Patentability Requirements

Chemistry and Intellectual Property - Catalysing Innovation

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Malta    15.02.2011
Overview

- European Patent Convention and the EPO
- Patentability Requirements
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 here below as follows:
Structure of the European Patent Organisation

The European Patent Organisation

European Patent Office

The executive body
- responsible for examining European patent applications

Administrative Council

The legislative body
- made up of delegates from the member states
- supervises the activities of the Office
- has a specific legislative function
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
Autonomy

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

Munich
PschorrHöfe

The Hague

Headquarters Munich
Isar building

Vienna

Berlin

Brussels
Bureau
What advantages does a European patent have?

**Unitary protection standards in the contracting states**
- One application, one language
- “A la carte” market by designation of countries

**Cost effective**
- Costs less than three separate national patents

**Strong**
- Thorough search – 72 million patent documents
- Substantive examination = sound legal protection
Cost breakdown of a sample European patent

- **EPO fees**: 32%
- **Professional representation before the EPO**: 22%
- **Translation/publication in the contracting states**: 14%
- **National renewal fees**: 32%

1) Six states, ten-year term
The European patent

Key figures

European applications filed and Euro-PCT applications entering the European phase
European applications filed and Euro-PCT applications (international phase)
Applications by residence of applicants (2009)

- US: 24.5%
- JP: 14.8%
- KR: 3.1%
- Other member states: 7.5%
- DE: 16.7%
- FR: 6.6%
- NL: 5.0%
- CH: 4.4%
- GB: 3.6%
- IT: 2.9%
- SE: 2.3%

Others: 6.6%
Technical fields with the most filings (2009)

Number of applications:

- Medical or veterinary science; hygiene: 16,400
- Electric communication technique: 13,753
- Computing: 8,508
- Basic electric elements: 7,639
- Organic chemistry: 7,402
- Measuring; testing: 7,290
- Biochemistry; genetic engineering: 3,853
- Vehicles in general: 3,809
- Organic macromolecular compounds: 3,681
- Engineering elements: 3,254
- Others: 58,953
EPO figures (2009)

- 203,500 searches completed
- 52,000 patents published
- 2,695 patents opposed
- 2,484 appeals received
- 540 million electron. searchable docs
### Number of staff in 2009

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<tr>
<th>Location</th>
<th>Number</th>
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<td>Munich</td>
<td>3,718</td>
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<td>The Hague</td>
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<td>Berlin</td>
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<td>Vienna</td>
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<td><strong>Total</strong></td>
<td><strong>6,818</strong></td>
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Around 60% are patent examiners.
Staff from 31 different countries (2009)

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<thead>
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<th>Country</th>
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<tr>
<td>AT Austria</td>
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<td>BE Belgium</td>
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<td>BG Bulgaria</td>
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<td>CH Switzerland</td>
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<td>LV Latvia</td>
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<td>MT Malta</td>
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<td>NL Netherlands</td>
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<td>PL Poland</td>
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<td>PT Portugal</td>
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<td>RO Romania</td>
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<td>SE Sweden</td>
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<td><strong>Total</strong></td>
<td><strong>6 818</strong></td>
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</table>
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 (prohibitive right).

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 (novelty)
  - involve an inventive step (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
Novelty (Art. 54 EPC)

What is the **state of the art**?

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

- Everything made available to the public by means of:
  - written description
  - oral description
  - by use
  - or in any other way
When must it have been made available?

Filing date 30.11.2010

Everything made available to the public before the date of filing (or priority date if claimed)
Inventive Step

An invention is inventive if, based on the state of the art, it is not obvious to a person skilled in the art.
The person skilled in the art

- An ordinary practitioner

- Aware of what is common general knowledge in a particular technical field (the art in question) at the relevant date.

- Has access to everything in the state of the art.

- Has normal capacity for routine work, but has no inventive skills.
Examples

• Ex. 1:

• A document from the XI century, written in Chinese. The only copy is located in an abbey in Tibet.

Does this belong to the state of the art?

• YES / NO
Examples

• Ex. 2:

• Can I combine a patent published in 1990 with a book/manual to decide on novelty of a claim?

• YES / NO
Examples

• Ex. 3:
  - Claim 1: "a frying pan made of aluminium"
  - Document D1 discloses a frying pan made of steel
  - Novelty?: YES / NO
Examples

• Ex. 4:

• Claim 1 refers to a plastic bottle

• Document D1 shows a bottle made of polypropylene

• Novelty?: YES / NO
Exceptions to patentability

– **Art 53(a):** European patents shall not be granted in respect of:

  – inventions the commercial exploitation of which would be **contrary to "ordre public" or morality**, provided that the exploitation shall not be deemed to be so contrary merely because it is prohibited by law or regulation in some or all of the Contracting States;

– Patenting is **not** morally neutral
Exceptions to patentability

- **Art. 53(b):** European patents shall not be granted in respect of plant or animal varieties or essentially biological processes for the production of plants and animals.

- **Reason:** Avoid double protection in field of plant breeding.

- **Extension** to animal breeding and "varieties" by analogy
Where to Get More Information

- European Patent Academy

**European Patent Academy**

Winner of the Diesel Medal 2010 “Best innovation support”

“Promoting and supporting education and training in patent-related intellectual property”

The European Patent Academy ensures the overall co-ordination of the external education and training activities of the European Patent Office.

The mandate of the European Patent Academy, based at the European Patent Office in Munich, reflects the need to improve patent-related intellectual property training and education structures in Europe.

**Programme areas**

The Academy’s activities are divided into five programme areas, aimed at different target audiences.

- Institutional strengthening
- Professional representatives
- Innovation support
- Judicial training
- Academy

**e-learning**

Consult e-learning modules online in the Learning area.

**Contact**

Please use this form to submit questions and comments to the European Patent Academy.

Contact the Academy
Where to Get More Information

- e-learning modules
Where to Get More Information

• European Patent Office
  www.epo.org

• Espacenet (database of 72 Mio. patent documents worldwide)
  www.espacenet.com

• EPOline (online file inspection)
  www.epoline.org
Questions?

www.epo.org