

# Chapter 1

## DEFINITION OF TERMS

There are various types of IP protection. These include:

- Patents of invention
- Utility model patents
- Industrial design patents
- Trademarks

This report concentrates on patents of invention.

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

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

Although regional and international patenting procedures exist, patent law varies from country to country. With differing regulations and procedures, patent applications can have a different scope from place to place, e.g., with respect to the average number of claims included in one application. These variations limit the ability to compare patents between countries.

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. With the exception of some items presented in Chapter 6, all statistics relate to patents of invention only.

Statistics are presented in accordance with the following definitions:

- Domestic applications are defined as all demands for patents made by residents of the country where the application is filed<sup>4</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>1</sup> of another previous filing, and all other applications are subsequent filings. They are usually made in the home country. The subsequent filings should 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>2</sup>, and that PCT filings are subsequent filings.
- As a group, EPO, JPO, KIPO and USPTO are referred to as the “Four Offices” and this term is affixed to the words used for things related to 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 36 states party to the European Patent Convention (EPC) at the end of 2009,
  - 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 (throughout the report) or as filing blocs on the basis of the place where the patents are sought (in chapters 3 and 5).

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

Direct applications (not PCT) are counted in the year they are filed.

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<sup>4</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>1</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>2</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>3</sup>.

- Grant counts are based on the WIPO Industrial Property Statistics series<sup>4</sup>. They are counted in the year that the grants are issued or published. As for the demand for patent protection, the rights granted are considered after cumulating the number of designated countries for which rights have been granted via regional procedures.
- 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 measure for first filings than aggregated domestic national filings. For the purposes of this report, 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, Four Blocs patent families are a filtered subset of patent families for which there is evidence of patenting activity in all Four Blocs<sup>5</sup>.

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 Intellectual Property Statistics of 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 that lead to patent applications is less than the total number of applications filed. This is because the first filing with respect to an invention is usually made in one Office which is followed within a period of one year by applications to as many other Offices as required, each such application claiming the priority of the earlier first filing. First filings can be thus seen as an indicator of innovation and inventive activity, while foreign filings are an indicator of an intention for international trade and of globalization.

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<sup>3</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 follows on from the corresponding international phase PCT filing and is made up to 30 months after the first filing if the applicant decides to do so.

<sup>4</sup> <http://www.wipo.int/ipstats/en/statistics/pct/index.html>

<sup>5</sup> For discussion of patent families in general see the OECD working paper "Insight into different types of patent families", by C. Martinez, [www.oecd-ilibrary.org/oecd/content/workingpaperseries/18151965](http://www.oecd-ilibrary.org/oecd/content/workingpaperseries/18151965)

<sup>6</sup> <http://www.trilateral.net/statistics/tsr.html>

<sup>7</sup> This edition refers to WIPO data as of April 2010.

This chapter provides some indication of the interdependency and importance of the major geographical markets. 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 patents 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>.

The filing of patent applications represents demands for services from patent Offices, but the work is not always performed at a comparable point in time at the various Offices. Consequently, neither the number of applications filed nor the number of requests for examination is a perfect basis for comparison of Offices. Some indication of the services that have actually been demanded can be provided using statistics on granted patents. To illustrate the similarities as well as the differences in the granting procedures at the Four Offices, comparisons of the characteristics and statistics of the four patent granting procedures are given in the last part of the chapter.

Further analyses of patent grants are provided, broken down by 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. It should be remembered that each grant action by the EPO can lead to as many national patents as the number of EPC states that had been designated.

## **Chapter 5**

This chapter shows how the PCT influences 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 Statistics, as explained above regarding Chapter 3.

## **Chapter 6**

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<sup>8</sup> <http://www.wipo.int/classifications/ipc/en/>

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