The European Patent Office
An introduction to the EPO and the European patent system

Last update: March 2013
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- Patents
- About us
- What we do
- The unitary patent
- Facts and figures
What is a patent?

- A patent is a legal title granting its holder the right to prevent third parties from exploiting an invention for commercial purposes without authorisation.

- In return for this protection, the holder has to disclose the invention to the public.

- Protection is granted:
  - for a limited period, generally 20 years
  - for a specific geographic area
What is patentable?

- To be patentable, an invention must:
  - have a **technical character** (e.g. comprise a product, process or apparatus)
  - be **new**
  - involve an **inventive step**
  - be **industrially applicable**

- Some innovations are not patentable under the EPC:
  - for example, mathematical methods or formulae, computer programs and business methods as such are **not regarded as inventions**
  - new plant or animal varieties and inventions whose commercial exploitation would be contrary to "ordre public" or morality (e.g. the cloning of human life) are examples of **inventions excluded from patentability**
The benefits of patents (I)

For inventors, patents can:

- help **safeguard financial returns** from the commercial exploitation of the invention
- give holders **time** to recoup their development costs
- encourage **further investment** in R&D
The benefits of patents (II)

For the economy in Europe, patents are a prime source of new technical knowledge.

Patents can help:

- identify new technological trends and new business partners
- inspire further inventions
- prevent the duplication of R&D in industry and universities

European patents foster technical innovation, which is crucial to competitiveness and overall economic growth in Europe
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Our mission

As the patent office for Europe, we support innovation, competiveness and economic growth across Europe through a commitment to high quality and efficient services delivered under the European Patent Convention.
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
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
The EPO has offices at five different locations.

Its headquarters are in Munich.
Munich

- Patent grant procedure
- Appeals
- Quality management
- Information management
- Administration
- Legal services
- International affairs
- European co-operation
The Hague

- Patent grant procedure
- Information management
- Administration
- Legal services
Berlin

- Patent grant procedure
- Administration
Brussels

- Relations with the European institutions and other organisations/associations
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- What we do
- The unitary patent
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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
Other services

- **Free patent information services**
  - online access to all European patent documents (updated weekly)
  - worldwide patent searches in the Espacenet database of over 80 million applications
  - helpdesk staffed by experts on Asian patent information

- **Training**
  - workshops and seminars for IP experts and non-IP audiences
  - specific programmes for start-ups, SMEs and business consultants
  - well over 100 e-learning modules

- **Free online services**
  - filing
  - fee payment
  - file inspection
  - tracking of legal status of applications
Overview of European patent grant procedure (I)

Applicant

- European patent application

EPO

- Filing and formalities examination
- Search and search report together with preliminary opinion on patentability
- Substantive examination
- Publication of application and search report
- Online access to application file and legal status information
- Observations by third parties possible

Public domain

- Refusal or withdrawal of application
- Validation in designated states
- Grant of European patent
- Publication of patent specification
Overview of European patent grant procedure (I)

- The procedure begins when an application for a European patent is filed with the EPO. During this filing phase:
  - a date of filing is assigned
  - formal requirements are checked

- Once the application complies with the filing requirements, it enters the search phase, where:
  - a search for prior art is performed
  - a search report and a written opinion are issued

- In the examination phase all the substantive issues relating to the application are assessed and the contents of the application are shaped into a form in which the patent can be granted ... or the application refused.
Overview of European patent grant procedure (II)

Refusal of application → Substantive examination → Grant of European patent → Opposition by third parties possible

Limitation or revocation proceedings → Appeal proceedings

Opposition proceedings

Applicant

EPO

Public domain

Public domain
Overview of European patent grant procedure (II)

- The post-grant procedures are:
  - Opposition - where third parties may contest a granted patent
  - Revocation and limitation - where patent proprietors may revoke their own patent or limit its scope
  - Appeal - every adverse decision is subject to appeal, to guarantee a two-instance procedure
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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
The unitary patent as a European patent

Same grant procedure as for classic European patent

European patent application

Filing and formalities examination

Search report with preliminary opinion on patentability

Substantive examination

Limitation/revocation/opposition proceedings

Grant of European patent

Refusal or withdrawal of application

Appeal proceedings

At the request of the patent proprietor

UNITARY PATENT
for the territories of the 25 participating states

The unitary patent replaces the individual effects of the European patent in the 25 participating states
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Origin of European patent filings (2012)

- EPO: 94,060
- US: 63,504
- JP: 51,693
- CN: 18,812
- KR: 14,491
- Others: 15,185

1 Direct European filings under the EPC and International filings under the PCT
Technical fields\(^1\) with the most applications (2012)\(^2\)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Field</th>
<th>Applications</th>
<th>% vs. 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Medical technology</td>
<td>10,412</td>
<td>1.6%</td>
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<tr>
<td>2</td>
<td>Electrical machinery, apparatus, energy</td>
<td>9,799</td>
<td>11.4%</td>
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<tr>
<td>3</td>
<td>Digital communication</td>
<td>9,592</td>
<td>20.4%</td>
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<tr>
<td>4</td>
<td>Computer technology</td>
<td>8,288</td>
<td>3.3%</td>
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<tr>
<td>5</td>
<td>Transport</td>
<td>6,633</td>
<td>7.2%</td>
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<tr>
<td>6</td>
<td>Measurement</td>
<td>6,428</td>
<td>1.9%</td>
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<tr>
<td>7</td>
<td>Organic fine chemistry</td>
<td>6,002</td>
<td>–6.9%</td>
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<tr>
<td>8</td>
<td>Engines, pumps, turbines</td>
<td>5,668</td>
<td>20.0%</td>
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<tr>
<td>9</td>
<td>Pharmaceuticals</td>
<td>5,364</td>
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<tr>
<td>10</td>
<td>Biotechnology</td>
<td>5,309</td>
<td>–4.3%</td>
</tr>
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</table>

\(^1\) Classified according to the IPC and technology concordance table compiled by the Fraunhofer ISI for WIPO

\(^2\) Based on European patent applications filed with the EPO
### Top applicants seeking protection with the EPO in 2012

Based on European patent applications filed with the EPO

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Europe</th>
<th>North America</th>
<th>Asia</th>
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<tbody>
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<td>Samsung</td>
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<td>Siemens</td>
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<td>BASF</td>
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<td>General Electric</td>
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<td>5</td>
<td>LG</td>
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<td>6</td>
<td>Robert Bosch</td>
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<td>Qualcomm</td>
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<td>Panasonic</td>
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<td>Bayer</td>
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<td>Alcatel Lucent</td>
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<td>Hitachi</td>
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<td>Huawei</td>
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<td>EADS</td>
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<td>United Technologies</td>
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<td>21</td>
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<td>22</td>
<td>Toyota Motor</td>
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<td>23</td>
<td>Sumitomo</td>
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<td>24</td>
<td>Fujitsu</td>
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<td>25</td>
<td>ABB</td>
<td>656</td>
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</table>

1 Based on European patent applications filed with the EPO