

# Chapter 1

## INTRODUCTION

### Definitions of terms

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

- patents of invention,
- utility model patents,
- industrial design patents,
- trademarks, and
- copyrights.

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

Despite the existence of regional and international procedures, patent rights may differ among countries all over the world. One reason is that patent law is different in every country. With different patent laws and procedures, applications can have a different scope, e.g. with respect to the average number of claims included in one application. This is one of the basic reasons for the differences between the number of patent applications in Japan compared to those in Europe and the United States. The existence of differences in the scope of applicability of patent rights compromises to some extent the ability to compare patents from different 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**, comprising of:
  - **regional** procedures, (for example the European or the African Intellectual Property Organization), and,
  - the **international** Patent Cooperation Treaty (PCT) procedure.

In this chapter, the statistics presented in the report and the relations among them are briefly described. All statistics, apart from some of those in Chapter 6, relate to patents of invention only.

Statistics are presented in accordance with the following definitions:

- Four geographical blocs are defined: the **European Patent Convention (EPC) contracting states** (corresponding to the territory of all the states party to the EPC at the end of the reporting year), **Japan**, the **USA**, and the rest of the world referred to

as the bloc identified as “**Others**”.

- Demand for patent protection is considered principally counting each **supranational application** only once. However, alternative presentations are also given in some places in terms of **demand for patent rights** that include the number of designated countries in each supranational application.
- Filings of **PCT applications** are counted in the year of filing in the international phase, which is the first part of the PCT procedure.
- **Domestic applications** are defined as demands for patent rights made by residents of the country where the application is filed. For the purpose of reporting statistics for the EPC contracting states considered as a bloc, **foreign applications** are those applications made by non-residents of the EPC bloc as a whole. For example, applications made by French residents 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 of a previous filing, and all other applications are considered **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>1</sup>, and that PCT filings are subsequent filings.
- **Grants** are reported as recorded by the WIPO in its Industrial Property Statistics series.
- A **patent family** is a group of patent filings that claim the priority of a single filing, including the original priority filing itself, and any subsequent filings made throughout the world. The set of distinct priority 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 trilateral blocs. Other types of filters can be applied to select patent families of high importance, for example, the subset of Trilateral patent families known as “Triadic patent families” that are currently reported in OECD publications. These require achievement of an application to the EPO itself rather than any patent office in the EPC contracting states. They also require that there be a grant at the USPTO rather than only an application there.

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<sup>1</sup> Except in the section on patent families, for estimation of the numbers of first filings in the EPC bloc, an approximation is made by adding first filings at the EPO to aggregated domestic national applications in the EPC contracting states.

## **Chapter 2**

In this chapter, a summary of the recent developments in the Trilateral offices is presented.

## **Chapter 3**

The third chapter of the report provides an assessment of worldwide patent applications. Statistics in this chapter are derived primarily from the Industrial Property Statistics of the WIPO.

The number of inventions for which a patent application is filed is less than the total number of applications made. Generally for each invention, one application is filed first in the country of residence, followed 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 international trade and globalization.

This chapter also gives 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 trilateral blocs, and then in terms of patent families.

## **Chapter 4**

This part of the report considers the substantive activities of the Trilateral offices. The aggregate demand for services in the patent procedures of the Trilateral offices is not exactly equivalent to the overall demand for patent rights. For example, the designated offices do not examine PCT applications definitively until they enter the national or regional phase.

Statistics are given for applications filed with Trilateral offices from each filing bloc, also showing domestic and foreign filings. They are counted at the date of filing for direct national applications at the JPO and the USPTO, and for direct regional applications at the EPO. PCT applications are counted at the moment they enter the national or regional phase. Part of the demand for patent rights in the EPC contracting states is processed through the national offices, and therefore does not result in workload for the EPO. 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).

Although the 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. Taking into account the fact that the percentage of applications that are granted is generally constant in each of the three procedures, some indicator of services actually demanded can nevertheless be provided using statistics on granted patents.

An analysis of patent grants is also provided, both in terms of the blocs of origin of the grants and in terms of the distributions of numbers of grants per applicant. In Chapter 4, the numbers of grant actions by the Trilateral offices themselves are described, even though grants by the EPO lead to multiple patents in the designated EPC contracting states.

To illustrate the similarities as well as the differences in the granting procedures of the three offices, characteristics of the trilateral patent granting procedures are shown in the last section of Chapter 4.

## **Chapter 5**

This chapter shows how the PCT impacts patenting activities. PCT work includes the actions required by the three offices for PCT applications in the international phase as international search authorities and international preliminary examination authorities.

Most of the data were obtained from WIPO Industrial Property Statistics, as reported by each country and region. However, some statistics (e.g., national stage figures, international search information, and international preliminary examination information) were provided by the Trilateral offices.

## **Chapter 6**

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