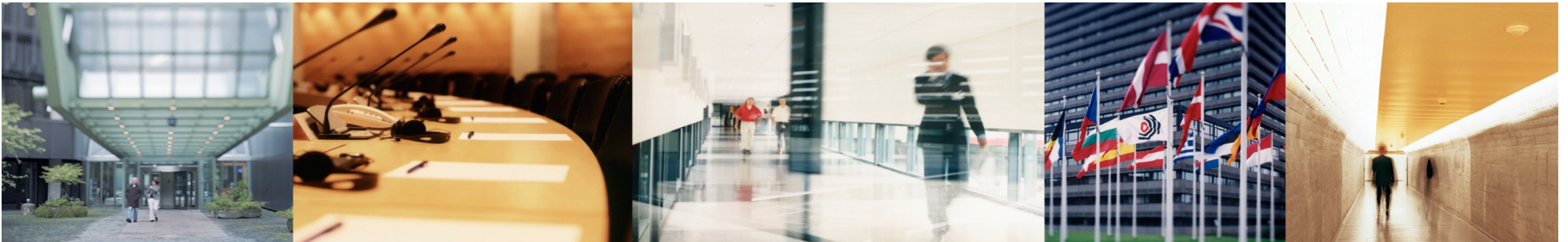




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Patentamt
European
Patent Office
Office européen
des brevets

The European Patent Office

Protecting your biotechnological inventions in Europe

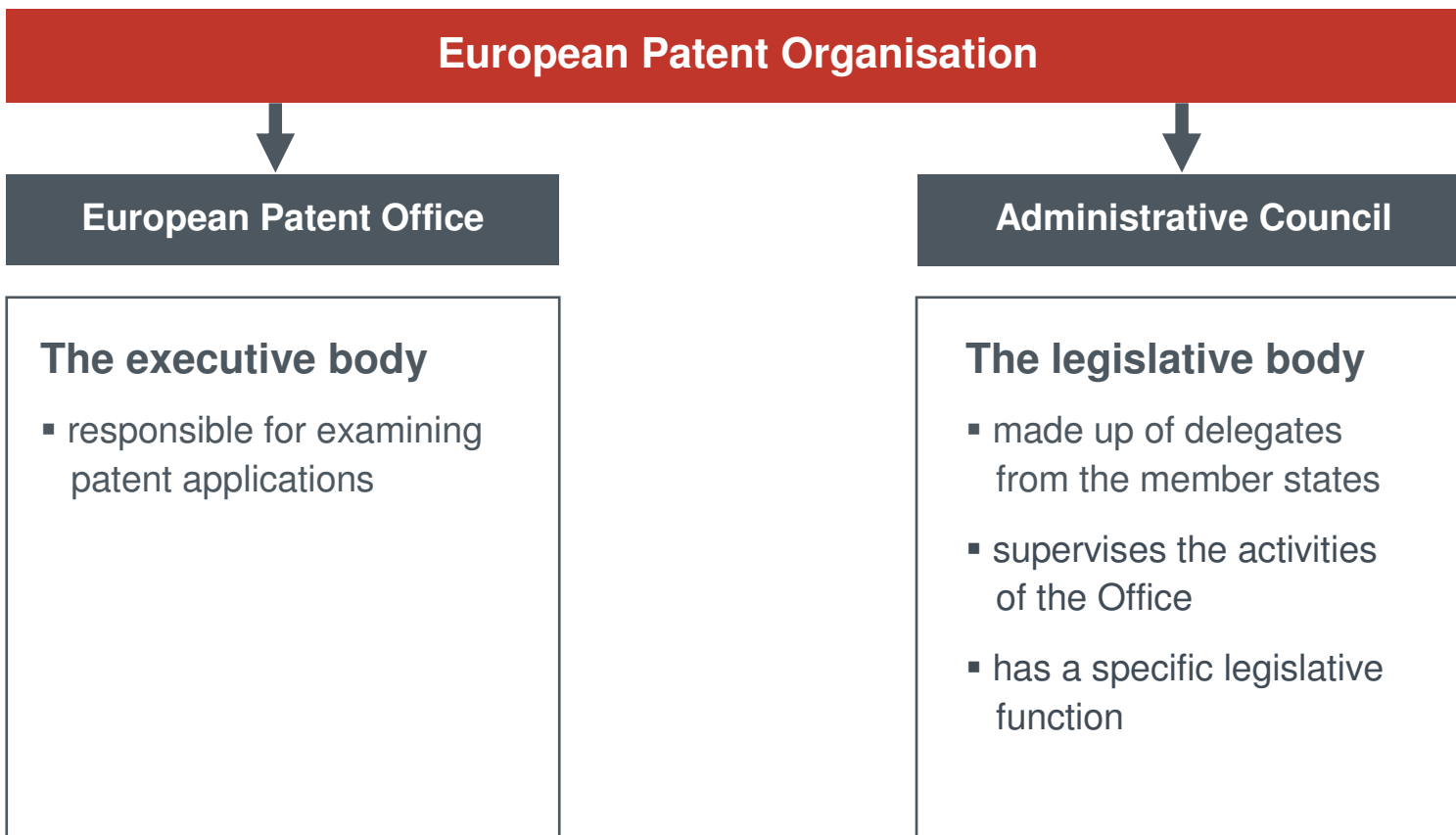


Our mission



As the patent office for Europe, we support **innovation, competitiveness and economic growth** across Europe through a **commitment to high quality and efficient services** delivered under the European Patent Convention.

Structure of the European Patent Organisation



Autonomy



- Second largest intergovernmental institution in Europe
- Not an EU institution
- Financially independent
- Self-financing, i.e. revenue from fees covers operating and capital expenditure

38 member states

Albania • Austria • Belgium • Bulgaria • Croatia • Cyprus • Czech Republic • Denmark • Estonia • Finland • France • Germany • Greece • Hungary • Iceland • Ireland • Italy • Latvia • Liechtenstein • Lithuania • Luxembourg • Former Yugoslav Republic of Macedonia • Malta • Monaco • Netherlands • Norway • Poland • Portugal • Romania • San Marino • Serbia • Slovakia • Slovenia • Spain • Sweden • Switzerland • Turkey • United Kingdom



European patent applications and patents can also be extended at the applicant's request to the following states:

Bosnia-Herzegovina • Montenegro

Locations

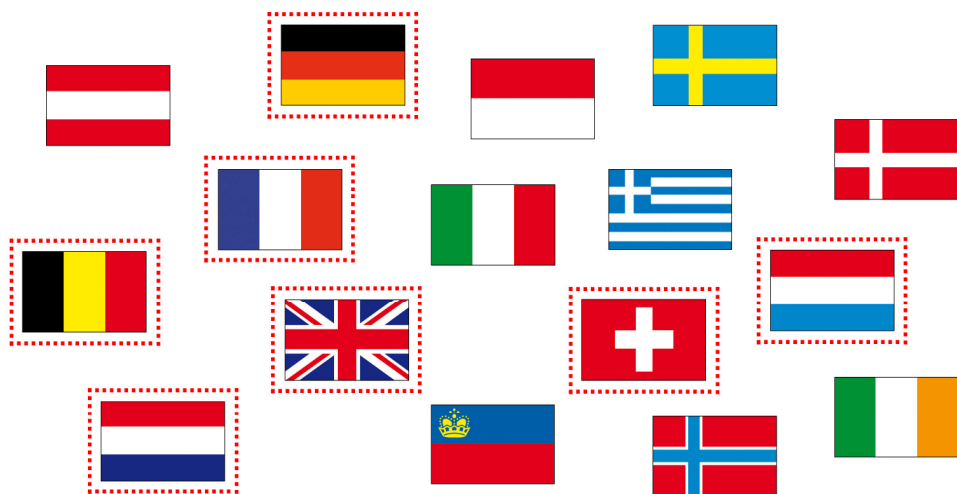


Staff (2010)

Munich	3 714
The Hague	2 623
Berlin	278
Vienna	107
Brussels	4
Total	6 726

The European Patent Convention

- The European Patent Convention (EPC)
 - provides the legal framework for the granting of European patents via a centralised procedure
 - establishes the European Patent Organisation
- 1973 – Diplomatic Conference in Munich ► signature of the EPC by 16 countries
- 1977 – Entry into force of the EPC in 7 countries - marked as follows



Our role in the European patent system

- **We provide patent protection in up to 40 European countries based on a single application in one of the three official languages (German, English, French)**

European patent applications can be filed:

- direct with the EPO
 - via the national patent offices of the contracting states
 - based on an international (PCT) application
- **We are also responsible for**
 - limitation and revocation proceedings by patentees
 - opposition proceedings by third parties
 - appeal proceedings before the Boards of Appeal
- **We will also be in charge of granting and administering the future Unitary Patent of the EU**



Advantages of a European Patent

convenient

- one application
- one language (EN, FR or DE)
- common procedure and law (EPC)
- patent protection in up to 38 countries
- a market of 600 million customers, ca. twice as in the US

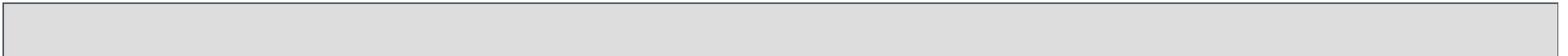
cost-effective

- costs less than three separate national patents
- major costs (translation) delayed after grant!

strong patent

- thorough search
- stringent examination
- sound legal protection = very high assumption of validity
- central opposition and appeal

Biotechnological inventions



What is patentable at the EPO?

Art. 52(1) 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***.

What is patentable in biotechnology?

All aspects of biotech:

white/grey biotech

enzymes, industrial processes

red biotech

medical

green biotech

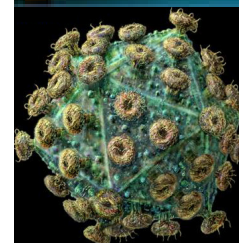
agriculture and environment

blue biotech

products derived from marine life

black biotech

energy production



What does it really mean?

Products:

- polypeptides (enzymes, antibodies, etc.),
nucleic acids (genes even human genes, promoters, vectors, antisense molecules, siRNAs, ribozymes, SNPs, etc.),
chemicals (polymers, antibiotics, etc.)

Living organisms:

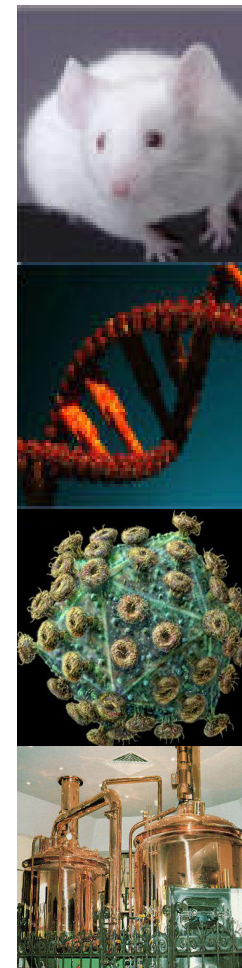
(non-human) animals, plants, cells, bacteria, viruses

Methods:

transformation, purification, production, *in silico* or *in vitro* screening, etc...

Medical uses:

"Compound X for the treatment of disease Y"



What about human genes?

Article 52(2)(a) EPC and Rule 29(2) EPC: an element isolated from the human body or otherwise produced by means of a technical process, including the sequence or partial sequence of a gene, may constitute **a patentable invention**, even if the structure of that element is identical to that of a natural element

Guidelines, C-IV, 2.3.1: to find a substance freely occurring in nature is mere discovery and therefore not patentable; if a substance found in nature is first to be isolated from its surroundings and a process for obtaining it is developed, that process is patentable. Moreover, if this substance can be properly characterised by its structure and it is new in the absolute sense of having no previously recognised existence, then the substance *per se* may be patentable.

Patent law versus bioethics



1992

The conflict between patent law and bioethics hits the headlines with for the first time the grant by the EPO of the first ever patent on a mammal (EP 169672).

Implanted with a human cancer gene, the so-called oncomouse has an increased disposition for developing tumours.

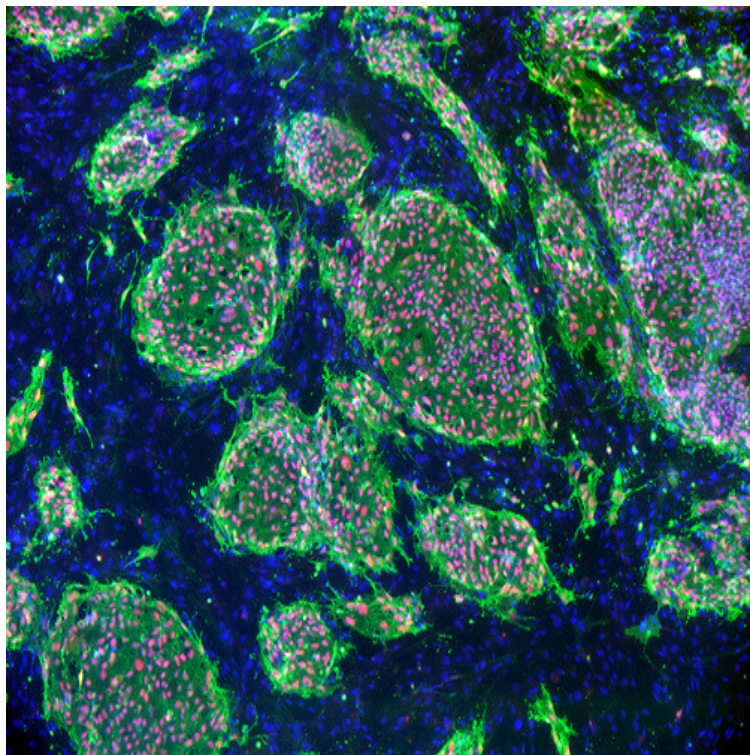
Opposition to stem cells



1999

The granting of the university of Edinburgh patent, which relates among other things to human embryonic stem cells, leads to wide-spread political debate about the boundaries of patent protection.

Decision of the Enlarged Board of Appeals



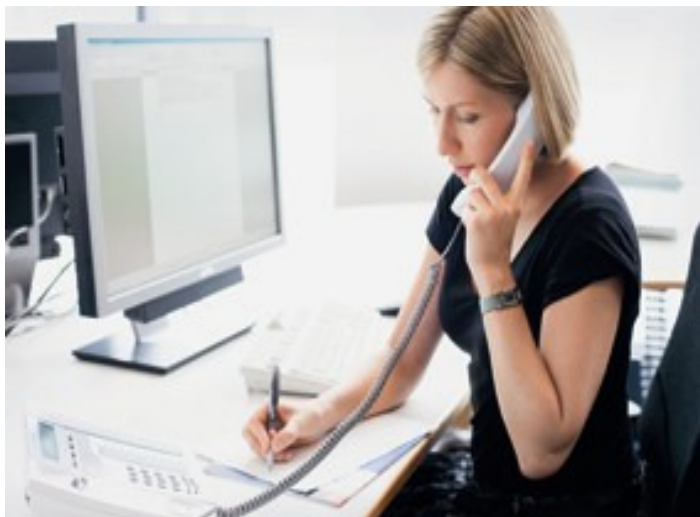
2009

The Enlarged Board of Appeals rules in its decision G2/06 that patents applications relating to methods or uses necessarily involving the destruction of human embryos are not patentable under ethical and moral considerations governed by Art. 53(a) EPC.

2012

Decision of the European Court of Justice substantially in line with the decision G2/06.

Need more information?



www.epo.org

info@epo.org

Tel. + 49 (0)89 2399 - 4636

Or better yet, ask us on booth
2727, we are happy to help
you further!

What about human genes?

Article 52(2)(a) EPC and Rule 29(2) EPC: an element isolated from the human body or otherwise produced by means of a technical process, including the sequence or partial sequence of a gene, may constitute **a patentable invention**, even if the structure of that element is identical to that of a natural element

Guidelines, C-IV, 2.3.1: to find a substance freely occurring in nature is mere discovery and therefore not patentable; if a substance found in nature is first to be isolated from its surroundings and a process for obtaining it is developed, that process is patentable. Moreover, if this substance can be properly characterised by its structure and it is new in the absolute sense of having no previously recognised existence, then the substance *per se* may be patentable.

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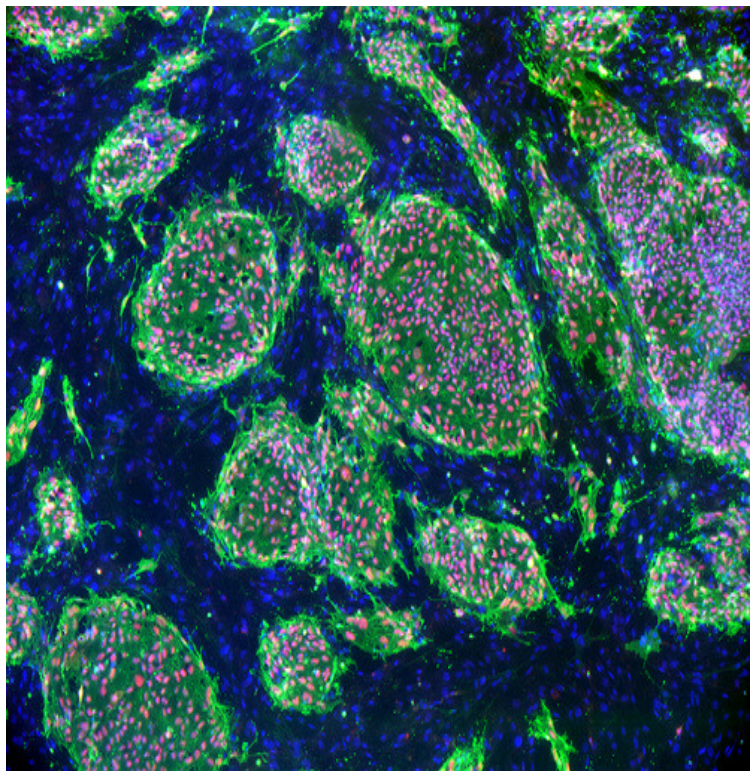
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2012

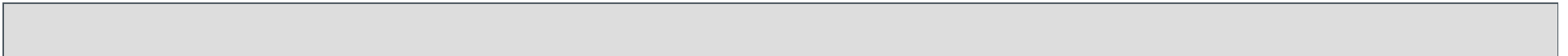
Decision of the European Court of Justice substantially in line with the decision G2/06.

Our role in the international (PCT) system

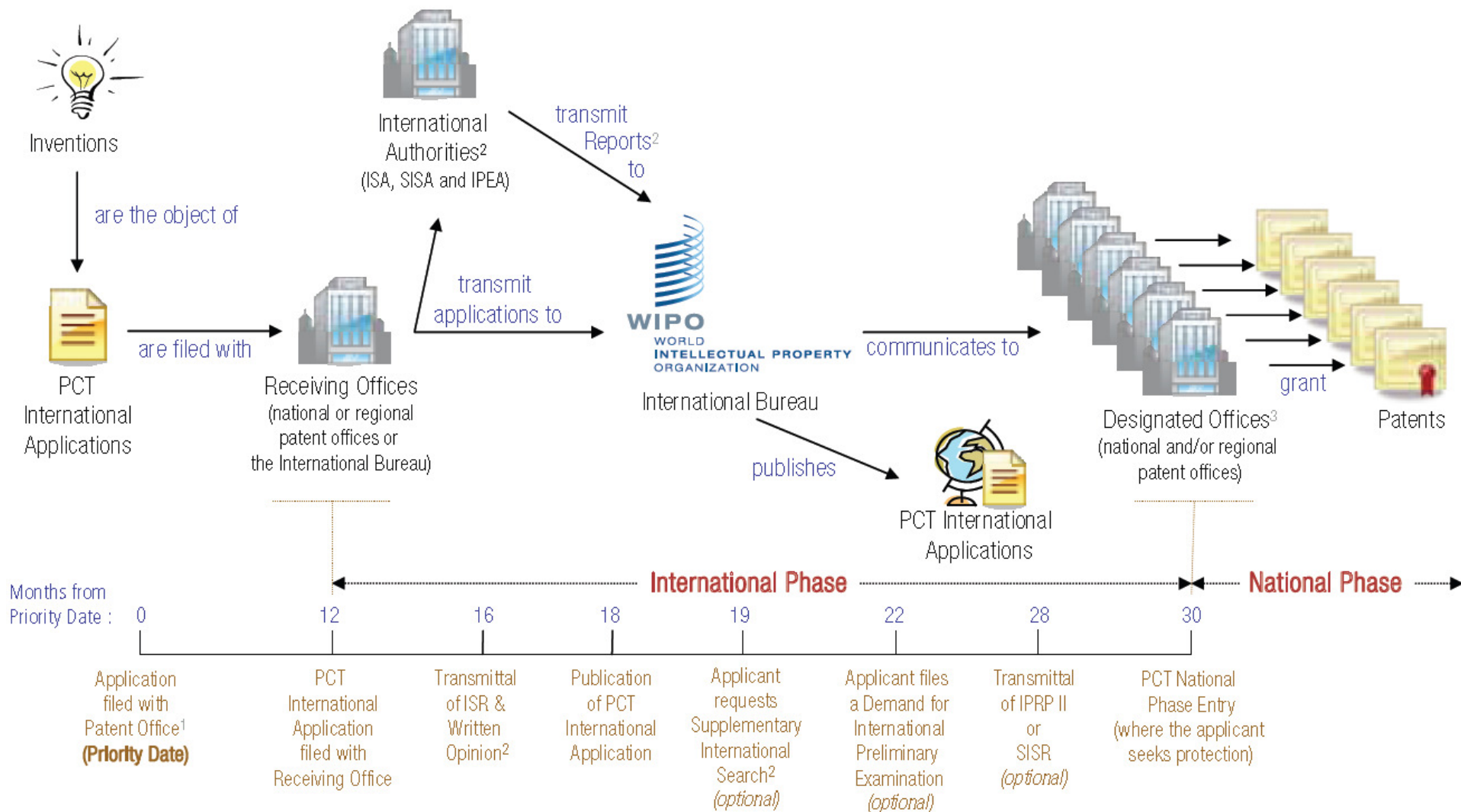
- **We process international patent applications**
 - we act as a receiving office for international applications (PCT)
 - We carry out **more than 40% of all international search and preliminary examination procedures**



PCT: Why should you chose the EPO as International Search Authority?

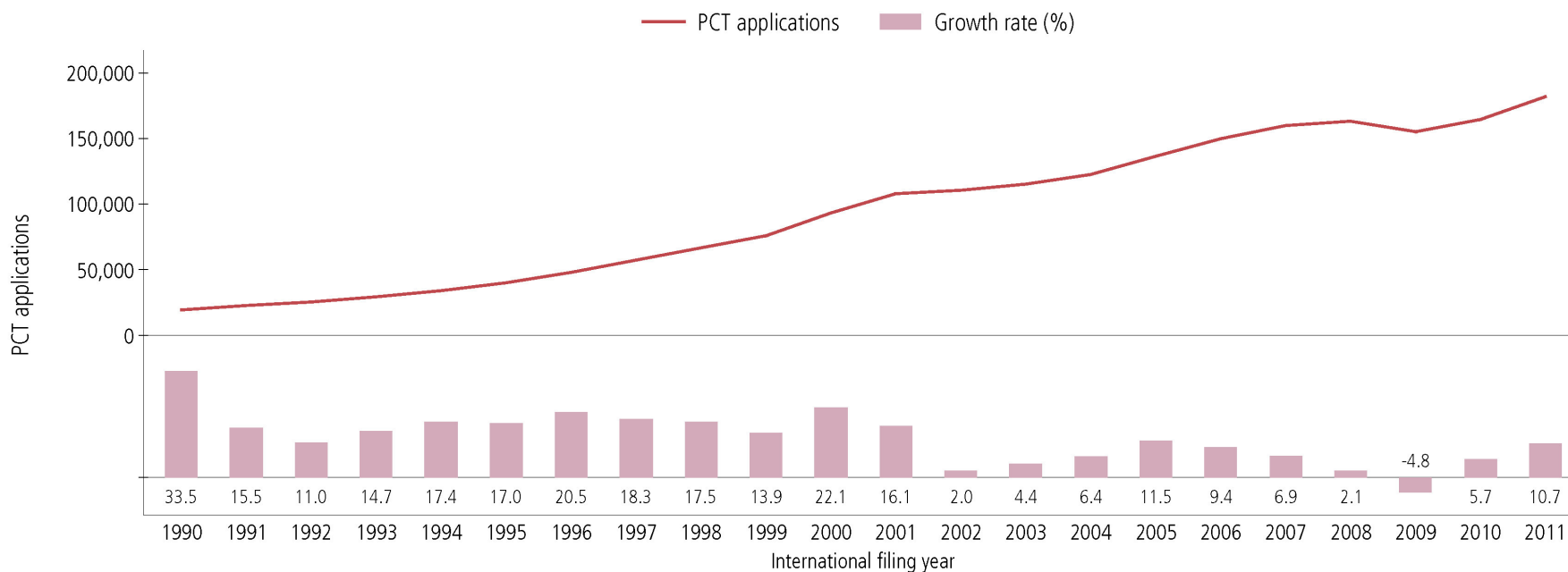


International applications - the PCT procedure



Source: Wipo

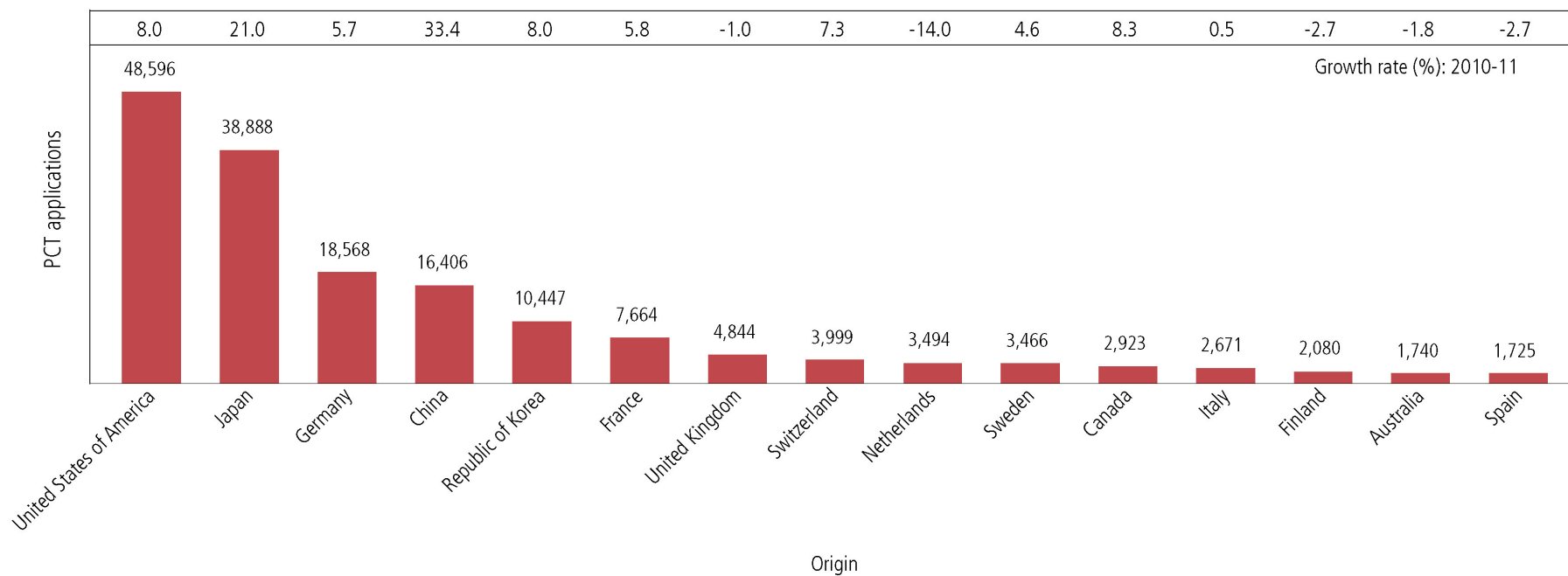
PCT International Application Filings from 1990 to 2011



Note: The figures given for PCT applications filed in 2011 are WIPO estimates.

Source: WIPO Statistics Database, March 2012

US is the world's major user of the PCT procedure



Note: The figures given for PCT applications filed in 2011 are WIPO estimates.

Source: WIPO Statistics Database, March 2012

The EPO as PCT authority

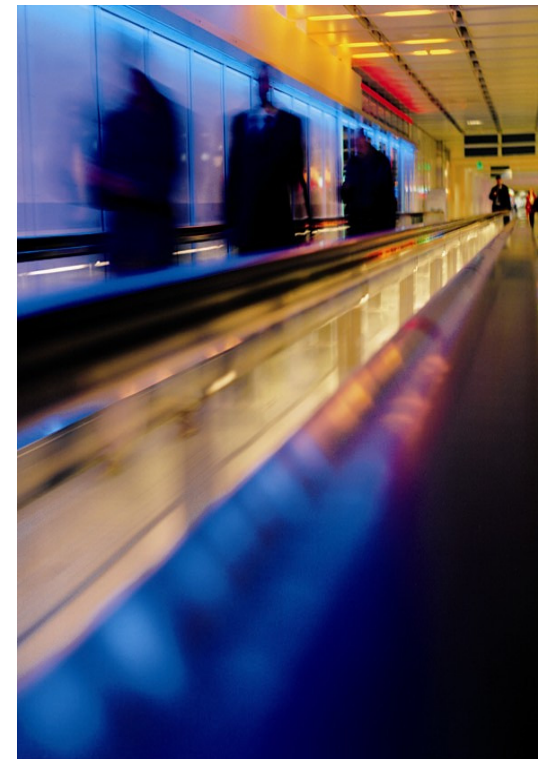
EPO as a **Receiving Office** for international applications
(PCT)

EPO as **International Search** Authority

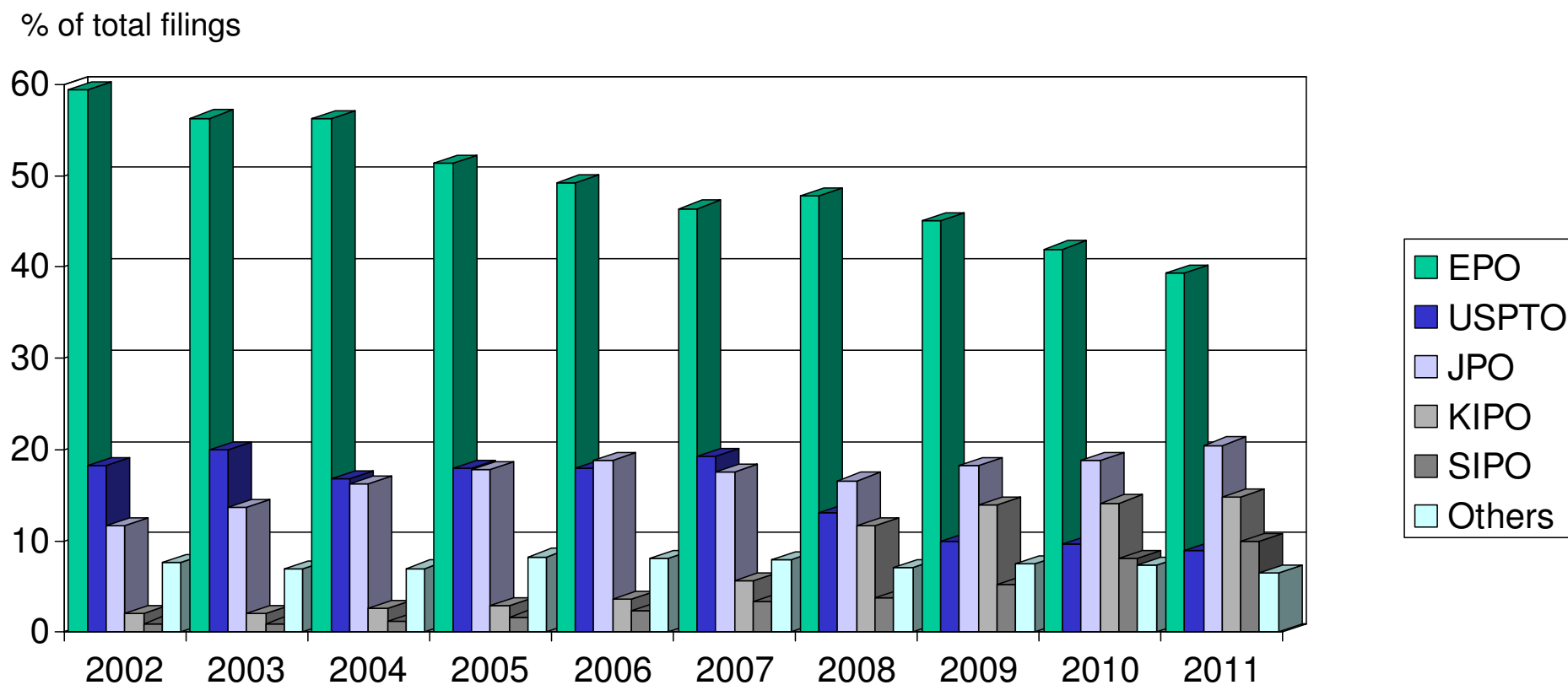
also for US applications

in any field of technology, including biotechnology
without restriction in terms of numbers

EPO as International Preliminary **Examination** Authority



The EPO, the most popular International Search Authority



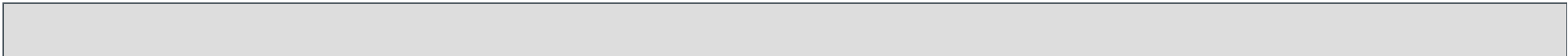
Source: WIPO aggregated data

Why?

high quality

timeliness

reduced cost



Quality

Same quality as for the European searches
background and **expertise** of the examiners
access to **600 millions records**, more than **7,000 journals**
largest patent database worldwide
constant **investment** in search tools
 machine translation tools
 sequence searches
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EPO best patent office in the world according to the users!

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The EPO tops the quality table once again, as the USPTO and SIPO make forward strides

For the third year running respondents to the annual IP benchmarking survey conducted jointly by IAM magazine and the IP Solutions of Thomson Reuters have clearly stated that the European Patent Office has the highest standards of performance among the IP Five.

On the private practice side, 68% of respondents stated that the EPO's quality is either "excellent" or "very good", that's up from 62% in 2011. The results from the corporate side revealed that 55% regarded the office's performance to be either "excellent" or "very good", while a further 37% considered it to be "good". Direct

Joff Wild
IAM Magazine
29 May 2012

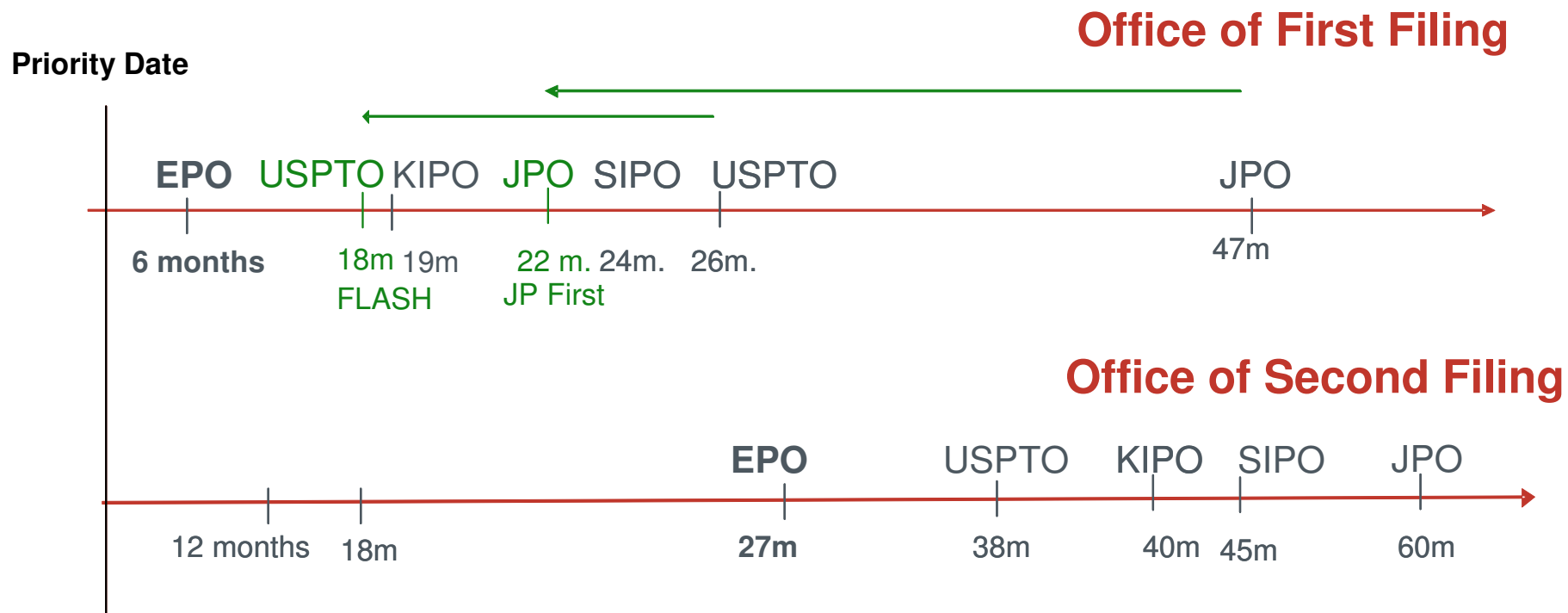
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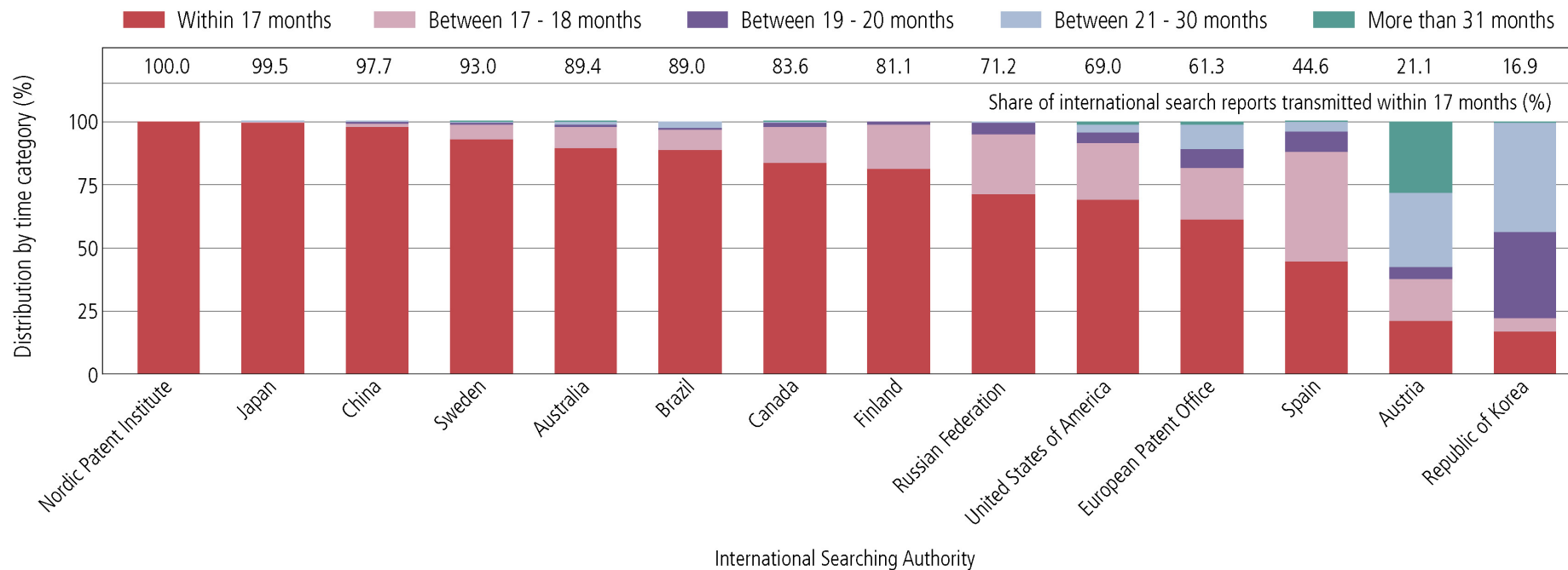
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Timeliness

Under the current framework, the EPO does not receive many search reports from the other IP5 Offices on time to be reused by EPO examiners.



Timeliness in transmitting ISRs



Note: Timeliness is calculated as the time elapsed between the priority date and the date on which the ISA transmits the ISR to the International Bureau.

Source: WIPO Statistics Database, March 2012

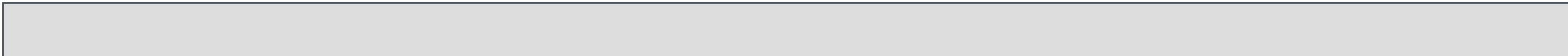
Reduced cost

The International Search Report issued by the EPO as ISA will be used as European search report

Upon entry into the regional phase (European phase), **no additional fee** for a supplementary European search report

Saving: 1.165 EUR

The Unitary Patent



Key facts about the unitary patent

▪ **Basic principles**

- a European patent **granted under the EPC**
- **unitary effect** for the territories of the 25 EU member states currently participating, at the applicant's request
- **co-existence with the existing European patent and national patents**
- **validated in one single administrative step by the EPO** for all the participating states in the language in which it was granted
- **language regime being finalised**; transition measures foreseen

▪ **Objective**

European Council Presidency and EU Commission intend to have **the first unitary patent granted in 2014**



Advantages

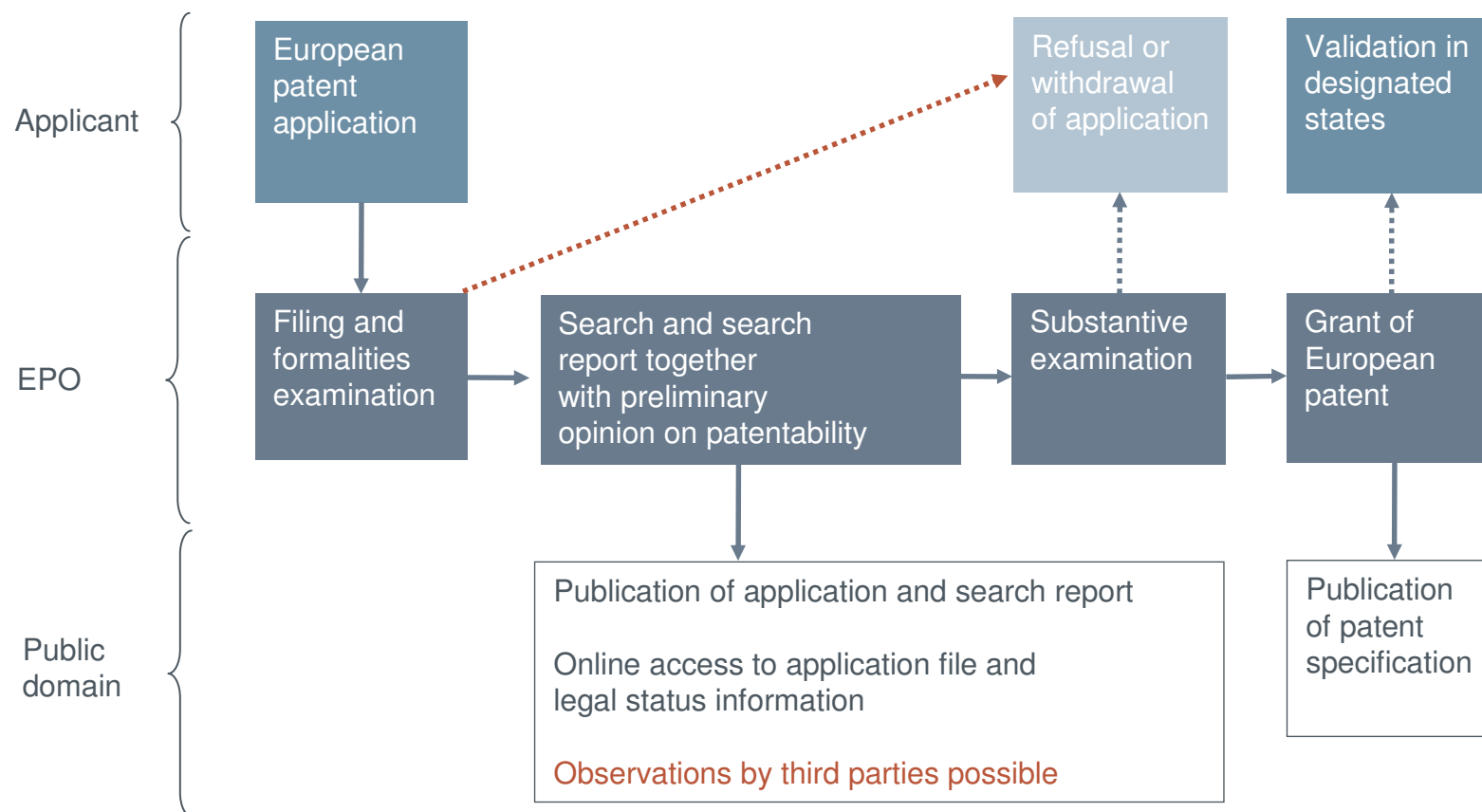
■ For inventors

- protection in **one single step for the 25 states** currently participating
- **significant cost savings** (translation, validation, administration)
- **simplified validation procedure** (instead of up to 25 different procedures)
- **simplified and more cost-efficient renewal** procedure
- **increased legal certainty** due to uniform litigation system

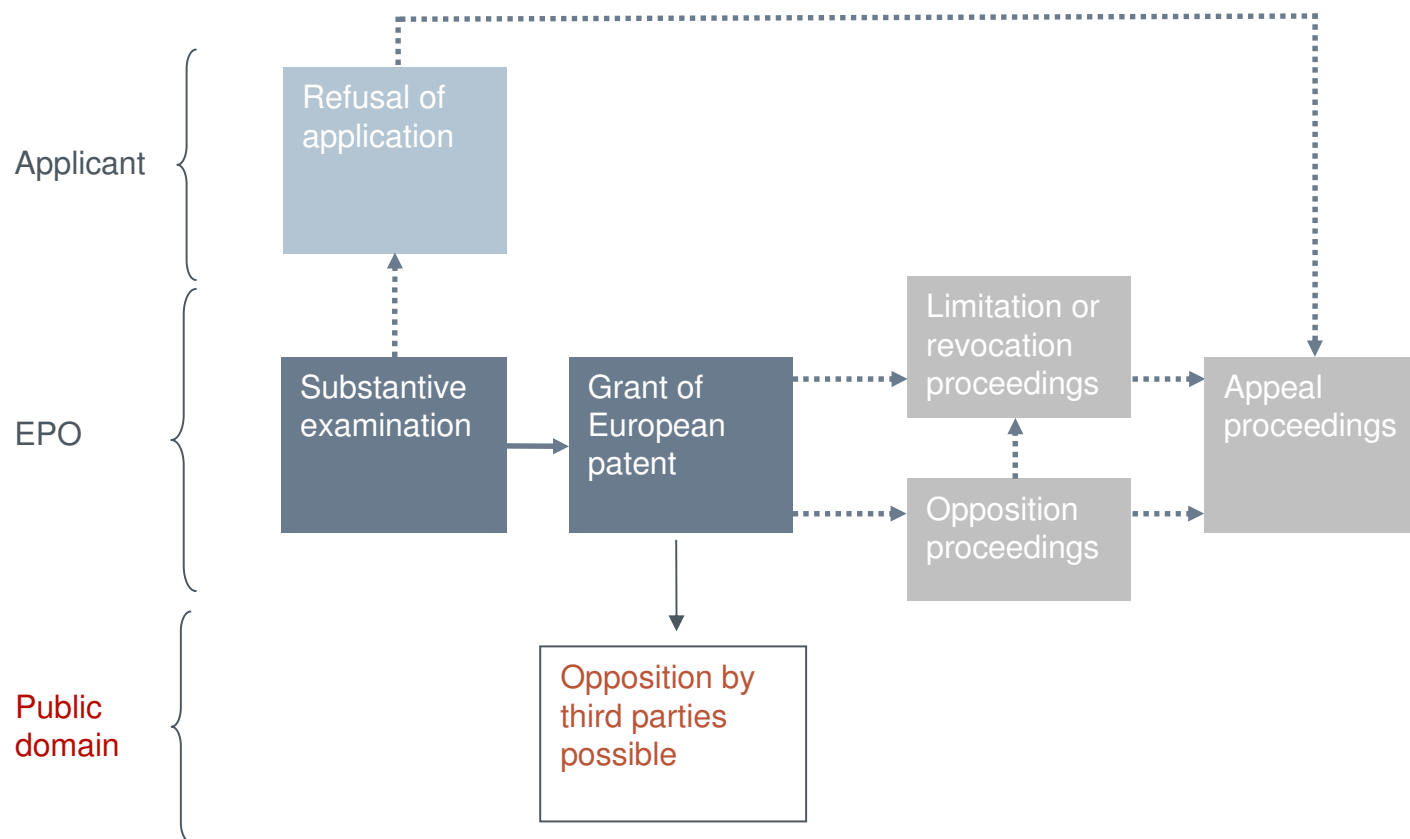
■ For Europe

- **optimal protection** in the participating states as a whole
- better framework **conditions for innovative companies** and organisations
- **simplified European protection mechanism** for companies from outside Europe
- **improved competitiveness** of the European patent system

Overview of European patent grant procedure (I)

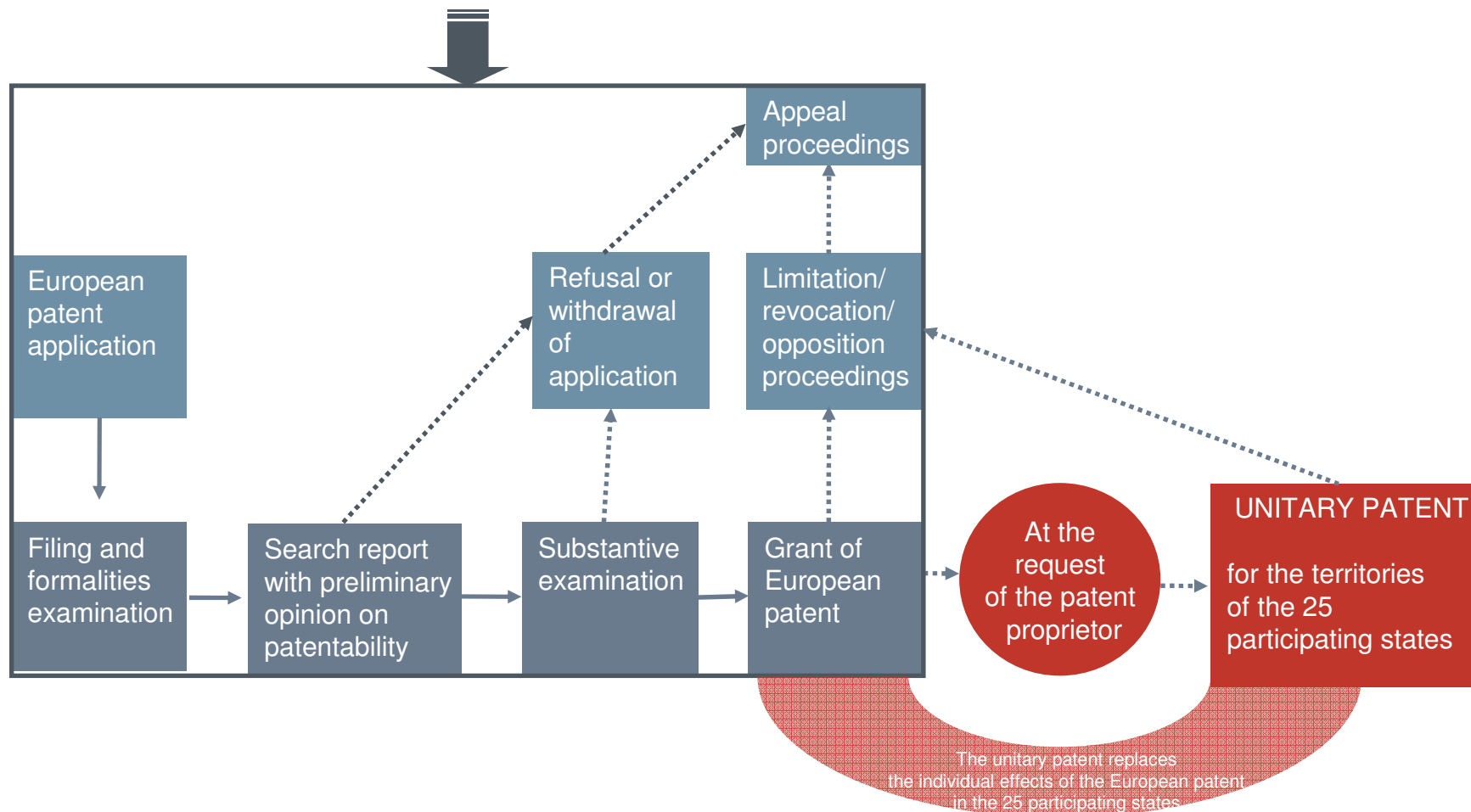


Overview of European patent grant procedure (II)

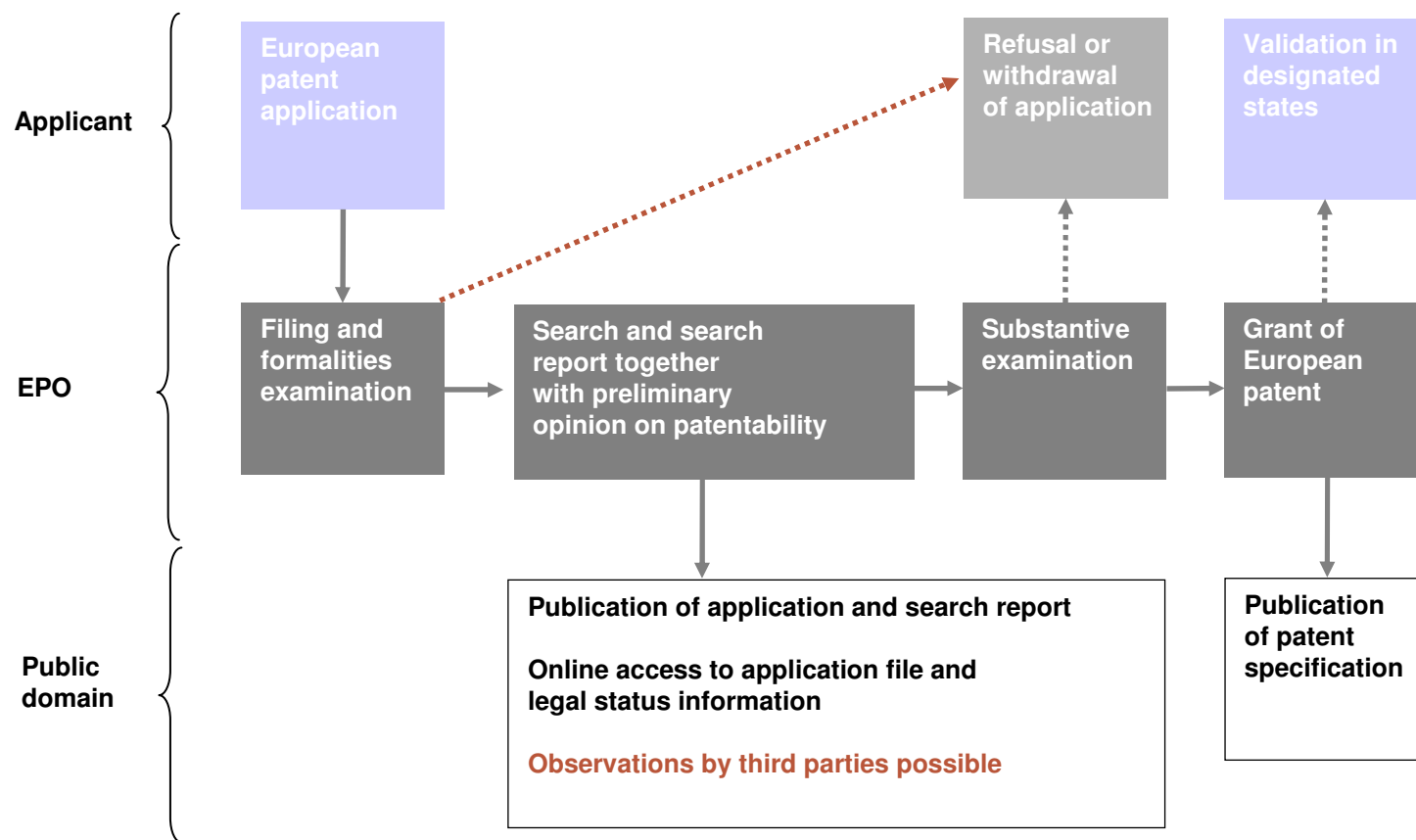


The unitary patent as a European patent

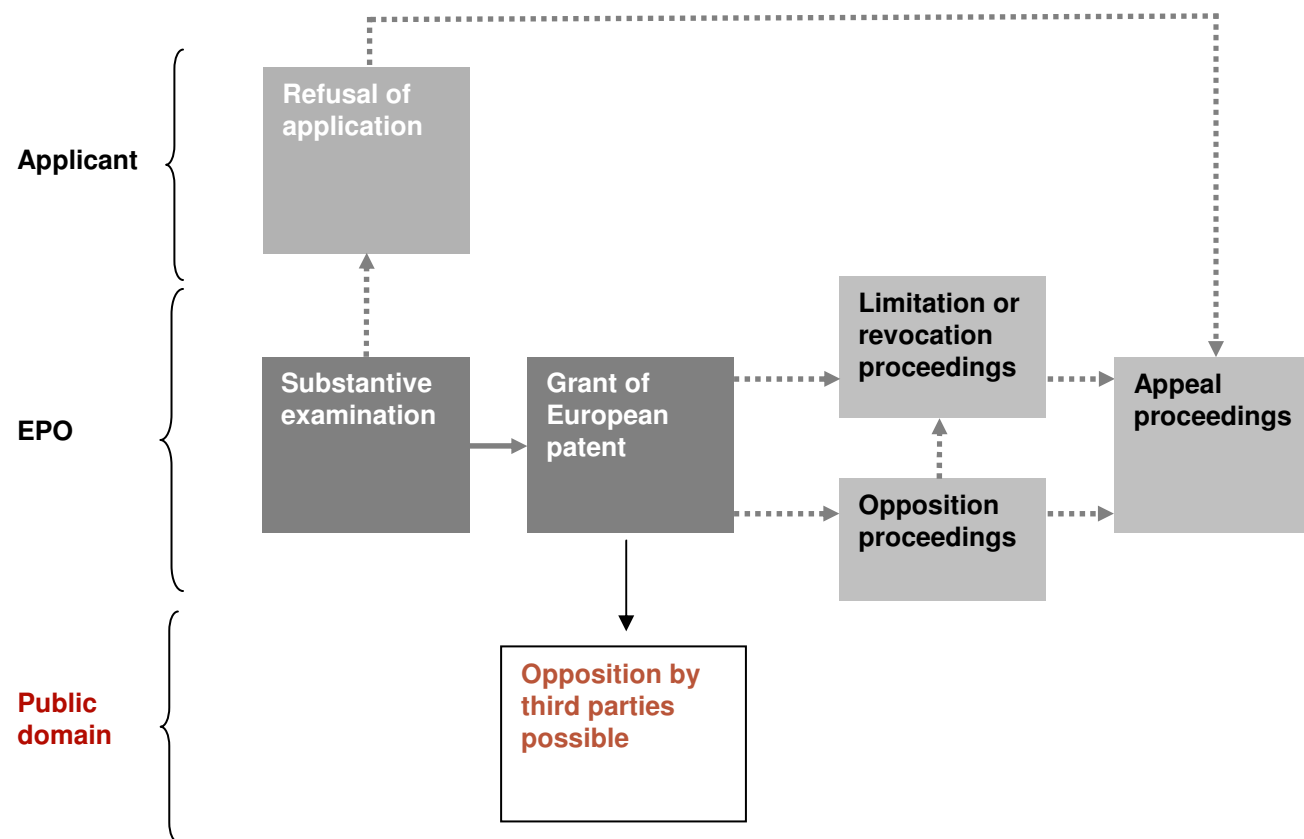
Same grant procedure as for classic European patent



Overview of European patent grant procedure (I)



Overview of European patent grant procedure (II)





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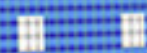


Cooperative Patent Classification (CPC)



I

F16G5/14



with reinforcement bonded by the plate

of several parts

Cooperative Patent Classification - CPC

- The USPTO and the EPO agree to co-operate on a **joint classification system based on ECLA (October 2010).**



USPTO and EPO Work Toward Joint Classification System

"In view of the significant benefit to stakeholders of developing a transparent and harmonized approach to a global classification system for patent documents; in order to make the search process more effective; and in the belief that cooperation between their two offices will facilitate progress in undertaking classification harmonization projects under the IP5 Common Hybrid Classification initiative, the USPTO and the EPO have agreed together to work toward the formation of a partnership to explore the development of a joint classification system based on the European Classification system (ECLA) that will incorporate the best classification practices of the two offices. This system would be aligned with the World Intellectual Property Organization (WIPO) classification standards and the International Patent Classification (IPC) structure. Accordingly, they have initiated discussions on governance and operational aspects of such a partnership.

The IP5 partner offices will be continually apprised of progress at appropriate IP5 forums. Stakeholders will receive regular updates on the substance and progress of classification partnership discussions between the two offices."

A handwritten signature in blue ink, appearing to read "David J. Kappos".

David J. Kappos

A handwritten signature in black ink, appearing to read "Benoît Battistelli".

Benoît Battistelli

October 25, 2010

Cooperative Patent Classification - CPC

The USPTO and the EPO agree on a
Joint Patent classification system based on ECLA

For the EPO:

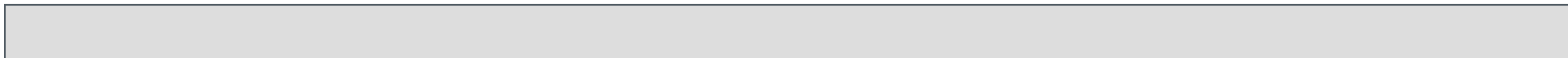
- Improve file and document routing
- Saving resources on (re-)classification of US documents in the future
- Common base for future classification revisions
- Renumbering of ECLA

For the USPTO:

Moving to an IPC-based classification system
Enhanced access to non-US documentation

GLOBAL PATENT INDEX

EPO's patent information service for experts



- Worldwide coverage (DOCDB)

⇒ advanced prior art search

- Weekly update

⇒ advanced patent watch

Criteria

- EASY SEARCH
- SIMPLE SEARCH
 - Publication
 - Application
 - Priority
 - Classification
 - Inventor
 - Applicant
- Publication
 - PUXK - extended kind code
 - PUND - number (DOCDB)
 - PUNE - number (EPODOC)
 - LOP - language of publication (non-PCT documents)
 - DPP - date of preceding publication in same application
 - PFA - previously filed application
 - DCF - date of coming into force
- Application
- Priority

**100 search criteria
detailed searches**

Query 1 708 documents (families: 1 272)

```

ANDNOT INV=KRONENBERG) OR APP=LCC OR (APP=LEGRAND ANDNOT INV=LEGRAND)
OR (APP=LENZE ANDNOT INV=LENZE) OR (APP=LEUZE ANDNOT INV=LEUZE) OR
APP=MAFELEC OR (APP= MAY AND APP=STEFFENS ) OR APP=MECAGIS OR
(APP=MOELLER ANDNOT (INV=MOELLER OR APP=PLAST* OR APP=WERK* OR
APP=FLEX*)) OR APP=MU... (APP=PILZ ANDNOT
INV=PILZ) OR APP=PITTV... *) OR (APP=PHOENIX
APP=CONTACT*) OR ... OT INV=RAFI) OR
P=RAMSAUER ANDNO... OT INV=RITTAL*) OR
P=RONIS ANDNOT IN... E) OR (APP=S AND
=C AND APP=ELECTRIC) OR (APP=S?C AND APP=ELECTRIC) OR (APP=ROSE AND
=SYSTEMTECHNIK) OR (APP=SCHALLER ANDNOT INV=SCHALLER) OR
(APP=SCHMERSAL ANDNOT INV=SCHMERSAL) OR (APP=SCHNEIDER AND
APP=AUTOMATION) OR (APP=SCHNEIDER AND APP=ELECTR*) OR (APP=SCHROFF
    
```

**complex queries
save/load for re-use**

Index APP Go to SYSTEMTECHNIK

Term

- systemtechnik
- systemtechnik outdoor gmbh
- systemtechnik outdoor gmbh co kg
- systemtechnik ag ak
- systemtechnik gmbh
- systemtechnikag
- systemtechnikaktiengesellschaft
- systemtechnil
- systemtechnix
- systemtechno

**one index per criterion
control e.g. spelling, format**

History

ID	Database	Result	Query	Parsed query
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\$89	GPI 2012...	6	PRD = "29230106" "29281005..."	PRD = 29230106 OR PRD = 29281005 OR PRD = 29340905 OR PRD = 49550804 OR P...
\$88	GPI 2012...	6	PRD = "29230106" "29281005..."	PRD = 29230106 OR PRD = 29281005 OR PRD = 29340905 OR PRD = 49550804 OR P...
\$87	GPI 2012...	10	PRD = "29230106" "29281005..."	PRD = 29230106 OR PRD = 29281005 OR PRD = 29340905 OR PRD = 49550804 OR P...
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\$85	GPI 2012...	1	apn=11155186 and anc=EP	(APND = 11155186 OR APNE = 11155186 OR APNO = 11155186) AND (APC = ep)
\$84	GPI 2012...	1	apn=11005835 and	ND (APC = ep)
\$83	GPI 2012...	0	APD >= "20100101"	p1)
\$82	GPI 2012...	206	APD >= "20100101"	= gonidec OR APPDA ...
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			name = gonidec	= gonidec OR APPDA ...
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			name = gonidec	INVD = gonidec OR INVDA = gonidec OR INVO = gonidec OR APPD = gonidec OR APPDA ...
			name = hans /3w musch	INVD = hans /3W musch OR INVDA = hans /3W musch OR INVO = hans /3W musch OR A...
			name = hans /2w musch	INVD = hans /2W musch OR INVDA = hans /2W musch OR INVO = hans /2W musch OR A...
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			name = "hans musch"	INVD = "hans musch" OR INVDA = "hans musch" OR INVO = "hans musch" OR APPD = "...
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\$75	GPI 2012...	4	TIEN OR ABEN=(...	(TIEN = bremsstrahlung OR ABEN = bremsstrahlung) AND (TIEN = irradiation OR ABEN = ...

**search history
check parsed queries**

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Query 1 708 documents (families: 1 272)

OR (APP=CUTTLER AND APP=HAMMER) OR
 (APP=DELTA AND APP=DORE) OR
 APP=EDF OR APP=EGG OR (APP=ELAN
 AND
 AND
 APP=
 AND
 AND NOT (INV=FELLER OR APP=ZURFLOH))
 OR (APP=FRANCE AND APP=TRANSFO) OR

query edit zone
refine search

Document 13 / 1 272

EP 2041765 B1 20120502

Title (EN)
SWITCHING DEVICE INCLUDING A MOVING FERROMAGNETIC PART

Publication
EP 2041765 B1 20120502 (FR)

Application
EP 07765758 A 20070702

Priority

- EP 2007056641 W 20070702
- FR 0652935 A 20060712

document
customisable
downloadable

Abstract (EN)
[origin: [US2009302981A1](#)] An electrical switching device that can be employed in a sliding button, a rotating button, in a position switch, or an impact sensor. This device includes: a permanent magnet creating a magnetic field and a microswitch controlled between at least two states, by being aligned along two different orientations of field lines of the magnetic field of the permanent magnet. The microswitch and the permanent magnet are fixed relative to one another and a movable ferromagnetic part is moved between two positions so as to act on the orientation of the field lines generated by the permanent magnet so as to impose on the microswitch one or other of its two states.

Representative image

Inventor

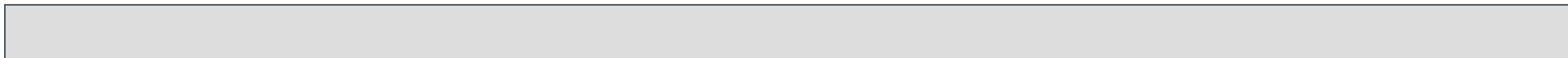
- CHIESI LAURENT (FR)
- GRAPPE BENOIT (FR)
- LAMIEN MATHIAS (FR)
- PAINEAU SYLVAIN (FR)

Result list 13 / 1 272 Simple family filter

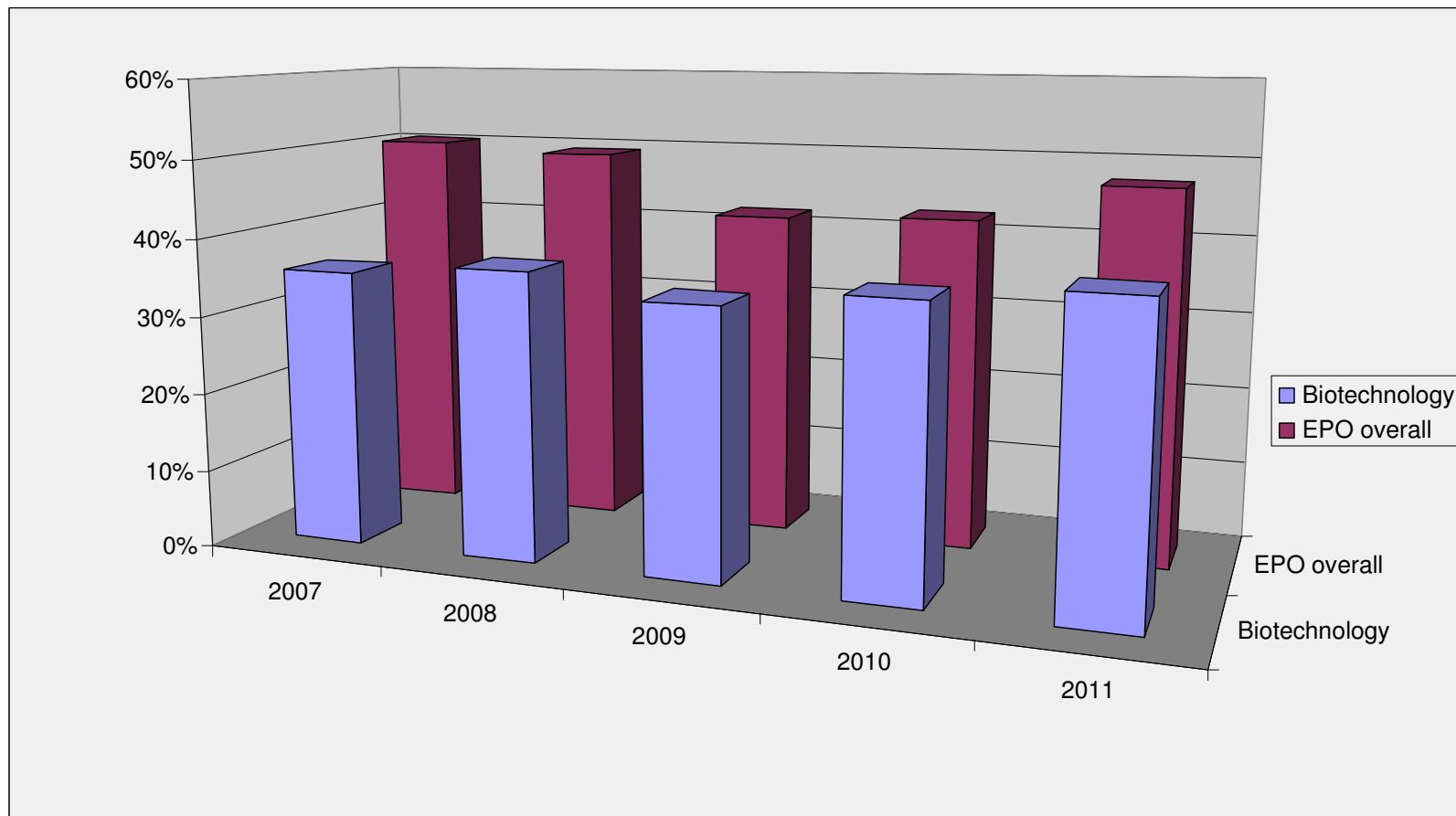
Publication	Priority
CA 2617448 C 20120103	US 13185599 P 19990429 CA 2280378 A 19990816
CA 2342422 C 20120117	US 54065000 A 20000331
CA 2501770 C 20120313	US 41811002 P 20021011 US 0331894 W 20031009
AU 2007343704 B2 20120315	US 87975807 P 20070108 US 2007025194 W 20071210
US 20120296	
US 20120244	
US 20120721	
EP 1632969 B	
US 20120845	
US 20120984	
DE 10201006	
DE 102010037714 B3 20120105	DE 102010037714 A 20100922
EP 2041765 B1 20120502	EP 2007056641 W 20070702 FR 0652935 A 20060712
ES 2379429 T3 20120426	FI 20041504 A 20041123 FI 2005000495 W 20051122
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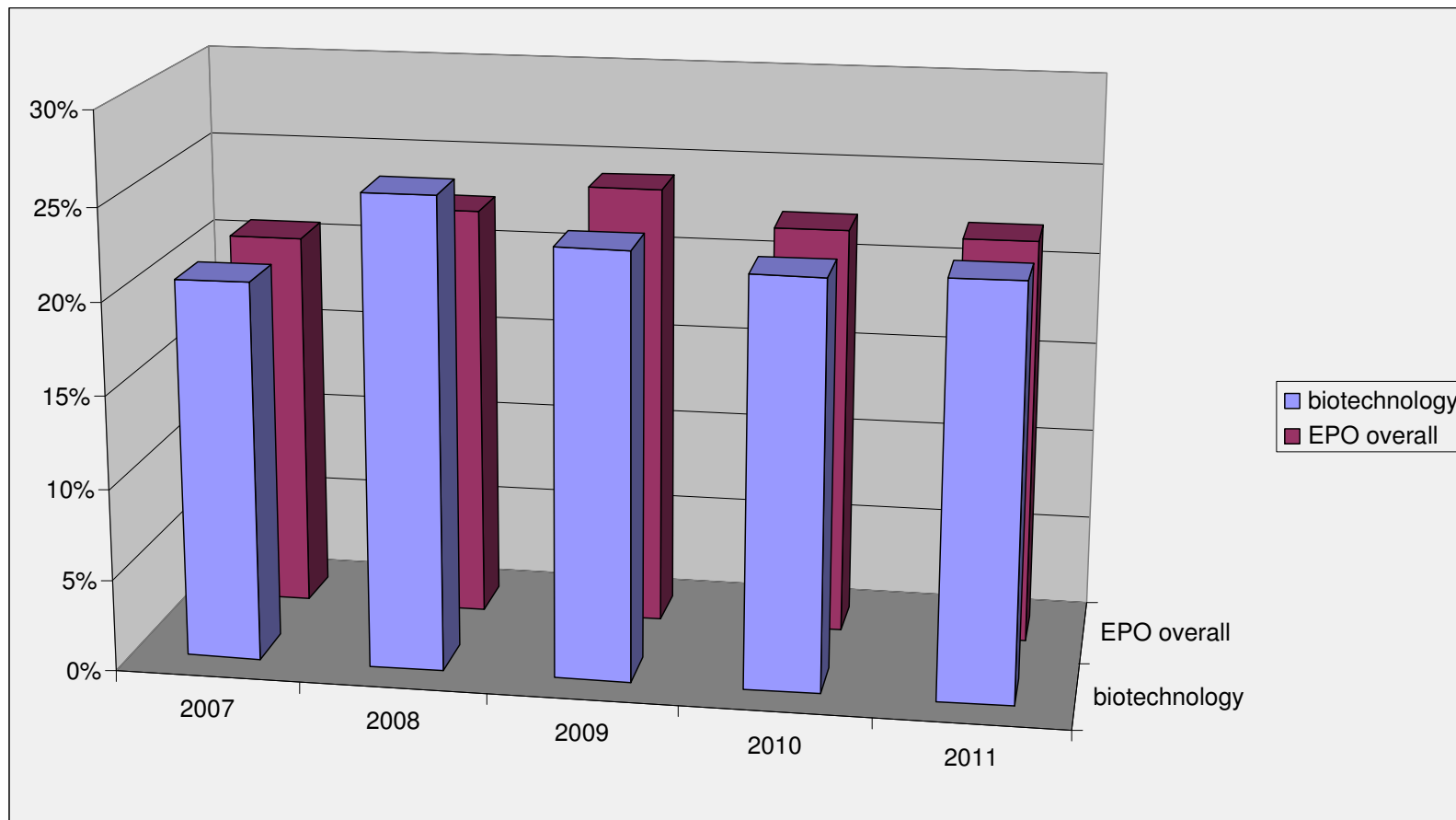
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Grant rate in biotech vs. EPO overall



Withdrawals after European search Biotechnology vs EPO overall



Numer of filed applications

Biotech vs. EPO overall

