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1. What is a patent?

A patent is an exclusive right to a new invention. It is granted by patent offices to give the applicant the right, for a limited period of time, to prevent others from (re-) producing, offering, using or selling the invention without his permission. When a patent is granted, the invention is the applicant's property and can be exploited. A patent is a territorial right and will protect the invention only within the country for which the patent protection has been granted. A patent is an intellectual property right and is granted for inventions in a technical field.

2. What can I get a patent for?

Patents are granted for technical inventions.

Patentable inventions are:

- A product
- The use of a product
- A method

[Biotechnological inventions](#) are patentable with certain restrictions.

Biotechnological inventions are inventions that consist of or contain biological material or that consist of a procedure to produce, treat or use biological material (see [Edinburgh-patent](#)).

The "Edinburgh Patent"

That is the commonly used name for the European patent, number 0695351, owned by the University of Edinburgh. The corresponding patent application was filed with the European Patent Office (EPO) in April 1994, and the patent was granted, after examination, in December 1999. The patent concerns a method of genetically modifying animal stem cells so as to give them a survival advantage over unwanted differentiated cells. Biotechnological researchers have to contend with the problem that stem cells may grow more slowly than other cells and thus will be overgrown by other cells. The patented method described in the "Edinburgh Patent" solves this problem by making it easier to culture and isolate desired stem cells.

The EPO examined the application and granted the patent but, through an oversight, failed to insist on limiting the term "animal", which can be interpreted as extending to humans. Initial protests against the granting of the "Edinburgh" patent were voiced in February 2000 and the first oppositions were filed in March 2000. Opponents have strong ethical objections to the invention as it also involves human stem cells, in particular human embryonic stem cells and the modification thereof. In addition, some parties maintain that the patent refers to human cloning and the creation of transgenic animals, including humans.

According to the European Patent Convention, any third party may oppose a European patent, within a period of nine months of its granting by arguing that the granting was unjustified. This is a standard procedure that is initiated against approximately 6% of the patents the EPO grants each year. In the Edinburgh case, oppositions were formally lodged by 14 parties, including the governments of Germany, Italy and the Netherlands.

The result of oral proceedings on the "Edinburgh" patent, held in Munich from 22 - 24 July 2002, was that the much-discussed "Edinburgh" patent is to be maintained in an amended form as proposed by the patent proprietor during the oral proceedings. It no longer includes human or animal embryonic stem cells, but still covers modified human and animal stem cells other than embryonic stem cells. This was decided after a three-day public hearing at the European Patent Office (EPO) before the Opposition Division appointed to consider the case.

3. What is not patentable?

Anything that ordinarily fulfils the criteria of being an invention but contradicts with morality or "ordre public" is not patentable. Plant or animal varieties or biological processes for the breeding of plants and animals are not patentable.

The following results are considered non-patentable inventions:

- discoveries, scientific theories or mathematical methods,
- aesthetic creations,
- a scheme, rule or method for performing a mental act, playing a game or doing business, or computer software producing no technical effect,
- the presentation of information.

4. Which conditions are absolutely necessary for an invention to be patentable?

So far, no patent common to all states (i.e. international or Community patent) exists. The conditions for the granting of a patent are governed by each individual state. However, all EU member states have harmonised their patent laws in accordance with the rules established by the European Patent Convention (EPC).

Inventions are patentable when they fulfil the following conditions:

4.1 Novelty

In order to be patentable the invention must be new. An invention is considered new if it is not part of the prior state-of-the-art. Most patent offices follow the concept of "absolute" novelty, which means that the invention has never been made public in any way anywhere in the world, for example in written or oral descriptions or by use, before the date the patent is filed. It is advisable to obtain information about the state-of-the-art by carrying out a novelty search. The definition of novelty in Europe is very different from the prior art definition in the United States. Furthermore, the European Offices usually define novelty in a different way than the American Office. The European Patent Office (EPO) tends to take a more limited view of what is patentable than the American one does.

4.2 Based on an inventive step

The patentable invention must also represent an inventive step. This means that, from the point of view of a person skilled in the relevant area of technology, the invention does not obviously follow from the state-of-the-art. Therefore, it is crucial to define whether the step that led to the invention could be anticipated by an expert skilled in the relevant area or whether it exceeds the expected step of further development. The inventive step requirement is intended to prevent patent rights from forming barriers to routine development. Various factors, depending on the field of the application, are taken into account to determine what an inventive step is.

4.3 Industrially applicable

An invention must be capable of being produced or used in some kind of industry. This criterion is met if the invention can be produced or used in any kind of industry, including agriculture. "Industry" is meant in its broadest sense as anything distinct from purely intellectual or aesthetic activity. It does not necessarily imply the use of a machine or the manufacture of an article.

An invention is considered not to have an industrial application if it relates to a medical treatment or medical diagnostic method.

5. National, European and international patent application

An applicant can also choose, if he wishes to apply for a national patent, to do so via a European office or to file an international patent application.

5.1 National Patents

Almost every state in the world has its own patent system. However, there are a couple of national differences in the patent systems. Most states, such as in Europe, apply the so-called first-to-file rule. According to this rule, the first applicant has priority over any subsequent applicant. In some other countries, such as in the US, the corresponding rule is known as first-to-invent. According to this principle, in the event of conflicting applications, the person who first made the invention is entitled to the patent and not the person who first applied for the patent.

5.2 European Patent

Since 1st June 1978, patent protection based on a single European patent application has been obtainable in a number of states. An applicant requests protection for the invention in one or more countries party to the European Patent Convention via the European Patent Office. Once a patent is granted using a centralised procedure, a European patent breaks down into national patents like a bunch of flowers. European patents are then treated as national patents in each of the designated states.

5.3 International application

An application is international when it is filed under and with reference to the Patent Cooperation Treaty (PCT). The PCT makes it easier for inventors to obtain protection in more than one state or region as they only need to file a single patent application to do so. A PCT procedure consists of two main phases. It begins with the filing of an international application and ends with the granting of national and/or regional patents. In addition, there are several other regional Patent Agreements, such as the [Eurasian Patent Convention](#), the [African Regional Industrial Property Organization](#) and the [African Intellectual Property Organization](#).

6. How to read a patent document

To be valid, a patent should enable a person skilled in that particular area to reproduce the invention. The description of the invention in a patent document published by the patent office consists of the patent claims, drawings and the description.

6.1 Patent Classification Systems

The classification of patents arose from the need to handle a high volume of patent documents. Classification is used for two different purposes:

- Classifying patent documents by their technical content. Due to the vast amount of patent information that is stored in patent offices, the classification system was introduced to make filing easier and to guarantee quick access to documents.
- To serve as search tool. Patent classification systems are used for searches such as:
 - state of the art searches;
 - infringement searches;
 - novelty searches;
 - validity/patentability searches

6.2 IPC System

The [International Patent Classification \(IPC\)](#) system is published by the WIPO and is revised at intervals of five years. The IPC system divides all technical fields into symbols. It is called "international" because it is both internationally agreed and internationally used.

It is based on the Strasbourg Agreement Concerning International Patent Classification.

- The Strasbourg Agreement Concerning International Patent Classification was concluded in 1971 and came into force in 1995. It is open to states party to the Paris Convention for the Protection of Industrial Property. [Here](#) is the updated list of Contracting Parties.
- The Assembly is a vital institution of the Agreement. Every member state of the Agreement is a member of the Assembly. The Assembly is responsible for the budget and the adoption of biennial programmes.
- [Text of the treaty](#)

The system is used by the industrial property offices of nearly 90 states, four regional offices and the International Bureau of the WIPO. Technology is classified into eight sections with up to 67,000 subdivisions. The symbol for each subdivision consists of Arabic numerals and Roman letters. National and regional patent offices index all patent applications and granted patents using these symbols. Please see the IPC list for classifying the patent documents of the various countries. Currently about 95% of all patent documents published worldwide are indexed using the IPC.

New editions are published every five years. The [current](#) 8th edition of the IPC entered into force on 1st January 2006. The IPC is edited in its original language versions, English and French.

The IPC is divided into:

- Sections (8)
- Classes (120)
- Subclasses (600)
- Main groups
- Subgroups (IPC-2006 contains about 70,000 groups)

With each step the classification becomes more detailed.

6.3 EC System

The [European Classification \(EC\)](#) system is a European Patent Office internal classification system based on the International Patent Classification symbols. The EPO assigns EC symbols to patents upon publication to make the classification more precise and therefore easier to use. To do so, EC subgroups are added to the IPC symbol.

Unlike the IPC, which remains fixed for five years, the EC classification system is constantly changing to adapt to the needs of technological development. However, only one version exists at any given time.

If the classification system is changed in the EC system, all patents are reclassified according to the new system. This differs from the IPC system, in which all patents are classified according to the edition in force when the patent is filed. When the next edition enters into force five years later, patents classified under the old edition are not reclassified. This results in patent documents having a classification symbol different from the one they should have according to the edition currently in force.

6.4 Other Classification Systems

- [Derwent Classification System](#)
- [USPTO Classification System](#)

7. How to exploit a patent

Patents, like any other property, may be sold, licensed or mortgaged either for payment or free of charge. Therefore, a patent owner has the right to decide who may use his patented invention for the period during which the invention is protected. The owner may also sell the right to the invention to someone else, who will then become the new patent owner. Once a patent expires, the protection granted by the state ends, and an invention enters the public domain, that is, the owner no longer holds exclusive rights to the invention, which becomes available for commercial exploitation by others.

7.1 Own exploitation

The patentee may exploit the patent himself. That means that he may manufacture the product protected by his patent himself or through his own company and then distribute it through his own sales organisation. This form of direct patent exploitation is the easiest method of exploitation.

7.2 Transfer

A patent may, like any other property title, also be bought or sold (patent purchase). In this case, the patent owner transfers his patent rights to another individual or entity, who then becomes the patent owner.

7.3 Licensing

Through a licence, the patent owner allows another person to use the patented invention either free of charge or in exchange for a so-called licence fee.

The licence may be an **exclusive licence**, which means that the right is conceded to only one person or entity, which will have the sole right to use the patented invention and to exclude others from doing so.

It is also possible to award what is called a **simple licence**. In contrast to the exclusive licence, in this case the licensee is only granted the simple right to use the invention without the possibility of excluding others from using the invention. The patentee remains in a position to use the invention himself, to award simple licences to others and to prosecute patent infringers.

A basic difference, as compared to patent purchase, lies in the fact that the patentee does not give up his legal position as patent owner.

European Patents

1. Introduction

The provisions of the European Patent Convention (EPC) quoted in this Guide are indicated in parentheses. Consulting the EPC before taking any decisions is strongly recommended.

The original texts are contained in the following EPO publications: "[European Patent Convention](#)" and "[Ancillary Regulations to the European Patent Convention](#)", which can be viewed on the website of the [European Patent Office](#). This website also offers a lot of other

useful information. Readers desiring further information are advised to consult the "[Guidelines for examination in the European Patent Office](#)", issued by the President of the European Patent Office for the benefit of those concerned with procedure. These. These guidelines are also very useful for applicants.

2. Nature and purpose

Before the European Patent Convention (EPC) came into force, patent protection for an invention could only be achieved territorially, that is to say separately in each national state. Patent applications had to be filed in the various languages at the respective national patent offices and the different national patent systems had to be taken into account. The European Patent Organisation (EPO) was set up on the basis of the EPC, which was signed in 1973, and provides patent protection for Europe on the basis of a **single patent application** and a **single grant procedure**. In other words, the EPC only established a single procedure for granting patents for subsequent registration in the national Contracting States and established certain standard rules governing those patents.

The aim of the EPC is to strengthen the co-operation between the European States with respect to the protection of inventions by making protection easier, cheaper and more reliable through the creation of a single European procedure for the granting of a patent.

Once a patent is granted, a European patent breaks down into national patents. European patents are then treated as national patents in each of the designated states. Hence, costs arise involving regular annual fees that have to be paid in each of the designated states in addition to translation costs.

The European patent shall, in each of the Contracting States for which it is granted, be subject to the same conditions as a national patent granted by that State and shall have the same effects.

Any **infringement** of a European patent is dealt with by national law.

The **term** of the European patent is **twenty years** from the date the application is filed.

3. Advantages

The European procedure has not replaced national granting procedures. An applicant seeking patent protection in one or more EPC Contracting States has a choice between the national procedure in each State for which he desires protection and the European route which, through a single procedure, confers protection in all Contracting States that he has designated.

The EPC uniformly determines the extent of protection conferred by the European patent (Art. 69) for all Contracting States. The European patent constitutes a protection right uniformly governing the extent of the protection conferred and offering a strong guarantee.

The choice of the national route for protection of an invention generally leads to national rights with differing extents of protection because of the fact that there are differences in the structure of grant procedures and the fact that they are conducted in parallel by several offices.

Taking into account the fees to be paid in the course of the granting procedure and representation for one qualified representative plus the cost of conducting the procedure in only one language, the cost of obtaining a European patent is generally approximately the same as that of obtaining three to four national patents. So if patent protection is desired for several states, a European patent application may be much less expensive and less time-consuming than filing for patent applications with individual national patent offices.

The European procedure is conducted in one of the three official languages of the EPO (English, French, German), depending on the language that the applicant chooses to use for filing the applications (Art. 14.1). In addition, applicants from contracting states whose language is not one of the EPO's official languages are granted advantages as regards languages and fees. The EPO rules specify that the language of the proceedings at the office will be the same as the language in which the application is originally filed.

4. Persons entitled to apply for and obtain European patents

A European patent application may be filed by any natural or legal person, or any body equivalent to a legal person by virtue of the law governing it.

A European patent application may also be filed either by **joint applicants** or by **two or more applicants** designating different Contracting States.

5. Effects of the European patent and the European patent application

The term of the European patent shall be 20 years from the date that the application is filed.

From the date of publication of its granting, a European patent confers upon its proprietor the same rights as would be conferred by a national patent granted in that State for each Contracting State for which it is granted.

Any infringement of a European patent shall be dealt with under national law.

6. Procedure

The procedure for the granting of a European patent is completely regulated by the EPC. Once the patent is granted, it is subject to the respective national legislation and is equated with a national patent.

Filing the Patent Application

A European patent application can be filed (a) at the European Patent Office in Munich or at its branch in The Hague, Berlin or (b) if the law of a Contracting State permits, at the central industrial property office or other competent authority in that state. The states where protection is sought must be designated in the application, but since not all the states party to the Convention need to be designated, a selection can be made. The application contains (a) a request for the grant of a European patent; (b) a description of the invention; (c) one or more claims; (d) any drawings referred to in the description or the claims; (e) an abstract.

Examination of formal requirements

If a filing date has been assigned and the application is not deemed to be withdrawn, the Receiving Section of the EPO will check the applicant's request for compliance with formal requirements such as those relating to the description, claims, drawings etc. If the EPO notes that there are deficiencies which may be corrected, it will give the applicant an opportunity to do so.

Publication of the Patent Application (A Document)

The application will be published 18 months after the date on which the patent application was originally filed, either with a national patent office or as a so-called direct application with the EPO. In the case of an application that claims a national priority date and which was filed one year after the priority date, publication will be carried out six months after the application was filed with the EPO. The EPO does not issue an 18-month publication if a) it is designated in an international patent application (PCT application) and b) the WIPO has

already published the application in one of the EPO's official languages, i.e. English, German or French. International patent applications in which the EPO is designated are called "Euro-PCT applications". However, at the request of the applicant, the application may be published before the expiry of the 18-month period. It will be published simultaneously with the publication of the European patent when the grant of the patent has become effective and before the expiry of the 18-month period. The publication contains a description, claims and drawings as filed, possibly together with the European search report and the abstract. The last two are included if they are available before the end of the technical preparations for publication. Starting on the publication date, a European application provides provisional protection against the invention's use by third parties in all designated states if the claims are available in (one of) the official language(s) of the designated national patent offices.

European Search Report

The Search Division of the European Patent Office draws up a European search report on the basis of the claims, taking into consideration description and drawings where necessary. The search report is published either together with the application or later. The applicant then has six months from the publication of the search report to decide whether to file a request for a substantive examination.

Request for Examination

Upon request, the European Patent Office examines whether the invention meets the requirements of the EPC regarding novelty, inventive step, and industrial applicability. A request for examination has to be filed by the applicant within six months of the date on which the European Patent Bulletin features the publication of the European search report. If no request for examination has been filed by the end of this period, the application is deemed to be withdrawn.

Substantive Examination (Withdrawal, Refusal)

The examination of the patent application aims to determine whether the requirements of novelty, inventive step and industrial applicability are fulfilled or not. In the first case, the patent will be granted. In the second case, if the examination of a patent application reveals that it does not meet the requirements of the EPC, the Examining Division invites the applicant to file observations. Hence, the applicant will have an opportunity to comment on all remarks made by the examiner. If the applicant fails to reply in due time, the application is deemed to be withdrawn. The examination will lead to the refusal of the application if the examiner comes to the final conclusion that the application or the invention to which it relates does not meet the requirements of novelty, inventive step or industrial applicability.

Granting the Patent: Announcement and Patent Publication

Once granted, a European patent breaks down into a bundle of national patents. In most Contracting States, for the patent to take effect and be enforceable against infringers, a translation of the patent has to be filed with the designated national patent office in its official language if the European Patent was published in another language. Details are given in the respective national laws. The granting of the patent is published in the European Patent Bulletin. At the same time, the EPO publishes the patent as a so-called B1-document, with bibliographical data, description, claims and any drawings.

Opposition

The EPC provides for a "belated" opposition procedure following the grant procedure. Accordingly, third parties have nine months during which they may oppose a patent that they believe should not have been granted. The EPO decisions may be appealed against, and are

then reviewed by the Office's independent Boards of Appeal. The opposition procedure can lead to the revocation or total or partial maintenance of the European patent.

After the nine-month period, legal proceedings for revocation can only be performed in individual states and are governed by national law.

Patent Publication in Case of Restriction (B2 Document)

The EPC provides for a "belated" opposition procedure following the grant procedure. Accordingly, third parties have nine months during which they can oppose a patent they think should not have been granted. The EPO decisions can be appealed and are then reviewed by the independent Boards of Appeal. The opposition procedure can lead to the revocation or maintenance of the European patent.

After the nine-month period, legal proceedings for revocation can only be performed in individual states and are governed by the relevant national law.

European patent becomes a national patent in designated EPC member states

Widerruf

The EPC provides for a "belated" opposition procedure following the grant procedure. Accordingly, third parties have 9 months during which they can oppose a patent they think should not have been granted. The EPO decisions are appealable, and are then reviewed by the Office's independent Boards of Appeal. The opposition procedure can lead to the revocation or maintenance of the European patent.

After the nine-month period, legal proceedings for revocation can only be performed in individual states and depend on the respective national law.

Board of Appeal

An appeal can be filed against decisions of the Receiving Section, Examining Divisions, Opposition Divisions and the Legal Division of the EPO. The appeal, which must be filed in writing within two months from the date of notification of such decisions, has a suspended effect. This means that the contested decisions do not yet become final and their effects are suspended. The appeal is referred to the department whose decision is contested and, if that department considers it to be admissible and well founded, it rectifies its decision. Otherwise the appeal is remitted to the Board of Appeals.

A European patent application may be filed:

- at the European Patent Office at Munich or its branch in The Hague, or Berlin
- if the law of a Contracting State so permits, at the central industrial property office or other competent authority of that State. An application filed in this way shall have the same effect as if it had been filed on the same date at the European Patent Office.

6.1. Components of a European patent application

European patent applications consist of the following four or five parts:

Request for grant

The request must be filed on the official EPO request for grant form. If an applicant's request for grant is not initially made on the official form, this will not prevent a filing date being accorded, provided the application meets the above-mentioned requirements.

Description

The description is the basis for the claims. The description of the invention discloses details enabling an expert skilled in the art to reproduce it. The description is a full and detailed explanation of the invention and how it works. The description may be accompanied by drawings. The applicant must disclose how his invention works in sufficient detail. The description must explain the invention fully at the time of filing. Additional information cannot be added later. If the description does not contain enough information the patent may not be granted. There should be no obviously irrelevant or unnecessary statement or other matter. The patent application must not contain statements or other matter contrary to *ordre public* or morality. Nor should it contain statements disparaging the products or processes of any person other than the applicant, or the merits or validity of applications or patents of any such person.

Claims

Patent claims indicate the scope of the protection. The claims must define the subject-matter for which patent protection is sought in terms of its technical features. They must be clear and concise and supported by the description.

Abstract

The abstract is purely for technical information purposes and cannot be used to assess the patentability of the invention.

Drawings

The application may also contain drawings. These are a useful supplement to the description as they can illustrate the advantageous features and uses of the invention.

6.2. First part of the procedure

The **first part of the procedure** is carried out by the EPO branch at The Hague and the Berlin sub-office. It includes the examination on filing, the formalities examinations, the preparation of the European search report and the publication of the application and the search report.

6.3. Second part of the procedure

The **second part of the procedure**, handled by the Examining Divisions in Munich (or The Hague or Berlin), includes the substantive examination and grant. An Examining Division consists of three technical examiners, who may be joined by a legally qualified examiner if necessary. Nevertheless, the processing of the application prior to a final decision is normally entrusted entirely to one technical examiner who issues the necessary communications and keeps in touch with the applicant.

This second part of the procedure is closed either by the granting of a patent or refusal of the patent application.

6.4. Third part of the procedure

The **third part of the procedure** consists of the opposition proceedings. The examination of oppositions is handled by the Opposition Divisions in Munich, which are composed on

the same basis as the Examining Divisions, but only one member of the Opposition Division may have taken part in the earlier proceedings for the granting of the patent. This member is not entitled to be the head of the Opposition Division in question.

The appeals procedure constitutes a **special procedural phase**. Appeals can be filed during the three aforementioned parts of the procedure against decisions of the Receiving Section, the Examining Divisions, the Opposition Divisions and the Legal Division. A decision that does not terminate proceedings can only be appealed together with the final decision, unless a separate appeal is allowed in that decision.

Decisions regarding appeals are heard by the Boards of Appeal, also in Munich.

A [more detailed survey of the procedure](#) can be viewed on the website of the European Patent Office.

7. Revocation

Regarding revocation, there are homogeneous national regulations that comply with the regulations in the EPC.

8. Contracting states

[The updated list of contracting states may be found here.](#)

A number of other countries are expected to become members in due course.

A European patent is not automatically granted for all EPC Contracting States. Applicants must designate the states for which they seek protection when filing.

9. Extension States

European patent applications and patents can also be extended to countries that are signatories to agreements to that effect with the European Patent Organisation. Several non-Contracting States have concluded an Extension Agreement with the EPO, providing European patent applicants with an efficient way of also obtaining protection in these countries. The extension system largely corresponds to the EPC system operating in the EPC Contracting States, except that it is not based on direct application of the EPC but solely on national law modelled on the EPC. It is therefore subject to the national rules of the country concerned.

[The updated list of extension states may be found here.](#)

International and regional applications

Patent Cooperation Treaty

1. Introduction

For applicants who seek protection for an invention in each of a large number of countries it is also possible to file an international patent application. In accordance with the Patent Cooperation Treaty (PCT), concluded in Washington on 19 June 1970, international patent applications can be filed with national patent offices qualified as "receiving" offices, with the European Patent Office, or with the International Bureau of the WIPO. The updated list of the PCT Contracting States may be found [here](#). At the moment there are 115 states that [have adhered](#) to the PCT.

The states party to the European Patent Convention can be designated as a single block. Thus, a European patent is also available by way of the Patent Cooperation Treaty.

The advantage of the system is that, by filing only one international application with one Office, an applicant can obtain the effect of regular national filings in any of the designated PCT Contracting states without initially having to hand in a translated application or pay national fees. The national patent granting procedure and the related high expenses are postponed, in the majority of cases, by up to 18 months (or even longer in the case of some Offices), as compared with the traditional patent system.

No "international" patent will be granted as a result of an international application, which merely represents a preliminary stage of the regional or national procedure. Each international application is the subject of an international search, the aim of which is to discover relevant prior art.

On request, an International Preliminary Examination Report can be issued providing a preliminary and non-binding opinion as to whether the invention appears to be new, involves an inventive step, and is industrially applicable.

This preliminary work is used by the individual national patent offices and by the European Patent Office when the international application has entered the national or regional phase, respectively. Such applications have a special importance in those states where the patent offices do not examine patent applications for novelty and inventive step.

The PCT system offers advantages for applicants, since it also makes it possible to file an application in a single language for a large number of states world-wide, while claiming the priority of the original application, even shortly before the expiry of the priority period.

A further advantage is that the PCT system gives, in contrast to national or regional applications, additional time to decide on the states in which patent protection is finally sought.

That is to say, when an international patent application has been filed, all national procedures in the designated states are delayed until the end of the 20th month from the priority date. Alternatively, if an international preliminary examination is requested before the end of the 19th month from the priority date, all national procedures in the designated states are delayed until the end of the 30th month from that date.

This delay gives applicants more time before the national requirements have to be fulfilled. In particular, the subsequent costs for the national procedures can be paid later. Furthermore, the substantive examination and other processing of the international patent application before the national offices is facilitated by the international search, which enables necessary amendments to be made to the application even before the national procedure starts.

2. International and national phases

The PCT procedure consists of two main phases, the international and the national phase. The international phase consists of the following four steps:

- Filing of the International Application by the applicant
- International Search Report
- Publication of the International Application and the International Search Report
- Optional: the International Preliminary Examination Report

The international phase is followed by the national phase wherein the patents are granted by the national or regional patent offices.

3. Application Procedure

In general, an international patent application can be filed in any language which the receiving office is prepared to accept. However, it is necessary to file in at least one language that is accepted by the International Searching Authority (ISA) and which is one of the languages in which international patent applications are published. Nonetheless, it is possible to hand in a translation of the application for the purpose of the international search.

An international application has to contain the following elements:

- Request
- Description
- Claim
- Drawings
- Abstract

Filing of the Patent Application

An international patent application can be filed by nationals or residents of one of the PCT Contracting States with the national patent office that will act as a PCT "receiving" office or with the International Bureau of WIPO. An international patent application corresponds to a national patent application in those PCT Contracting States "designated" in the application. The states party to a regional patent treaty (such as the ARIPO Harare Protocol, the Eurasian Patent Convention, the European Patent Convention and the OAPI Agreement) can also be designated as a single bloc. Thus, for example, a European patent is also available by way of the PCT.

International Search

During the "international phase" of the PCT procedure (see "National or Regional Phase"), every international patent application is subjected to an "international search" carried out by an International Searching Authority (ISA). The international search is a high-quality search in patent documents and other technical literature. International Searching Authorities (ISA) are the national offices of Australia, Austria, China, Japan, the Russian Federation, Spain, Sweden and the United States of America, and the European Patent Office.

International Search Report

Four or five months after the filing (or 10 months if no priority is claimed)

The results of the international search are set out in an "International Search Report" which is made available by the fourth or fifth month (or tenth month, if no priority is claimed) after the international patent application is filed. The International Search Report contains no comments on the value of the invention, but lists citations of documents showing prior art relevant to the claims of the international patent application. The report gives an indication of the possible relevance of the citations to the questions of novelty and inventive step. The search report shows the chances of obtaining patents in the designated states and/or regions. A favourable search report (that is to say, one in which there seem to be no limitations to prevent the patent being granted) will be helpful during the granting process at the national or regional office dealing with the application during the national or regional phase of the PCT procedure (see "National or Regional Phase"). If a search report is unfavourable, the applicant has the opportunity to amend the claims in the international patent application or to withdraw the application before it is published by the International Bureau of WIPO. International Preliminary Examination Report

International Preliminary Examination Report

Under the PCT system, the applicant has the option of having an international preliminary examination of the application carried out. This is for the purpose of the patent granting

procedure in any of the PCT Contracting States that recognise the international preliminary examination procedure. This preliminary examination will be made on the basis of the international search report. The results of the international preliminary examination are set out in an "international preliminary examination report". The report consists of an opinion on the compliance with the internationally accepted criteria of patentability such as novelty, inventive step and industrial applicability with regard to each of the application claims. If the report is favourable, the applicant has a stronger foundation on which to deal with national and regional patent offices when processing a patent application before them. The international preliminary examination report is an important reference but is not binding for those offices.

International Publication

The International Bureau publishes the international application 18 months after the priority date.

National or Regional Phase

Twenty months after the priority date (30 months if a preliminary examination has been requested).

The granting of a patent is the responsibility of the designated national or regional patent offices. The start of the processing of an international application before those offices (the "national phase" or "regional phase"), including examination as to substance is, however, delayed. For citizens of Member States of the EPC, the European Patent Office is competent for the regional phase when EP is designated in the international application. These international applications are also called "Euro-PCT" applications. All national procedures in the designated states are delayed until the end of the 20th month from the priority date. If an international preliminary examination is requested before the end of the 19th month from the priority date, this is delayed until the end of the 30th month from that date. The delay gives the applicant at least eight more months (or 18 months if a preliminary examination has been requested) before national requirements have to be fulfilled. This additional time can be used to evaluate the chances of obtaining patents and of exploiting the invention commercially in the various designated countries. This time is also useful for assessing its technical value as well as the continued need for protection in those countries.

3.1. Filing of the Patent Application

An international patent application can be filed by nationals or residents of one of the PCT Contracting States with the national patent office that will act as a PCT "receiving" office or with the International Bureau of WIPO.

An international patent application corresponds to a national patent application in those PCT Contracting States "designated" in the application. The states party to a regional patent treaty (such as the ARIPO Harare Protocol, the Eurasian Patent Convention, the European Patent Convention and the OAPI Agreement) can also be designated as a single bloc. Thus, for example, a European patent is also available by way of the PCT.

3.2. International Search

During the "international phase" of the PCT procedure (see "National or Regional Phase"), every international patent application is subjected to an "international search" carried out by an International Searching Authority (ISA).

The international search is a high-quality search in patent documents and other technical literature to establish a report setting out the relevant prior art. International Searching Authorities (ISA) are the national offices of Australia, Austria, China, Japan, the Russian Federation, Republic of Korea, Spain, Sweden and the United States of America, and the European Patent Office.

3.3. International Search Report

The results of the international search are set out in an "International Search Report" which is made available by the fourth or fifth month (or tenth month, if no priority is claimed) after the international patent application is filed.

The International Search Report contains no comments on the value of the invention, but lists citations of documents showing prior art relevant to the claims of the international patent application. The report gives an indication of the possible relevance of the citations to the questions of novelty and inventive step.

The search report shows the chances of obtaining patents in the designated states and/or regions. A favourable search report (that is to say, one in which there seem to be no limitations to prevent the granting of a patent) will be helpful during the granting process at the national or regional office dealing with the application during the national or regional phase of the PCT procedure (see "National or Regional Phase").

If a search report is unfavourable, the applicant has the opportunity to amend the claims in the international patent application or to withdraw the application before it is published by the International Bureau of WIPO.

3.4. International Preliminary Examination Report

Under the PCT system, the applicant has the option of having an international preliminary examination of the application carried out. This is for the purpose of the patent granting procedure in any of the PCT Contracting States that recognise the international preliminary examination procedure.

This preliminary examination will be made on the basis of the international search report. The applicant has to pay a fee for this report. The results of the international preliminary examination are set out in an "international preliminary examination report".

The report consists of an opinion on compliance with the internationally accepted criteria of patentability such as novelty, inventive step and industrial applicability with regard to each of the application claims. If the report is favourable, the applicant has a stronger foundation on which to deal with the national and regional patent offices when processing a patent application before them. The applicant can decide whether to continue seeking patent protection in several countries, to pay the national fees and professional fees for patent agents abroad, and to incur the cost of preparing translations. The international preliminary examination report is an important reference but is not binding for those offices.

3.5. International Publication

Eighteen months after the priority date, the international application is published by the International Bureau, together with the international search report and any amendments of claims which may be made by the applicant, and is then transmitted to the applicant and the designated Offices.

3.6. National or Regional Phase

If the applicant has decided whether and in which states he will proceed with his application he has to fulfil the various national requirements. Therefore, the national or regional patent offices are responsible for granting patents.

For citizens of Member States of the EPC, the European Patent Office is competent for the regional phase when EP is designated in the international application. These international applications are also called "Euro-PCT" applications.

This time is also useful for assessing its technical value as well as the continued need for protection in those countries.

3.7. Electronic filing

In order to facilitate application it is also possible to file PCT international applications electronically. Sending the application in electronic form can reduce application fees. Applicants can download the software from the WIPO homepage or receive it on CD-ROM or diskette. The software is available in all PCT publication languages (i.e. Chinese, English, French, German, Japanese, Russian and Spanish). It can be downloaded from the Internet from the [PCT-SAFE page](#), and may also be obtained from the PCT-SAFE Help Desk:

[e-mail](#)

Telephone: (+41-22) 338 95 23 (opening hours from 08:30 - 16:00 Central European Time)

Facsimile: (+41-22) 338 80 40

[Eurasian Patent Convention](#)

Under the Eurasian patent system, Eurasian patents can be obtained through a single procedure. The patents are granted jointly for a number of republics that were part of the former Soviet Union. However, after being granted, the patents have to be maintained individually in these republics in order to remain effective. The contracting states are listed [here](#).

[African Regional Industrial Property Organization \(ARIPO\)](#)

A patent granted under the ARIPO system has the same effects in the designated contracting states as a national patent. The contracting states are listed [here](#).

[African Intellectual Property Organization \(AIPO\)](#)

Contrary to the case for European patents and for ARIPO patents, patent registration with the AIPO Office automatically covers the African AIPO member states at once, without requiring registration and/or validation or confirmation in the various countries. The member states of this convention are listed [here](#).