

Chapter 1

INTRODUCTION

Intellectual Property (IP) refers to a variety of mechanisms that have been established for protecting “creations of the mind”², including:

- Patents for invention
- Utility models
- Trade secrets
- Industrial designs
- Trademarks
- Geographic indications

to protect industrial innovations, and

- Copyrights

for literary and artistic creations.

This report focuses on industrial property rights and almost exclusively on patents for Invention³. It is notable that the activity of patents for invention is recognised throughout the world as a useful indicator of innovative activity.

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

- National procedures
- Regional procedures (for example, those created by the African, Eurasian, European and Gulf regional organizations)
- The Patent Cooperation Treaty (PCT) procedure

Each country and region maintains its own patent procedures in order to encourage innovative activities and to optimise the regional benefits of innovation. Enhanced international cooperation led to the establishment of different regional and international patenting procedures. But the patent laws vary from country to country. The scope of an individual patent application can also differ according to location. These factors limit the degree to which the patenting activity in different countries and regions can be directly compared.

The patent systems at the IP5 Offices are all based on the first-to-file principle and follow the Paris Convention. To a large extent, this drives the usage of the patent systems worldwide. A first patent application is usually filed to the local national authority to protect the invention, followed within a one year priority period by subsequent applications to expand protection to other countries.

² See also, World Intellectual Property Organization, “What is Intellectual Property?” <https://www.wipo.int/about-ip/en/> and World Intellectual Property Indicators – 2020, <https://www.wipo.int/publications/en/details.jsp?id=4528>

³ Patents for invention are called utility patents in the case of the USPTO which are different from utility model patents as explained in Chapter 6.

Separate references are made to "direct" applications filed under national and regional procedures and "PCT" international phase applications, in order to distinguish the two subsets of applications handled by the patent offices. While applications filed under national procedures are handled by national authorities, regional applications are subject to a centralised procedure and usually only after grant do they fall under national (post grant) regulations. PCT applications are handled at first by the appointed offices during the international phase. Up to about 30 months after the first filing, the PCT applications enter the national/regional phase to be treated as national or regional applications according to the regulations of each designated office.

In this report, patenting activities are presented for the following six geographical blocs:

- The European Patent Convention (EPC) contracting states (EPC states in this report) corresponding to the territory of the 38 states party to the EPC at the end of 2020
- 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 rest of the world (Others in this report)

The first five of these blocs are called the "IP5 Blocs." Throughout the report, the 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 the patents are sought.

The contents of each chapter in this report are briefly described below. With the exception of some items presented in Chapter 6, the statistics relate to patents for invention.

Please refer to Annex 2 for explanations of the statistical and procedural terms that are used.

Together with this report, there is an annex including a glossary of patent-related terms and a statistical table file that includes extended time series and graphs of much of the data found in this report⁴.

Chapter 2 - The IP5 Offices

A summary of the recent developments in each of the IP5 Offices is presented in Chapter 2. The terminologies for the budget items that appear are provided in Annex 1.

Chapter 3 - Worldwide Patenting Activity

An assessment of worldwide patent activity is presented in Chapter 3. This covers not only patenting activity at the IP5 Offices, but in the rest of the world as well.

The numbers of applications filed are presented in separate sections that use different definitions for counting. This provides a description of worldwide bloc-wise patenting activity for filings, first filings, applications, demands for national patent rights, grants and national patent rights granted. Next, a description of inter-bloc activity is presented,

⁴ <https://www.fiveipoffices.org/statistics>

firstly in terms of the flows of applications between the IP5 Blocs, and then in terms of patent families⁵.

The statistics are mainly derived from the WIPO Statistics Database⁶, that includes data from each country and region.

Chapter 4 – Patent Activity at the IP5 Offices

The substantive activities of the IP5 Offices are presented in Chapter 4. This gives statistics on patent application filings and grants at the offices, as well as some comparative data on operations. The statistics are derived from IP5 Offices' internal databases.

Firstly, statistics are given for requests for patents with the IP5 Offices, including domestic and foreign filing breakdowns. Then, statistics are provided displaying the breakdown of applications by sectors and fields of technology according to the International Patent Classification (IPC)⁷.

Then, the numbers of grant actions by the IP5 Offices, broken down by the blocs of origin of the grants, are provided. The distributions of the numbers of grants per applicant are also described.

To illustrate the similarities as well as the differences in the granting procedures at the IP5 Offices, characteristics and statistics of the five patent granting procedures are given in the last part of the chapter.

Chapter 5 – The IP5 Offices and the Patent Cooperation Treaty (PCT)

In Chapter 5, the influence of the PCT on patenting activities is displayed through worldwide activities broken down by geographical blocs and IP5 Offices, particularly in terms of proportions of patent filings that use the PCT, proportions of PCTs from the international phase that then enter the national/regional phase, the share of PCTs among applications, the share of PCTs among grants and the proportions of PCT usage within patent families. As with Chapter 3, statistics are derived primarily from the WIPO Statistics Database, that includes data collected from each country and region. Statistics are also included to describe the PCT related activities of the IP5 Offices including activities as Receiving Office (RO), International Searching Authority (ISA) and International Preliminary Examining Authority (IPEA).

Chapter 6 – Other Work

This chapter is dedicated to some other patenting activities that are not common to all of the IP5 Offices, as well as to work related to other types of industrial property rights. This supplements the information that is provided in the rest of the report.

⁵ For a further discussion of patent families, see Chapter 3 and the term definitions in Annex 2.

⁶ This edition refers to general patent data as of April 2021, and to PCT international phase application data as of May 2021, <https://www.wipo.int/ipstats/en/index.html>

⁷ <https://www.wipo.int/classifications/ipc/en/>

Annex 1 – Definitions for IP5 Offices' expenditures

This explains some terms that appear in Chapter 2.

Annex 2 – Definitions of terms and statistics on procedures

This gives more detailed information on the statistics that appear in the report, particularly for Table 4.3 in Chapter 4.

Annex 3 – Acronyms

This writes acronyms in full and in each case refers to the page of first occurrence of the acronym.