

# Chapter 1

## DEFINITION OF TERMS

There are various types of IP rights. They can be categorized as:

- Patents of invention
- Utility model patents
- Industrial design patents
- Trademarks
- Copyrights
- Trade secrets

This report concentrates on the first type, patents of invention.

Despite the existence of regional and international procedures, patent rights differ between countries. One reason is that patent law varies from country to country. With differing regulations and procedures, patent applications can have a different scope, e.g., with respect to the average number of claims included in one application. Variation in the range of applicability of patent rights compromises to some extent the ability to compare patents between countries.

In order to get protection for their innovations, applicants may use the following types of granting procedures, or combinations of them:

- National procedures,
- Supranational procedures, consisting of:
  - Regional procedures (for example the European, Eurasian, African Intellectual Property Organizations, or Gulf Cooperation Council), and the
  - International PCT.

While applications filed under national procedures are handled immediately by national authorities, regional applications are subject to a centralized procedure and usually only after grant do they fall under national (post grant) regulations. International applications filed under the PCT are first handled by appointed offices during the international phase. Then after about 30 months from first filing, they enter the national/regional phase to be handled as national or regional applications in each designated office. Reference is made to "direct" applications as opposed to "PCT" applications in order to distinguish the two subsets of applications handled by patent offices.

In this chapter, the statistics presented in the report and the relations between them will be briefly described. Almost all statistics apart from some items given in Chapter 6 relate to patents of invention only.

Statistics are presented in accordance with the following definitions:

- Domestic applications are defined as all demands for patent rights made by residents of the country where the application is filed<sup>1</sup>. For the purpose of reporting statistics for the EPC contracting states (see below) considered as a bloc, foreign applications are given with regard to the applications made by residents from outside the EPC bloc as a whole. 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 are applications filed without claiming the priority<sup>2</sup> of another previous filing, and all other applications are subsequent filings. The subsequent filings usually have to be 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>3</sup>, and that PCT filings are subsequent filings.
- As a group, EPO, JPO, KIPO and USPTO are referred to as the “Four Offices” and the term “four offices” is affixed to the words used for things related to the these offices. In addition, the term "Trilateral" refers to EPO, JPO, and USPTO as a group.
- Five geographical blocs are defined:
  - The EPC contracting states (*EPC states* in this report) corresponding throughout the period covered to the territory of the 34 states party to the European Patent Convention (EPC) at the end of 2008,
  - Japan (*Japan*),
  - the Republic of Korea (*R. Korea* in this report),
  - the United States of America (*U.S.* in this report),

which are referred as “Four blocs”, and

- the rest of the world (*Others*).

These blocs are referred to as blocs of origin on the basis of the residence of the applicant or as filing blocs on the basis of the place where rights are sought.

- Demand for patent protection is considered principally by counting each supranational application once only. However, alternative representations are also given in some places in terms of the demand for patent rights, after cumulating the number of designated countries in each supranational application.

Direct (national and regional) applications are counted in the year they are filed.

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<sup>1</sup> At the USPTO the country of residence is determined by the residence of the first named inventor. At EPO, JPO and KIPO the country of residence is determined by the residence of the first named applicant.

<sup>2</sup> See the Article 4A to 4D of the Paris Convention at the WIPO web site; [www.wipo.int/export/sites/www/treaties/en/ip/paris/pdf/trtdocs\\_wo020.pdf](http://www.wipo.int/export/sites/www/treaties/en/ip/paris/pdf/trtdocs_wo020.pdf)

<sup>3</sup> 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. The data source used for patent families allows a precise count of first filings.

PCT applications are usually counted in the year that they enter the national (or regional) phase. In some parts of this report they are counted in the year of filing in the earlier international phase<sup>4</sup>.

- Grant counts are based on the WIPO Industrial Property Statistics series<sup>5</sup>. They are counted in the year that the grants are issued or published.
- 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. The set of distinct priority forming filings (that indexes the set of patent families) in principle constitutes a better proxy measure for the set of first filings than the set of aggregated domestic national filings added to first filings at the EPO. Trilateral patent families are a filtered subset of patent families for which there is evidence of patenting activity in all the Trilateral blocs. In addition, in this report, Four blocs patent families are a filtered subset of patent families for which there is evidence of patenting activity in all Four blocs. Other types of filters can be applied to select patent families of high importance. For example, a subset of Trilateral patent families known as "Triadic patent families" is currently reported in OECD publications.

Further definitions for statistics on procedures are given in Annex 2. Definitions of patent related terms can be found in the glossary located in the web annex<sup>6</sup>.

## Chapter 2

In this chapter, a summary of the recent developments in the Four Offices is presented. Further information on budget item definitions is given in Annex 1.

## Chapter 3

This chapter provides an assessment of the development of worldwide patent activity. Statistics are derived primarily from the Industrial Property Statistics of the WIPO<sup>7</sup>, as collected from each country and region. Patent statistics are sometimes retrospectively updated, so where necessary and possible the counts have been augmented from other sources. But otherwise no estimated counts have been included to compensate for missing data.

The number of inventions for which a patent application is filed is less than the total number of applications completed. Generally for each invention, one application is filed first in the country of residence, followed within a period of one year by applications to as many foreign countries as required, each such foreign application claiming the priority of the earlier application. First filings can be seen as an indicator of innovation and inventive activity, while foreign filings are a measure of an intention for international trade and globalization.

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<sup>4</sup> An international phase PCT application can in theory be a first filing but is usually a subsequent filings made up to twelve months after a first filing. A national (or regional) phase PCT entry follows on from the corresponding international phase PCT filing and is made up to 30 months after the first filing.

<sup>5</sup> [www.wipo.int/ipstats/en/statistics/pct/index.html](http://www.wipo.int/ipstats/en/statistics/pct/index.html)

<sup>6</sup> [www.trilateral.net/tsr/tsr\\_2008/annex/](http://www.trilateral.net/tsr/tsr_2008/annex/)

<sup>7</sup> This edition refers to WIPO data as of June 2009.

Chapter 3 also provides an indication of the interdependency and importance of the major geographical markets. The development of the total number of applications filed worldwide is given first. Next, there is a discussion of bloc-wise patent activity (first filings, origins of applications, targets of applications, patent grants). This is followed by a description of inter-bloc activity, firstly in terms of the flows of applications between the Four blocs, and then in terms of patent families.

## **Chapter 4**

This part of the report considers the substantive activities of the Four Offices.

Statistics are given for applications filed with the Four Offices from each filing bloc, also showing domestic and foreign filings. Direct applications to the Offices are counted at the date of filing. PCT applications are counted at the moment they enter the national or regional phase. Part of the demand for patent rights in the EPC states is processed through the national offices and is not considered in this chapter. The demand at the EPO is given in terms of applications rather than in terms of designations.

Statistics are provided on the breakdown of applications by fields of technology according to the International Patent Classification (IPC)<sup>8</sup>.

Although patent applications filed do indeed represent demands for services, the work is not always performed at a comparable point in time. Consequently, neither the number of applications filed nor the number of requests for examination is a perfect basis for comparison between the offices. Some indication of the services that have actually been demanded can be provided using statistics on granted patents.

Further analyses of patent grants are provided, in terms of the blocs of origin of the grants and the distributions of numbers of grants per applicant. In Chapter 4, the numbers of grant actions by the Four Offices themselves are described, even though grants by the EPO lead to multiple patents in the designated EPC states.

To illustrate the similarities as well as the differences in the granting procedures at the Four Offices, comparisons are given of the characteristics and statistics of the four patent granting procedures in the last part of the chapter.

## **Chapter 5**

This chapter shows how the PCT impacts patenting activities, particularly at the Four Offices. PCT work includes the actions required by each office for PCT applications in the international phase as Receiving Office (RO), International Searching Authority (ISA) and International Preliminary Examining Authority (IPEA).

Most of the data were obtained from the WIPO Industrial Property Statistics, as explained above regarding Chapter 3.

## **Chapter 6**

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<sup>8</sup> [www.wipo.int/classifications/ipc/en/](http://www.wipo.int/classifications/ipc/en/)

This chapter is dedicated to the other activities the Four Offices are performing that are not common to all Four Offices, as well as work related to other types of industrial property rights.

