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Learning path for patent administrators

General aspects of patent systems: EPAC – entry level

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Introduction

This publication, "General aspects of patent systems, EPAC – entry level", is part of the "Learning path for patent administrators" series which is edited and published by the European Patent Academy. The series is intended for patent administrators who are training to gain certifications offered by the European Patent Office (EPO). It is also freely available to the public for independent learning.

The topics covered include: general aspects of patent systems, the European patent system and the European patent granting procedure, the International Patent System (PCT) and the PCT procedure, European and international publications, filing a European patent application and filing an international application; formalities during European and international search; formalities during European examination and international preliminary examination, formalities during the appeal procedure after refusal (EPC) and during the opposition procedure (EPC), national validation (EPC), entry into national/regional phases and entry into the European phase (PCT).

Each chapter focuses on one topic at entry, intermediate or advanced level, as appropriate. The series will be revised annually to ensure it remains up to date.

Disclaimer

All references to natural persons are to be understood as applying to all genders.

Contents

1. Learning objectives

Participants in this course will learn about:

- the definition of “patent” and the structure of its specification
- the requirements for patentability
- the geographical scope of a patent
- the different patenting routes
- the priority concept
- the definition of ownership and inventorship as well as transfer of rights

2. Background of patent systems

The background of patent systems is rooted in the idea of encouraging innovation by granting inventors exclusive rights for a limited time in exchange for public disclosure of their invention.

Patents are one form of intellectual property (IP). Their role is to establish and protect ownership of ideas and the way they are represented and applied. Other forms of IP comprise: trademarks, industrial designs, copyright, etc.

Patent systems are designed to support the development of innovation. A patent has two important functions: guaranteeing the legal protection of an invention and its disclosure, thereby contributing to economic growth by giving public access to information on new technologies.

Key legal frameworks that shape patent protection at different levels are the:

- **Paris Convention** – establishes principles for protecting intellectual property internationally, including priority rights.
- **Patent Cooperation Treaty (PCT)** – provides a unified procedure for filing patent applications in multiple countries.
- **European Patent Convention (EPC)** – governs the granting of European patents through the European Patent Office.
- **German Patent Law** – regulates patent granting within Germany.

Legal references:
Art. 87 EPC; Art. 89 EPC;
Rule 157 EPC; Rule 165 EPC

3. 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. This right is limited to the territory of a specified country or region and is valid for a defined period of time.

Under the European Patent Convention (EPC) and many other national patent laws, the standard protection term of a patent is 20 years from the date of filing. Provided that annual renewal fees are duly paid, patents will remain in force for the maximum protection term.

The patent specification describes the invention and defines the scope of protection. Furthermore, the EPC stipulates that an invention be disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

Remarks

- In each contracting state for which a patent is granted, a European patent gives its proprietor the same rights as would be conferred by a national patent granted in that state. If its subject-matter is a process, protection is extended to products directly obtained by that process. Any infringement of a European patent is dealt with by national law.
- The problem solved by the invention must be a technical problem rather than, for example, a purely financial, commercial or mathematical one. Not meeting this requirement leads to the invention being excluded from patentability. An invention can, for example, be a product, a process or an apparatus.

Legal references:
Art. 63 EPC; Art. 64 EPC

4. Structure of a patent specification

1. Title of the invention
    - A concise and descriptive name for the invention.
    - Should reflect the core idea or function.
2. Description of the invention
    - The heart of the application.
    - Explains the invention in full technical detail.
    - Includes examples, embodiments and variations.
    - Should enable someone skilled in the field to reproduce the invention.
3. Claims
    - The most critical part of the application.
    - Legally defines the scope of protection.
    - Each claim is a single sentence describing a specific aspect of the invention.
    - Divided into independent claims (broadest scope) and dependent claims (narrower, building on independent ones).
4. Drawings (if applicable)
    - Visual representations of the invention.
    - Can include flowcharts, schematics, mechanical diagrams, etc.
    - Must be clear and labelled according to patent office standards.
5. Abstract
    - A brief summary (usually 150 words or less).
    - Highlights the technical field, purpose and key features of the invention.
6. Sequence listing (if applicable)
    - Required for inventions involving genetic sequences.
    - Provides standardised data formats (WIPO Standard ST.26)

The description generally specifies the technical field to which the invention relates, indicates the background art by citing source documents (patent specifications, books, periodicals), discloses the invention as claimed, indicates the technical problem that the invention solves and describes how to solve it. The description should also contain preferred embodiments of the invention. It should be clear from the description how the invention is susceptible of industrial application.

The claims define the subject-matter for which protection is sought. The subject-matter must be defined in terms of the technical features of the invention. The claims must be clear and concise and supported by the description.

There are two types of claims:

1. An independent claim must state all the essential features of the invention. European patent applications may not contain more than one independent claim, unless Rule 43(2) EPC applies.

2. Dependent claims include all the features of the claim to which they relate. They must contain a reference to this other claim, which may also be dependent, and then state the additional features for which protection is sought.

The patent specification may also contain drawings. These form a useful addition to the description as they illustrate the features of the invention. Any flow sheets and diagrams are considered to be drawings. The description should list the drawings according to their figure numbers and explain the reference signs used in the drawings.

The patent specification further contains an abstract, which is purely for technical information of the public.

Legal references:
Art. 57 EPC; Art. 83 EPC; Art. 84 EPC, Art. 85 EPC
Rule 42(1)(a) EPC; Rule 42(1)(f) EPC; Rule 43 EPC; Rule 47 EPC; Rule 49 EPC
GL F-II, 4; GL F-III; GL F-IV

5. Patentability criteria

European patent applications are subject to an examination which establishes whether the patentability requirements of the EPC are met.

Art. 52 EPC: Patentability

Art. 54 EPC: Novelty

Art. 56 EPC: Inventive step

Art. 57 EPC: Industrial application

These requirements are the basis not only for the granting of a European patent, but also for the assessment of its validity by the national courts. The extent of the protection conferred by a European patent is determined uniformly for all contracting states.

Legal references:
Art. 52(2) EPC; Art. 54 EPC; Art. 56 EPC; Art. 57 EPC

6. The geographical scope of a patent

A patent is an intellectual property (IP) right with a validity limited to the territory covered by the granting authority: it is granted for one country (national patent system) or for a region (regional patent system).

An applicant may file a patent application with a national or regional granting authority. The granting authority will process the application based on the applicable national or regional patent law and a patent may be granted on this legal basis. Applicants may also use the international patent system (PCT) to file an application. Contrary to national or regional patent systems, the PCT does not, in itself, include the grant of a patent, but the international application can be continued in the PCT contracting states with a possible eventual grant.

Patents confer the right to prevent third parties from making, using or selling an invention without their owners' consent in the countries where the patent has been granted. There are different routes to patent protection and the best route for an application will depend on the invention and the targeted markets.

When filing a European patent application, all the contracting states for which the EPC has already entered into force on the date of filing are deemed to be designated.

- 39 EPC contracting states: Albania, Austria, Belgium, Bulgaria, Switzerland, Cyprus, Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, United Kingdom, Greece, Croatia, Hungary, Ireland, Iceland, Italy, Liechtenstein, Lithuania, Luxembourg, Latvia, Monaco, Montenegro, North Macedonia, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Sweden, Slovenia, Slovakia, San Marino and Türkiye.

- 1 extension state: Bosnia-Herzegovina

- 6 validation states: Kingdom of Morocco, Republic of Tunisia, Kingdom of Cambodia, Republic of Moldova, Georgia and the Laos People’s Democratic Republic. (Note: the validation agreement signed with Costa Rica has not yet entered into force).

(As of 1 June 2026, the Republic of Moldova will become the 40th EPC contracting state. As a result, there will be only five validation states.)

For European patent applications, a specific extension or validation fee must be paid by the applicant if they wish to retain the possibility of validating a potentially granted patent in the extension or validation states, within six months of the date on which the European Patent Bulletin mentions the publication of the European search report(GL A-III, 12.2):

Patent applications can be filed with the European Patent Office under the European Patent Convention (EPC) or under the Patent Cooperation Treaty (PCT). If an applicant is seeking protection in several European countries, it may be more economic and efficient to apply at the EPO rather than applying in each individual country. If an applicant is seeking protection for only one country, it may be best to apply for a national patent in that particular country.

Legal references:
Art. 59 EPC; Art. 64 EPC; Art. 65 EPC; Art. 79 EPC
Rule 39 EPC; Rule 159(1) EPC
GL A-III, 12.2

7. National, regional (EP) and international routes

When applying for a patent, applicants can choose between:

1. The national route: in this case the applications are filed with the relevant national office and the granted patent will be valid for that state only.

2. The European route: a single application is valid for all 39 EPC contracting states (plus one extension state and the six validation states) and has the same legal effect as a national patent in those countries.

3. The international route: The international application is filed under the Patent Cooperation Treaty (PCT), designating the EPO as a regional office. During this phase, the application undergoes an international search and optionally an international preliminary examination to assess patentability.

The applicant chooses the national route when filing an application with a national patent office. If a patent is granted, this patent is valid only in the state where the application was filed.

The applicant chooses the European route when filing an application under the European Patent Convention (EPC) at the European Patent Office (EPO). The EPO has three procedural languages: German, English and French. If a patent is granted by the EPO, it can be validated in up to 46 states (39 EPC member states, one extension state and six validation states).

There are further regional offices besides the EPO: the Eurasian Patent Organization (EAPO), the African Intellectual Property Organization (OAPI) and the African Regional Intellectual Property Organization (ARIPO).

The applicant chooses the international route if the application is filed under the Patent Cooperation Treaty (PCT). International applications are filed at a so-called receiving Office, which could be the International Bureau of WIPO, the EPO or any other national or regional patent office operating as receiving Office under the PCT. However, the PCT procedure does not, in itself, result in the grant of a patent. To obtain a patent, applicants must enter the national/regional phase before the national/regional office(s) of their choice, which is, usually, at the end of the international phase: 30 months from the earliest priority date or the international filing date, if no priority is claimed. A patent can therefore potentially be granted in up to 158 states.

Filing an application with a national patent office usually has the following advantages: the procedural fees are usually lower than for a regional route. Generally, applicants can also deal with the office in a language they are more likely to be familiar with.

Should an applicant also wish protection in other countries at a later stage, the national application can serve as the basis for the priority right under which applicants can file an application for the same invention in another country within 12 months from this first filing, while keeping the original filing date.

Legal references:
Art. 75 EPC; Art. 76 EPC
Rule 35 EPC
Art. 2 PCT; Art. 4 PCT; Art. 11(3) PCT; Art. 64(4) PCT
Rule 4.9 PCT

8. Priority right and Paris Convention

The priority right is triggered by the first filing of an application relating to a given invention: this right allows the filing of a subsequent application for the same invention within 12 months from the date of filing of the first application. This first date of filing is known as the priority date.

The effect of the priority right is that the priority date is considered as the "effective date of filing" of any subsequent application when assessing the patentability of a subsequent application and the validity of the rights it may confer.

A priority right exists not only for patents but also for other intellectual property rights. The priority right is defined by the Paris Convention, adopted in 1883, and covering “industrial” or intellectual property in the widest sense, including patents, trademarks, industrial designs, utility models, service marks, trade names, geographical indications. The convention aims to repress unfair competition.

If an applicant files a patent application in a state party to the Paris Convention or in any member state of the World Trade Organisation (WTO), for example, he may then claim priority when filing a patent application in respect of the same invention.

Legal references:
Art. 54(2) EPC; Art. 54(3) EPC; Art. 60 EPC; Art. 87 EPC; Art. 88(1) EPC; Art. 88(2) EPC; Art. 89 EPC
Rule 52 EPC; Rule 53 EPC
GL A-III, 6; GL F-VI

9. Ownership and inventorship

The concepts of ownership and of inventorship are essential to the functioning of the patent sytem.

The applicant is the proprietor, or owner, of the patent application. The applicant can be any natural or legal person, or anybody equivalent to a legal person, irrespective of nationality and place of residence and/or business. For the purposes of proceedings before the EPO, the applicant will be deemed to be entitled to exercise the right to the patent.

An application may be filed in the name of one or several persons named as joint applicants. The application may also be filed by two or more applicants, which can designate different contracting states of a regional office.

Each application must have designated inventor(s). If the applicant is not the inventor, a designation of inventor has to be filed. This designation of inventor must state both the family and given names, the country and place of residence of the inventor and bear the signature of the applicant or their representative. Inventorship can be regulated differently in different countries.

Examples

For a given application, a first applicant designates a first group of contracting states and a second applicant designates a different group of contracting states while both applicants jointly designate a third group of contracting states. In such a case the applicants will be regarded as joint applicants for the purposes of the proceedings.

Legal references:
Art. 58 EPC; Art. 59 EPC; Art. 60(3) EPC; Art. 118 EPC; Art. 133 EPC; Art. 134 EPC
Rule 151(1) EPC
GL A-II, 2

10. Transfer of rights and assignments

A patent application or a patent may be transferred in whole or in part, by the proprietor(s) for one or more of the countries where the patent application/patent is valid.

In this case the Legal Division will bear sole responsibility for it. The Legal Division will also bear sole responsibility for decisions in respect of suspension/interruption and resumption of proceedings as stated in Rule 14 EPC and Rule 142 EPC.

The formal requirement for transfers is laid down in Article 72 EPC, which requires that the assignment is made in writing and bears the signature of the parties to the contract.

A request for a transfer of rights is not deemed to have been filed until an administrative fee has been paid in full (Rule 22(2) EPC)). It has been free of charge for MyEPO users since 1 April 2024.

Legal references:
Art. 71 EPC; Art. 72 EPC
Rule 14 EPC; Rule 22 EPC; Rule 85 EPC; Rule 142 EPC
GL E-XIII, 3

11. Duties and responsibilities of a representative/applicant and of a patent paralegal

In many cases, applicants do not interact with the patent authority directly, they choose to be represented by patent attorneys, also called representatives or agents. Representation before the European Patent Office is governed by Art. 134 EPC.

On filing, an application must comply with a number of formal requirements in accordance with the implementing regulations, see Art. 90 EPC. The applicant or the representatives are responsible for ensuring that these requirements are met. Administrative staff working for the representative or agent, also known as paralegals, are usually entrusted with these administrative checks.

Legal references:
Art. 134 EPC; Art. 90(1) EPC
Rule 10(1) EPC

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