

## Annex 2

# DEFINITIONS OF TERMS AND STATISTICS ON PROCEDURES

This annex contains firstly definitions of the main terms used in the report<sup>45</sup>. After that there is an explanation of the patent procedures relating to Fig. 4.9. Then finally there are definitions of the statistics on procedures that appear in Table 4.3.

## DEFINITIONS OF TERMS

### APPLICATIONS, COUNTING OF

Application counts are mainly determined by counting each national, regional or international application only once. However, alternative representations are also given in Chapter 3 after cumulating the number of designated countries over applications.

In this report, applications are counted in terms of patent filings, first filings, requests for patents entering a grant procedure, and demand for national patent rights.

- Counts of “*Patent filings*” include direct national, direct regional, and initial PCT international phase applications;
- Counts of “*First filings*” include initial patent applications filed prior to any later subsequent filings to extend the protection to other countries;
- Counts of “*Requests for patents entering a grant procedure*” include direct national, direct regional, national phase PCT, and regional phase PCT applications;
- Counts of “*Demands for national patent rights*” include direct national applications counted once each, designations in regional applications, national phase PCT applications, and designations in regional stage PCT applications.

These counting methods are used in various sections of the report, and particularly in Chapter 3. The methods are discussed in greater detail both at the beginning of Chapter 3 and at the beginning of the corresponding sections of Chapter 3.

## BLOCS, GEOGRAPHIC

Six geographical blocs are defined in this report. The first five blocs, together, are referred to as the “*IP5 Blocs*”. They are:

- The EPC contracting states (EPC states in this report) corresponding throughout the period covered in this report to the territory of the 38 states party to the EPC at the end of 2019;
- Japan (Japan in this report);
- Republic of Korea (R. Korea in this report);
- People’s Republic of China (P.R. China in this report);
- United States of America (U.S. in this report).

The remaining geographical areas are grouped together as:

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<sup>45</sup> A more extensive glossary of terms is available with the web-based version of the report.

- The rest of the world (Others in this report).

These blocs are referred to as blocs of origin on the basis of the residence of the first-named applicants or inventors (throughout the report) or as filing blocs on the basis of the place where the patents are sought (in Chapters 3 and 5).

## DEMANDS FOR PATENT RIGHTS

Demand for patent rights refers to applications for patents for invention. The counts of patent filings (see above) are made principally by counting each national, regional, or international application only once. However, alternative representations are also given in Chapter 3 in terms of the demands for national patent rights, after cumulating the number of designated countries over applications. This makes a difference only in regard to systems where multiple countries can be designated in an application (PCT and regional systems). Demands for “*national*” patent rights effectively measures the number of national patent applications that would have been necessary to seek patent protection in the same number of countries if there were no PCT or regional systems. The counts include direct national filings, designations in regional systems, national stage PCT applications, and designations in regional stage PCT applications.

## DIRECT APPLICATIONS

“*Direct*” applications are filed directly with the country or regional patent office where protection is sought and are counted in the year they are filed. They are distinguished from “*PCT*” applications in order to distinguish the two subsets of applications handled by patent offices.

## DOMESTIC APPLICATIONS

These are defined as all demands for patents made by residents of the country where the application is filed<sup>46</sup>. For the purpose of reporting statistics for the EPC contracting states considered as a bloc, domestic applications are given with regard to the applications made by residents from anywhere inside the EPC bloc. For example, applications made by residents of France in one of the other EPC contracting states are counted as domestic demand in the EPC bloc.

## FIRST FILINGS

These are applications filed without claiming the priority<sup>47</sup> of another previous filing and are counted in the year they are filed. They are usually made in the home country or region. All other applications are subsequent filings, usually made within one year of the first filings. In the absence of a complete set of available statistics on first filings, it is assumed in this report that domestic national filings are equivalent to first filings<sup>48</sup> and that PCT filings are subsequent filings. Currently, USPTO first filing data, unless otherwise noted, also include a substantial proportion of applications that are continuations of applications previously filed at the USPTO. See also *APPLICATIONS, COUNTING OF*.

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<sup>46</sup> For the USPTO, this is by the residence of the first-named inventor; For the EPO, the JPO, the KIPO, and the CNIPA, this is by the residence of the first-named applicant.

<sup>47</sup> See the Article 4A to 4D of the Paris Convention at the WIPO web site; [www.wipo.int/treaties/en/ip/paris/](http://www.wipo.int/treaties/en/ip/paris/)

<sup>48</sup> The data source used for patent families allows a precise count of first filings. Except in the sections on patent families, an approximation of the number of first filings in the EPC Bloc is made by adding first filings at the EPO to aggregated domestic national applications in the EPC contracting states.

## FOREIGN APPLICATIONS

These are defined as all demands for patents made by residents of a location outside of the country or region where the application is filed<sup>49</sup>. See the term definition for Domestic Applications for additional details.

## GRANTS, COUNTING OF

Grant counts in Chapter 3 are based on the WIPO Statistics Database<sup>50</sup>. They are counted in the year that the grants are issued or published. As with the demand for patent rights, the demand for rights granted in each bloc are considered after cumulating the number of designated countries for which national patent rights have been granted via regional procedures. The counts in Chapter 4 and proportions of PCT grants in Chapter 5 are based on IP5 Offices data.

## CROSS FILINGS

IP5 cross filings are patent applications filed at the IP5 Offices during the same time period (i.e. calendar year in this report) and claiming the same priority. Such applications can be filed as direct national, direct regional or PCT that entered the national or regional stage during the reporting period. The priority application may have been filed in any patent office in the world. Cross filings are filed in at least two and up to all five IP5 Offices. Counts of cross filings are based on the number of underlying priorities claimed in subsequent patent applications filed in the reporting period.

The counts of cross filings are considered an indicator for shared workload among the IP5 Offices. Cross filings are therefore reported according to the year of the subsequent applications.

Contrary to patent families involving activity in the individual EPC Contracting States, cross filings in Europe are limited to subsequent filings at the EPO. Cross filings are reported according to the year of the subsequent applications while patent families are reported according to the year of the priority applications.

## PATENT FAMILIES

A patent family is a group of patent filings that claim the priority of a single filing, including the original priority forming filing itself and any subsequent filings made throughout the world. Groups containing only utility model applications are excluded. Provisional patent filings are allowed. The patent family counts are made using the reference DOCDB database at EPO, which is fed with data from patent publications from patent offices worldwide. But, only for the patent family measures of first filings in Chapter 3, the numbers of domestic national filings are taken, which means that the numbers of first filings in Table 3 conform to those in Fig. 3.4. This has been implemented since the previous edition of this report. The proportions of the overall numbers of first filings that generated families using the PCT in Fig. 5.5 make use only of patent families data, as in previous reports. For the purposes of this report<sup>51</sup>, IP5

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<sup>49</sup> For the USPTO, this is by the residence of the first-named inventor; For the EPO, the JPO, the KIPO, and the CNIPA, this is by the residence of the first-named applicant.

<sup>50</sup> [www.wipo.int/ipstats/en/statistics/pct/index.html](http://www.wipo.int/ipstats/en/statistics/pct/index.html)

<sup>51</sup> The additional statistical tables that are available at the web site, and previous editions of this report, also give statistics on Trilateral Patent families and Four blocs families. These are a filtered subset of patent families for which there is evidence of patenting activity in all the Trilateral blocs (EPC, Japan, and U.S.), or all the Trilateral blocs and R. Korea, respectively.

patent families are a filtered subset of patent families for which there is evidence of patenting activity in all IP5 Blocs.

## **PATENTS IN FORCE**

Patents in force are patents that have not yet expired. Patents may expire for several reasons, two of the most common being the completion of their patent term and the failure to pay a required maintenance fee.

## **PCT APPLICATIONS**

Applications that are filed under the PCT are first handled by appointed offices during the international phase. About 30 months after the first filing, they enter the national/regional phase to be treated as national or regional applications according to the regulations of each designated office where protection is sought. "PCT" applications are distinguished from "direct" applications in order to distinguish the two subsets of applications handled by patent offices. PCT applications are usually counted in the year that they enter the national (or regional) phase, although in some parts of this report they are counted in the year of filing in the earlier international phase<sup>52</sup>.

## **REQUESTS FOR PATENTS ENTERING A GRANT PROCEDURE**

These are filings that entered a grant procedure and include direct national, direct regional, national phase PCT, and regional phase PCT applications. Direct national and direct regional applications enter a grant procedure when filed, while in the case of PCT applications, the grant procedure is delayed to the end of the international phase.

## **SUBSEQUENT FILINGS**

Subsequent filings are applications filed that claim the priority<sup>53</sup> of a previous filing and usually are made within one year of the first filings. See also FIRST FILINGS. Currently, USPTO subsequent filings data also include a substantial proportion of applications that are continuations of applications previously filed at the USPTO.

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<sup>52</sup> An international phase PCT application can in theory be a first filing but is usually a subsequent filing made up to twelve months after a first filing. A national (or regional) phase PCT entry can follow on from the corresponding international phase PCT filing and is made up to 30 months after the first filing.

<sup>53</sup> See the Article 4A to 4D of the Paris Convention at the WIPO web site, [www.wipo.int/treaties/en/ip/paris/](http://www.wipo.int/treaties/en/ip/paris/)

## **EXPLANATIONS OF THE PATENT PROCEDURES**

The following section contains additional explanations of the IP5 Offices patent procedures as shown in Fig. 4.9.

### **EXAMINATION: SEARCH AND SUBSTANTIVE EXAMINATION**

Each of the IP5 Offices examines a filed patent application based upon novelty, inventive step, and industrial applicability. At the EPO, the process involves two phases: a search to establish the state of the art with respect to the invention and a substantive examination to evaluate the inventive step and industrial applicability. For the second phase, a separate request has to be filed no later than six months after publication of the search report.

In the national procedures before the JPO, the KIPO, the CNIPA, or the USPTO, the search and substantive examination are undertaken in one phase.

Filing of a national application with the USPTO is taken to imply an immediate request for examination. At the JPO, the KIPO, and the CNIPA, deferred examination systems exist and filing of a national application does not imply a request for examination. This may be made up to three years after filing for the JPO, the KIPO and the CNIPA.

The international searches and international preliminary examinations carried out by the IP5 Offices as PCT authorities are not included in the flow chart.

### **PUBLICATION**

In the IP5 Offices, the application is to be published no later than 18 months after the earliest priority date, or otherwise the date of filing (in case of a first filing). The application can be published earlier at the applicant's request. In each of the IP5 Offices, the publication process is independent of other office processes, such as examination. Also, at the USPTO, an application that has not and will not be the subject of an application filed in foreign countries does not need to be published if an applicant so requests.

### **GRANT, REFUSAL / REJECTION, WITHDRAWAL**

When an examiner intends to grant a patent, this information is communicated to the applicant: announcement of grant (EPO), decision to grant (JPO), decision to grant (KIPO), decision to grant (CNIPA), and notice of allowance (USPTO). If a patent cannot be granted in the form as filed before the office, the intention to reject the application is communicated to the applicant: (unfavourable) examination Report (EPO), notification of reason for refusal (JPO), notification of reason for refusal (KIPO), notification of reason for refusal (CNIPA), and office action of rejection (USPTO). The applicant may then make amendments to the application, generally in the claims, after which examination is resumed. This procedural step is iterated as long as the applicant continues to make appropriate amendments. Then, either the patent is granted or the application is finally rejected-intention to refuse (EPO), decision of rejection (JPO), decision of rejection (KIPO), decision of rejection (CNIPA), final rejection (USPTO) - or withdrawn by the applicant - withdrawal (EPO), withdrawal or abandonment (JPO), withdrawal or abandonment (KIPO), withdrawal or abandonment (CNIPA), and abandonment (USPTO). In addition, if no request for examination for an application is filed to the EPO, the JPO, the KIPO, or the CNIPA within a prescribed period (six months after publication of the search report for the EPO, three years from the date of filing for the JPO, the KIPO and the CNIPA), the application will be deemed to have

been withdrawn. In all five procedures, an applicant may withdraw or abandon the application at any time before the application is granted or finally refused.

After the decision to grant the patent, the patent specifications are published if certain administrative conditions are fulfilled, known as Publication of patent (the EPO, the JPO, the KIPO, the CNIPA, and the USPTO). At the USPTO, this action also is referred to as "Patent issuance." Patents granted by the EPO are also then subject to validation in the designated member states where the applicant is seeking patent protection.

## **OPPOSITION**

The opposition procedures allow third parties to challenge a patent granted before the granting office.

There is no opposition system at the KIPO, and the CNIPA.

At the EPO, the period for filing opposition(s) begins after granting of the patents and lasts nine months. If successful, the opposition can lead to a revocation of the patent or to its maintenance in amended form. Furthermore, the patentee may request a limitation or a revocation of his own patents.

At the JPO, only within six months from the date of publication of the Gazette containing the patent, any person may file an opposition to the grant of the patent. The examination of the opposition shall be conducted by documentary examination.

At the USPTO, prior to the implementation of the AIA on September 16, 2012, there were two types of third party opposition procedures: interference and re-examination. The AIA revised these and introduced some additional procedures. Under the AIA, there are now six distinct procedures for third party opposition, including post grant review, inter parte review, business method review, ex parte re-examination, interference, and derivation.

## **TRIAL AND APPEAL**

An appeal can be filed by any of the parties concerned against a decision taken by the IP5 Offices. In practice, applicants can appeal decisions to reject an application or revoke a patent, while opponents can appeal decisions to maintain a patent. The procedure is in principle similar for the IP5 Offices. The examining department first studies the argument brought forward by the appellant and decides whether the decision should be revised. If not, the case is forwarded to a Board of Appeal, which may take the final decision or refer the case back to the examining department.

The JPO deals with ex parte appeals (e.g. appeals against examiner's decision of refusal) and inter partes trials (e.g., trials for invalidation). If applicants have an objection to examiner's decision of refusal, they can file an appeal against the examiner's decision of refusal with the JPO. In case the applicants have made an amendment at the time of requesting the appeal against the examiner's decision of refusal, the examination department that has issued said decision will examine the case again. During this examination, only those which are not eligible for patent grant are transferred to the board of trial and appeal where the proceedings of appeals shall be executed. In addition, any interested party can demand a trial for invalidation upon registration of the establishment of rights. At the trial for invalidation, oral proceedings shall be executed in principle.

The CNIPA has re-examination and invalidation procedures. Where an applicant for a patent is not satisfied with the decision of the CNIPA rejecting the application, the applicant may, within three months from the date of receipt of the notification, request the Patent Re-examination Board to make a re-examination. Where any entity or individual considers the grant of a patent right is not in conformity with the relevant provisions of the Patent Law, a request can be made to the Patent Re-examination Board to declare the patent right invalid.

## **DEFINITIONS FOR STATISTICS ON PROCEDURES**

The following section contains additional definitions for terminology appearing in Table 4.3 follow.

### **EXAMINATION RATE**

This rate shows the proportion of those applications, for which the period to file a request for examination expired in the reporting year, that resulted in a request for examination up to and including the reporting year.

For the EPO, the request for examination has to be filed no later than six months after publication of the search. For example, the rate for 2018 relates to applications mainly filed in the years 2014 to 2018.

For the JPO, the period to file a request for examination is three years from filing date. The rate for 2018 relates mainly to applications filed in the year 2015.

For the KIPO, the period to file a request for examination has been changed from 5 years to 3 years from filing date in 2018.

For the CNIPA, the period to file a request for examination is three years from filing date.

At the USPTO, as filing an application implies a request for examination, such a request is made for all applications.

### **GRANT RATE**

For the EPO, this is the number of applications that were granted during the reporting period, divided by the number of disposals in the reporting period (applications granted plus those abandoned or refused).

For the JPO, the grant rate is the number of decisions to grant a patent divided by the number of disposals in the reporting year (decisions to grant or to refuse and withdrawals or abandonment after first office action).

For the KIPO, the grant rate is the number of patent approvals divided by the number of disposals in the reporting year (sum of the numbers of patent approvals, rejections, and withdrawals after first office action).

The USPTO has revised its calculation to present a grant rate that is more consistent with the other IP5 Offices. In reports prior to the 2011 edition, a USPTO allowance rate was reported rather than a grant rate. In this report, the displayed USPTO grant rate is the total number of issued patents divided by the total number of applications disposed of in the reporting year. RCEs are not included in the disposals. This grant rate differs from the allowance rate usually reported by the USPTO, which counts the total number of applications determined to be eligible by USPTO patent examiners for a patent divided by the total number of applications disposed of in a reporting year. For the allowance rate, RCEs are included in the disposals. Both rates include plant and reissue patent applications in addition to utility patent applications. However, since utility applications comprise over 99 percent of these applications, the rates are almost identical to rates based strictly on utility applications.

### **OPPOSITION RATE**



This term applies to the EPO and the JPO. The USPTO has opposition procedures but does not currently produce an opposition rate.

The opposition rate for the EPO is the number of granted patents for which the opposition period (which is nine months after the date of grant) ended in the reporting year and against which one or more oppositions were filed, divided by the total number of patents for which the opposition period ended in the reporting year.

The JPO rate is the total number of oppositions (counting one(1) for each patent) filed in the calendar year divided by the total number of granted patents in the calendar year.

### **APPEAL ON EXAMINATION RATE**

For the EPO, the rate is the number of decisions to refuse in the examination procedure against which an appeal was lodged in the reporting year, divided by the number of all decisions to refuse for which the time limit for appeal ended in the reporting year.

The JPO rate is the total number of appeals against examiners' decisions of refusal filed in the calendar year divided by the total number of examiners' decisions of refusal rendered by the examiners in the calendar year.

For the KIPO, the rate is the number of appeals filed during the year after the examiner's decision to issue a final rejection against a patent application divided by the number of final rejections issued against a patent application during the year.

The USPTO rate, which includes utility, plant, and reissue categories, captures the number of appeals filed after an examiner's decision to issue a final rejection against a patent application. The rate is the number of examiner answers written during the year in response to appeal briefs divided by the number of final rejections issued that year. This rate includes plant patents and reissue patents in addition to utility patents (see above GRANT RATE).

For all five offices, any subsequent litigation proceedings in national courts are not included.

### **PENDENCY / EXAMINATION / NUMBER OF APPLICATIONS AWAITING REQUEST FOR EXAMINATION**

This does not apply to the USPTO.

This figure indicates the number of filed applications awaiting a request for examination by the applicant.

For the EPO, this indicates the number of applications for which the search report has not been published (pending in search) by the end of the reporting year, added to the number of applications for which the search report has been published but the prescribed period for the request has not expired (six months after publication of the search report).

For the JPO, the KIPO, and the CNIPA, the numbers of applications awaiting request for examination indicate the numbers of applications for which no request for examination has been filed by the end of the reporting year, and for which the

prescribed period for the request (three years after filing for the JPO, the KIPO and the CNIPA) has not expired.

For the JPO, numbers include the number of abandoned/withdrawn applications.

### **PENDENCY / EXAMINATION / NUMBER OF PENDING APPLICATIONS**

For the EPO, this is the number of applications filed for which the search was completed and the request for examination was filed, yet they have not received a final decision by the examining division (announcement to grant, to refuse or abandonment) by the end of the reporting year.

For the JPO and the KIPO, pending applications in examination are applications for which the requests for examination were filed and which have been waiting for a first action and have not been subject to a final action such as withdrawal or abandonment by the end of the reporting year.

For the USPTO, pending applications in examination are applications that are waiting for a first action and have not been subject to a final action such as withdrawal or abandonment by the end of the reporting year. These figures do not include other pending applications that have been subject to a first action.

### **PENDENCY / EXAMINATION / PENDENCY FIRST OFFICE ACTION**

This is measuring the delay until the first action on patentability.

For the EPO, the pendency to first office action is the average time period, in months, measured from the date of filing the application to the date of issue of the European search report which is extended to include an opinion on the patentability.

For the JPO, pendency first office action is the average time period, in months, from the request for examination to first office action in examination.

For the KIPO, pendency first office action is the average time period, in months, from the request for examination to first office action in examination.

For the CNIPA, pendency first office action is the average time period, in months, from when applications entered the substantive examination phase following the request for examination to first office action in examination.

For the USPTO, pendency first office action is the average amount of time, in months, from filing to First office Action On Merits (FAOM). A FAOM is generally defined as the first time an examiner either formally rejects or allows the claims in a patent application.

### **PENDENCY / EXAMINATION / PENDENCY FINAL ACTION**

For the EPO, the counts relate to pendency until a final decision by the examining division (decisions to grant or refuse) during the reporting year. This is the average time elapsed from the date on which the application enters the substantive examination, once the request for examination has been completed, to the date of the decision by the examining division.

For the JPO and the KIPO, pendency for examination in months is the total number of months taken for disposing applications as final actions (decisions to grant or to refuse,

withdrawals, or abandonments) in the reporting year, divided by the number of final actions during the reporting year.

For the JPO, the pendency time is the number of months in a calendar year, and excludes some cases where the JPO requests an applicant to respond to the second notification of reasons for refusal and where the applicant performs procedures they are allowed to use, such as requests for extension of the period of response and for an accelerated examination.

For the CNIPA, pendency for examination refers to the average time period taken, in months, for the granting of invention patent applications, calculated from the date on which the application enters the substantive examination phase to the date on which the decision to grant is issued.

For the USPTO, pendency examination in months is calculated by measuring the time from filing to abandonment or issue for all applications that are abandoned or issued during a three month period. The average of these times is the pendency in months. This number includes plant patents and reissue patents in addition to utility patents (see above GRANT RATE).

### **PENDENCY INVALIDATION**

The CNIPA, “Pendency time in invalidation” refers to the duration from the date on which the notification of acceptance of request for invalidation is issued to the date on which the examination decision on request for invalidation is issued.

The JPO pendency period is the average processing period for a trial for invalidation in a calendar year from the date a request for a trial for invalidation is filed, to the date a trial decision is dispatched (if an “advance notice of a trial decision” is to be made, it is the date the notice is dispatched), to the date a withdrawal or abandonment is finalized and concluded, or to the date a dismissal is dispatched.