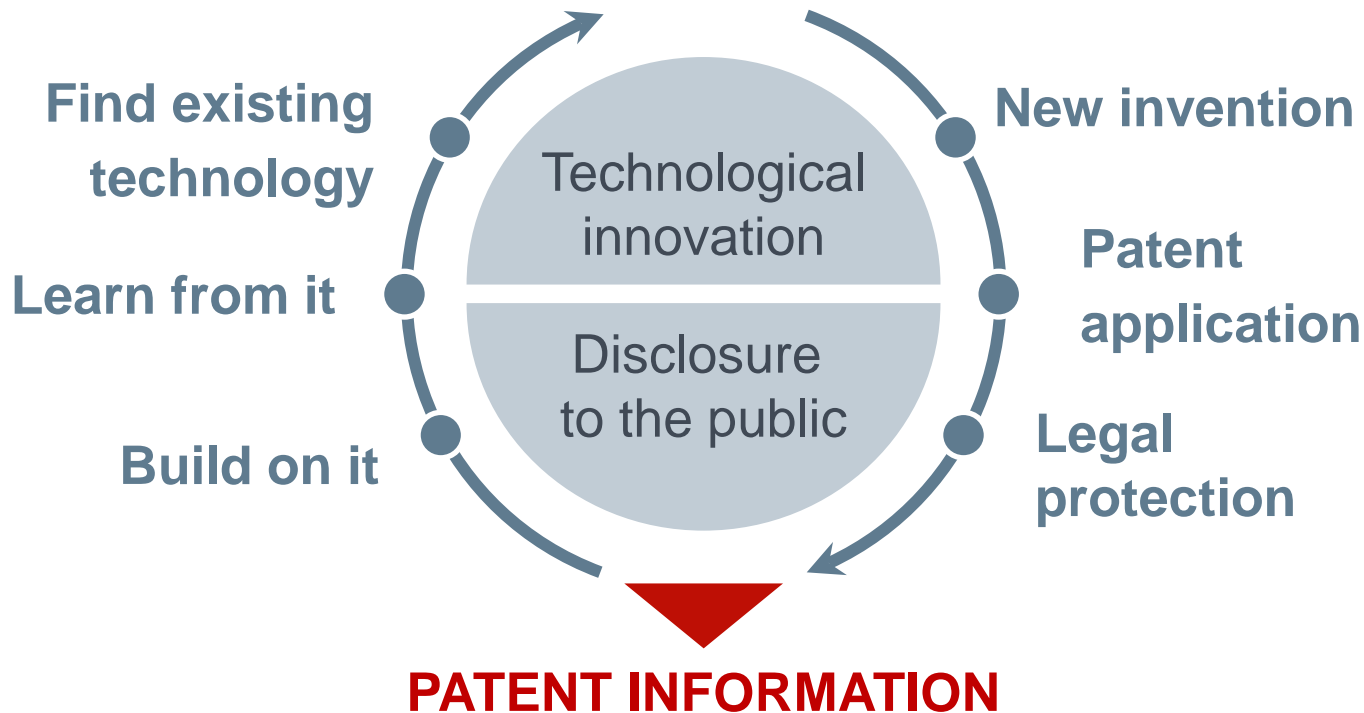
Information generated by the patent granting process



The patent deal

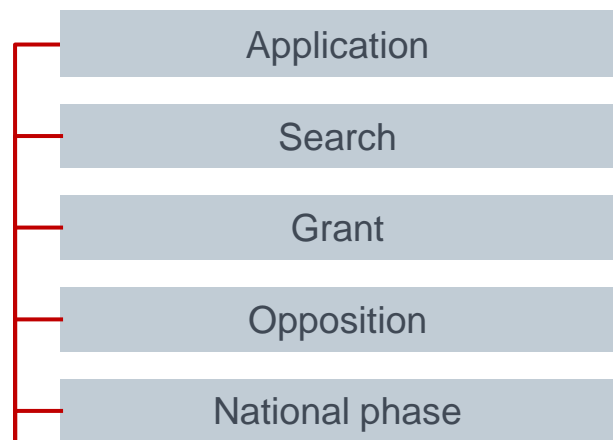


A fair system driving knowledge transfer & innovation



EPO: The only patent office with a dual role

As a patent office



As a provider of patent information for the world patent community



Seven good reasons to use patent information

1. Avoid duplication of R&D expenditure
2. Find out what technology already exists and build on it



**Technical
information**



3. Check where an invention is protected (and where it is not)
4. Avoid infringing other people's patent rights



**Legal
information**



5. Keep track of what others are doing
6. Identify new partners, e.g. for licensing
7. Spot trends in technology or the market



**Business
information**

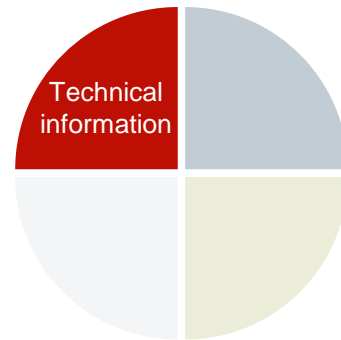


Traditional search:

Patentability or Invalidation search (novelty / prior art)

Typical result: **Search report** with:

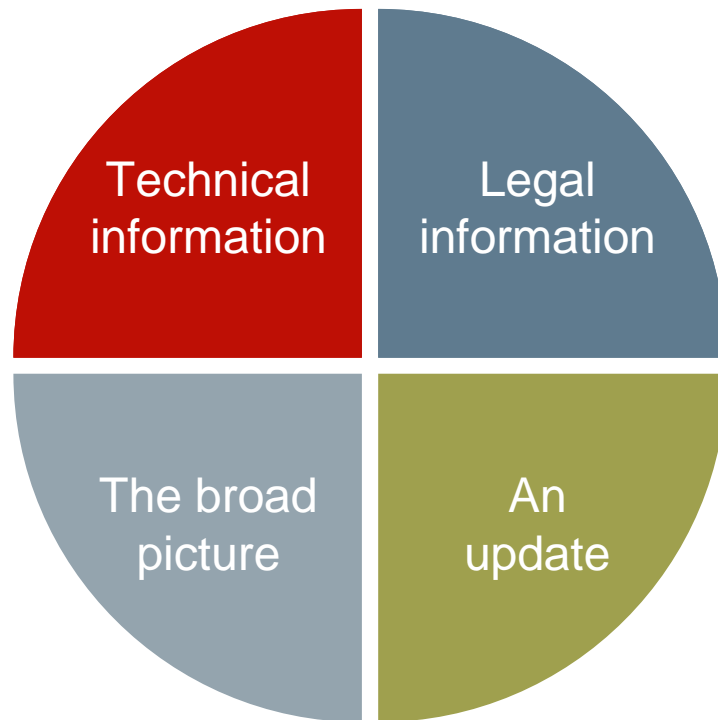
- Search **methodology**
- **List of documents** destroying the novelty and/or showing the lack of inventive step
- **Databases and tools** are needed
- Full text where possible
- Can be a zero-hit search
- No guarantee of completeness, unless the same invention is found (efforts/budget to be agreed)



From patent data to patent knowledge

Examples:

- What are emerging technological trends?
- How do the patent portfolios of my competition look like?
- What are the newest developments protected by my competitors?
- Which patents were opposed?
- Which patents are in force?



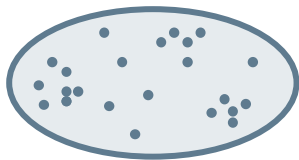
Patent statistics

- Used for **big results sets**
- Approach very different from traditional types of patent searches
- Patent statistics does not aim at identifying and analysing individual patent documents
- **Statistical approach**
 - bibliographical data and relationship between inventions in the focus of the statistical analysis
 - creating basic set of patent documents
 - define criteria for statistical analysis, e.g. examining chronological development, aggregating according to country of residence

Patent statistics: Procedure

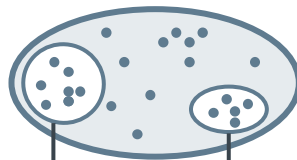
Basic search

- patent classes
- search concepts
- applicants
- countries of residence
- [...]



Statistical analysis

| Period | (1) | (2) | Int./q _{it} |
|---|-----------------------------|-----------------------------|-----------------------------|
| Estimation method | Fixed-effects regression | Fixed-effects regression | Fixed-effects regression |
| $q_{ijt} = \alpha L_{ijt}^\alpha \beta K_{ijt}^\beta$ | 0.74*** (0.020) | 10.337*** (1.823) | 12.12*** (1.823) |
| | 0.21*** (0.059) | 0.8892*** (1.188) | 0.91*** (0.161) |
| Intercept | -10.18 (0.7014) | 0.4791 (0.1102) | - |
| Other_stock _{it} | 0.0002** (9.7e-05) | 0.0021* (0.0012) | 0.0001 (0.0001) |
| Other_stock _{it-1} | -5.1e-09** (2.5e-09) | -1.1e-08* (5.9e-09) | -3.4e-09 (1.7e-09) |
| Green_stock _{it-1} | 0.0608 (0.0579) | 11.322** (0.5057) | 1.0 (0.5057) |
| Green_stock _{it-2} | -0.0012** (0.00038) | -0.0183* (0.00091) | -0.0001 (0.0001) |
| Green_stock _{it-3} | 2.0e-07** (1.5e-07) | 5.0e-07 (3.2e-07) | 1.4e-07 (8.1e-08) |
| Year fixed effects | Yes | Yes | Yes |
| Country-specific industry fixed effects | Yes | Yes | Yes |
| Industry fixed effects | No | No | No |
| Country fixed effects | No | No | No |
| N | 2936 | 1060 | |

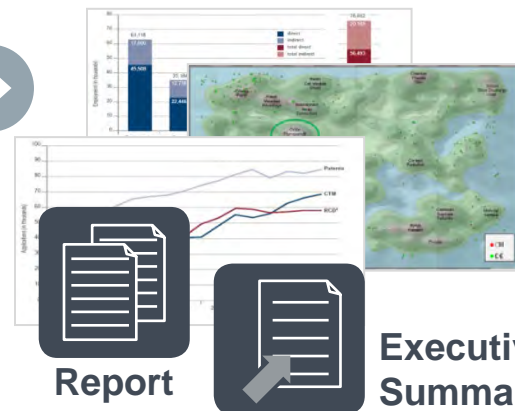


Group 1

Group 2

Processing results

- further analyses/processing
- visualisation
- reporting



Thomson Reuters®

Paris Convention: Right of priority (1883)

[...] on the basis of a regular first application filed **in one** of the Contracting States, the applicant may, within a certain period of time (12 months for patents and utility models; 6 months for industrial designs and marks), apply for protection **in any of the other** Contracting States. These subsequent applications will be regarded as if they had been filed on the same day as the first application. [...]

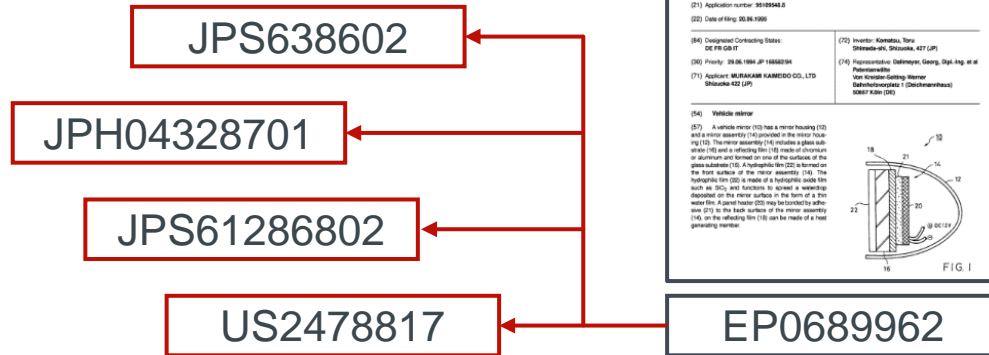
DOCDB simple patent family

- Collection of patent documents filed in different offices
- All members have exactly the same priorities
- Cover a single invention
- Identical* technical content
- Corresponding texts in other languages
- Overview on the geographical coverage

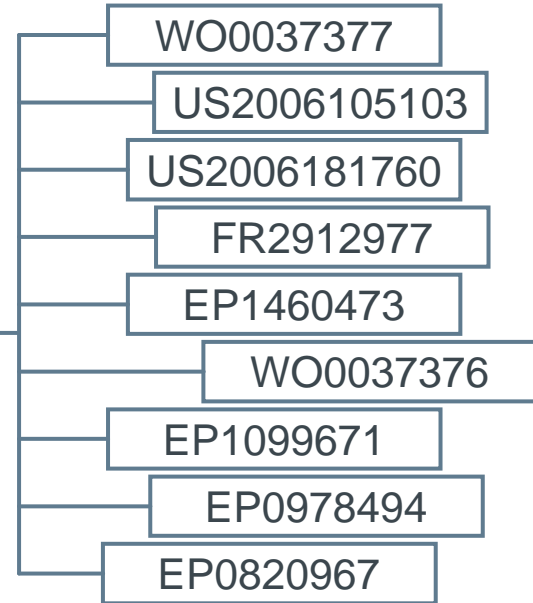
*or very similar

Backward and Forward citations

Backward citations:
earlier documents



Forward citations:
later documents



Cited documents

Citing documents

time →

Patent classification systems

The **IPC** has a hierarchical structure:

| | |
|-------------|------------------------|
| Sections | A, B, C, D, E, F, G, H |
| Classes | e.g. A47 |
| Sub-classes | e.g. A47J |
| Groups | e.g. A47J37 |
| Sub-groups | e.g. A47J37/08 |

CPC e.g. A47J37/0821

Cooking; Apparatus for making beverages

A47J 37/00 Baking; Roasting; Grilling; Frying (bakers' ovens, non-domestic baking apparatus or equipment A21B; domestic stoves or ranges F24B, F24C)

A47J 37/06 • Roasters; Grills; Sandwich grills

A47J 37/08 •• Bread-toasters (electric heating elements H05B)

A47J 37/0814 ••• [with automatic bread ejection or timing means] (A47J 37/0857 takes precedence)

A47J 37/0821 •••• [with mechanical clockwork timers]

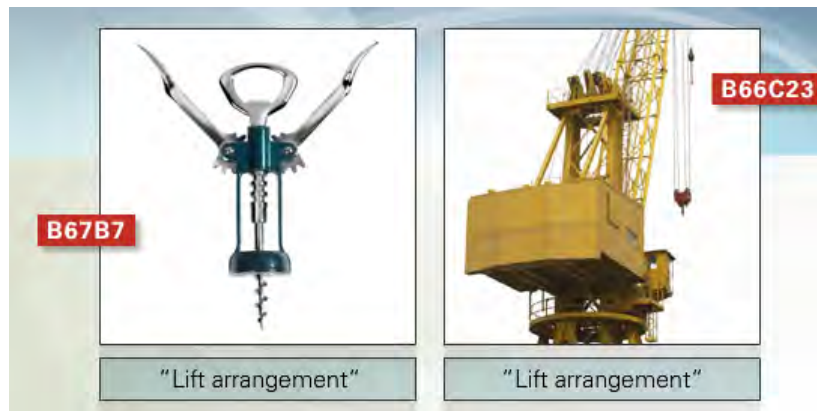
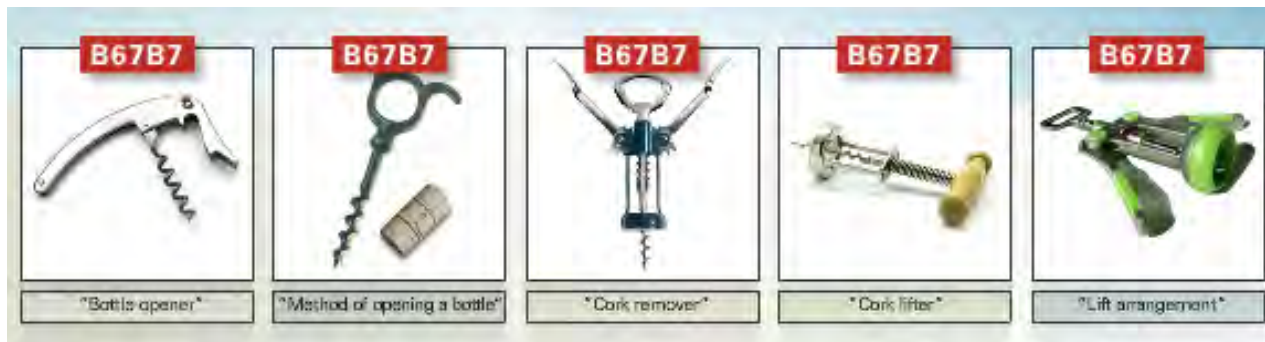
Advantages:

Assigned by experts

High quality


Language independent

Patent Classification systems



www.epo.org/pi-tour

Espacenet – Classification browser

**Espacenet**
Patent search

Enter your search terms


My Espacenet **Help** **Classification search** **Results**

Classification search

A47J37/0821

Search

Index **A** **B** **C** **D** **E** **F** **G** **H** **Y**



| Classification symbol | Title and description |
|-----------------------------------|---|
| <input type="checkbox"/> A | HUMAN NECESSITIES |
| <input type="checkbox"/> B | PERFORMING OPERATIONS; TRANSPORTING |
| <input type="checkbox"/> C | CHEMISTRY; METALLURGY |
| <input type="checkbox"/> D | TEXTILES; PAPER |
| <input type="checkbox"/> E | FIXED CONSTRUCTIONS |
| <input type="checkbox"/> F | MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING |
| <input type="checkbox"/> G | PHYSICS |
| <input type="checkbox"/> H | ELECTRICITY |
| <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 |

A »

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S

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S

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Browse manually ...

Espacenet – Classification browser

[My Espacenet](#)[Help](#)[Classification search](#)[Results](#)

Classification search

[Index](#)[A](#)[B](#)[C](#)[D](#)[E](#)[F](#)[G](#)[H](#)[Y](#)[A »](#)

| Classification symbol | Title and description | |
|----------------------------|---|----------------------------|
| <input type="checkbox"/> A | HUMAN NECESSITIES | <input type="checkbox"/> S |
| <input type="checkbox"/> B | PERFORMING OPERATIONS; TRANSPORTING | <input type="checkbox"/> S |
| <input type="checkbox"/> C | CHEMISTRY; METALLURGY | <input type="checkbox"/> S |
| <input type="checkbox"/> D | TEXTILES; PAPER | <input type="checkbox"/> S |
| <input type="checkbox"/> E | FIXED CONSTRUCTIONS | <input type="checkbox"/> S |
| <input type="checkbox"/> F | MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING | <input type="checkbox"/> S |
| <input type="checkbox"/> G | PHYSICS | <input type="checkbox"/> S |
| <input type="checkbox"/> H | ELECTRICITY | <input type="checkbox"/> S |
| <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 | <input type="checkbox"/> S |



... or search by **keyword** or **classification symbol**

Detecting early trends is finding hidden patterns



Source: gettyimages

Content

- Introduction
- **Use Espacenet to filter and analyse your search results**
- Make the best out of Global patent index
- PATSTAT for more advanced statistics
- Questions and conclusions

Use Espacenet to search technical information

Key product features

- Over 120 million patent documents
 - From around 100 patent authorities
 - Linked to Patent Translate (32 languages)
 - Classified and indexed for easy retrieval
 - Data from 1782 to today
- Free of charge

► **epo.org/espacenet**

Key user benefits

- Avoid duplication of R&D expenditure
- Find out what technology already exists and build on it
- Keep track of what others are doing
- Identify new partners, e.g. for licensing



Find more information at: epo.org/searching-for-patents

The screenshot shows the EPO website's 'Espacenet - patent search' page. At the top, there is a header with the EPO logo, a search bar, and links for 'Website' and 'Patents'. Below the header is a navigation bar with links: 'Home', 'Searching for patents', 'Applying for a patent', 'Law & practice', 'News & events', 'Learning', and 'About us'. The main content area is titled 'Espacenet - patent search' and includes a breadcrumb trail: 'Home > Searching for patents > Technical information > Espacenet - patent search'. On the left, there is a sidebar with links: 'Espacenet - patent search', 'Global Patent Index (GPI)', 'European Publication Server', 'Searching Asian documents', and 'EP full-text search'. The main content area features a large orange graphic with the words 'Innovate', 'Search', and 'Find' in a circular flow. Below this graphic, there is a paragraph describing Espacenet's worldwide coverage and search features, followed by a button 'Open Espacenet' and a link 'Open classic Espacenet'. To the right of the main content area, there is a 'Support' section with links: 'Talk to EPO experts or get help from other users', 'Visit the discussion forum', and 'Contact us'. Below the 'Support' section, there is an 'Introduction to Espacenet' section with a link 'Watch a recording of the online seminar'. At the bottom, there is an 'Advanced features of Espacenet' section with a link 'Watch a recording of the online seminar'.

Home > Searching for patents > Technical information > Espacenet - patent search

Espacenet patent search

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Support

Talk to EPO experts or get help from other users

> Visit the discussion forum

Contact

> Contact us

Introduction to Espacenet

> Watch a recording of the online seminar

Advanced features of Espacenet

> Watch a recording of the online seminar

With its worldwide coverage and search features, Espacenet offers free access to information about inventions and technical developments from 1782 to today.

Open Espacenet > Open classic Espacenet

> National patent offices' databases

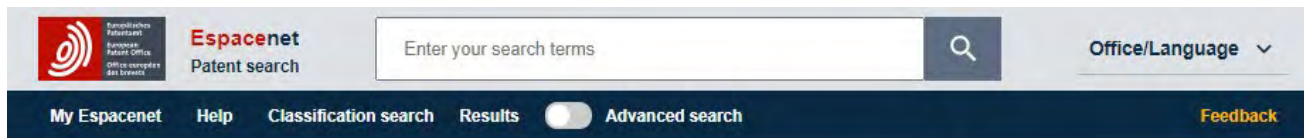
Espacenet is accessible to beginners and experts and is updated daily. It contains data on more than 120 million patent documents from around the world. Supporting information can help you understand whether a patent has been granted and if it is still in force.

➤ Video: How to use Espacenet

❑ **Espacenet - pocket guide** (PDF, 540 KB)

❑ **What has changed in Espacenet** (PDF, 126 KB)

Access to Espacenet: epo.org/espacenet



Espacenet: free access to over 120 million patent documents



Navigating the citation tree: example [EP2910453A1](#)

☆ **EP2910453A1** Method and system for autonomously guiding a vehicle through a parking area Available in ▾ ⋮

Bibliographic data Description Claims Drawings Original document **Citations** Legal events Patent family

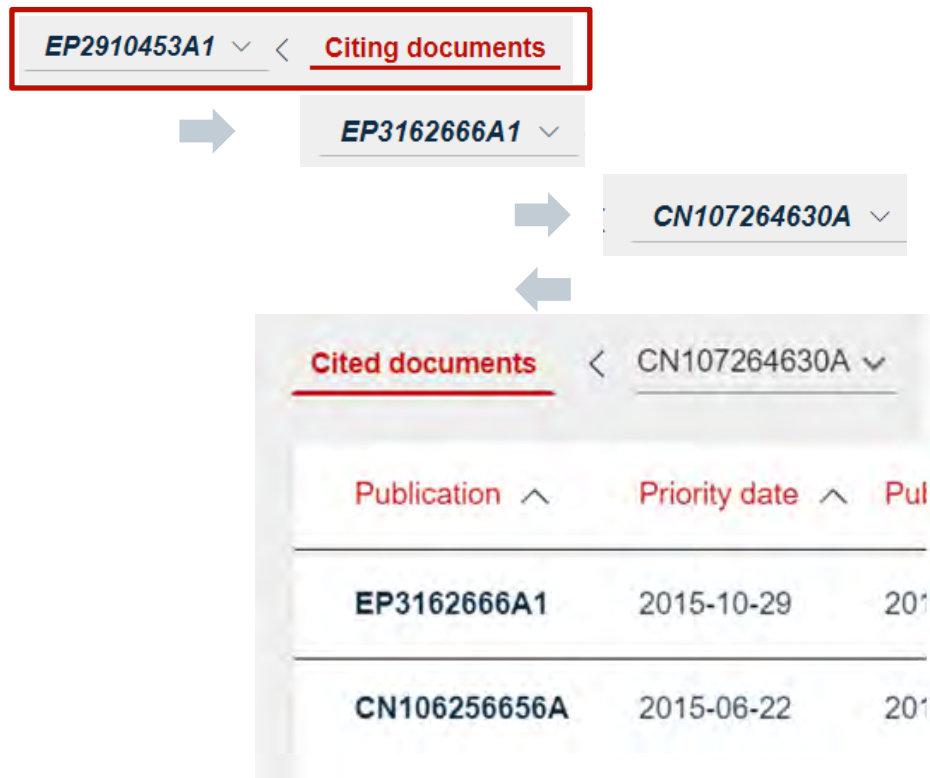
Cited documents < **EP2910453A1** ▾ < **Citing documents** CCD ↗

| Publication ▴ | Priority date ▴ | Publication date ▴ | Applicants ▴ | Title ▴ | IPC ▴ | CPC ▴ | Citation origin ▴ |
|-------------------------|-----------------|--------------------|--|---|--------------------------------------|--|-------------------|
| DE102016116857A1 | 2016-09-08 | 2018-03-08 | KNORR BREMSE SYSTEME FUER NUTZFAHRZEUGE GMBH [DE] | System und Verfahren zum Operieren von Nutzfahrzeugen | B60W30/00, B60W30/08, G08G1/16 | G05D1/0214 (US), G05D1/0225 (US), G05D1/0282 (EP), G08G1/148 (EP), G08G1/164 (EP), G05D2201/0213 (US), G05D2201/0216 (EP) | APP |
| WO2018046252A1 | 2016-09-08 | 2018-03-15 | KNORR BREMSE SYSTEME FUER NUTZFAHRZEUGE GMBH [DE] | SYSTEM AND METHOD FOR OPERATING UTILITY VEHICLES | G05D1/02, G08G1/14, G08G1/16 | G05D1/0214 (US), G05D1/0225 (US), G05D1/0282 (EP), G08G1/148 (EP), G08G1/164 (EP), G05D2201/0213 (US), G05D2201/0216 (EP) | APP |
| CN106585626A | 2015-10-19 | 2017-04-26 | BAIC MOTOR CO LTD | Automatic parking system and method | B60W30/06, G08G1/14 | B60W30/06 (CN), G08G1/14 (CN), G08G1/143 (CN) | SEA |
| EP3162666A1 | 2015-10-29 | 2017-05-03 | VALEO SCHALTER & | METHOD FOR | B62D15/02, | B62D15/0285 (EP), | SEA |

← Result list

Forward and backward citation

EP2910453A1 > Citing: EP2910453A1 > Citing: EP3162666A1 > Cited by: CN107264630A



Forward citations of important patents (CT=...)

Kary Mullis' invention: Polymerase Chain Reaction (PCR)

US4683202 Process for amplifying nucleic acid sequences

United States Patent [19]
Mullis

[11] **Patent Number:** **4,683,202**

[45] **Date of Patent:** * **Jul. 28, 1987**

[54] **PROCESS FOR AMPLIFYING NUCLEIC ACID SEQUENCES**

[75] Inventor: **Kary B. Mullis**, Kensington, Calif.

[73] Assignee: **Cetus Corporation**, Emeryville, Calif.

[*] Notice: The portion of the term of this patent subsequent to Jul. 28, 2004 has been disclaimed.

[21] Appl. No.: **791,308**

[22] Filed: **Oct. 25, 1985**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 716,975, Mar. 28, 1985, abandoned.

[51] Int. Cl.⁴ **C12P 19/34**; C12N 15/00; C12N 1/00; C07H 21/04; C07H 21/02

[52] U.S. Cl. **435/91**; 435/177.3; 435/317; 536/27; 536/28; 536/29; 935/17; 935/18; 935/16

[58] Field of Search 435/91, 172.3, 317; 536/27, 28, 29; 935/17, 18

[56] **References Cited**
PUBLICATIONS

Gaubatz et al, "Strategies for Constructing Comple-

mentary DNA for Cloning", J. Theor. Biol. 95: 679 (1982).

Caton and Robertson, *Nucleic Acids Research*, vol. 7, pp. 1445-1456 (1979).

Rossi et al., *J. Biol. Chem.*, 257, 9226-9229 (1982).

Primary Examiner—James Martinell
Attorney, Agent, or Firm—Janet E. Hasak; Albert P. Halluin


[57] **ABSTRACT**

The present invention is directed to a process for amplifying any desired specific nucleic acid sequence contained in a nucleic acid or mixture thereof. The process comprises treating separate complementary strands of the nucleic acid with a molar excess of two oligonucleotide primers, and extending the primers to form complementary primer extension products which act as templates for synthesizing the desired nucleic acid sequence. The steps of the reaction may be carried out stepwise or simultaneously and can be repeated as often as desired.

21 Claims, 12 Drawing Figures

Forward citations

Protected markets

**Espacenet**
Patent search

ct=US4683202A

My Espacenet Help Classification search Results Advanced search Filters Popup tips

Home > Results

Family Publication

Countries (family)

| | |
|----|-------|
| US | 5 516 |
| WO | 4 612 |
| EP | 3 860 |
| CA | 2 616 |
| JP | 2 439 |
| AU | 2 340 |
| CN | 1 668 |
| ES | 1 077 |

Apply Exclude

6 082 results found

List view Text only List content All Sort by Relevance

☐ (0 patents selected) Select the first 20 results

☐ 1. Crystallisation of a GLP-1 analogue
US2005124542A1 • 2005-06-09 • ARENTSEN ANNE C.
Earliest priority: 2000-01-31 • Earliest publication: 2003-10-02
Crystals of glucagon-like peptide-1 (GLP-1) and GLP-1 analogues, and processes for preparation of crystals of GLP-1 and GLP-1 analogues.

☐ 2. IMPROVED PRIMER EXTENSION REACTIONS
AU5438290A (B2) • 1990-11-05 • HARVARD COLLEGE
Earliest priority: 1989-04-12 • Earliest publication: 1990-10-13
No abstract available

☐ 3. A METHOD FOR THE FLUORESCENT DETECTION OF A D...
AU638568B2 (A) • 1993-07-01 • US HEALTH [US]
Earliest priority: 1990-02-26 • Earliest publication: 1991-08-27
No abstract available

☐ 4. New expression system from rhodococcus

Forward citations

Patents with a large coverage

The screenshot displays the Espacenet patent search interface. The search query is 'ct=US4683202A'. The results page shows 509 results found. The left sidebar includes a 'Countries (family)' filter with a list of countries and their corresponding result counts: CN (509), EP (509), JP (509), KR (509), US (509), WO (509), and BR (353). The main content area lists the first three results, each with a title, patent number, date, and a brief description.

Query language: en / de / fr **Filters:** Countries (family): ☒ US ☒ AND ☒ WO ☒ AND ☒ EP ☒ AND ☒ CA ☒ AND ☒ JP ☒ AND ☒ AU ☒ AND ☒ CN ☒ AND ☒ KR

Family ☒ **Publication** ☐

Countries (family)

| Country | Count |
|--|-------|
| <input checked="" type="checkbox"/> CN | 509 |
| <input checked="" type="checkbox"/> EP | 509 |
| <input checked="" type="checkbox"/> JP | 509 |
| <input checked="" type="checkbox"/> KR | 509 |
| <input checked="" type="checkbox"/> US | 509 |
| <input checked="" type="checkbox"/> WO | 509 |
| <input type="checkbox"/> BR | 353 |

509 results found


Text only

☐ (0 patents selected) **Select the first 20 results**

- ☐ **1. Efficient algorithm for PCR testing of blood sam...**
US6566052B1 • 2003-05-20 • ALPHA THERAPEUTI...
Earliest priority: 1995-04-10 • **Earliest publication:** 19...
Systems, processes, and devices are provided which are useful for testing blood or plasma donations to detect those specific donations which are contaminated by a virus abo...
- ☐ **2. Multi-primer amplification method for barcoding...**
CN103952482A • 2014-07-30 • FLUIDIGM CORP
Earliest priority: 2009-04-02 • **Earliest publication:** 20...
In certain embodiments, the present invention provides amplification methods in which nucleotide tag(s) and, optionally, a barcode nucleotide sequence are added to the...
- ☐ **3. Isolation and identification of T cells**
EP2363710A1 (B1) • 2011-09-07 • BAYLOR COLLE...
Earliest priority: 2002-08-08 • **Earliest publication:** 20...
The present invention relates to improved autologous T cell

Forward citations

Applicants

**Espacenet**
Patent search

ct=US4683202A

Office/Language ▾

My Espacenet Help Classification search Results Advanced search Filters Popup tips Report data error Feedback

Home > Results > US2005124542A1
CPC assigning offices ▾

Applicants 🔍 ☰ ☷ ^

☐ YEDA RES & DEV 161

☐ LIFE TECHNOLOGIES CORP 157

☐ HOFFMANN LA ROCHE 137

☐ ROCHE DIAGNOSTICS GMBH 115

☐ UNIV CALIFORNIA 105

☐ ROCHE MOLECULAR SYSTEMS INC 100

☐ GEN PROBE INC 98

Apply Exclude + query

6 082 results found

List view List content Sort by

Text only ▾ All ▾ Relevance ▾ ⋮

☐ (0 patents selected) Select the first 20 results☐ 1. Crystallisation of a GLP-1 analogue
US2005124542A1 • 2005-06-09 • ARENTSEN ANN...
Earliest priority: 2000-01-31 • Earliest publication: 20...
Crystals of glucagon-like peptide-1 (GLP-1) and GLP-1 analogues, and processes for preparation of crystals of GLP-1 and GLP-1 analogues.☐ 2. IMPROVED PRIMER EXTENSION REACTIONS
AU5438290A (B2) • 1990-11-05 • HARVARD COLLE...
Earliest priority: 1989-04-12 • Earliest publication: 19...
No abstract available☐ 3. A METHOD FOR THE FLUORESCENT DETE...
AU638568B2 (A) • 1993-07-01 • US HEALTH [US]
Earliest priority: 1990-02-26 • Earliest publication: 19...
No abstract available

☆ US2005124542A1 Crystallisation of a GLP-1 analogue

Available in ▾ Patent Translate ▾ ⋮

Bibliographic data ▾

Global Dossier ↗**Applicants** ARENTSEN ANNE C. +**Inventors** ARENTSEN ANNE C [DK] +**Classifications**IPC **C07K14/605; A61K38/00;**
(IPC1-7): C07K14/605;CPC **C07K14/605 (EP);**
A61K38/00 (EP);
C07K2299/00 (EP);**Priorities** DKPA200000156A-2000-01-31;
US18330000P-2000-02-17;
US4683202A-2004-12-31;

Forward citations

Use of the technology

The screenshot displays the Espacenet patent search interface. The search bar at the top contains the query 'ct=US4683202A'. The navigation bar includes tabs for 'My Espacenet', 'Help', 'Classification search', and 'Results'. The 'Results' tab is active, showing 6,082 results found. A sidebar on the left lists CPC subgroups, including A61P35/00, C12Q2600/156, A61P43/00, C12Q2600/158, A61K38/00, C12Q1/686, C12Q1/6883, and C12Q1/6886. The main content area shows a list of results, with the first result being '1. ACCELERATED POLYMERASE CHAIN REACTION ...'. A detailed view of the CPC classification 'CPC - A61P35/00' is shown, highlighting the classification 'A61P 35/00' and its description 'Antineoplastic agents'. The classification is further detailed as 'Drugs for cancer treatment'.

Home > Results > US2005124542A1

6 082 results found

List view: Text only | List content: All | Sort by: Publication d... | (0 patents selected) Select the first 20 results

1. ACCELERATED POLYMERASE CHAIN REACTION ...
WO/2020/210420A1 • 2020.10.15 • SIGMA-ALDRICH CO. L.

Global Dossier

CPC subgroups

A61P35/00
C12Q2600/156
A61P43/00
C12Q2600/158
A61K38/00
C12Q1/686
C12Q1/6883
C12Q1/6886

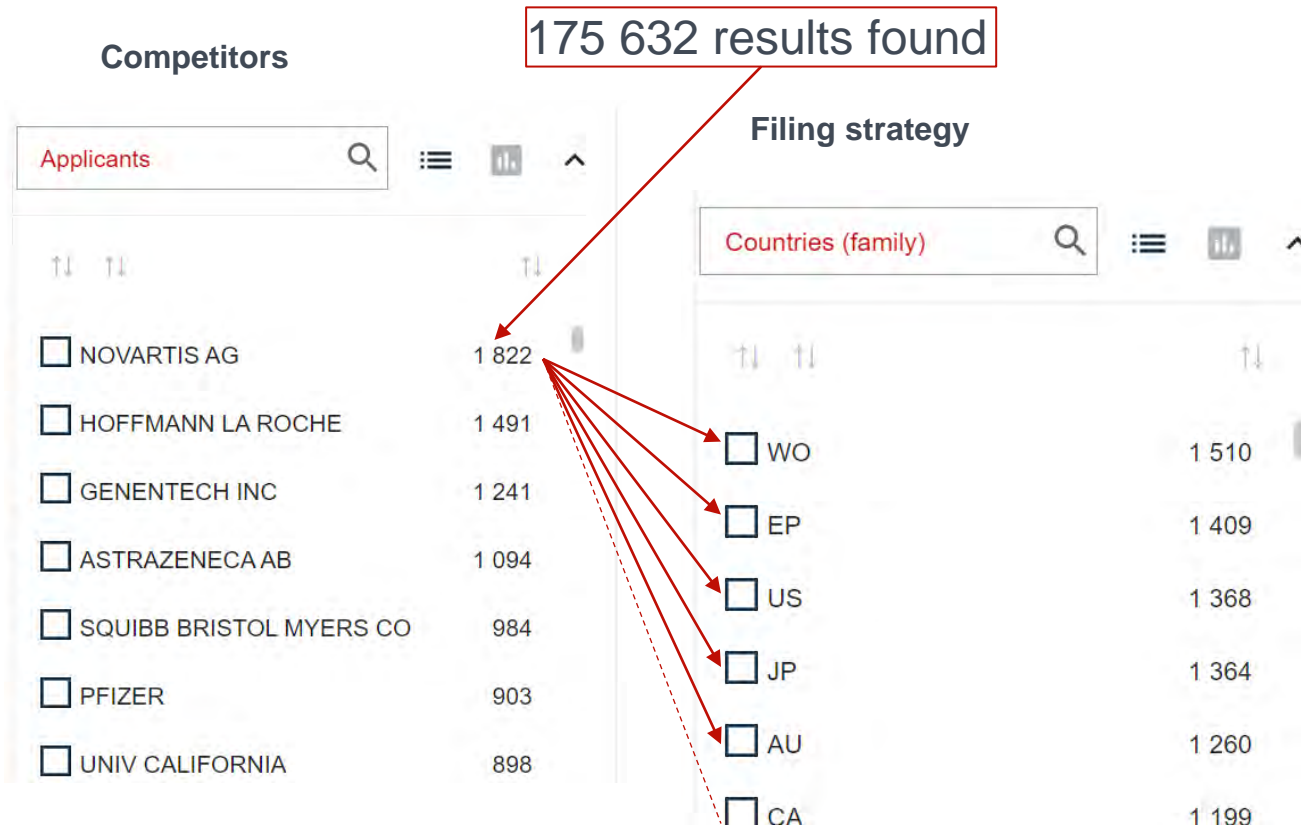
Apply Exclude + query

CPC - A61P35/00

| Symbol | Klassifikation und Beschreibung |
|------------|---|
| A | HUMAN NECESSITIES |
| A61 | MEDICAL OR VETERINARY SCIENCE; HYGIENE |
| A61P | SPECIFIC THERAPEUTIC ACTIVITY OF CHEMICAL COMPOUNDS OR MEDICINAL PREPARATIONS |
| A61P 35/00 | Antineoplastic agents |

Drugs for cancer treatment

Technology: A61P35 cancer drugs



Filters – Different category: AND operator

Filters: Countries (publication): DE ✕ IPC details: B23K26/00 ✕ Applicants: FRAUNHOFER GES FORSCHUNG ✕

Family ☒ Publication

| | | |
|--------------------------------|--|--|
| Countries (publication) | | |
| Languages (publication) | | |
| Publication date (publication) | | |
| Priority date | | |
| IPC main groups | | |
| IPC details | | |
| CPC main groups | | |
| CPC details | | |
| Applicants | | |
| Inventors | | |

IPC details

↑↓ ↑↓

☒ B23K26/00

☐ H01S3/10

☐ H01S3/00

☐ B23K26/06

☐ B23K26/08

☐ B23K26/40

☐ B23K26/38

☐ B23K26/36

Apply

Exclude

Applicants

↑↓ ↑↓

☒ FRAUNHOFER GES FORSCHUNG (58)

☐ ELECTRO SCIENT IND INC (33)

☐ DISCO CORP (26)

☐ DISCO ABRASIVE SYSTEMS LTD (24)

☐ GEN ELECTRIC (21)

☐ MITSUBISHI ELECTRIC CORP (19)

☐ SIEMENS AG (19)

Apply

Exclude

Filters – Same category: **OR** / AND

- **OR** when applied at the same time

IPC subgroups: B23K26/00 **OR** B23K26/06 **OR** B23K26/38 ✕

18 094 results found

52 672 publications meet the search and filter criteria

Filters – Same category: OR / AND

- OR when applied at the same time

IPC subgroups: B23K26/00 OR B23K26/06 OR B23K26/38 X

18 094 results found

52 672 publications meet the search and filter criteria

- AND when applied in consecutive order (here co-assignments)

IPC subgroups: B23K26/00 X AND B23K26/06 X AND B23K26/38 X

639 results found

4 038 publications meet the search and filter criteria

Filters – Identify co-applicants

Example: Fujitsu

The screenshot shows the Espacenet patent search interface. At the top, the search bar contains 'cl=H01S'. The navigation bar includes 'My Espacenet', 'Help', 'Classification search', 'Results', 'Advanced search', 'Filters', and 'Popup tips'. The 'Results' tab is active, showing '107 results found'. The query language is set to 'en'. The filters section shows 'Applicants: FUJITSU LTD' and 'AND NIPPON TELEGRAPH & TELEPHONE OR UNIV TOKYO OR PHOTONICS ELECTRONICS TECHNOLOGY RES ASS'. The results list on the left shows the following applicants and their counts:

| Applicant | Count |
|--|-------|
| FUJITSU LTD | 107 |
| NIPPON TELEGRAPH & TELEPHONE | 60 |
| UNIV TOKYO | 32 |
| PHOTONICS ELECTRONICS TECHNOLOGY RES ASS | 15 |
| NIPPON ELECTRIC CO | 12 |
| ARAKAWA YASUHIKO | 4 |
| HATORI NOBUAKI | 3 |

The main results area shows the first two results:

- 1. WAVELENGTH MULTIPLEX/DEMULTIPL...**
JP2020194092A • 2020-12-03 • FUJITSU LTD
Earliest priority: 2019-05-28 • Earliest publication: 20...
To provide a wavelength multiplexer/demultiplexer, an optical transmitter and an optical receiver with which it is possible to further expand an effective wavelength.
- 2. OPTICAL DEVICE AND METHOD OF MA...**
US2020132951A1 • 2020-04-30 • FUJITSU LT...
Earliest priority: 2018-10-24 • Earliest publication: 20...

The right sidebar shows the 'Bibliographic data' for the selected patent:

- Global Dossier**
- Applicants**: FUJITSU LTD; PHOTONICS ELECTRONICS TECHNOLOGY RES ASS +
- Inventors**: CHUNG SEUK HWAN +
- Classifications**:
 - IPC: G02B6/12; G02B6/126; G02F1/025; H01S5/022; H01S5/40;
- Priorities**: JP2019099669A-2019-05-28
- Application**: JP2019099669A-2019-05-28
- Publication**: JP2020194092A-2020-12-03

Use the family filter to identify not protected markets

The screenshot shows the Espacenet Patent search interface. The search bar contains 'pn=US'. The navigation bar includes 'My Espacenet', 'Help', 'Classification search', 'Results', 'Advanced search', 'Filters', and 'Popup tips'. The 'Results' section shows '9 885 522 results found'. The 'Family' filter is selected, and the 'Countries (family)' list shows the following results:

| Country | Count |
|---------|-----------|
| US | 9 885 522 |
| JP | 1 193 260 |
| WO | 825 372 |
| DE | 770 414 |
| CN | 704 471 |

The search results list shows the following details for the first two results:

- 1. NON-CONTACT IC CARD AND METHOD OF USING THE SAME**
US5220158A • 1993-06-15 • MITSUBISHI ELECTRIC CORP [JP]
Earliest priority: 1990-09-19 • Earliest publication: 1992-04-02
A non-contact IC card includes an antenna by which data is sent and received without contact, first and second demodulators that demodulate signals received by the antenna, interrupt device interrupts a current flow for operating the first demodulator, a control device selects one of the
- 2. Digital information supply and management system**
US6141685A • 2000-10-31 • MATSUSHITA ELECTRIC IND CO LTD [JP]
Earliest priority: 1999-09-19 • Earliest publication: 2000-04-10

The right sidebar shows the 'US6141685A Digital information supply and management system' and 'Bibliographic data' section, including 'Published as JPH1091689A; US6141685A' and 'Digital information supply and management system'.


Identify markets that are not protected

- Analysis of the covered countries in a patent family allows to identify protected and not protected markets

Caution

- Make sure you also check regional applications (EPO, PCT)
- This is not a freedom to operate (FTO) search
(other IP rights might still be in the way)
- Excluding countries in the search statement does not work

Do not use the search to identify not protected markets

**Espacenet**
Patent search

pn= US not pn= EP

×

🔍

My Espacenet **Help** **Classification search** **Results**  **Tooltips**

[Home](#) > [Results](#) > **US2008145685A1**

11465094 results found, 16036439 publications

List view
Text only

List content
All

Sort by
Ranking

⋮

☐ 1. Lump Object and Method of Producing the Same
US2008145685A1 • HOEI SHOKAI CO LTD [JP]
Earliest priority: 2005-02-07 • Earliest publication: 2006-...
[Object] To provide a lump object which is easily handled and for

☆ **US2008145685A1** Lump Object
Producing the Same

Also published as

Patent T

JPWO2006082...

EP1847625A1

EP1847625A4

ASUO [JP]
DKAI CO LT

Statistic overview with Espacenet

Excel download



Quiz 1: Searching with classification symbols in general ...

- A: improves the precision of the search (less noise)
- B: improves the recall of the search (less missed documents)
- C: finds documents in foreign languages
- D: all of the above

Quiz 2: What will result in higher numbers?

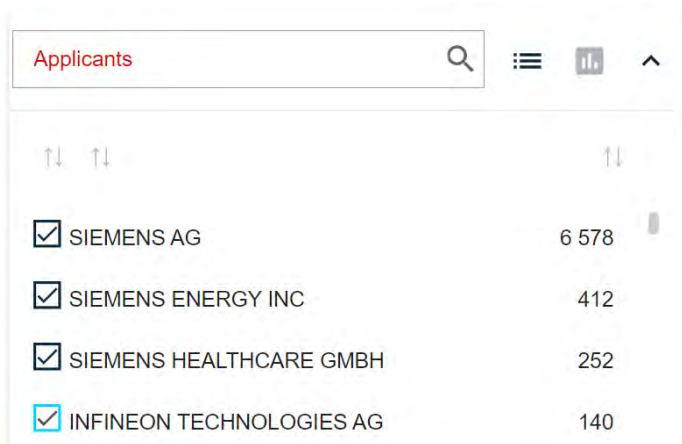
- A: Counting patent families
- B: Counting patent applications
- C: A and B are always the same
- D: Cannot be determined

Quiz 3: What are advantages of Espacenet's filter system compared to using the search?

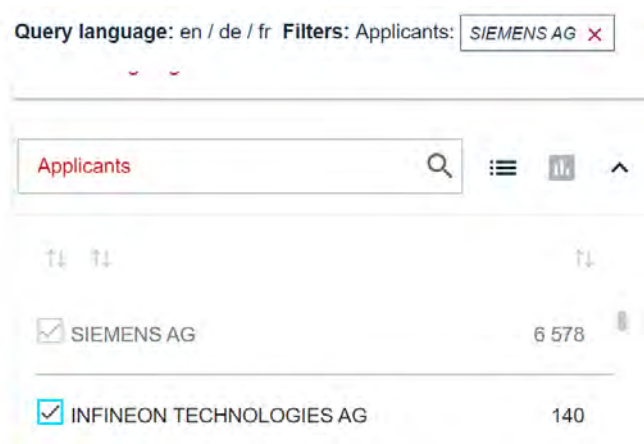
- A: The filter system will create statistics
- B: Classification symbols do not need to be searched separately
- C: Applicant and inventor networks can be explored
- D: All of the above

Quiz 4: How can I combine the results of two or more applicants in Espacenet?

A: Simultaneous selection



B: Consecutive selection

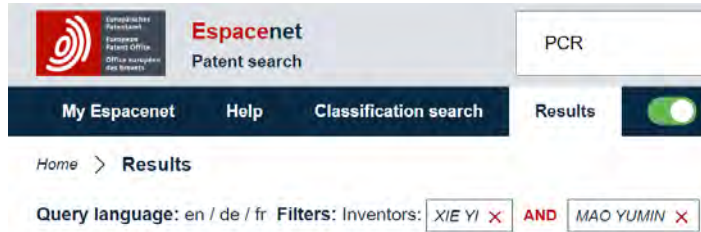


C: Both A and B will have the same effect

D: This cannot be done in Espacenet

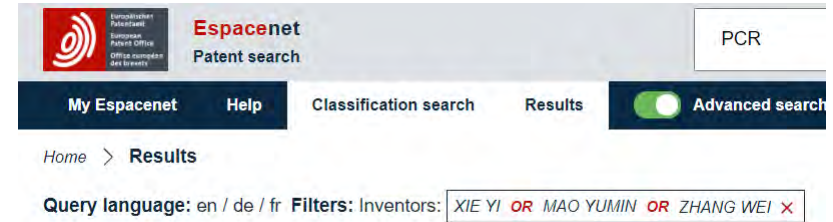
Quiz 5: How can I identify co-inventors in Espacenet?

A: Consecutive selection



The screenshot shows the Espacenet search interface. The top navigation bar includes the Espacenet logo, 'Patent search', and a 'PCR' button. Below this is a dark blue bar with 'My Espacenet', 'Help', 'Classification search', 'Results', and a toggle switch. The main content area shows 'Home > Results'. The search filters section displays 'Query language: en / de / fr' and 'Filters: Inventors: XIE YI X AND MAO YUMIN X'. The 'AND' operator is highlighted in red, indicating consecutive selection.

B: Simultaneous selection



The screenshot shows the Espacenet search interface. The top navigation bar includes the Espacenet logo, 'Patent search', and a 'PCR' button. Below this is a dark blue bar with 'My Espacenet', 'Help', 'Classification search', 'Results', and a toggle switch labeled 'Advanced search'. The main content area shows 'Home > Results'. The search filters section displays 'Query language: en / de / fr' and 'Filters: Inventors: XIE YI OR MAO YUMIN OR ZHANG WEI X'. The 'OR' operators are highlighted in red, indicating simultaneous selection.

C: Both A and B will have the same effect

D: This cannot be done in Espacenet

Quiz 6: Which search can be used to identify inventions with a large patent family?

A: Consecutive selection

The screenshot shows the Espacenet search interface. The search term 'laser' is entered in the search bar. Below the search bar, the 'Results' tab is selected. The 'Filters' section shows 'Countries (family)' with a list of countries: JP, US, EP, WO, CN, KR, CA, AU, and BR. Each country is preceded by a red 'X' and followed by an 'AND' operator, indicating a consecutive selection of countries.

B: Simultaneous selection

The screenshot shows the Espacenet search interface. The search term 'laser' is entered in the search bar. Below the search bar, the 'Results' tab is selected. The 'Filters' section shows 'Countries (family)' with a list of countries: JP, CN, US, WO, EP, KR, DE, TW, and CA. Each country is preceded by a red 'OR' operator, indicating a simultaneous selection of countries.

C: Both A and B

D: Neither A nor B

Quiz 7: Which search can be used to identify inventions that have not been filed at the EPO?

A:



Europäisches Patentamt
Espacenet
Patent search

laser

My Espacenet Help Classification search Results

Home > Results

Query language: en / de / fr Filters: Countries (publication): EP X

Family ☒ Publication

B:



Europäisches Patentamt
Espacenet
Patent search

laser

My Espacenet Help Classification search Results

Home > Results

Query language: en / de / fr Filters: Countries (family): EP X Clear

Family ☐ Publication

C: Both A and B

D: Neither A nor B

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Johannes Schaaf

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- Questions and conclusions

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