

Four Office Statistics Report

2008 EDITION

(corrected version*, April 22, 2010)

* Fig. 3.1 and Fig. 5.1 has been replaced

(corrected version*, June 24, 2010)

* Fig. 5.1 has been replaced again.



Four Office Statistics Report 2008 Edition

European Patent Office,
Japan Patent Office,
Korean Intellectual Property Office,
United States Patent and Trademark Office

Edited by JPO, Tokyo, October 2009

Preface

Since 1985, the European Patent Office (EPO), the Japan Patent Office (JPO), and the United States Patent and Trademark Office (USPTO), which are commonly referred to as the Trilateral Offices in the patent community, have been jointly producing the Trilateral Statistical Report (TSR). Collaboration between the Trilateral Offices has proved to be successful in the area of patent statistics. As one major player in the worldwide intellectual property (IP) activity the Korean Intellectual Property Office (KIPO) has now joined the Trilateral Statistical Working Group in their endeavour towards improved statistical cooperation. Moreover, this year is memorable because KIPO has become one of the joint producers of the report. EPO, JPO, KIPO and USPTO are referred to as “Four Offices” in this report and the TSR has expanded to become the “Four Office Statistics Report (FOSR)”.

This is an annual compilation of patent statistics. In addition to promoting a better understanding of the importance of patent rights in the world, the report explains each Office’s operations and informs about patent grant procedures. In order to do this, the report discusses background activities at each Office, reviews worldwide patenting developments and then compares the patent related work at the Four Offices. The FOSR supplements annual reports for each of the Four Offices and also presents specific statistics that are collected by the International Bureau of the World Intellectual Property Organization (WIPO) and as available in publications databases.

Applications for patent rights among the Four Offices slightly decreased in calendar year 2008. Together the Four Offices experienced a 0.1 percent decrease in patent applications compared to 2007. Only the EPO experienced a marked positive growth of 3.6 percent. At the USPTO, the total patent application filings in 2008 were almost the same as those in 2007. On the other hand, there was a decrease by 1.3 percent at JPO, continuing a recent declining trend, and a decrease by 1.1 percent at KIPO. JPO had the highest proportion of domestic filings at almost 84 percent. The proportion of domestic filings at EPO was 49 percent, at KIPO was 74 percent and at USPTO was 51 percent. In terms of fields of technologies, physics-related technologies represent the highest share at each Office, and textiles and paper technologies represent the lowest. The Four Offices granted a combined total of 478 064 patents in 2008, which is a 4.5 percent of decrease compared to 500 641 patents granted in 2007, mainly due to a big decrease in patents granted at the KIPO in 2008.

Various factors have influenced patent filing trends in the past. These include changes to patent rules and fees. For example, the supranational systems operating under the European Patent Convention (EPC) and the Patent Cooperation Treaty (PCT) have changed to a full open option system that allows applicants to delay their choice to proceed to the stage of full examination of their applications. The average numbers of designated countries per application in these systems have consequently increased in recent years. This has led to a higher level of demand for patent rights. All PCT member countries are automatically designated at the outset. The set of countries that is chosen still tends to be restricted later on when applicants have to formalize their geographical choice by paying fees as the application enters the national/regional phases of the granting procedure.

Economic activity is clearly a determinant of patenting levels. However, quantitative interpretation of worldwide patenting activity in terms of specific economic factors is not easy. Other factors, such as political and technological considerations, need to be considered as well.

The international financial crisis in 2008 has led to a global economic recession. There have also been significant declines in stock market prices in 2008 and the first half of 2009 for most countries. Manufacturing industry accounts for most patent applications, and innovation is highly dependent on investment capacity of companies.

According to International Monetary Fund¹, “the global economy is beginning to pull out of a recession unprecedented in the post–World War II era, but stabilization is uneven and the recovery is expected to be sluggish. Economic growth during 2009–10 is now projected to be about ½ percentage points higher than projected in the April 2009 World Economic Outlook, reaching 2.5 percent in 2010. Financial conditions have improved more than expected, owing mainly to public intervention, and recent data suggest that the rate of decline in economic activity is moderating, although to varying degrees among regions. Despite these positive signs, the global recession is not over, and the recovery is still expected to be slow, as financial systems remain impaired, support from public policies will gradually diminish, and households in countries that suffered asset price busts will rebuild savings.”

Preliminary indications are that some declines in numbers of patent filings are taking place in 2009. But previous downturns in the world economy have usually led to very mild corrections in the upward path of patent demand, resulting in only small declines or static levels for no more than one year only.

Research and development (R&D) expenditures are often cited as a key measure of innovation. Innovation strategies of companies increasingly depend on global sourcing to sense new market and technology trends worldwide, as global competition has forced them to develop commercially viable products and services more quickly. Spending on innovation helps to increase the stock of knowledge, which fuels patenting. As IP continues to become more significant in a highly competitive global market, patents are increasingly being emphasized for a variety of business strategies, such as developing favourable partnerships and licensing agreements, capturing market share, participating in markets to trade patent rights and attracting capital for other new ventures. With a greater emphasis on patenting, there is an expectation that demand will follow, especially from countries with rapidly expanding economies.

Globalisation of markets and production continue to be key business trends. There is a continuing worldwide tendency to harmonise patent laws towards common international standards and to stimulate the flow of patent applications across borders. This has had a positive impact on worldwide patent growth over recent years.

The Four Offices hope that this report brings useful information to the reader. The Offices will continue to improve and to refine the report to better serve expectations and objectives of the public. The report is also available on the Trilateral Co-operation

¹ “World Economic Outlook UPDATE”, July 8, 2009
(www.imf.org/external/pubs/ft/weo/2009/update/02/index.htm)

web site². Material can be freely reproduced in other publications but we request that this should be accompanied by a reference to the title and web site location of this report. An additional annex appears in the web version that gives a glossary of patent related terms, and there is also a file that contains statistics from the report over a greater number of previous years.

EPO, JPO, KIPO and USPTO
With co-operation of WIPO
October 2009

² www.trilateral.net/statistics/tsr.html

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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 filed³. 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 priority⁴ 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 filings⁵, 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 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 to 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,

³ 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.

⁴ 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

⁵ 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.

after cumulating the number of designated countries in each supranational application.

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

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 phase⁶.

- Grant counts are based on the WIPO Industrial Property Statistics series⁷. 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 annex⁸.

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 WIPO⁹, 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.

⁶ 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.

⁷ www.wipo.int/ipstats/en/statistics/pct/index.html

⁸ www.trilateral.net/statistics/tsr.html

⁹ This edition refers to WIPO data as of June 2009.

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.

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)¹⁰.

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

¹⁰ www.wipo.int/classifications/ipc/en/

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.

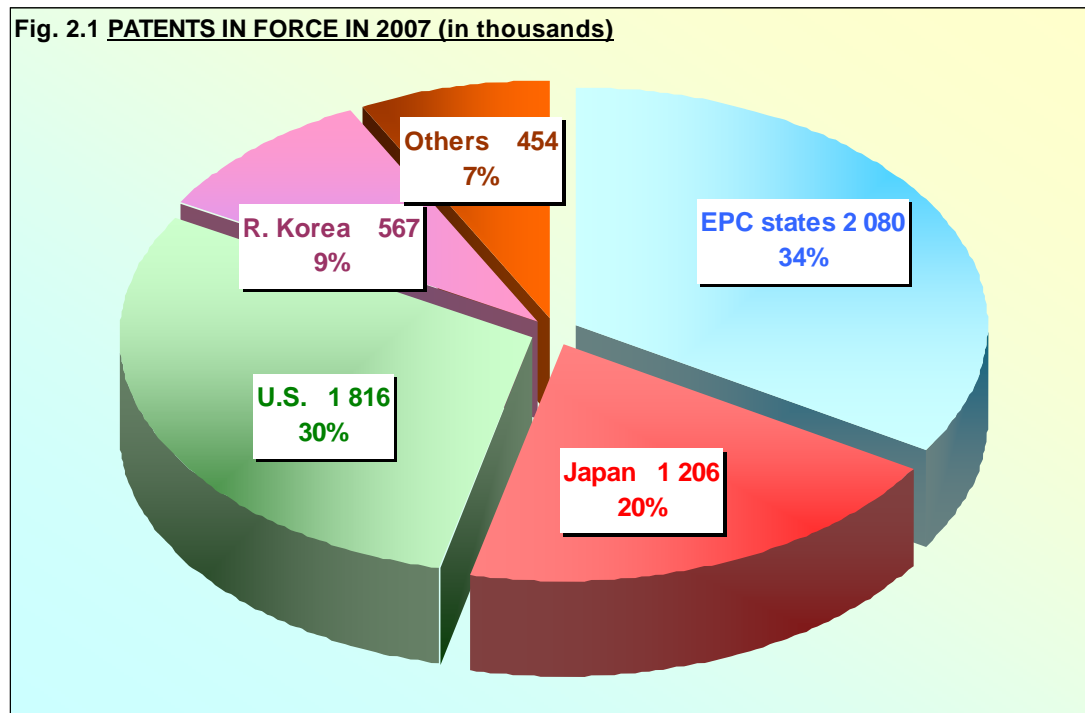
Chapter 6

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.

Chapter 2

THE FOUR OFFICES

Patent rights are recognized throughout the world as a measure of innovation output. The EPO, JPO, KIPO and USPTO are among the largest IP offices in the world in terms of the volume of patent applications they handle. The following figure shows the role played by the Four Offices in the patenting activity.



Based on the most recent information on worldwide patent rights available from the WIPO Patent Statistics and from some other offices, it appears that at the end of the year 2007, 93 percent of the 6.1 million patents in force¹¹ in the world, were valid in the Four Offices jurisdiction.

¹¹ Data for 2007 are missing for some countries in WIPO data, in which case data for 2007 in each annual report of such countries or WIPO data for 2005 or 2006 were used as available.

EUROPEAN PATENT OFFICE

The EPO, the main patent granting authority for Europe, is an example of economic and political cooperation, providing patent protection at the end of 2008 in up to 38 European countries on the basis of a single patent application and a unitary grant procedure. The EPO receives currently more than 50 percent of all the patent applications filed in the area of the EPC contracting states.

At the end of 2008, the 34 members of the underlying European Patent Organisation were:

| | | | | |
|----------------|-------------|---------------|----------------|-----------|
| Austria | Belgium | Bulgaria | Croatia | Cyprus |
| Czech Republic | Denmark | Ellas | Estonia | Finland |
| France | Germany | Hungary | Iceland | Ireland |
| Italy | Latvia | Liechtenstein | Lithuania | Luxemburg |
| Malta | Monaco | Netherlands | Norway | Poland |
| Portugal | Romania | Slovakia | Slovenia | Spain |
| Sweden | Switzerland | Turkey | United Kingdom | |

Other states have agreements with the EPO to allow applicants to request an extension of European patents to their territory. At the end of 2008, extensions of European patents could be requested for:

Albania, Bosnia-Herzegovina, the F.Y.R. Of Macedonia, and Serbia.

Together, the above states build a market of about 600 million people.

On January 1, 2009 the F.Y.R. Of Macedonia became a member of the European Patent Organisation, and San Marino joined on July 1, 2009. Other states are likely to join the Organisation in the future.

Grant Procedure

The mission of the EPO is to support innovation, competitiveness, and economic growth across Europe through a commitment to high quality and efficient services delivered under the EPC, particularly by granting European patents. The EPO also acts as a receiving, searching, and examining authority under the PCT. A further task is to perform, on the behalf of patent offices of certain member states, state of the art searches for the purpose of national procedures and to carry out searches at the request of third parties.

Adopted during a diplomatic conference in November 2000, the revised European Patent Convention (EPC 2000) entered into force on December 13, 2007¹². It aimed at bringing the Convention fully in the line with the recent developments in international law, in particular the Agreement on Trade-Related aspects of Intellectual Property Rights and the Patent Law Treaty. It strengthens the position of applicants and patentees, simplifies the access to patent protection and introduces new legal remedies,

¹² www.epo.org/patents/law/legal-texts/epc2000.html

without departing from the fundamental principles established in the original convention of 1973.

The London Agreement was ratified by a large enough number of countries to enter into force in May 2008 in 14 contracting states. This is a major step towards reducing translation costs for granted European patents.

The EPO continued to develop its quality management system based on the highest standards. Among other methods, systematic regular quality control checks on sampled search reports and granted applications enable a system of preventive and corrective actions.

In Table 2.1, the latest production figures for search (European, PCT and national searches), for examination (European and PCT Chapter II), for opposition and for appeal in the European procedure are given for the years 2007 and 2008.

Table 2.1: EPO PRODUCTION INFORMATION

| PRODUCTION FIGURES | 2007 | 2008 |
|--|----------------|----------------|
| Applications filed (Euro-direct & PCT regional phase) | 141 439 | 146 561 |
| Searches carried out | | |
| European (including PCT supplementary) | 84 698 | 87 667 |
| PCT international | 73 880 | 82 063 |
| On behalf of national offices and other | 18 877 | 17 104 |
| Total production search | 177 455 | 186 834 |
| Examination - Opposition (final actions) | | |
| European examination | 90 310 | 99 053 |
| PCT Chapter II | 11 513 | 10 430 |
| Oppositions | 2 085 | 1 982 |
| Total final actions examination-opposition | 103 908 | 111 465 |
| Appeals settled | | |
| Technical appeals | 1 620 | 1 737 |
| PCT protests | 41 | 45 |
| Other appeals | 61 | 67 |
| Total decisions | 1 722 | 1 849 |

In 2008, the Office production in search increased by 5 percent to about 186 800 completed searches. While the examination work under the PCT has been reduced, the number of final actions in examination at EPO increased by 10 percent to about 99 100. In 2008, about 1 850 decisions in appeal were completed (7 percent more than in 2007).

Documentation

The Office further improved the range and quality of its databases and online search tools in 2008. At the end of the year, the electronically searchable EPO database contained more than 64 million patent documents. The database now covers 84 countries and is accessible to the public via the World Patent Finder (*esp@cenet*). The literature documentation on patent and non-patent literature now contains 86 million

searchable abstracts, 9 million more than in 2007. A special effort was made to improve patent data coverage of Asia.

The EPO citation database currently contains more than 85 million references relating to 13 million applications or publications. Quality control resulted in half a million corrections related to 5.6 million cited documents.

The bibliographic database was augmented with more than 3 million documents to 68 million and around one million corrections were made.

The electronic filing tool *epoline*® increased in popularity with the users. In 2008, almost half of the European applications were filed online.

Patent Information

EPO is a producer of patent information products and services and has set up databases that are available not only for internal use, but also for dissemination by national offices.

The Office launched in 2008 the new SmartSearch feature in *esp@cenet* and ESPACE Global Patent Index, a world patent search product. These products facilitate the search for patent documents.

Two updates of the World Patent Statistical Database (aka PATSTAT¹³) were distributed, in spring and autumn 2008 respectively, incorporating amendments as suggested by the users. The EPO developed best-practice examples of how to use this database for patent statistics and patent mapping.

International Cooperation

EPO is engaged in different types of co-operation programmes.

The co-operation within the European Patent Network concentrated on the exchange of best practices and tools and the exchange of knowledge and expertise among member states. The second annual meeting took place in Sofia in June.

The partnership with the European Union (EU) Neighbourhood policy helps neighbouring countries to harmonise with European IP standards.

Other bilateral programmes are run under partnership agreements with the European Commission (EC) such as the regional programme for IP for the Western Balkans and Turkey; and the EU-China IPR2 project which was presented to industry representatives in Brussels.

EPO shares responsibility with USPTO and JPO for a Trilateral quality management system, some work-sharing projects and development of e-learning training modules to be used by the Trilateral Offices. In the context of the IP five offices co-operation

¹³ www.epo.org/patents/patent-information/raw-data/test/product-14-24.html

with USPTO, JPO, SIPO and KIPO, ten foundation projects were identified for possible joint development.

EPO income statement

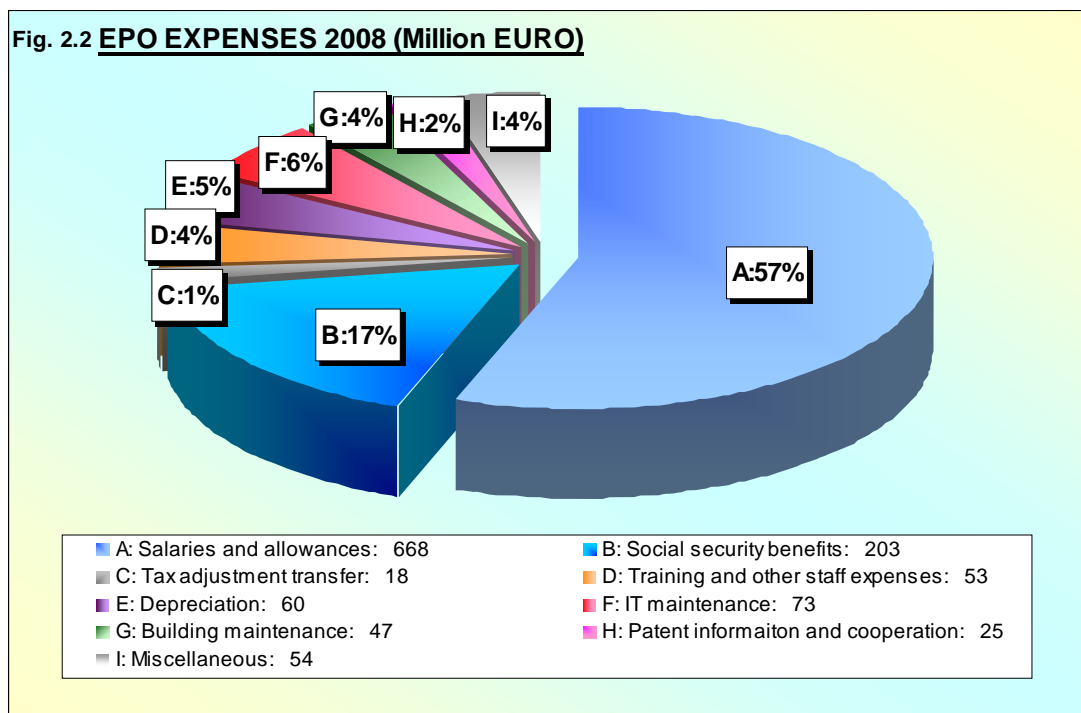
EPO is financially autonomous and makes its financial statements since 2006 in accordance with International Financial Reporting Standards (IFRS). Expenses are to be covered entirely out of revenue, mainly from patent fees paid by applicants and patentees.

Fees related to the patent grant process, such as filing, search, examination, appeal fees as well as renewal fees for European patent applications (i.e. before grant) are paid to EPO directly. Renewal fees for European patents (i.e. after grant) are collected by the designated contracting states and determined by national law. From these renewal fees, 50 percent is kept by the national offices and 50 percent is transferred to EPO.

Under IFRS, procedural fees are not recorded automatically as revenue in the accounting year in which they are received, but instead are treated as deferred income, to be included as revenue in the year during which the relevant task is actually performed. A similar concept is applied also for all other types of income. In 2008, the total income, after netting finance revenue and finance costs, amounted to EUR 1 260 million.

On the expenditure side, in addition to salaries and allowances, staff expenses include entitlements for post-employment social benefits as far as these are built-up during the accounting year, including pensions as well as sickness and long-term care costs.

In conformity with IFRS, all expenses were recorded following the accrual principle, irrespective of whether or not cash disbursements took place in the period under consideration. For the same reason, depreciation for buildings, IT equipment and other tangible and intangible assets are shown under expenses.



A detailed description of the items in Fig. 2 can be found in Annex 1.

EPO Staff

In 2008, 348 employees were recruited of which 286 were examiners. By the end of the year, the staff complement reached a total of 6 685, including 3 864 examiners in search, examination, opposition, and 152 members of Board of Appeal.

More information

Further information can be found on the EPO's Homepage:
www.epo.org

JAPAN PATENT OFFICE

JPO is committed to comprehensive development of industry through planning and carrying out examinations and appeals under the system of IP rights, which includes patents, utility models, designs, and trademarks.

In order to ensure suitable growth, it is essential for Japan to establish itself as an IP-based nation where the achievements of intellectual creation activities become the source of national wealth. It is necessary to establish "the intellectual creation cycle" of creation, protection and exploitation of IP in order to achieve an IP based nation. To this end, JPO, which is responsible for the core of the IP administration, specifies measures to establish the human and system environments that will support the adequate protection and effective exploitation of IP.

Development of Intellectual Property Policy

The "Intellectual Property Strategic Program 2008" was adopted on June 18, 2008. This program contains various measures with particular emphasis on the following three priority issues:

- Enhancing further Japan's international competitive edge in the priority strategic fields
- Strengthening development in international markets
- Exhibiting leadership in efforts for world's common issues or Asian various issues, highlighting five important strategies, "IP for Innovation", "Global IP", "Promotion of Soft Power Industries", "Stable IP", and "User-Friendliness".

Recent Improvements to Japan's IP system

The Bill to Partially Amend the Patent Act and Other IP-Related Acts, which was promulgated in April 18, 2008, was formulated from the following perspectives: establishment of an IP system more friendly to users; and strategic utilization and adequate protection of IP rights. The bill includes revision of the non-exclusive license registration system, revision of the time limit for filing a request for an appeal, expansion of the network of electronic exchange of priority documents, and reduction of patent/trademark fees, etc. "Reduction of patent/trademark fees" has been effected on June 1, 2008. The other revisions have been effected on April 1, 2009.

Efforts related to Patents

With the goal of implementing expeditious and accurate patent examinations according to the highest global standards, JPO is making efforts to fundamentally strengthen the examination system by increasing the number of fixed-term examiners and outsourcing prior art searches to registered search agencies in the private sector. In addition, JPO has continued its efforts to maintain and improve the quality of patent examinations through activities such as the establishment of the Quality Management system. Furthermore, JPO is promoting international cooperation in patent examination, through programs such as the Patent Prosecution Highway (PPH) and JP-FIRST (JP-Fast Information Release Strategy).

Further efforts toward expeditious and efficient patent examination

- Securing the necessary number of examiners through the appointment of new fixed-term examiners
- Ahead of other countries, JPO has established a paperless system for all procedures, from the filing of an application to the examiner's decision. This enables active promotion of the world's first outsourcing of prior art searches to the private sector, and has enhanced efficiency to a significant degree.

Table 2.2: JPO NUMBER OF PATENT EXAMINERS

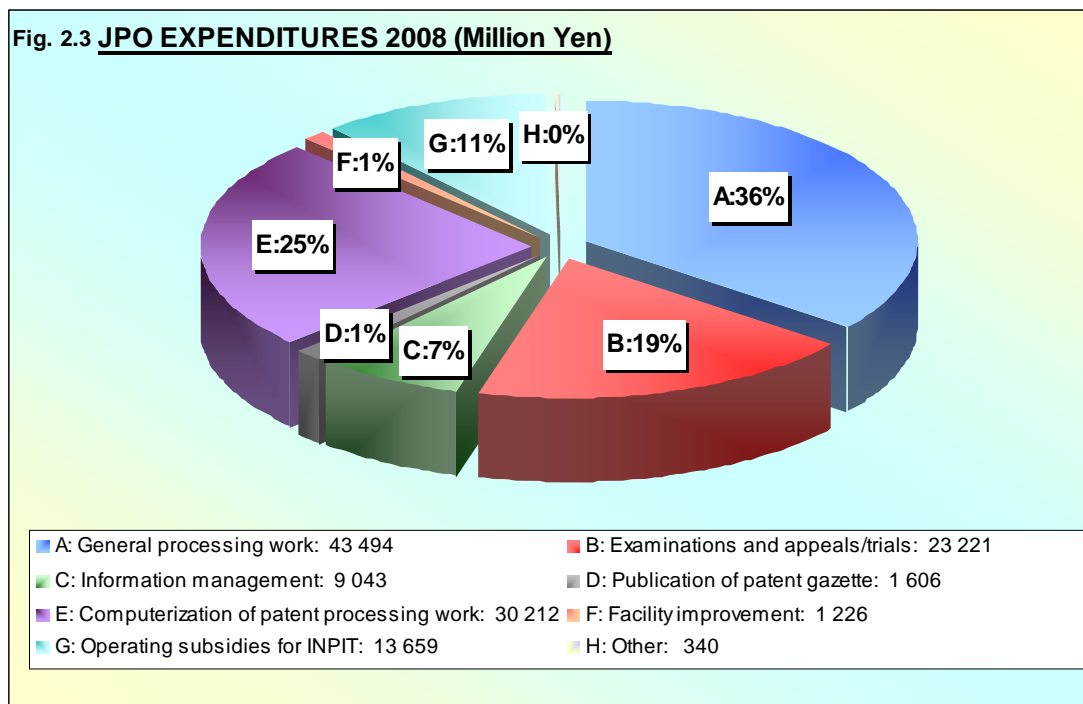
| Examiners | FY 2007 | FY 2008 ¹⁴ |
|------------|-------------|-----------------------|
| Regular | 1 175 (+1) | 1 190 (+15) |
| Fixed-term | 392 (+98) | 490 (+98) |
| Total | 1 567 (+99) | 1 680 (+113) |

Table 2.3: JPO PRODUCTION INFORMATION

| PRODUCTION FIGURES | | 2007 | 2008 |
|-----------------------|---|---------|---------|
| Applications | Domestic | 333 498 | 330 110 |
| | Foreign | 62 793 | 60 892 |
| | Total | 396 291 | 391 002 |
| Examinations | Requests | 376 310 | 347 836 |
| | First actions | 307 665 | 342 654 |
| | Final actions | 299 628 | 318 903 |
| Registration | Domestic | 145 040 | 151 765 |
| | Foreign | 19 914 | 25 185 |
| | Total | 164 954 | 176 950 |
| Appeals/Trials | Demands for Appeal against examiner's decision of refusal | 32 586 | 31 019 |
| | Demands for Trial for invalidation | 284 | 292 |
| PCT activities | International searches | 26 033 | 26 523 |
| | International Preliminary examinations | 2 741 | 2 321 |

¹⁴ The period of JPO's FY 2008 is from April 1, 2008 to March 31, 2009.

JPO Budget



A detailed description of the items in Fig. 2.3 can be found in Annex 1.

JPO Staff Composition

As of the end of FY 2008, JPO employed a total of 2 901 staff. This includes 98 new fixed-term examiners.

| | | |
|-------------------|-------------------------|-------|
| Examiners: | Patent / Utility model: | 1 680 |
| | Design: | 52 |
| | Trademark: | 150 |
| Appeal examiners: | | 386 |
| General staff: | | 633 |
| Total: | | 2 901 |

More information

Further information can be found on the JPO's Homepage:
www.jpo.go.jp

KOREAN INTELLECTUAL PROPERTY OFFICE

Mission Statement and Strategic Goals

The mission of the Korean Intellectual Property Office is as follows:

To contribute to technical innovation and industrial development by facilitating the creation, commercialization and utilization of intellectual property and by strengthening the protection of intellectual property.

To execute the mission effectively, KIPO established the following six strategic goals:

- To conduct world-class examinations and trials
- To build a world-class IT system for patent administration
- To reinforce the basis for the creation of IP
- To facilitate the utilization of IP
- To fortify the basis for the protection of IP
- To implement customer and performance-based management.

Major Developments in 2008

In 2008, KIPO established and implemented the EXCEL(EXamination exCELLence) plan to enhance the quality of its patent examination. More specifically, 39 projects were implemented in three categories: (i) optimization of the examination infrastructure, (ii) enhancement of examination quality, and (iii) efficient management of examination quality. In addition, KIPO introduced a three-track examination system to meet the sophisticated and varying needs of applicants. The system enables applicants to choose an accelerated examination, a regular examination, or a customer-deferred examination. KIPO has adopted these measures to pursue a customer-oriented patent examination service of the highest quality.

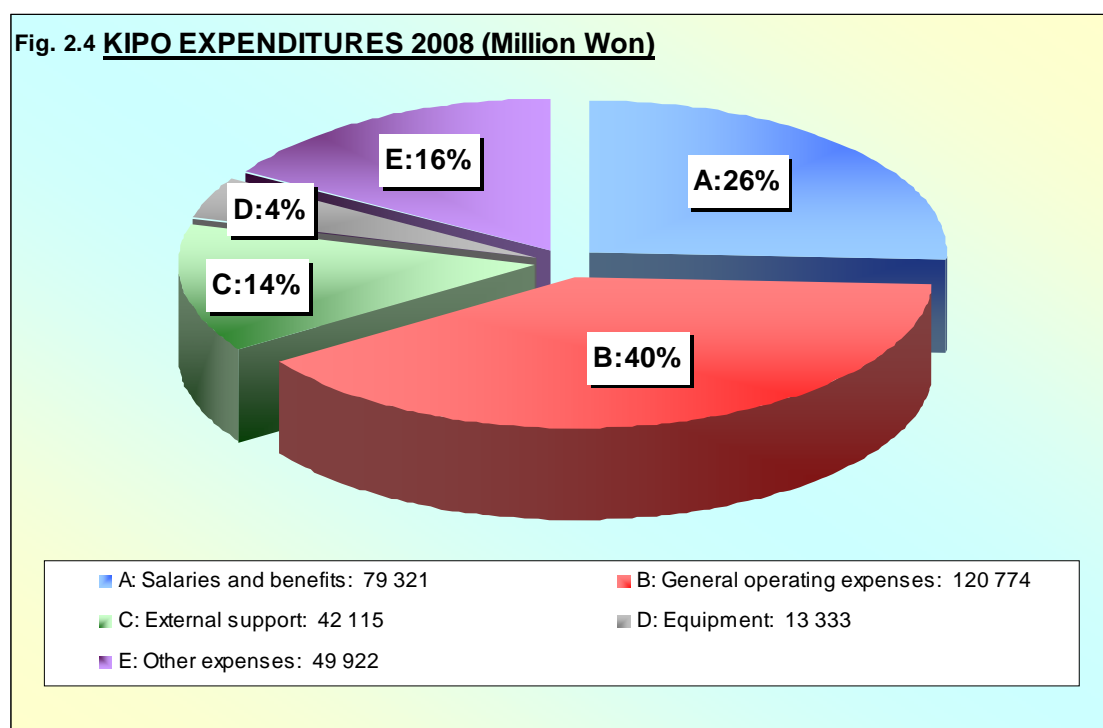
With regard to patent information, the number of domestic and international intellectual property rights stored in KIPO's database at the end of 2008 exceeded 42 million. Aside from being used in patent examinations, this information is used to promote R&D in the public and private sectors and to boost the creation of intellectual property among academic institutes, small and medium sized enterprises (SMEs), and the general public.

To raise public awareness of intellectual property, KIPO has been promoting open innovation through various projects such as the Campus Patent Strategy Universiade in collaboration with industry and academia. KIPO also initiated the "Happy CEO" project, which provided timely and appropriate support for SMEs through comprehensive consultations on intellectual property management.

Table 2.4: KIPO PRODUCTION INFORMATION

| PRODUCTION FIGURES | 2007 | 2008 |
|--|-------------|-------------|
| Applications filed | | |
| Domestic | 128 701 | 127 114 |
| Foreign | 43 768 | 43 518 |
| Total | 172 469 | 170 632 |
| Examination | | |
| Requests | 137 446 | 143 916 |
| First actions | 129 147 | 95 504 |
| Final actions | 152 417 | 108 897 |
| Grants | | |
| Domestic | 91 562 | 61 115 |
| Foreign | 32 143 | 22 408 |
| Total | 123 705 | 83 523 |
| Applications in appeal | 10 950 | 12 238 |
| PCT activities | | |
| International searches | 8 280 | 12 936 |
| International preliminary examinations | 586 | 474 |

KIPO Budget



A detailed description of the items in Fig. 2.4 can be found in Annex 1.

KIPO Staff Composition

| | |
|------------------|-------|
| Examiners | 807 |
| Patents | 678 |
| Designs | 27 |
| Trademarks | 102 |
| Appeal examiners | 88 |
| Other staff | 616 |
| Total | 1 511 |

More information

Further information can be found on KIPO's Homepage:
www.kipo.go.kr

UNITED STATES PATENT AND TRADEMARK OFFICE

Mission Statement

The mission of the United States Patent and Trademark Office is:

To foster innovation and competitiveness by: Providing high quality and timely examination of patent and trademark applications, guiding domestic and international intellectual property policy, and delivering intellectual property information and education worldwide.

The USPTO's core mission continues "to promote the progress of science and the useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries" (Article 1, Section 8, Clause 8, of the U.S. Constitution).

Services and Operations

As an agency of the U.S. Department of Commerce (DOC), the primary services provided by USPTO are examining patent and trademark applications and disseminating patent and trademark information. USPTO encourages technological advancement by providing incentives to invent, invest in, and disclose new technology by issuing patents and registering trademarks.

USPTO provides valued products and services to its customers in exchange for fees that are appropriated to fund its operations. The powers and duties of USPTO are vested in the Under Secretary of Commerce for Intellectual Property and Director of USPTO, who consults with the Patent Public Advisory Committee and the Trademark Public Advisory Committee. USPTO operates with two major business lines, Patents and Trademarks.

USPTO Strategic Plan

In collaboration with the Patent Public Advisory Committee, the Trademark Public Advisory Committee, members of the public, stakeholders and employees, USPTO created its *2007-2012 Strategic Plan*. This *Plan* supports the DOC's strategic objective to "protect IP and improve patent and trademark systems" by establishing three strategic goals and a management goal as follows:

- Goal 1: Optimize patent quality and timeliness.
- Goal 2: Optimize trademark quality and timeliness.
- Goal 3: Improve intellectual property protection and enforcement domestically and abroad.
- Management Goal: Achieve organizational excellence.

This *Strategic Plan*, goals, and objectives were built upon four guiding principles: quality, timeliness, cost-effectiveness, and transparency.

Patent Quality and Timeliness

High quality and timely examination of patent applications advances science and technology and creates the certainty innovators needed in capital-driven markets. In 2008, USPTO maintained its high level of quality, shown with a patent allowance compliance rate (a measure of error-free allowances) of 96.3 percent, while increasing patent production by examining 448 003 applications, the highest number in its history.

The sustained high level of quality is the result of several initiatives including the full implementation of the PPH with JPO. USPTO also implemented PPH pilots with EPO, KIPO, and the IP Offices of Canada, Australia, and the UK.

The patent filings examined through the Accelerated Examination Program rose by 173 percent over its introduction last year and maintained a 12-month or less pendency for every application in the program with an average time to final action or allowance of 186 days or just over six months.

Intellectual Property Protection

In 2008, USPTO hosted the follow-up to the Heads of Offices meeting for IP five offices (EPO, JPO, KIPO, SIPO, USPTO) to discuss further cooperative initiatives to meet the growing patent application filing demands and improve patent quality. USPTO entered into memoranda of understanding or other bilateral agreements with the IP Offices in R. Korea, Japan, Australia, Philippines, Brazil and Canada.

USPTO's Global Intellectual Property Academy (GIPA) celebrated the graduation of its first group of examiners participating in the Foreign Examiner in Residence program. Patent examiners from Brazil, P. R. China, Egypt, India, Mexico and the Philippines were trained in U.S. current patent examination practice while working on applications filed under the Patent Cooperation Treaty. USPTO officials gained critical knowledge of their systems as well. GIPA trained more than 4 100 foreign officials on best practices for strengthening IP rights and enforcement in their nations. USPTO continues to expand the scope of GIPA's programs and is developing outreach and capacity-building through long distance training to give participants maximum flexibility to benefit from these programs.

In 2008, USPTO continued with Strategy Targeting Organized Piracy¹⁵ (STOP!) which works with other U.S. Government agencies to fight piracy and counterfeiting. As part of STOP!, USPTO continued managing a hotline that helps small and medium-sized businesses leverage U.S. Government resources to protect their IP. The USPTO responded to more than a thousand STOP! hotline calls in 2008.

¹⁵ www.stopfakes.gov

Table 2.5: USPTO PRODUCTION INFORMATION

| PRODUCTION FIGURES | 2007 | 2008 |
|--|----------------|----------------|
| Applications filed | | |
| Utility | 456 154 | 456 321 |
| Plant | 1 049 | 1 209 |
| Reissue | 1 054 | 1 104 |
| <i>Total Patents of Invention</i> | <i>458 257</i> | <i>458 634</i> |
| Design | 27 752 | 27 782 |
| Provisional | 136 046 | 141 475 |
| TOTAL | 622 055 | 627 447 |
| PCT Chapter I Searches | 55 500 | 52 433 |
| PCT Chapter II Examination | 3 107 | 3 087 |
| First actions | 394 492 | 436 947 |
| Grants (Total) | 158 838 | 159 659 |
| | U.S. residents | 80 171 |
| | Foreign | 78 667 |
| | Japan | 33 525 |
| | EPC states | 23 884 |
| | R. Korea | 6 307 |
| | Others | 14 951 |
| Applications in appeal and interference proceedings | | |
| Ex-parte appeal contested | 5 078 | 7 550 |
| Ex-parte appeal disposed | 3 757 | 4 876 |
| Inter-partes appeal contested | 61 | 63 |
| Inter-partes appeal disposed | 83 | 74 |
| Patent cases in litigation | | |
| Cases filed | 51 | 79 |
| Cases disposed | 58 | 62 |
| Pending cases (end of calendar year) | 43 | 60 |

USPTO Budget

USPTO utilizes an activity based cost accounting methodology to allocate costs across the three strategic goals in order to provide transparency to program's operational performance in identifying various factors that drive program costs. In FY 2008¹⁶, USPTO expenditures totalled \$1 852 million.

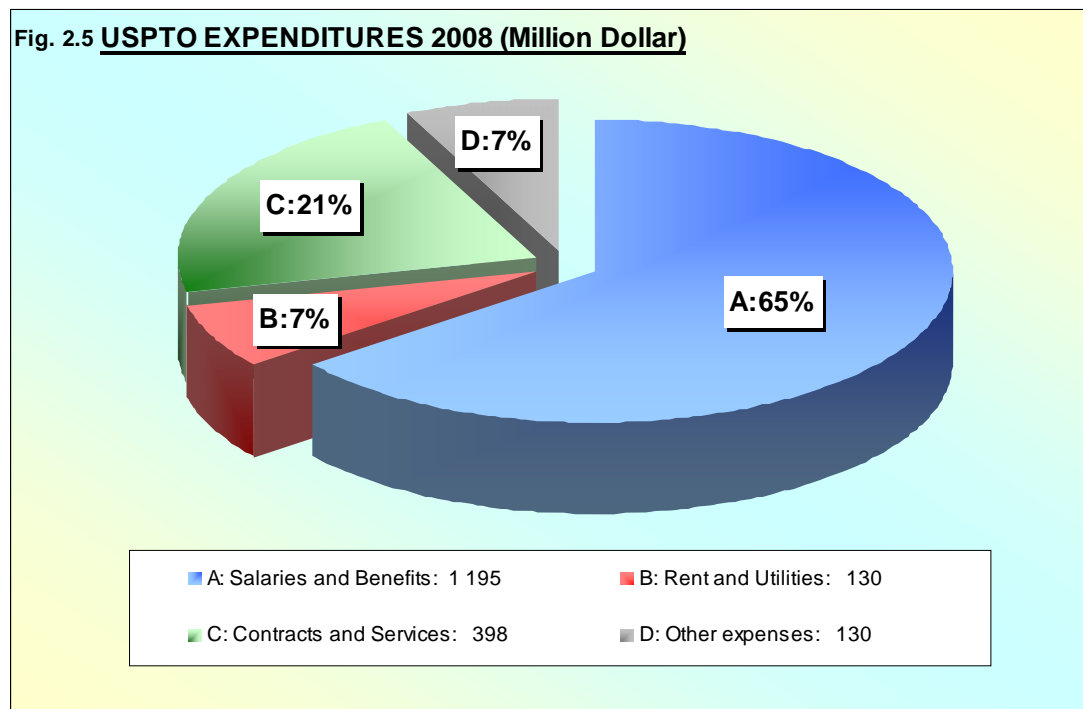
| | |
|--|-----------------|
| Goal 1 - Optimize patent quality and timeliness | \$1 602 million |
| Goal 2 - Optimize trademark quality and timeliness | \$187 million |
| Goal 3 - Improve IP protection and enforcement domestically and abroad | \$63 million |

Agency-wide, 16.1 percent of expenditures was allocated to information technology (IT) security and other indirect IT costs such as rent, utilities, program administration, internal operations and infrastructure.

¹⁶ The period of USPTO's FY 2008 is from October 1, 2007 to September 30, 2008.

USPTO expenditures are divided into four major categories: salaries and benefits, rent and utilities, contracts and services, and all other expenses. The majority of expenditures in 2008 were attributed to USPTO's labor force. Salaries and benefits accounted for 64.5 percent of overall expenditures, or about \$1 195 million. Contracts and services were the second major expenditure, which represented about 21.5 percent of expenditures. Rent and utilities were the third largest at 7.0 percent. A breakdown of the major spending categories is shown in Fig. 2.5.

USPTO Expenditures 2008



A detailed description of the items in Fig. 2.5 can be found in Annex 1.

USPTO Staff Composition

At the end of FY 2008, the total staff at the USPTO was 9 518. Patent examiner staff totalled 6 055; 5 955 Utility, Plant and Reissue examiners, and 100 Design examiners. Trademark examiner attorney staff totalled 398. Managerial, administrative and technical support staff totalled 3 065.

More Information

Further information can be found on the USPTO's Homepage:
www.uspto.gov

Chapter 3

WORLDWIDE PATENTING ACTIVITY

This chapter examines worldwide patent activities in terms of patent applications and grants. The statistics mostly cover the five-year period from 2003 to 2007. More current and detailed data from the Four Offices are presented in Chapter 4. Comparable statistics on the usage of the PCT system appear in Chapter 5.

Applications reported hereafter are counted by the calendar year of filing and grants by the calendar year of granting.

Due to the complexity of the patent system, several different representations of the patent filing process can be made. The following scheme can guide the reader to graphs that correspond to the different representations.

Figures 3.1, 3.2, 3.3, 3.4 show the numbers of **patent filings** in terms of application forms filled out. All of the following are counted once only: direct national filings, direct regional filings, PCT international filings.

Figures 3.5, 3.6 and 3.12 show the numbers of **requests for patents** as they entered a grant procedure. Direct national and direct regional filings are counted once only. PCT national/regional phase filings are replicated over the numbers of procedures that are started.

Figures 3.7, 3.8 and 3.9 show the equivalent numbers of **requests for national patent rights**. Direct national filings are counted once only. The counts for PCT applications entering national procedures are replicated over the number of countries where they enter this phase. The counts for direct regional filings and PCT regional phase filings are replicated over the number of countries designated in the applications at the time that they enter the regional procedure. This gives a representation in terms of national patent rights.

Figures 3.13, 3.14 and 3.15 show the numbers of **patent families** that are generated as the set of first filings, counted once each only, and documented in terms of the flows of priority rights from the first filings to subsequent filings in other countries.

Regarding grants, Fig. 3.10 shows the numbers of **granted patents**. All grants are counted once only.

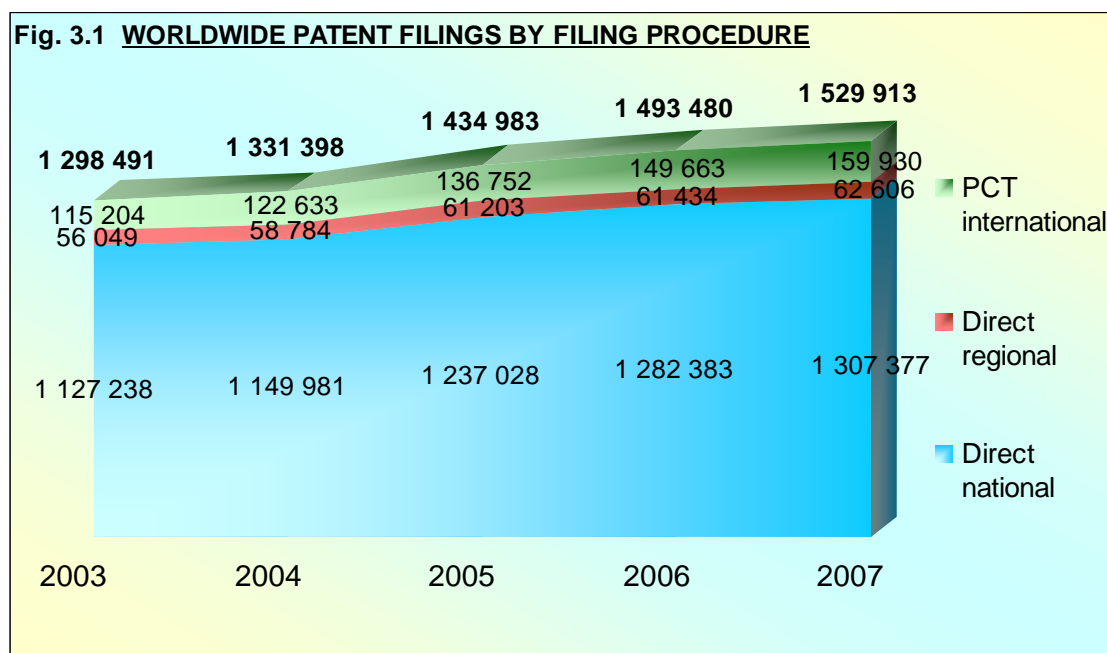
Fig. 3.11 shows the numbers of **validated national patent grant registrations**. Direct national grants are counted once only, but counts for regional office grants are replicated over the numbers of countries for which the grant provides valid registrations. This gives a representation in terms of national patent rights.

Attention is drawn to the fact that, in comparison to the previous editions of TSRs, as a bloc of origin Others excludes R. Korea, and as a filing bloc Others excludes KIPO. Therefore, in this FOSR 2008, there has been a large reduction in counts for the “Others” compared with those in the previously issued TSRs.

PATENT FILINGS

This section shows the development of the numbers of patent applications that were filed throughout the world. These can be filed according to the direct national, direct regional or PCT international procedures.

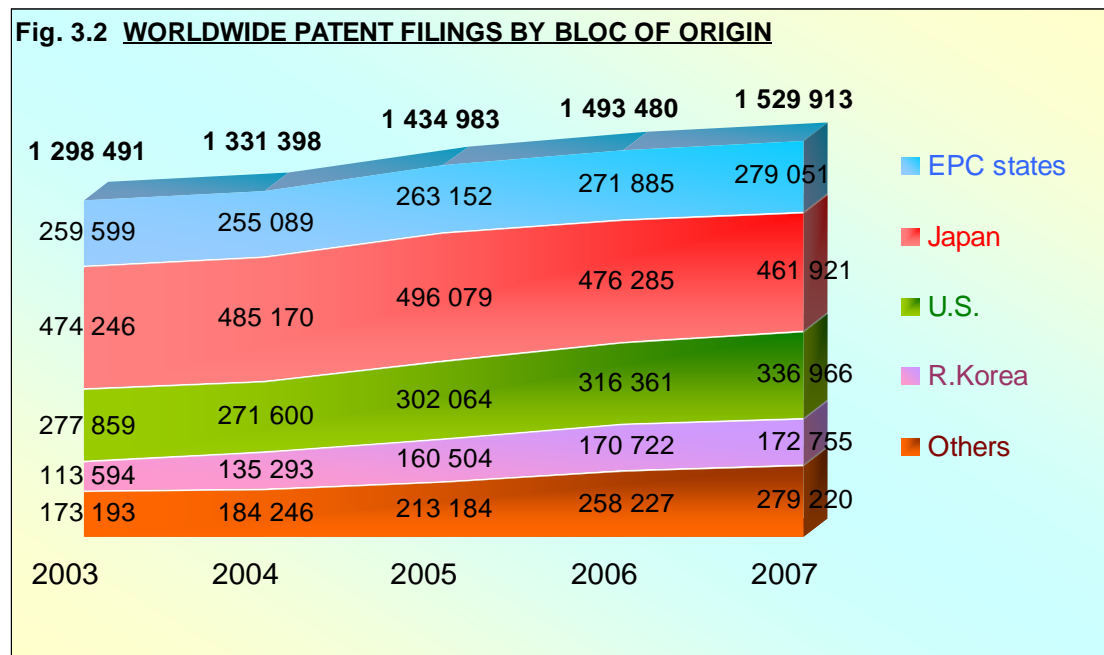
Fig. 3.1 shows the breakdown of the three types of applications filed.



The more than 1.5 million applications filed in 2007 represent a measure of the number of actions taken to assert IP rights around the world. This has increased by 2.4 percent since 2006. In 2007, 85 percent of these applications were filed according to national procedures but the continuing trend towards usage of supranational systems, and in particular the PCT system, has contributed to the growth in filings.

Considering that not all the offices report filing statistics on a regular basis, one should be careful in interpreting these data. It can at least be concluded that there was an increasing tendency to use the patent systems as a whole.

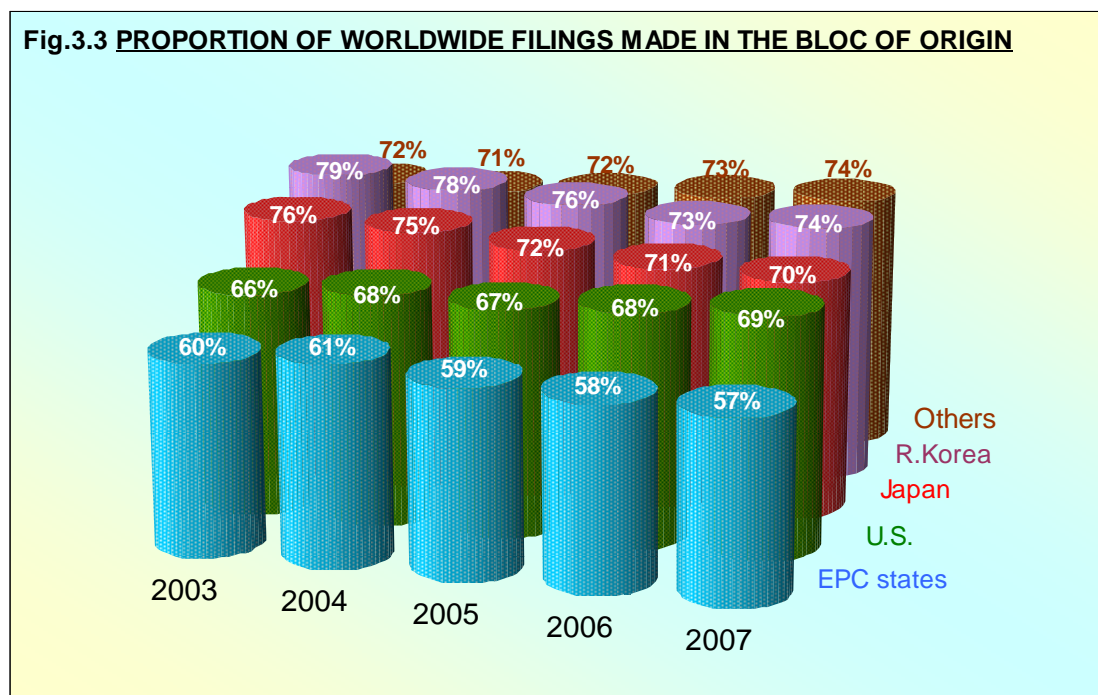
Fig.3.2 below shows the origin of these applications.



The Four blocs have consistently been the origin for more than 82 percent of patent filings in 2003 to 2007.

Most national applications are made by residents of the countries concerned. To a large extent, applications abroad are made using regional or international procedures.

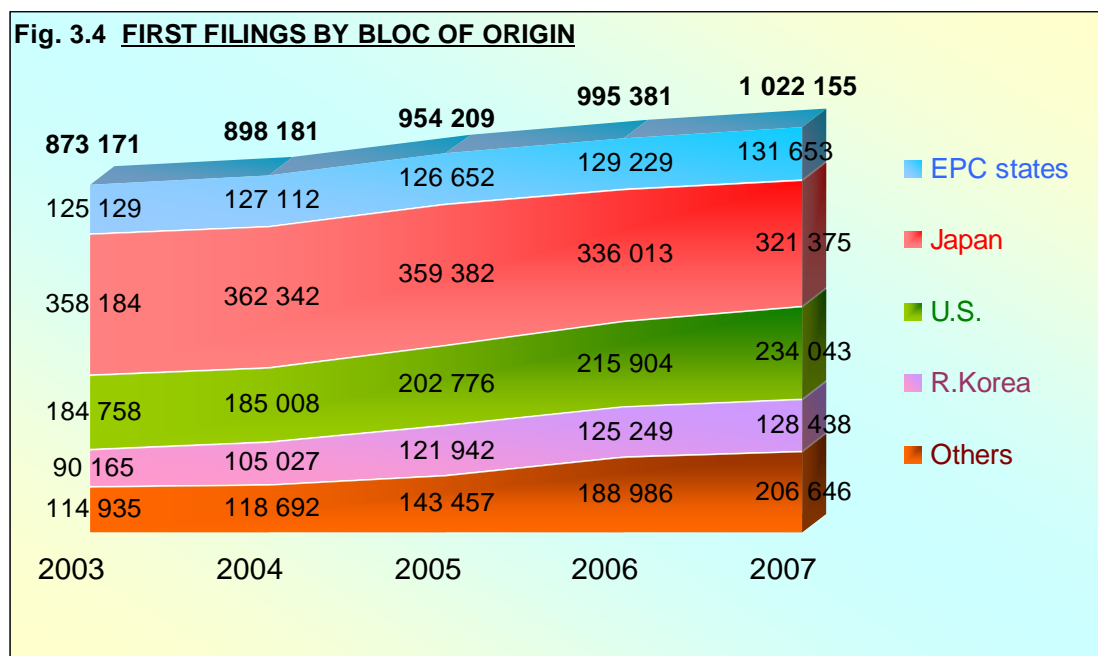
The following figure (Fig. 3.3) shows the proportion of these applications that are filed at home by residents of each bloc.



In most cases, the first filing is made in the country of residence and subsequent applications are made to protect the invention abroad. Worldwide around 70 percent of applications are made at home. This proportion is slightly decreasing which indicates the further internationalisation of the patent system. This is especially the case for Japan and R. Korea and to a lesser extent for EPC residents. The proportion for U.S. is basically stable but might be starting to increase since 2006.

FIRST FILINGS

The process of patent protection starts with the first filing, an initial patent application made to protect an invention or an innovation prior to any subsequent filing to extend the protection to other countries. The development of first filings in the major filing blocs is shown in Fig. 3.4.

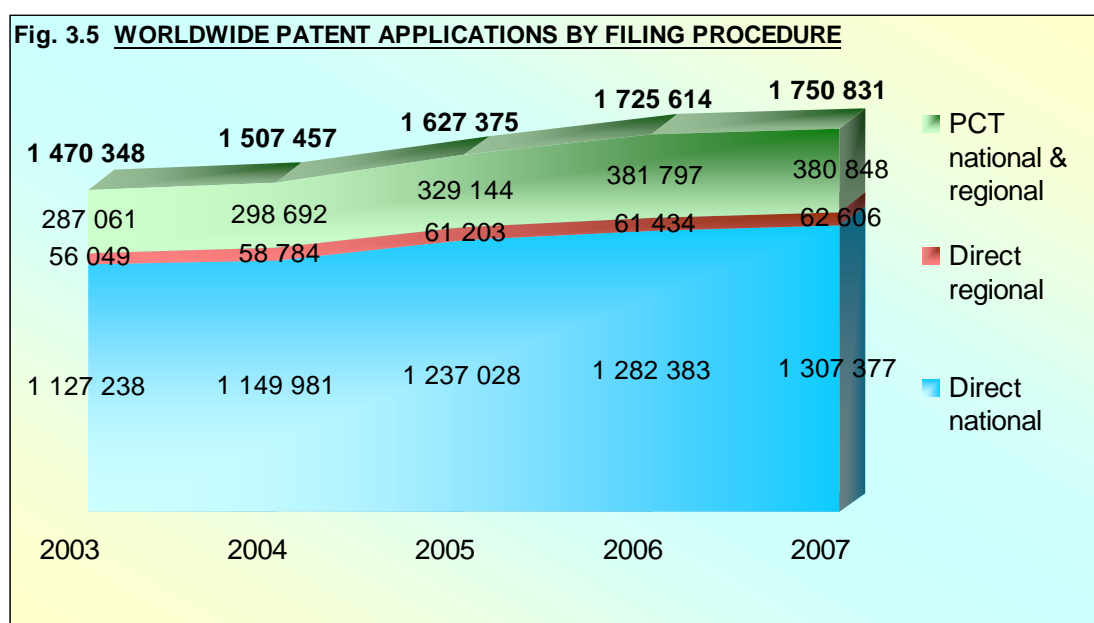


Japan recorded 321 375 first filings (about one third of the whole), the highest number of first filings by bloc in 2007; although this was a decline of 4.4 percent from their 2006 total. The EPC states first filings increased by 2 percent to 131 653. The U.S. with 234 043 first filings showed a growth rate of 8 percent from 2006. R. Korea with 128 438 first filings experienced a lower increase of 3 percent.

PATENT APPLICATIONS FILED

This section describes the development of the number of requests for patents that entered a grant procedure. Direct national and direct regional applications enter a grant procedure when filed. In the case of PCT applications this is delayed to the end of the international phase. In the following figures the PCT application numbers count the applications that entered a national/regional stage in the corresponding year. This leads to higher numbers than in the previous section, because one PCT international filing usually enters into several national or regional procedures. For example, one PCT application as reported in Fig. 3.1 may result in an EPO PCT regional phase entry, a U.S. PCT national phase entry, and an Australian PCT national phase entry, thus producing three PCT national/regional entry phase applications.

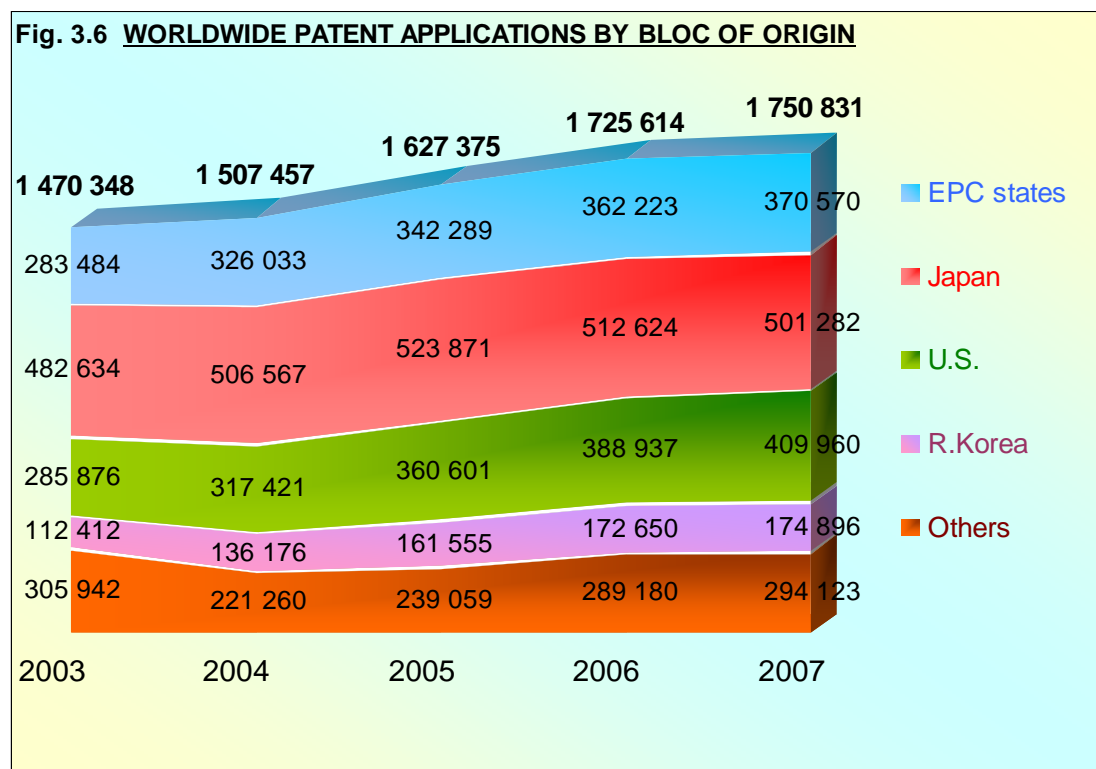
The development of worldwide patent applications by filing procedure is shown in Fig. 3.5.



From 2006 to 2007, although the number of PCT national & regional entries decreased slightly, on the whole the number of worldwide patent applications increased by 1.5 percent.

Since 2003, the number of filed applications grew at an average compound growth rate of 5 percent per year. Most of the applications were filed according to the direct national route (75 percent in 2007). The PCT national and regional route and the direct regional route accounted for a stable 22 percent and 4 percent respectively.

The following figure (Fig. 3.6) shows the origin of the applications filed in a granting procedure.



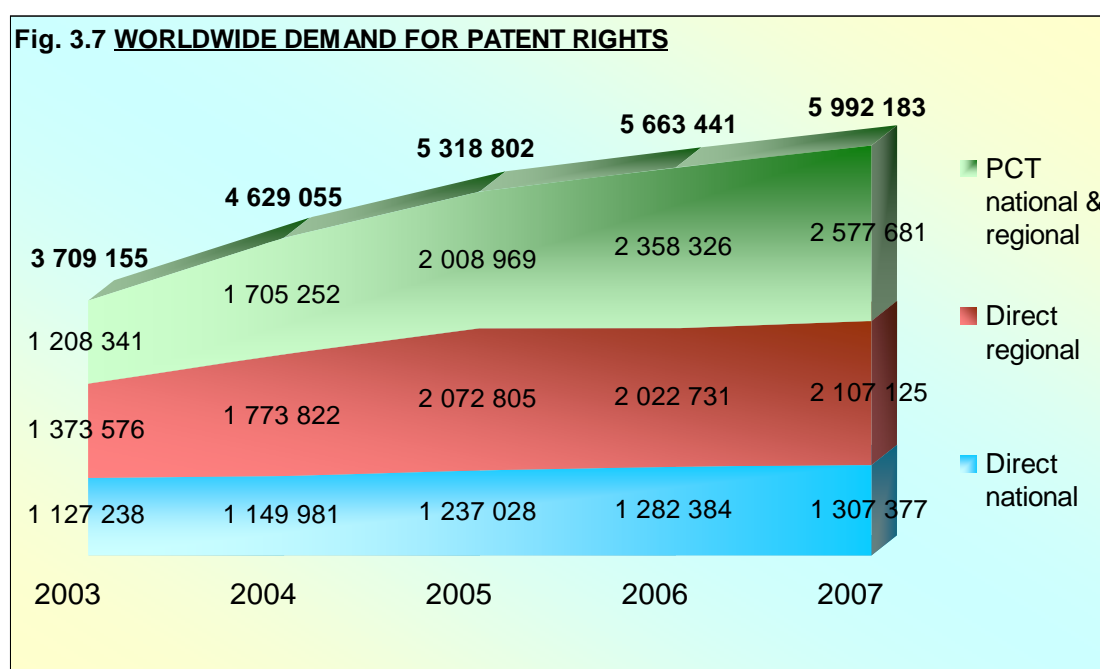
Japan remains the bloc from which the largest share of applications was originating. Except for Japan, the number of applications filed increased from all blocs since 2005. Over the five year period, EPC based applications went up on average by 7 percent, those from the U.S. by 9 percent. Applications from R. Korea increased on average by 12 percent.

These data should be interpreted with caution as the origin of the PCT applications entering a national procedure is not reported in detail from all offices.

DEMAND FOR PATENT RIGHTS

With an increasing use of international and regional systems, and also the increasing number of countries joining such systems¹⁷, the applications filed correspond to more and more requests for national patent rights. This is because one application entering a regional system is now equivalent to a request for a patent in all the regional system member countries.

Fig. 3.7 describes the development of the demand for patent rights resulting from the applications filed as presented in the previous section. The direct national applications have effect in one country only, as does any PCT application entering one national phase procedure. But direct regional applications and PCT applications entering in a regional system are requests for each and every individual member country. So, filing counts for regional offices are expanded to cover the numbers of designated countries. This gives an estimate of the maximum number of patents that could be obtained later from the filed applications in the corresponding year.



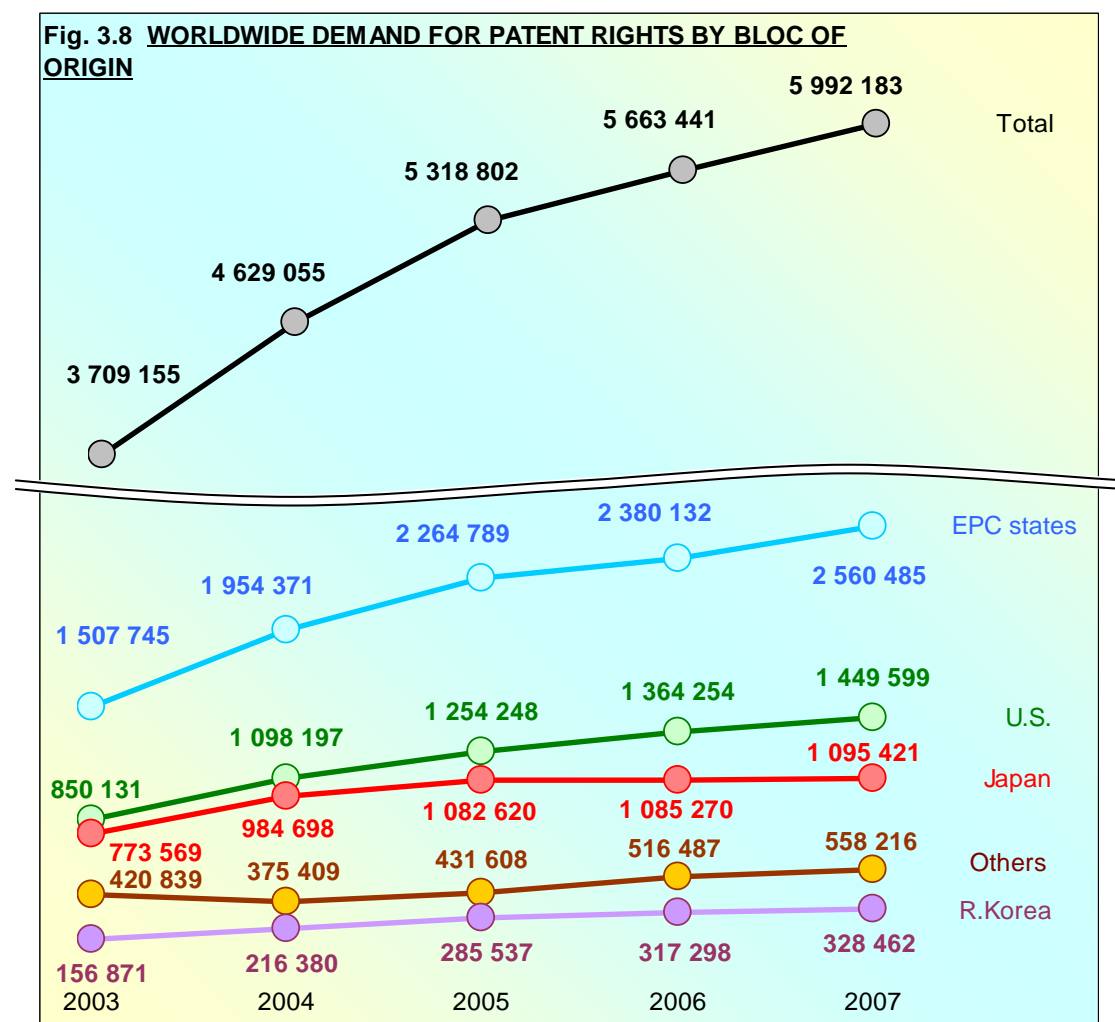
The sustained large growth over the five year period shows the effect of the centralized procedures (regional and international) to help users of the system to expand their patent protection with a limited number of procedures.

Fig. 3.4 showed that the total number of first filings in 2006 was 995 381. From these first filings, one year later in 2007, a comparison of Fig. 3.1 and Fig. 3.4 shows that 507 758 subsequent filings were filed (1 529 913 - 1 022 155). Thus on average each first filing led to almost 0.5 subsequent applications in the following year. However, a similar comparison with Fig. 3.5 shows that this corresponds to almost 0.7 subsequent applications entering a grant procedure, and Fig. 3.7 shows that it corresponds to 5 subsequent requests for patent rights throughout the world. This illustrates how the

¹⁷ At the end of 2008, 83 states were party to a regional patent system, and 139 to the PCT, compared to 73 and 122 respectively in 2003.

greater usage of the international and regional patent systems allows a broader geographical coverage of the protected inventions even while filing less applications worldwide.

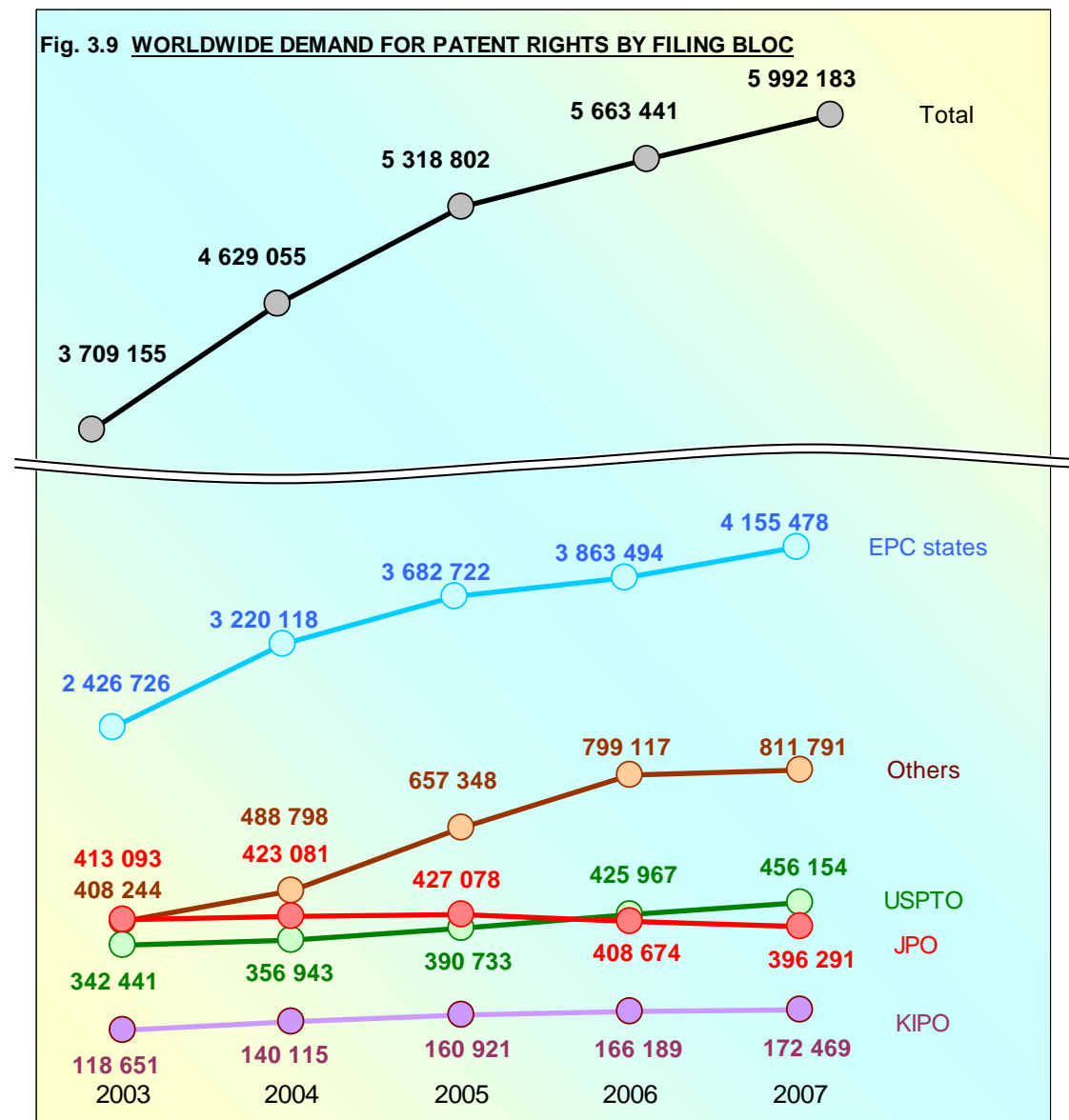
Based on the same data as Fig. 3.7, Fig. 3.8 below shows the trend for the demand of patent rights by blocs of origin of the applicants.



From 2006 to 2007 the total worldwide demand for patent rights increased by 6 percent. Demand from EPC states residents increased by 8 percent. U.S. residents increased their demand by 6 percent. Demand from R. Korea increased by 4 percent; while the demand originating from Japan increased just a little.

The total worldwide demand for patent rights has increased at a compound growth rate of 13 percent per year from 2003 to 2007, but this has slowed down at the end of the period.

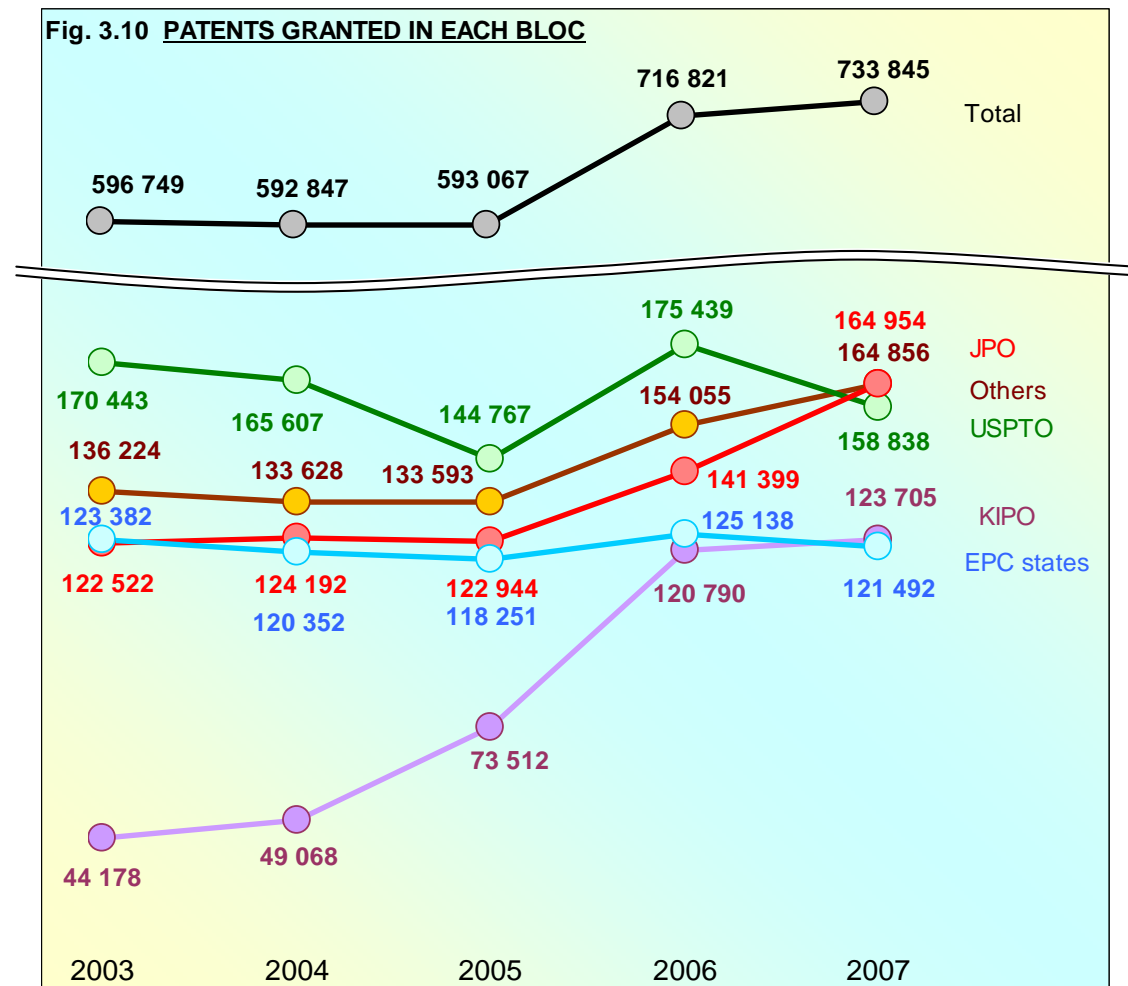
Fig. 3.9 shows the distribution of the demand for patent rights according to the targeted regions. This graph is also related to the data described in Fig. 3.7 and Fig. 3.8.



This shows the influence of regional patent systems on the demand for patent rights. It occurs especially in the EPC states which are made up of many countries.

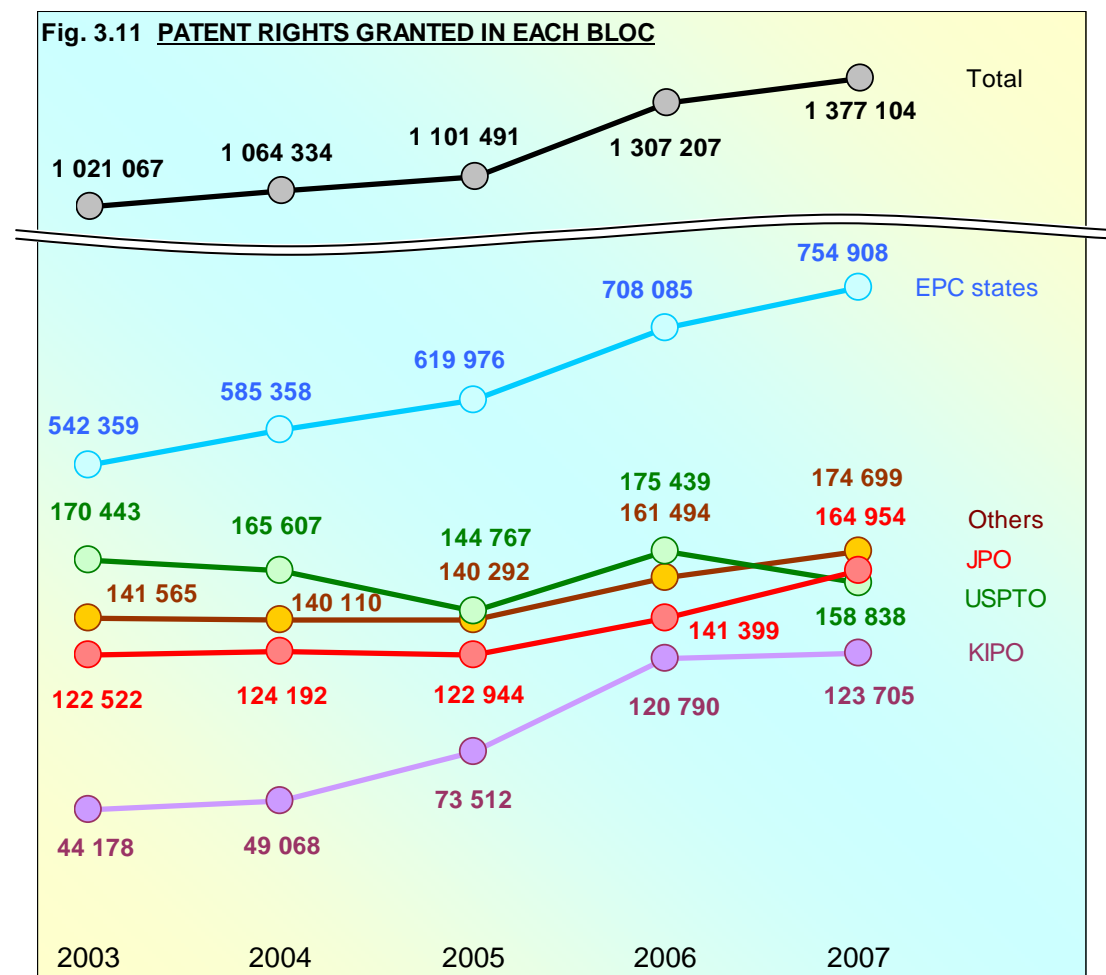
GRANTS

The development of the use of patent systems is shown next in terms of grants. Fig. 3.10 displays the cumulative numbers of patents granted by the various IP offices.



After a period of stabilisation until 2005, the worldwide number of grants increased from 592 106 in 2005 to 733 845 in 2007. The number of patents granted in the EPC states in 2007 decreased by 3 percent since 2006. The JPO increased by 17 percent in 2007. The USPTO granted 9 percent less patents in 2007 than in 2006. The number of patents granted at KIPO increased by 2 percent in 2007.

Regional granting procedures lead to multiple patent rights in the various designated states within the region concerned. This affects only the EPC states and "Others". Fig. 3.11 illustrates the development of the validated national grants resulting from the decisions reported in Fig. 3.10.



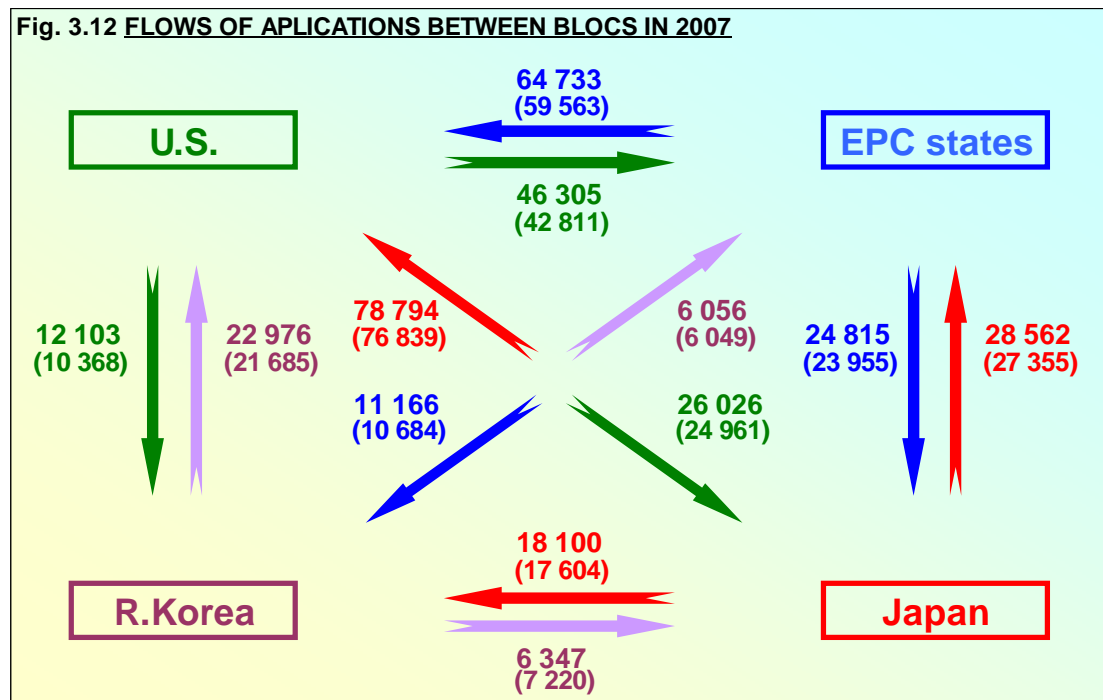
There has been a steady growth of the number of patent rights granted in the EPC states. A growing number of rights were granted via the regional procedure at the EPO either directly or via the PCT system. The fact that the EPC states is made of many countries explains the larger number of patent rights granted there.

INTERBLOC ACTIVITY

The flows between the different blocs and especially the Four blocs are analysed first in terms of applications and then in terms of patent families.

FLOWS OF APPLICATIONS

The flows of patent applications between the Four filing blocs in 2007 are described in Fig. 3.12, which is based on the distinct applications entering a grant procedure (as in Fig. 3.5). The 2006 figures are given in parentheses.

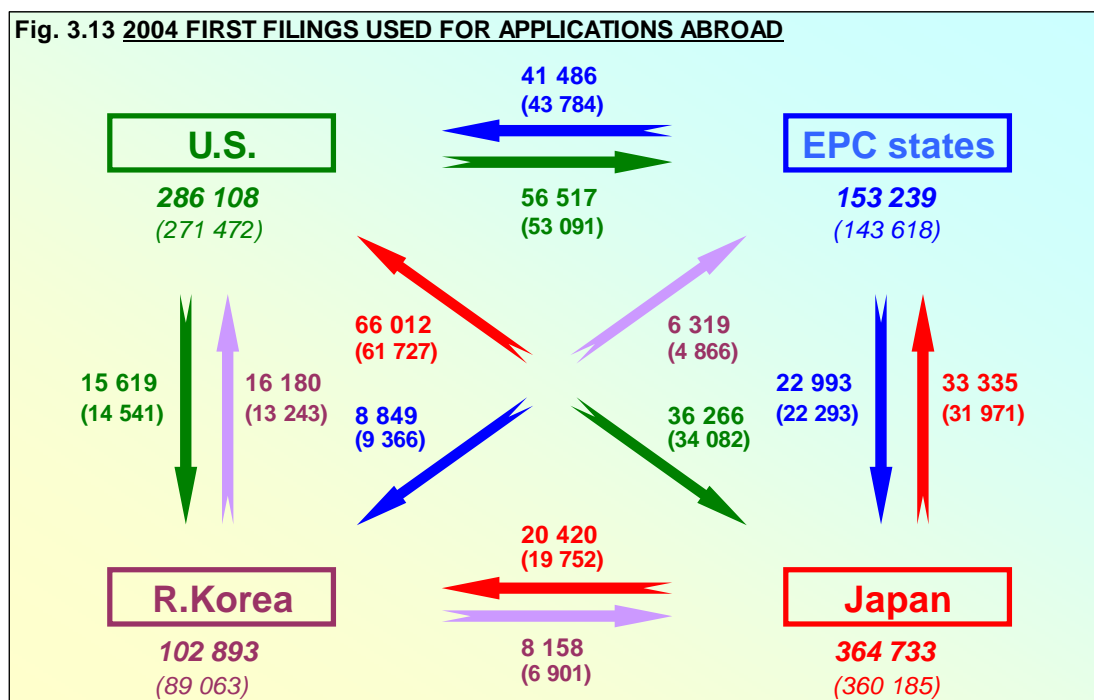


The filing behaviour in 2007 is quite similar to that in 2006. As a general pattern, applicants filed many more applications in the U.S. than in the other blocs. U.S. applicants applied more in the EPC states than in the other regions. With the exception of the flows from R. Korea to Japan, all flows have increased, in particular the flows of applications between EPC states and U.S. (in both directions) and the flow from U.S. to R. Korea show strong relative growth.

PATENT FAMILIES

The information in this section on flows of patent families was obtained from the DOCDB database of worldwide patent publications. The statistics are based on references to priorities given in published applications and differ to some extent from other statistics in this chapter that were based on counts of patent applications provided by individual patent offices. Due to the delay in publication (from the moment of filing), the figures can only be reported with any degree of accuracy after several years have passed.

The flows of patent families from first filings to subsequent filings between Four blocs are shown in Fig. 3.13. The number given for each bloc is the total number of distinct references to priority filings in 2004. This can be taken as an indicator of the number of first filings in the bloc for that year. The flow figures between blocs of origin and target blocs indicate the numbers of secondary filings in the target bloc that referenced priority filings from the bloc of origin in 2004. The comparable figures for 2003 are given in parentheses.



The following Table 3 shows details of flows of patent families between blocs for the same priority years 2003 and 2004. Historical tables for the years from 1995 to 2004 can be found in the web based annex to this report. From information in Table3, out of all first filings in the Four blocs in 2004 (906 973), only 22 percent formed patent families which included at least one of the remaining blocs (196 857).

Table 3: NUMBERS OF PATENT FAMILIES

NUMBERS OF PATENT FAMILIES

Year of priority filings:

2003

| Bloc of origin from which priority is claimed | First Filings in Bloc of Origin | Flows to Subsequent Filings | | | | | | | | Tribilateral Patent Families from bloc of origin | Four Blocs Patent Families from bloc of origin |
|---|---------------------------------------|---|-------------------------|--------------------|-------------------|-------------------|------------------|--------------------|--------------------|--|--|
| | | First filings in Bloc of Origin leading to priority claims in filings in: | | | | | | | | | |
| | | Any other Blocs | Any Trilateral Blocs | Any Four Blocs | EPC States | Japan | R. Korea | U.S. | Other countries | | |
| EPC States | 143 618 | 49 608 (34.5%) | 45 599 (31.8%) | 46 500 (32.4%) | - | 22 293 (15.5%) | 9 366 (6.5%) | 43 784 (30.5%) | 28 584 (19.9%) | 20 478 (14.3%) | 7 688 (5.4%) |
| Japan | 360 185 | 69 467 (19.3%) | 63 534 (17.6%) | 65 964 (18.3%) | 31 971 (8.9%) | - | 19 752 (5.5%) | 61 727 (17.1%) | 36 706 (10.2%) | 30 164 (8.4%) | 11 547 (3.2%) |
| R. Korea | 89 063 | 15 278 (17.2%) | 13 988 (15.7%) | 13 988 (15.7%) | 4 866 (5.5%) | 6 901 (7.7%) | - | 13 243 (14.9%) | 8 148 (9.1%) | 3 476 (3.9%) | 3 476 (3.9%) |
| U.S. | 271 472 | 69 320 (25.5%) | 56 739 (20.9%) | 57 228 (21.1%) | 53 091 (19.6%) | 34 082 (12.6%) | 14 541 (5.4%) | - | 50 909 (18.8%) | 30 434 (11.2%) | 11 977 (4.4%) |
| Four blocs subtotal | 864 338 | 203 673 (23.6%) | 179 860 (20.8%) | 183 680 (21.3%) | 89 928 (10.4%) | 63 276 (7.3%) | 43 659 (5.1%) | 118 754 (13.7%) | 124 347 (14.4%) | 84 552 (9.8%) | 34 688 (4.0%) |
| Others | 232 016 | 15 612 (6.7%) | 14 999 (6.5%) | 15 071 (6.5%) | 4 942 (2.1%) | 2 903 (1.3%) | 1 003 (0.4%) | 13 579 (5.9%) | - | 1 630 (0.7%) | 595 (0.3%) |
| Global total | 1 096 354 | 219 285 (20.0%) | 194 859 (17.8%) | 198 751 (18.1%) | 94 870 (8.7%) | 66 179 (6.0%) | 44 662 (4.1%) | 132 333 (12.1%) | 124 347 (11.3%) | 86 182 (7.9%) | 35 283 (3.2%) |

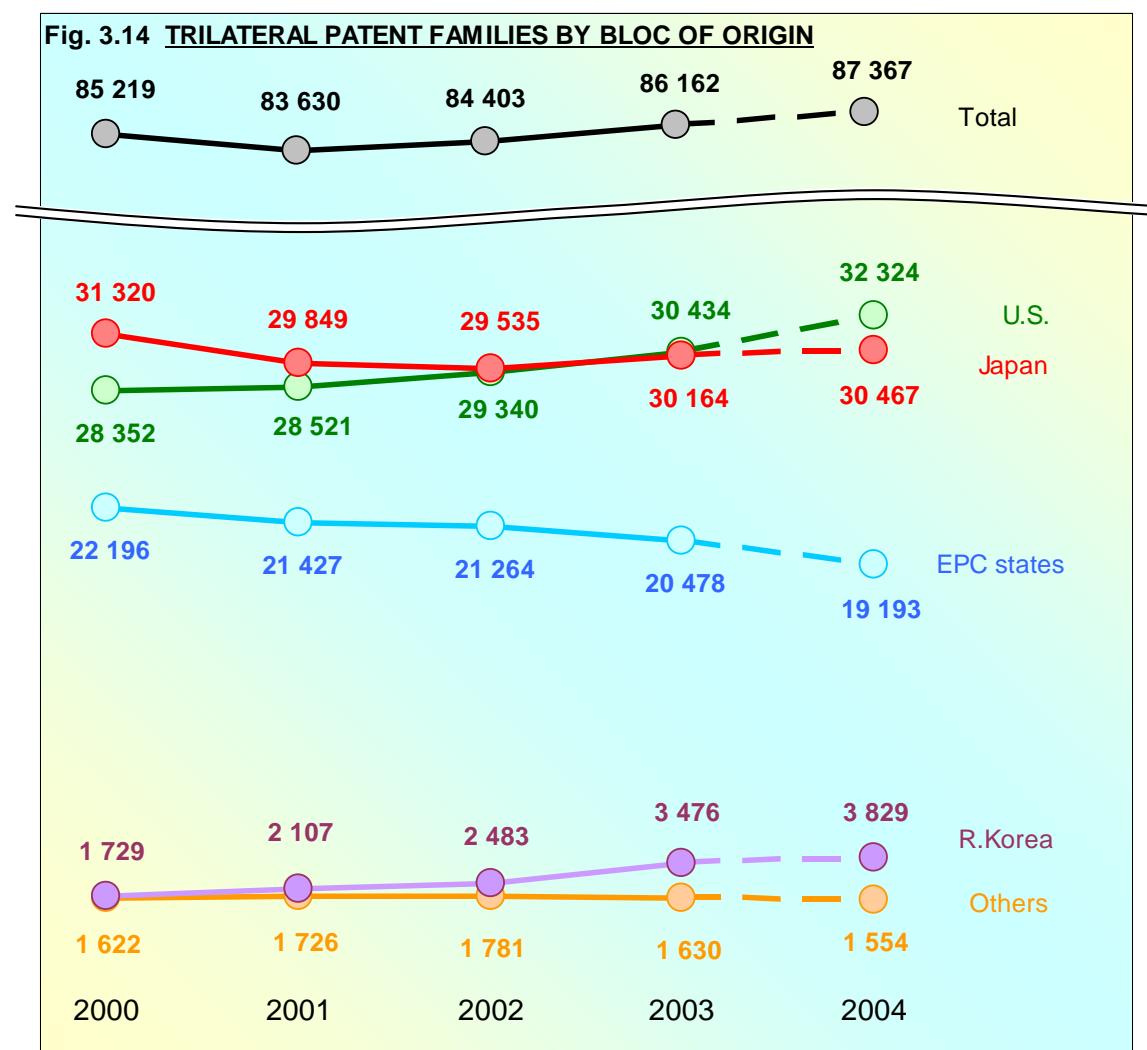
Year of priority filings:

2004

| Bloc of origin from which priority is claimed | First Filings in Bloc of Origin | Flows to Subsequent Filings | | | | | | | | Tribilateral Patent Families from bloc of origin | Four Blocs Patent Families from bloc of origin |
|---|---------------------------------------|---|-------------------------|--------------------|-------------------|-------------------|------------------|--------------------|--------------------|--|--|
| | | First filings in Bloc of Origin leading to priority claims in filings in: | | | | | | | | | |
| | | Any other Blocs | Any Trilateral Blocs | Any Four Blocs | EPC States | Japan | R. Korea | U.S. | Other countries | | |
| EPC States | 153 239 | 49 089 (32.0%) | 45 286 (29.6%) | 46 744 (30.5%) | - | 22 993 (15.0%) | 8 849 (5.8%) | 41 486 (27.1%) | 28 416 (18.5%) | 19 193 (12.5%) | 6 485 (4.2%) |
| Japan | 364 733 | 74 232 (20.4%) | 68 880 (18.9%) | 71 538 (19.6%) | 33 335 (9.1%) | - | 20 420 (5.6%) | 66 012 (18.1%) | 36 411 (10.0%) | 30 467 (8.4%) | 11 038 (3.0%) |
| R. Korea | 102 893 | 19 268 (18.7%) | 17 530 (17.0%) | 17 530 (17.0%) | 6 319 (6.1%) | 8 158 (7.9%) | - | 16 180 (15.7%) | 8 614 (8.4%) | 3 829 (3.7%) | 3 829 (3.7%) |
| U.S. | 286 108 | 71 018 (24.8%) | 60 459 (21.1%) | 61 045 (21.3%) | 56 517 (19.8%) | 36 266 (12.7%) | 15 619 (5.5%) | - | 50 550 (17.7%) | 32 324 (11.3%) | 12 721 (4.4%) |
| Four blocs subtotal | 906 973 | 213 607 (23.6%) | 192 155 (21.2%) | 196 857 (21.7%) | 96 171 (10.6%) | 67 417 (7.4%) | 44 888 (4.9%) | 123 678 (13.6%) | 123 991 (13.7%) | 85 813 (9.5%) | 34 073 (3.8%) |
| Others | 246 859 | 16 348 (6.6%) | 15 930 (6.5%) | 16 026 (6.5%) | 5 206 (2.1%) | 3 041 (1.2%) | 1 143 (0.5%) | 14 035 (5.7%) | - | 1 554 (0.6%) | 570 (0.2%) |
| Global total | 1 153 832 | 229 955 (19.9%) | 208 085 (18.0%) | 212 883 (18.5%) | 101 377 (8.8%) | 70 458 (6.1%) | 46 031 (4.0%) | 137 713 (11.9%) | 123 991 (10.7%) | 87 367 (7.6%) | 34 643 (3.0%) |

Source: EPO DOCDB database
Percentages are the counts expressed as proportions of the numbers of First Filings in the countries/blocs of origin.

The development over time of Trilateral patent families is shown in Fig. 3.14. Due to the delay in publication (from the moment of filing), the figures can only be reported with any degree of accuracy after several years of delay. The references to priorities and flows between the Four blocs in Fig 3. 13 and Table 3 are fairly accurate up to the year 2004. But the numbers for Trilateral patent families the year 2003 may not be complete because more time is needed to gather all the evidence of activity in the Four blocs.

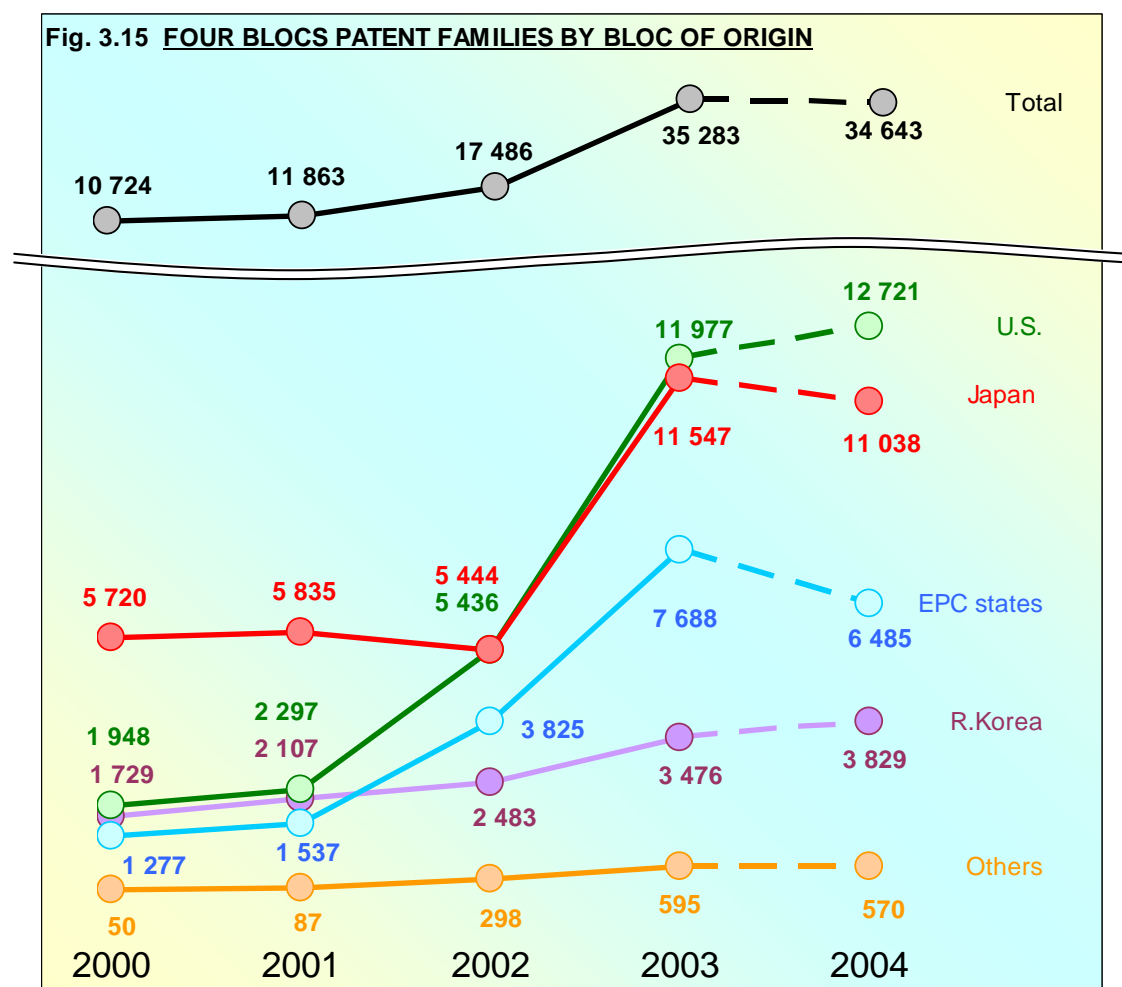


After a period of stabilisation, the total number of Trilateral Patent Families increased after 2001. The number of those originating from the EPC states kept decreasing, while those from Japan, R. Korea and most particularly U.S. started to increase again.

The total number of Trilateral patent families in 2003 was 86 182, of which 24 percent originated from the EPC states, 35 percent from Japan, 4 percent from R. Korea, 35 percent from the U.S. and 2 percent from Others.

Out of all priority forming filings in the Four blocs area in 2003, 10 percent formed Trilateral patent families. The proportions differed considerably according to the bloc of origin of the priority forming filings. For the EPC states, 14 percent of priority forming filings formed Trilateral patent families; for the U.S. 11 percent; for Japan 8 percent, for R. Korea 4 percent, and for "Others" 1 percent.

It is also possible to consider Four blocs patent families, a more select group where there is evidence of activity from a priority forming first filing in all Four blocs. The development over time of Four blocs patent families is shown in Fig. 3.15.



What is clear from this graph is that the numbers of Four blocs patent families are expanding rapidly from a low base towards the end of the period that is considered. This reflects increasing interest in obtaining patents in R. Korea. Since the rate of increase of Trilateral families in Fig. 3.14 is not as great as that for Four blocs patent families in Fig. 3.15, this shows that the proportion of Four blocs patent families among Trilateral patent families is itself increasing over the period.

Chapter 4

PATENT ACTIVITY AT THE FOUR OFFICES

This chapter presents trends in patent application filings and grants at the Four Offices. These statistics are generally available on a more up-to-date basis than those in Chapter 3; so most information that appears here goes beyond 2007 to cover 2008. Regarding Europe, statistics are for the EPO only. Whereas the EPO is indicated from the viewpoint of an Office, the EPC states are still indicated as a bloc of origin.

The statistics give insight into the work that is carried out at the Four Offices, rather than on numbers of individual patent rights. The representations are analogous to those of figures 3.5, 3.6 and 3.12.

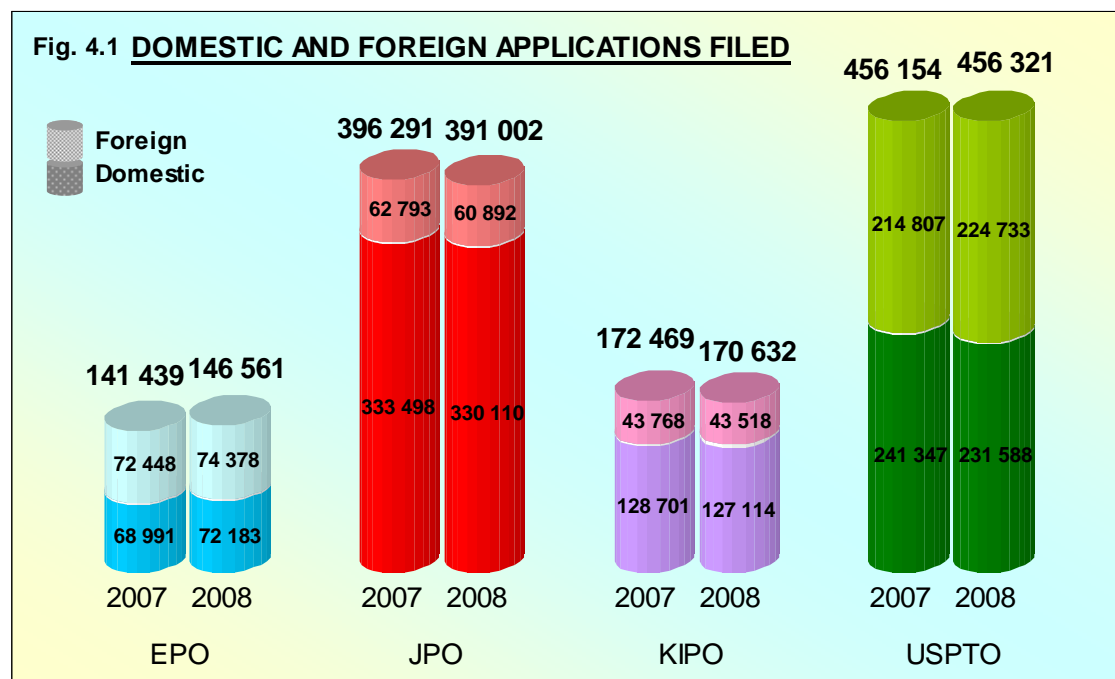
Demand at the Four Offices is demonstrated by counts of the numbers of patent applications that were filed. These counts represent the total of direct national/regional applications filed and PCT applications entering the national/regional phase.

For granted patents, the statistics involve direct, regional and PCT applications by year of grant. The representations here are similar to Fig. 3.10, except that for EPC states only the EPO is considered as the granting authority. Hereinafter "patents granted" will correspond to the number of grant actions (issuances or publications) by the Four Offices.

In previous editions of TSRs, as a bloc of origin Others included R. Korea. Therefore, there has been some adjustment in counts for the "Others" in this report compared with those in the previously issued TSRs.

PATENT APPLICATIONS FILED

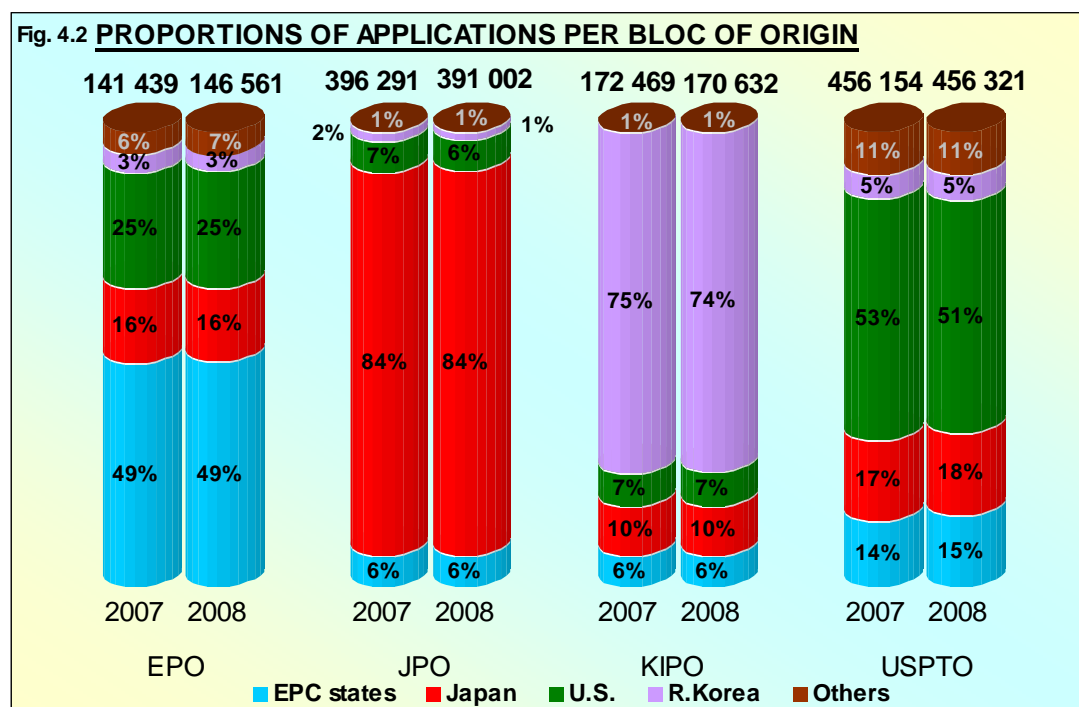
The numbers of domestic (residents of the country) and foreign (non-residents) patent applications filed with each of the Four Offices for the years 2007 and 2008 are shown in Fig. 4.1.



There were a total of 146 561 patent applications filed with the EPO in 2008, which is a growth of 4 percent. The number of patent application filings at the JPO decreased by 1 percent to 391 002. The number of patent application filings at the KIPO decreased by 1 percent to 170 632. USPTO recorded 456 321 patent application filings in 2008, almost the same level as in 2007.

This figure also illustrates the predominance of domestic applications at JPO and KIPO.

Fig. 4.2 shows the respective shares of patent application filings by origin relative to total filings at each Office for 2007 and 2008.



Due to the differences in behaviour of the applicants from different countries, comparison of the numbers of applications at the Four Offices should only be made with caution. For example, the numbers of claims given in applications are significantly different among the Four Offices. On average, in 2008, an application filed at EPO contained 15.6 claims (18.0 in 2007), one filed at the JPO contained 9.8 claims (10.1 in 2007), one filed at KIPO contained 10.9 claims (11.2 in 2007), while one application at USPTO had 19.3 claims (20.0 in 2007). The relatively large change in the figure for EPO since 2007 is probably due to a change in fee structure for multiple claims introduced on April 1, 2008.

The shares of patent application filings by each bloc of origin are quite consistent for 2007 and 2008. The numbers of domestic filings are approximately equivalent to the numbers of first filings, except at EPO where domestic filings for the EPC states area are mostly subsequent filings that follow earlier first filings at EPC states national offices. At JPO, KIPO and USPTO more than 90 percent of the domestic applications are first filings, while only 30 percent of the domestic applications at the EPO are first filings.

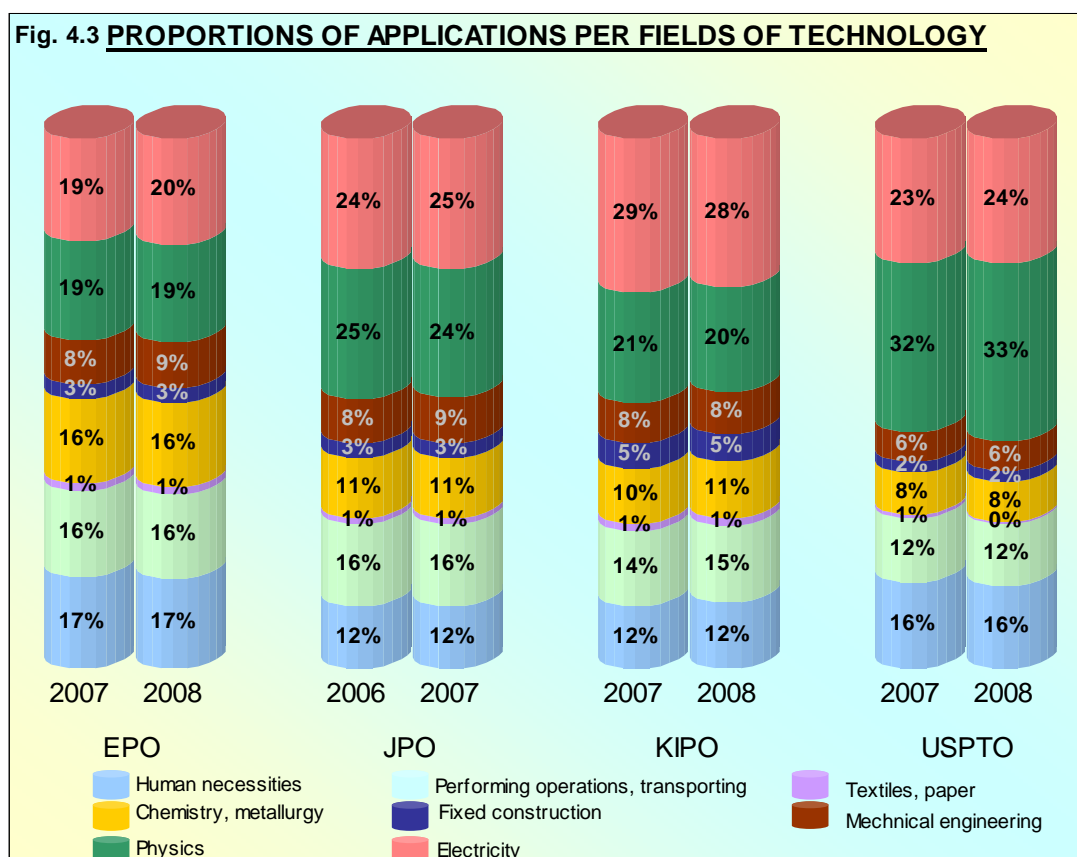
FIELDS OF TECHNOLOGY

Patents are classified by the Four Offices according to the IPC. This provides for a hierarchical system of language independent symbols for the classification of patents and utility models according to the different areas of technology to which they pertain. Fig 4.3 shows the distribution of applications according to the main sections of the IPC.

The classification takes place at a different stage of the procedure in each Office. Data are shown for the EPO, KIPO, and the USPTO for the filing years 2007 and 2008, while for the JPO the breakdown is given for the filing years 2006 and 2007. JPO data for 2007 are the most recent available figures because the IPC assignment is completed just before the publication of the Unexamined Patent Application Gazette (18 months after the first filing).

USPTO applications are classified according to U.S. Patent Classification system. The breakdown according to the IPC has been determined by means of a general concordance between both classifications. Therefore the technical scope of the USPTO with respect to the IPC may differ from the scope presented by EPO, JPO and KIPO.

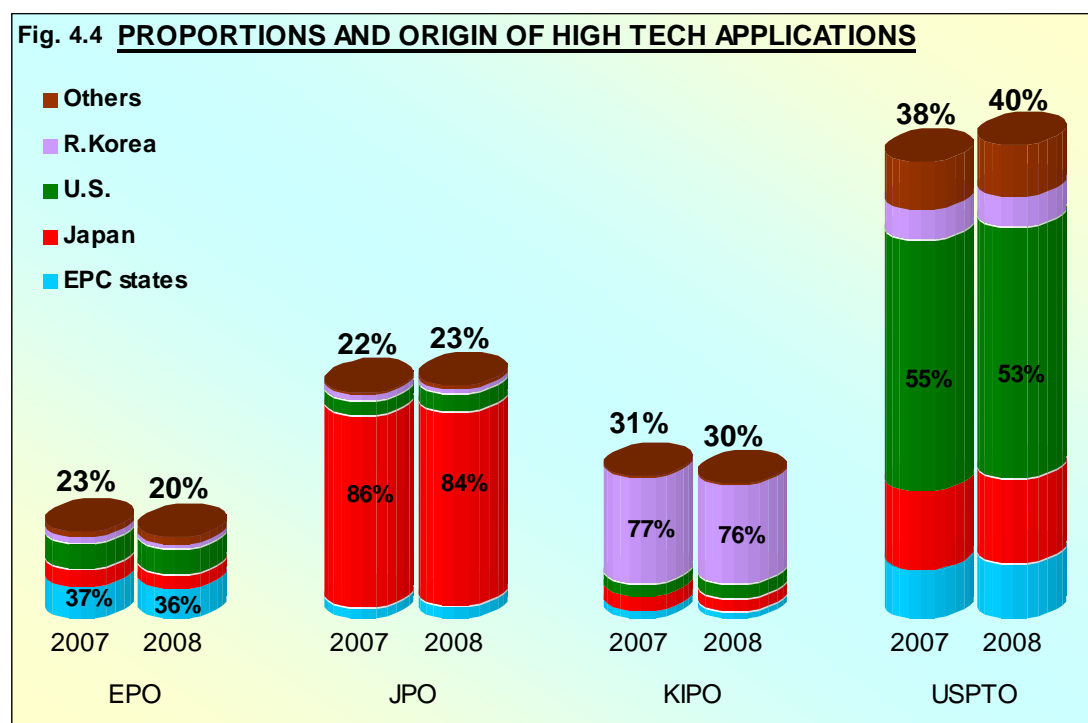
Fig. 4.3 indicates the share of applications by fields of technology at each office. The shares are determined for all applications for which a classification is available.



The IPC does not itself define high technology fields. The Four Offices, however, consider the following as high technology fields:

- Computer and automated business equipment,
- Micro-organism and genetic engineering,
- Aviation,
- Communications technology,
- Semi-conductors, and
- Lasers.

In Fig. 4.4, the proportions of applications in high technology areas are given for each Office in 2007 and 2008, together with the subsidiary breakdowns by origins (with subsidiary percentages given for the domestic region in each case). The height of each bar gives an indication of the number of high technology applications at that office.

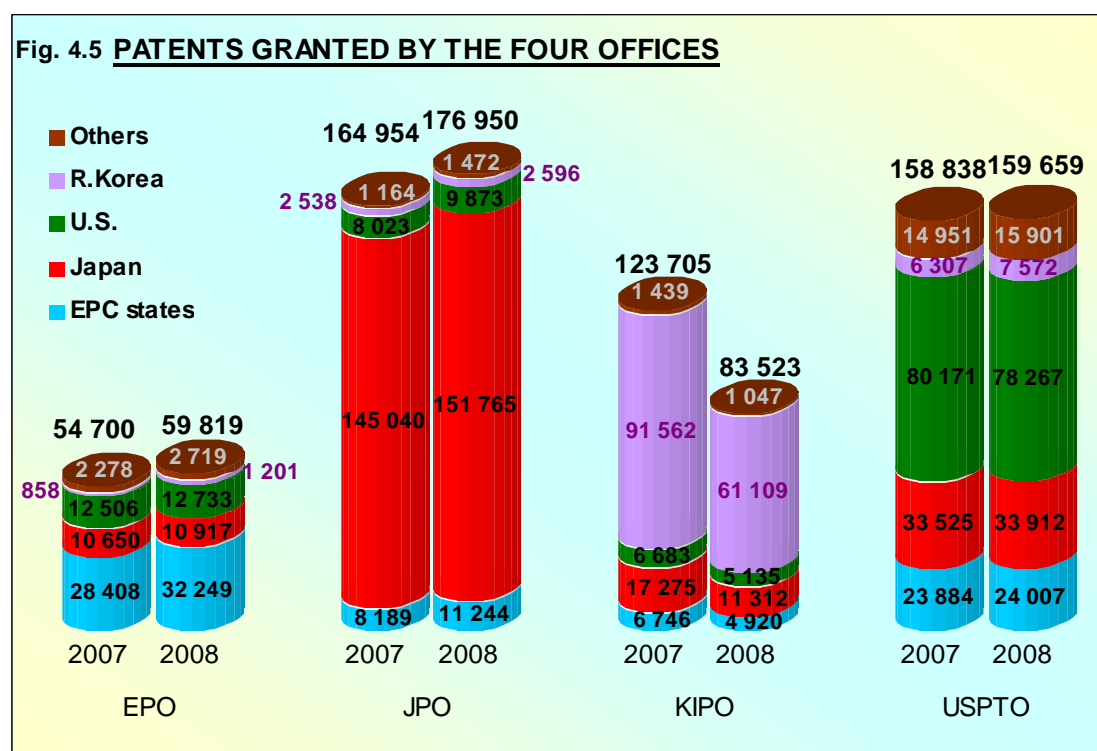


On average 30 percent of the Four Offices applications are filed in high technology areas. The proportions are markedly different between the Four Offices. The high technology areas share is twice as high at the USPTO as at EPO or JPO. The share for KIPO is intermediate and close to the overall average.

While at the other offices, the subsidiary share of domestic applications within the high technology areas is comparable to that in all applications, the domestic subsidiary share is noticeably lower at the EPO.

PATENTS GRANTED

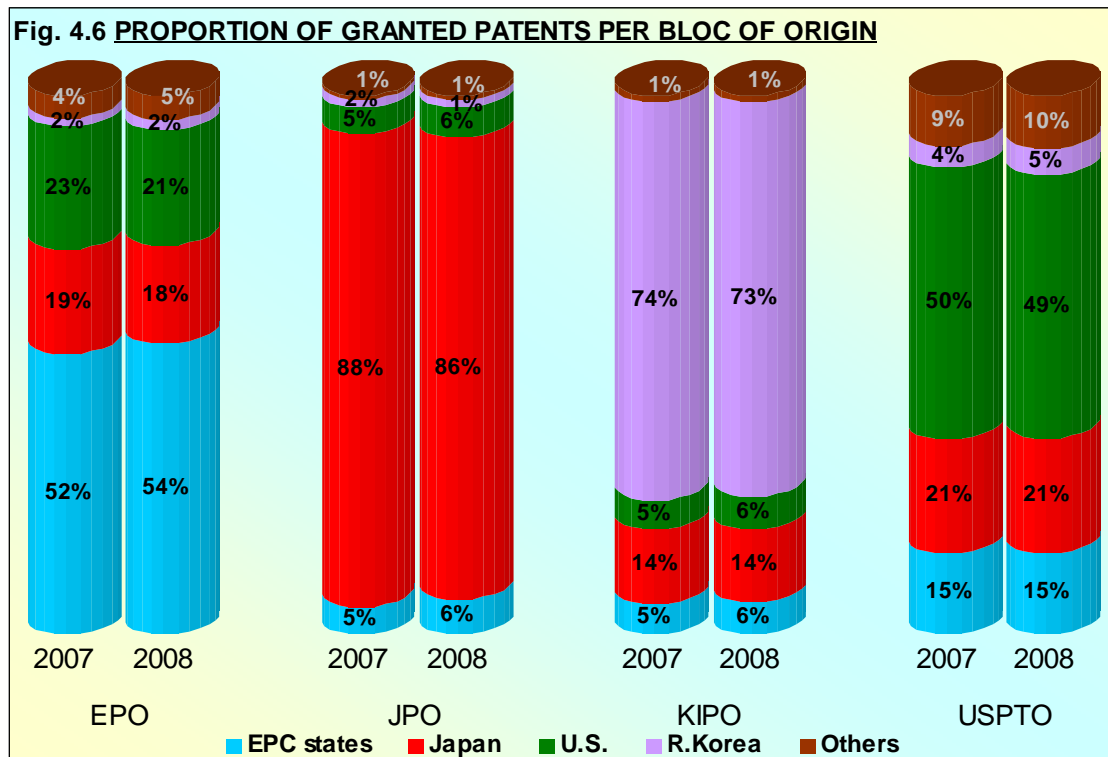
Fig. 4.5 shows the numbers of patents granted by the Four Offices.



Together the Four Offices granted 479 951 patents in 2008, 22 246 less than in 2007. This is an overall decline of 4.4 percent.

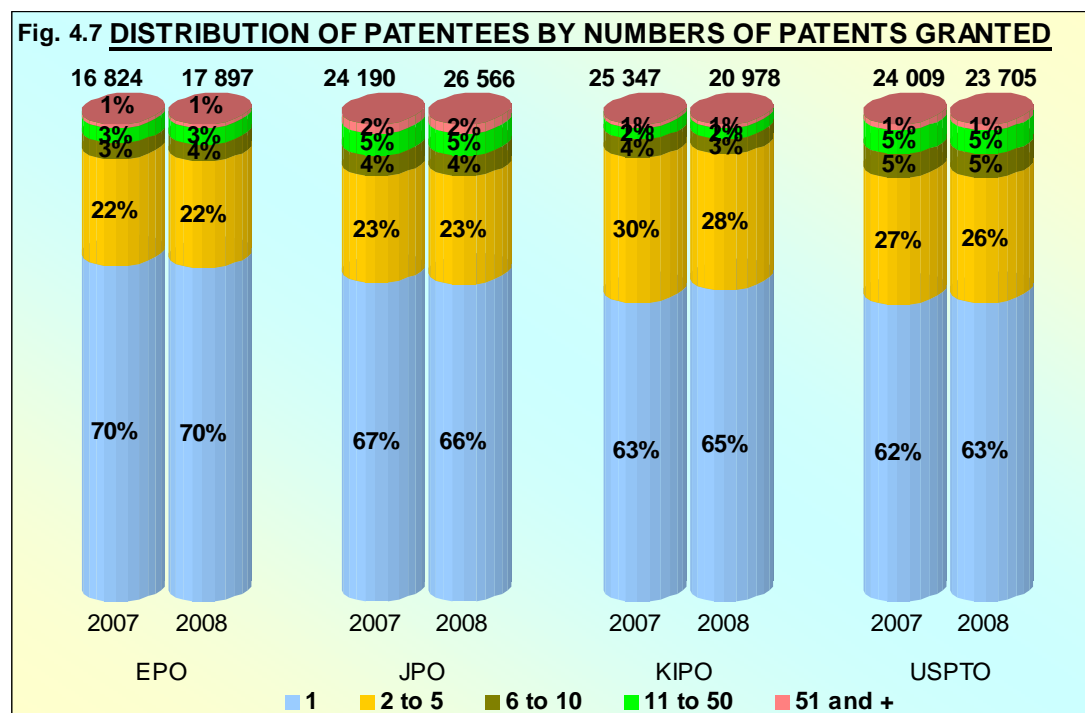
The number of patents granted by EPO, JPO and USPTO increased in 2008, by 9 percent at EPO, 7 percent at JPO and 0.5 percent at USPTO. The number of patents granted by KIPO decreased by 32 percent in 2008. The differences between the Four Offices regarding the absolute numbers of patents granted can only be partly explained by differences in the number of corresponding applications. These numbers are also affected by differing grant rates and durations to process applications by the Four Offices, which themselves reflect differences in the procedures (see section below on "Four Offices Patent Procedures").

Fig. 4.6 presents the percentage shares of total patents granted by origin.



The shares from the different filing blocs are not far away from those observed for the filings in each Office as presented in Fig. 4.2. However, comparison of the figures shows that the shares by domestic origin within the numbers of patent grants at EPO and JPO are slightly higher than the comparable shares within the numbers of applications filed. Actually, the shares of Japanese origin granted patents are higher than the corresponding shares in applications at all Four Offices.

The breakdown of numbers of patentees by numbers of patents granted is shown in Fig. 4.7.



This diagram shows that the distributions by numbers of grants are highly asymmetric but rather similar for the Four Offices. On average, in 2008 a patentee received 3.3 granted patents at the EPO compared to 6.7 at the JPO, 4.0 at the KIPO and 6.7 at the USPTO.

At the Four Offices, most of the patentees received not more than five granted patents. The proportion of patentees receiving one grant in 2008 is higher at EPO (70 percent) than at JPO (66 percent), KIPO (65 percent) or USPTO (63 percent). The proportion of patentees receiving two to five grants is larger at the KIPO than in the other three Offices. The proportion of patentees receiving six or more grants is lower at EPO (8 percent) and KIPO (6 percent) than at JPO (11 percent) and USPTO (11 percent). In 2008, the maximum number of patents granted to a single applicant was 941 at EPO, 4 739 at JPO, 4 737 at KIPO and 4 169 at USPTO.

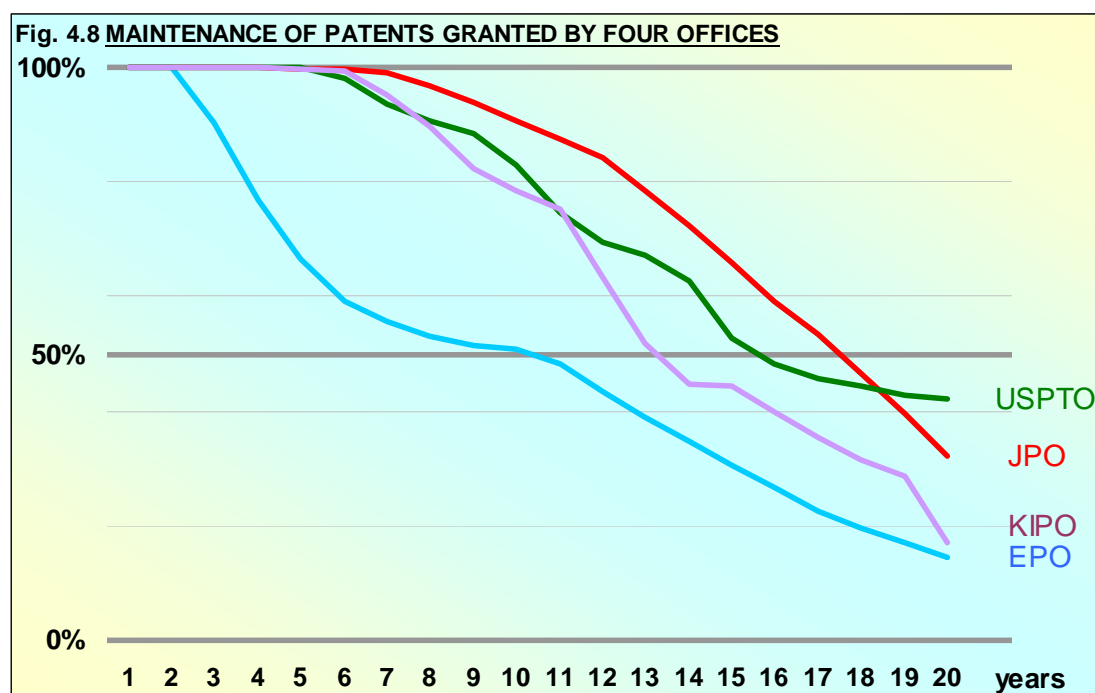
A patent granted by an Office has a maximum term fixed by law. In all Four Offices this is usually a twenty year term from the date of filing the application. In order to maintain the protection right during this period, the applicant has to pay renewal fees, annual fees or maintenance fees in the countries to which the protection pertains. Maintenance systems differ from country to country. At each of the Four Offices, if a renewal fee, an annual fee or maintenance fee is not paid in due time, the protection right expires.

At EPO, renewal fees are payable from the third year after filing in order to maintain the application. After the patent has been granted, annual renewal fees are paid to the national office of each designated EPC contracting state in which the patent has been registered. The resulting national patents are not necessarily maintained for the same period in each of the contracting state.

For a Japanese or R. Korean patent, the annual fees for the first three years after patent registration are paid as a lump-sum and - for subsequent annual fees, the applicant can pay either yearly or in advance.

The USPTO collects maintenance fees at 3.5, 7.5, and 11.5 years after the date of allowance. Thus, the USPTO data shown below are interpolations between these data points.

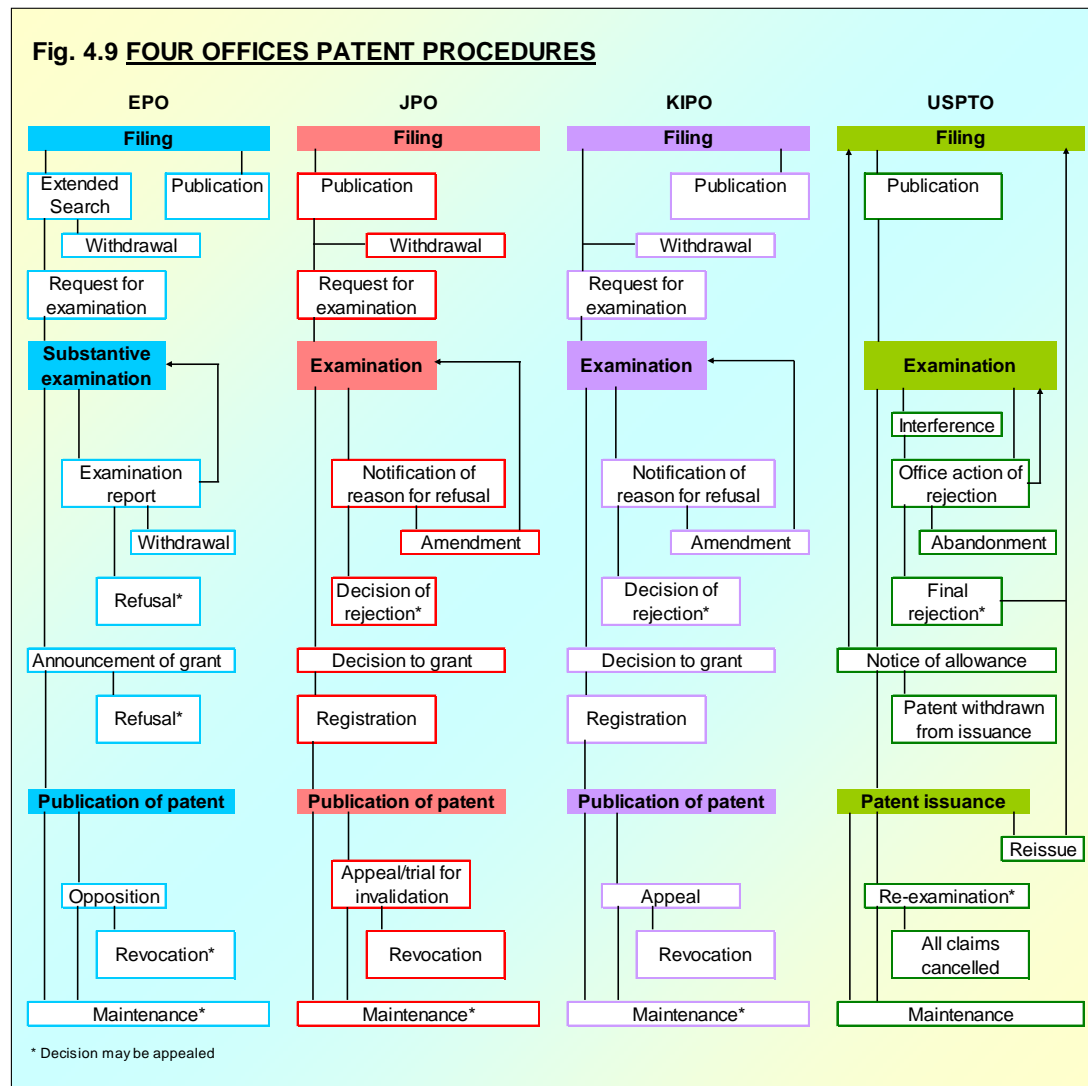
Fig. 4.8 shows the proportions of patents granted by each Office that are maintained for differing lengths of time. It compares the rate of granted patent registrations existing and maintained each patent year starting with the year of application. The EPO proportions represent an average ratio of maintenance in the EPC states.



In Japan, over 50 percent of the patents granted are maintained for at least 17 years compared to at least 10 years for the European patents, 13 years for the R. Korean patents and at least 15 years for the U.S. patents.

PATENT PROCEDURES

The major phases of the grant procedures at the Four Offices are shown in Fig. 4.9, which concentrates on the similarities between offices to motivate comparative statistics to be presented in the remainder of this chapter. However the reader should always bear in mind when interpreting such statistics that details of the procedures differ between offices, sometimes to a large degree (e.g. in time lags between stages of the procedures).



Examination: search and substantive examination

Each of the Four Offices examines a filed patent application based upon novelty, inventive step, and industrial applicability. At EPO, this examination is done in two phases. Firstly, a search is done in order to establish the state of the art with respect to the invention. The applicant receives a search report accompanied by an initial opinion on patentability. In a second phase, the inventive step and industrial applicability are examined in the substantive examination. In the national procedures before JPO, KIPO or USPTO, the search and substantive examination are undertaken

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

Filing of a national application with USPTO is taken to imply an immediate request for examination. Filing of a European application with EPO is taken to imply a request for search, but not yet a request for substantive examination. For the latter, a separate request has to be filed no later than six months after publication of the search report. At both JPO and KIPO, where deferred examination systems exist, filing of a national application does not imply a request for examination; this may be filed up to three and five years after the date of filing, respectively.

At KIPO, an applicant can apply for a customer-deferred examination up to six months after the date of the examination request and indicate the preferred date of the deferred examination. An examiner will complete the examination within three months of the preferred date of the deferred examination. The preferred date of the deferred examination should be a date that occurs not less than 18 months after the filing date and not more than five years after the filing date. The first constraint is based on the date on which an application is laid open and the second constraint is based on the deadline for requesting an examination.

Publication

In the Four Offices, the application is to be published, at the latest, 18 months after the date of filing or the earliest priority date. The application can be published earlier at the applicant's request. In 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 (EPO: Announcement of grant; JPO: Decision to grant; KIPO: Decision to grant; USPTO: Notice of allowance). 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 (EPO: Examination Report; JPO: Notification of reason for refusal; KIPO: Notification of reason for refusal; USPTO: Office action of rejection). 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 (EPO: Intention to refuse; JPO: Decision of rejection; KIPO: Decision of rejection; USPTO: Final rejection) or withdrawn by the applicant (EPO: Withdrawal; JPO: Withdrawal or Abandonment; KIPO: Withdrawal or Abandonment; USPTO: Abandonment). In addition, if no request for examination for an application is filed to the EPO, the JPO or the KIPO within the prescribed period (EPO: six months after publication of the search; JPO: three years from the date of filing; KIPO: five years from the date of filing), the application will be deemed to have been withdrawn. In all four 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 (EPO: Publication of patent; JPO: Publication of patent; KIPO: Publication of patent; USPTO: Patent issuance).

Opposition

There is no opposition system at JPO and KIPO.

At EPO, the period for filing opposition(s) begins after granting of the patent rights and lasts nine months. If successful, the opposition can lead to a revocation of the patent or to its maintenance in amended form.

In the procedure before USPTO, there are two features that may lead to the cancellation of a granted patent: interference proceedings and re-examination. These features are not comparable to the opposition procedure at EPO. In USPTO, the first feature is a priority contest between applicants/patentees seeking to protect the same invention and the second feature may be requested by third parties or by the patentee during the lifetime of a granted patent.

Appeal

An appeal can be filed by any of the parties concerned against a decision taken by the Four 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 Four 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.

In JPO and KIPO, generally appeal examiners examine the supplementary reasons brought forward by the appellant and decide whether the decision can be overturned. However, in the case that amendments of the description of the claims or the drawings have been made within 30 days from the filing date of an appeal against a decision to refuse the application, the examiner first re-examines the amendment brought forward by the appellant in order to decide whether the decision can be overturned. If not, the case will be forwarded to the appeal examiners for the final decision.

STATISTICS ON PROCEDURES

The 2007 and 2008 values of the basic procedural statistics at the Four Offices are shown in Table 4 (below). Definitions and further explanations of the statistics are given in Annex 2.

Definitions differ for the Four Offices. This should always be born in mind when seeking to make comparisons between the Four Offices based on the information provided.

Rates

The examination rate in USPTO is 100 percent, since filing implies a request for examination in the USPTO procedure, whereas in EPO, JPO and KIPO a specific request for examination has to be made. At EPO the growing proportion of PCT applications in the granting procedure led to an increase of the examination rate, as almost all of them proceed to examination. The examination rate is lower at JPO and KIPO because applicants have substantially more time to evaluate whether to maintain the application or not.

The grant rate is higher at KIPO than at the other offices.

Pendencies

In the successive stages of the procedure, there are pending applications awaiting action in the next step of the procedure. The number of pending applications gives an indication of the workload (per stage of procedure) from the patent grant procedure in each of the Four Offices. This is not a particularly good indicator for the backlog in handling applications within the Offices since a substantial part of pending applications are awaiting action from the applicant, for instance a request for examination, or a response to actions communicated by the office.

From 2007 to 2008, the total number of pending applications (at whichever stage) increased at the EPO, KIPO and USPTO. Altogether more than 4.4 million applications were pending in the Four Offices at the end of 2008 (-0.3 percent compared to 2007).

Table 4: STATISTICS ON PROCEDURES

| Progress in the procedure | | Year | EPO | JPO | KIPO | USPTO |
|------------------------------|---|------|---------|-----------|---------|---------|
| Rates in percentage | | | | | | |
| Examination | | 2007 | 94.5 | 66.2 | 83.9 | 100 |
| | | 2008 | 93.5 | 65.6 | 83.4 | 100 |
| Grant ¹⁸ | | 2007 | 50.4 | 48.9 | 73.6 | 48.7 |
| | | 2008 | 49.5 | 50.2 | 67.6 | 44.0 |
| Opposition | | 2007 | 5.2 | - | - | - |
| | | 2008 | 5.2 | - | - | - |
| Maintenance after opposition | | 2007 | 70.4 | n.a. | - | - |
| | | 2008 | 67.9 | n.a. | - | - |
| Appeal ¹⁹ | On examination | 2007 | 32.9 | 33 077 | 20.6 | 2.2 |
| | | 2008 | 29.7 | 31 483 | 32.5 | 3.8 |
| | on opposition | 2007 | 42.3 | - | - | - |
| | | 2008 | 28.7 | - | - | - |
| | | | | | | |
| Pendency in the procedure | | | | | | |
| Search | Number of pending applications | 2007 | 124 000 | - | - | - |
| | | 2008 | 136 021 | - | - | - |
| | Pendency times in search (months) | 2007 | 17.6 | - | - | - |
| | | 2008 | 18.9 | - | - | - |
| Examination | Number of applications awaiting request for examination | 2007 | 19 517 | 1 639 081 | 244 332 | - |
| | | 2008 | 18 051 | 1 500 879 | 289 835 | - |
| | Number of pending applications | 2007 | 318 298 | 888 198 | 446 295 | 763 493 |
| | | 2008 | 339 043 | 868 025 | 470 245 | 809 070 |
| | Pendency time to first office action (months) | 2007 | 22.8 | 26.7 | 9.9 | 24.9 |
| | | 2008 | 19.0 | 28.5 | 12.1 | 25.7 |
| | Pendency time in examination ²⁰ (months) | 2007 | 42.8 | 32.4 | 15.8 | 32.0 |
| | | 2008 | 46.9 | 33.9 | 17.4 | 33.5 |
| Opposition | Number of pending applications | 2007 | 5 822 | - | - | - |
| | | 2008 | 5 885 | - | - | - |
| | Pendency time in opposition ²¹ (months) | 2007 | 26.4 | - | - | - |
| | | 2008 | 23.9 | - | - | - |

n.a.” not available

- = not applicable

¹⁸ The USPTO reports on allowance rate.¹⁹ For JPO, only numbers are available.²⁰ For EPO, the counts now relate to pendency until dispatch of the decisions, instead of pendency up to the examiner's decision as previously.²¹ For EPO, these counts also now relate to pendency until dispatch.

Chapter 5

THE FOUR OFFICES AND THE PATENT COOPERATION TREATY

This chapter presents statistics on the extent of the various activities of the Four Offices that relate to the PCT system. The graphs cover five-year periods that include the latest year for which reliable data are available.

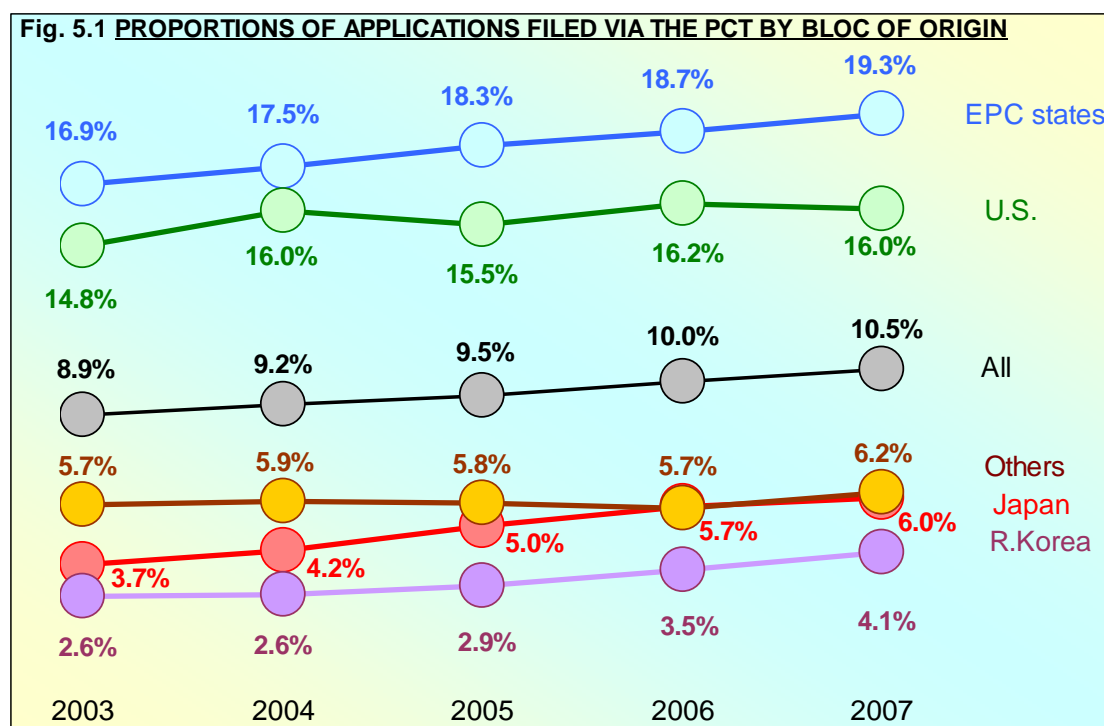
Graphs are presented to display the shares of patent applications and grants using the PCT filing route by origin. Descriptions are then given of additional activities of the Four Offices under the PCT as ROs for applicants in their respective territories, as the major ISAs and as IPEAs. PCT searches are a significant additional workload item at the Four Offices to those already described in Chapter 4.

In previous editions of TSRs, Others included R. Korea. Therefore, there has been some adjustment in counts for the “Others” compared with those in the earlier reports.

THE PCT AS FILING ROUTE

PATENT FILINGS

Fig. 5.1 shows the proportions of all patent applications filed that are PCT international applications, and also shows the breakdown by each bloc of origin. Applications are counted in the year of filing.



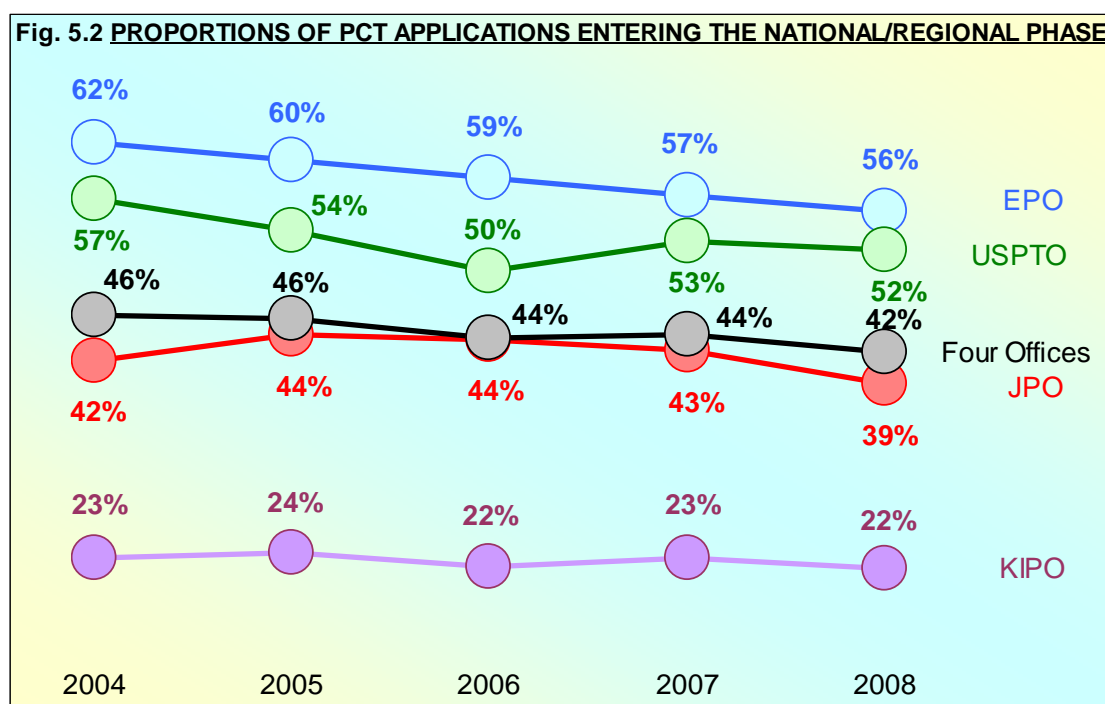
The choice of the PCT as a filing route has generally continued to increase, although at different levels for the different bloc of origin.

The line for All is a weighted combination of the various lines for each bloc of origin, and can be reconstructed from the information provided in Fig. 3.1 of Chapter 3.

NATIONAL/REGIONAL ENTRY RATE

After the international phase of the PCT procedure, applicants decide whether they wish to continue further with their applications. A decision has to be made for each country or regional organisation. If the decision is made to proceed further, the applicant has to fulfil the various requirements of the selected PCT contracting states or organisations. The application then enters the national or regional phase.

The proportions of all PCT applications that have entered the national or regional phase at each of the Four Offices are presented in Fig. 5.2. Applications are counted in the year of the delay to enter the national or regional phase has expired.

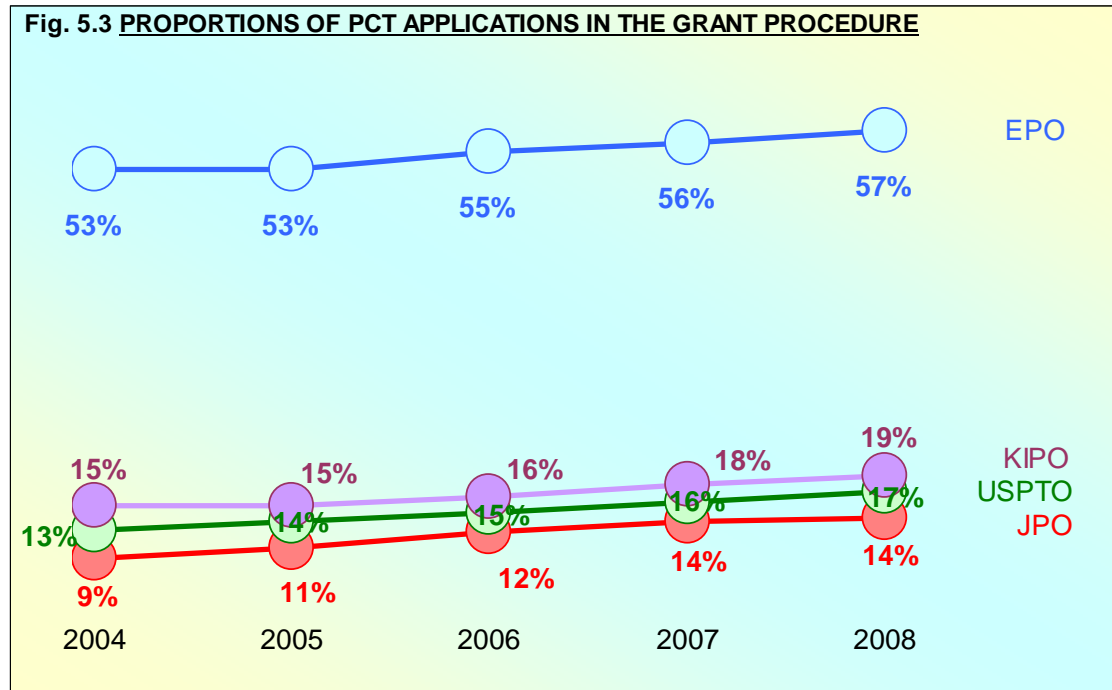


There is a general declining trend observed at all offices. This should be interpreted in the context of the strong increase of the number of PCT international applications filed during the period and shortly before. A higher proportion of PCT applications entered the regional phase at the EPO than entered the national phase at JPO, KIPO or USPTO. This is due to the supranational dimension of EPO, which provides an opportunity to proceed further with a unique procedure for several countries.

It should be noted that proportions of PCT applications entering national phase at EPC contracting state national offices are not reported here. The line for Four Offices is almost a simple weighted average of the individual Office lines because most international phase PCT filings designate all Four Offices at the outset.

SHARE OF PCT APPLICATIONS

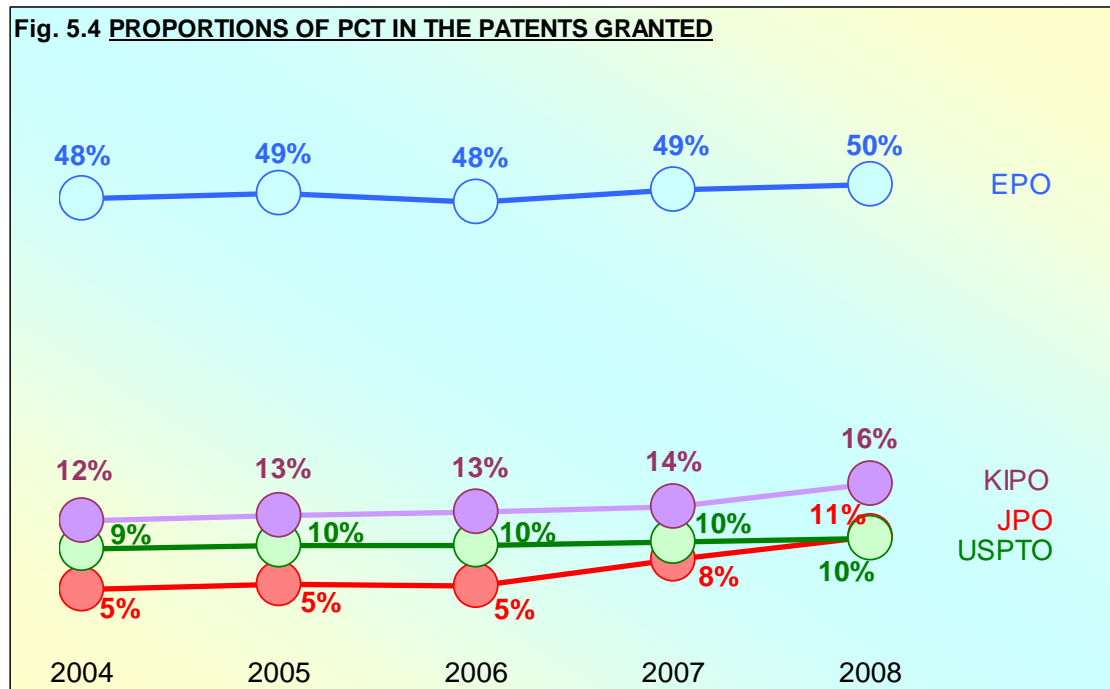
Fig. 5.3 shows the proportions of PCT applications within the overall applications that entered the grant procedure at each Office (as presented earlier in Fig. 4.1).



Despite the declines reported in Fig 5.2, the total shares of PCT applications nevertheless increased in 2008 as compared to 2007 at the all offices except JPO, which remained stable. The EPO has a higher proportion of PCT applications than at the other offices.

PCT GRANTS

Fig. 5.4 shows the proportions of patents granted by each of the Four Offices that were based on PCT applications.



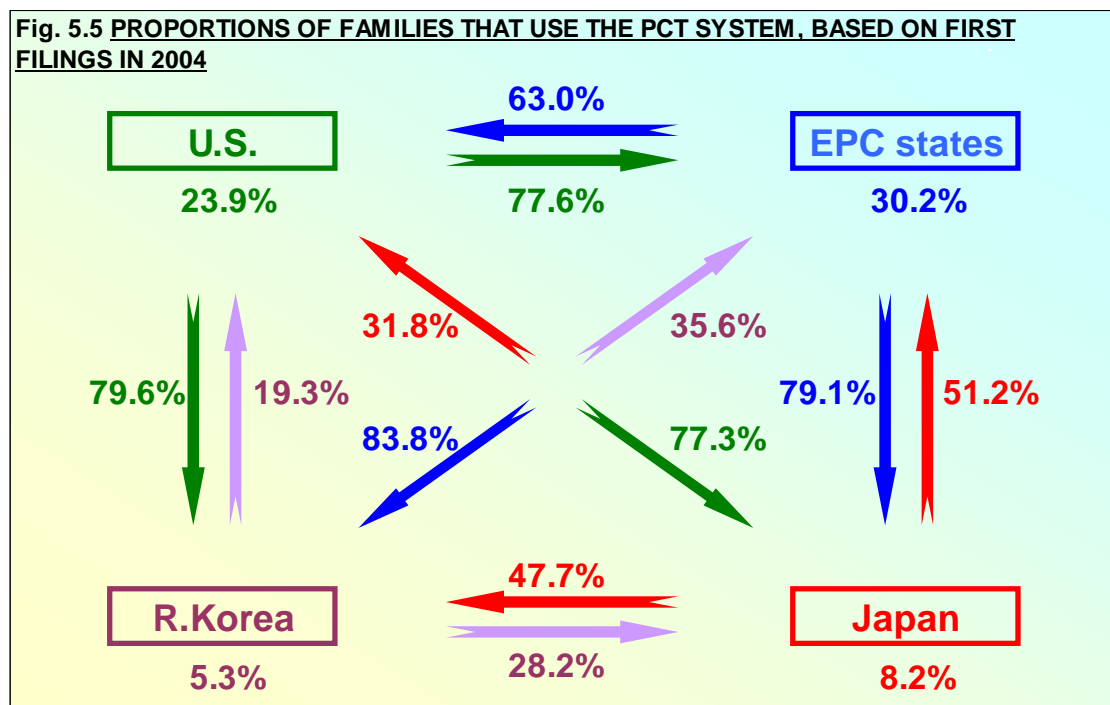
Shares of PCT patents granted are somewhat below those of applications (see Fig. 5.3), since granted patents generally relate to applications that had been filed three to five years earlier when the proportions of PCT applications were lower (as shown in Fig. 5.1).

PATENT FAMILIES AND PCT

The PCT system provides a good way to make subsequent patent applications in a large number of countries. Therefore it can be expected that many patent families flowing between blocs will use the PCT route. In this section, the use of the PCT system implies that at least one PCT application has been made within the family of filings for the same invention. Further details of PCT usage in patent family flows can be found in the statistical data file that is attached to the web based version of this report.

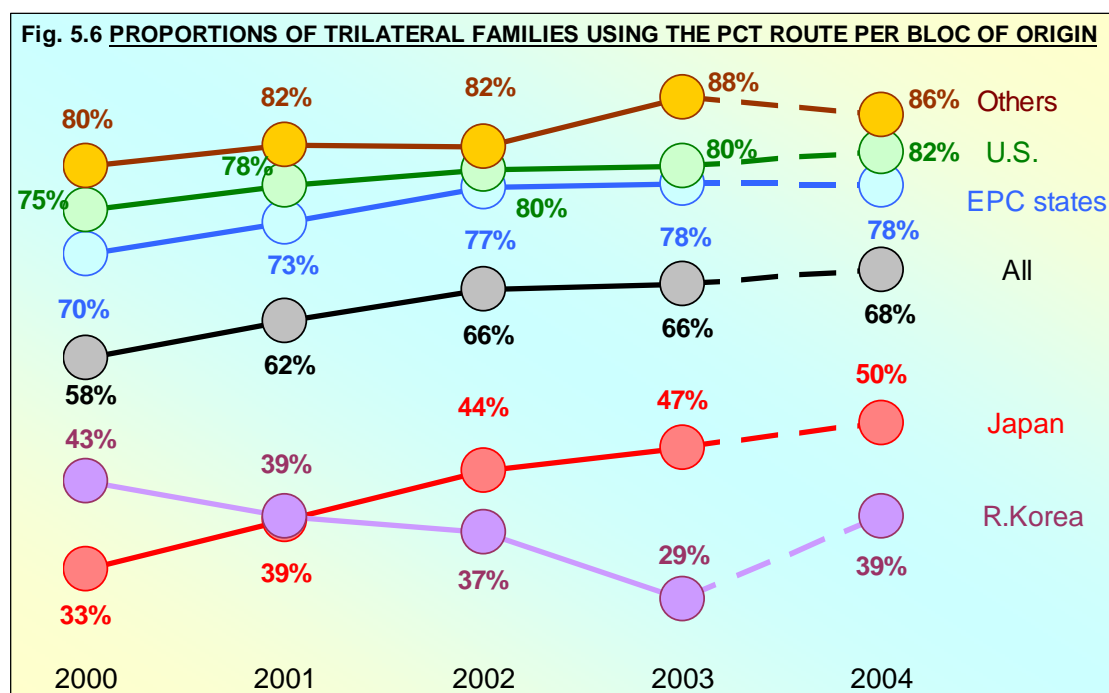
Fig. 5.5 shows the percentages of PCT system usage in the flows of all patent families between blocs, based on first filings in 2004, and can be compared with Fig. 3.13.

The percentage given next to each bloc is the proportion of distinct referenced priorities for the bloc that generated families using the PCT route. This is an indicator of the proportion of the total first filings in the bloc that led to the use of the PCT system.



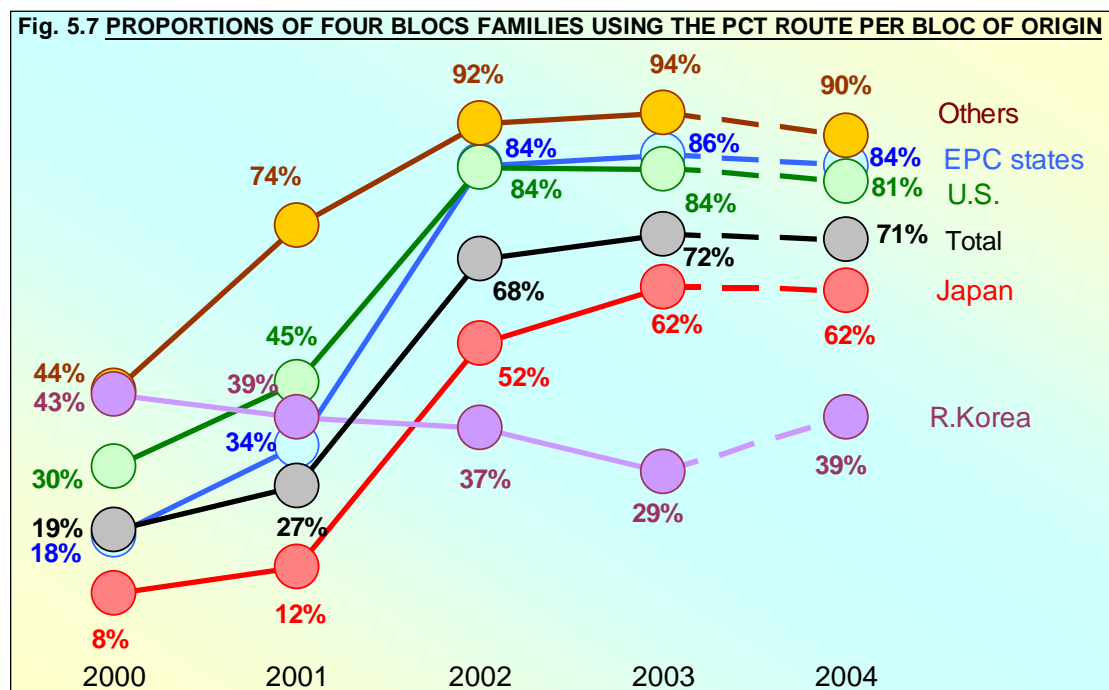
In general, the usage of the PCT route is far higher when making applications abroad rather than at home. Applicants from U.S. and EPC states prefer to use the PCT system to a greater extent than applicants from Japan and R. Korea.

Fig. 5.6 shows the proportions of Trilateral patent families (as given earlier in Fig. 3.14) that make some use of the PCT system. As discussed earlier, the data for 2004 are provisional.



Usage of the PCT system was fairly widespread in Trilateral patent families, although still at a somewhat lower level in Japan and R. Korea. In 2003, out of all Trilateral patent families, 66 percent made some use of the PCT system.

Fig. 5.7 shows the proportions of Four blocs patent families (as given earlier in Fig. 3.15) that made some use of the PCT system.

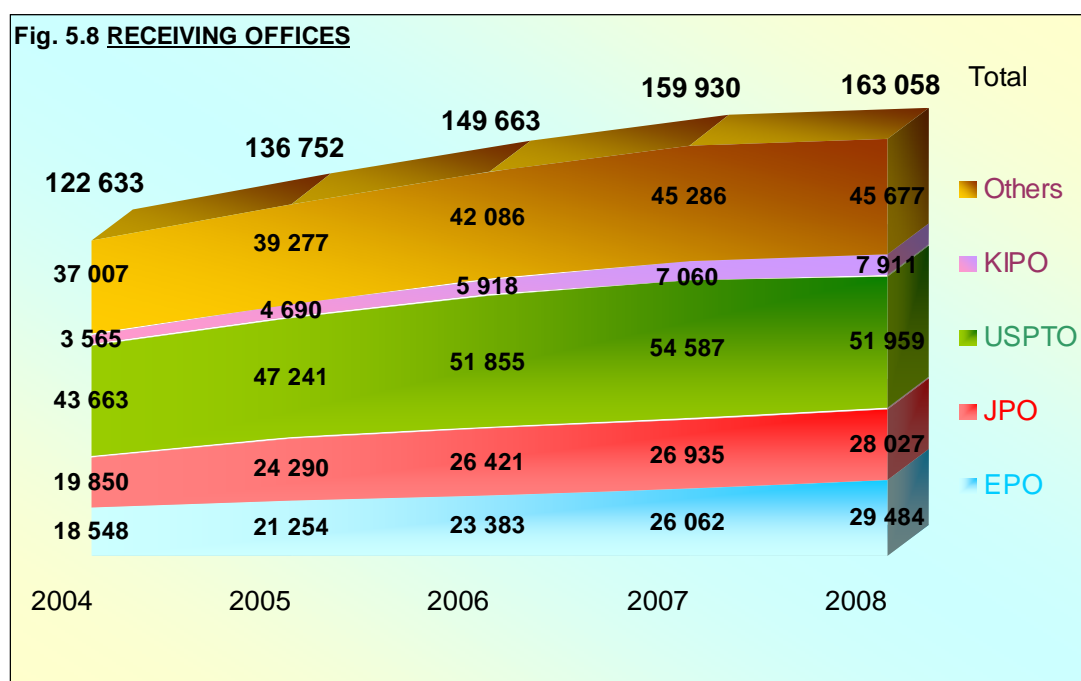


Except for R. Korea and U.S. in the most recent years, the usage of the PCT system has generally grown in the Four blocs families over the period, from less than that in Trilateral patent families to more than that in Trilateral Patent families since 2002. This may be correlated to the strong growth in absolute numbers of Four blocs patent families that was shown in Fig. 3.15 of Chapter 3. Fig. 5.7 confirms that the PCT system is indeed a useful way to obtain an increased international distribution of subsequent filings.

PCT AUTHORITIES

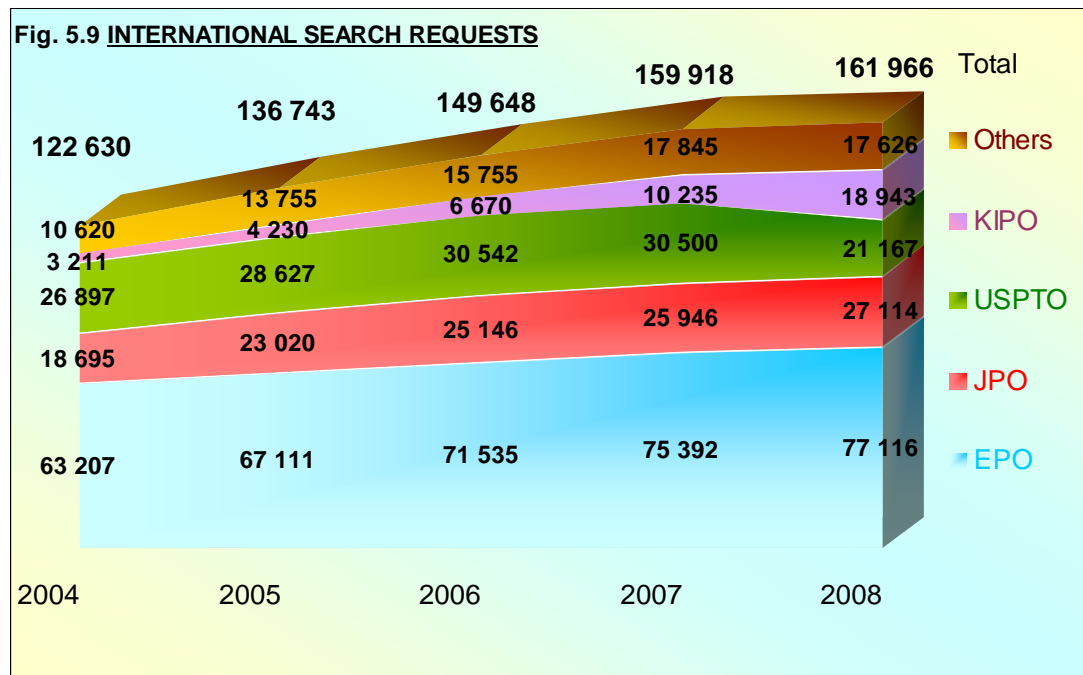
Under the PCT, each of the Four Offices acts as RO, mainly for applicants from its own geographical zone, and as ISA and IPEA for also non residents as well as for residents. The following graphs show the trend over the years 2004 to 2008 of the activities of the Four Offices as PCT authorities.

Fig. 5.8 shows the breakdown of PCT international filings by ROs over time.



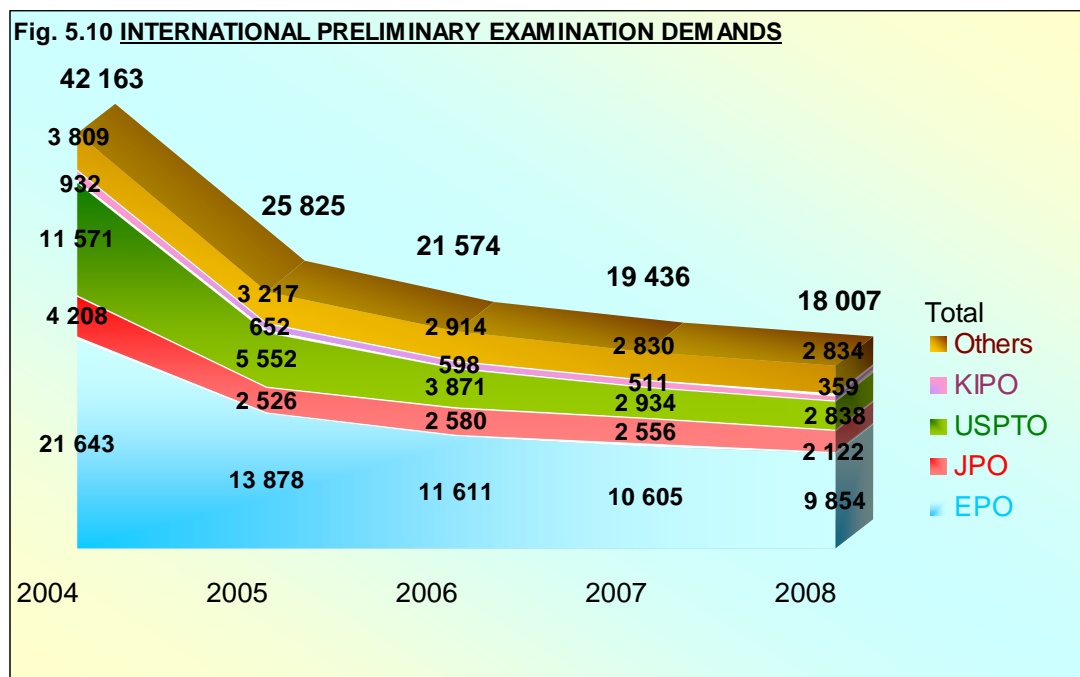
EPO and the JPO received fewer international applications than USPTO. KIPO received far fewer applications. In 2008, USPTO was the only one of the Four Offices to experience a decrease (5 percent).

Fig. 5.9 shows the breakdown of the numbers of international search requests over time.



The Four Offices together received 89 percent of the PCT international search requests in 2008. A growing proportion of applicants select KIPO to perform the PCT international search. The reason for this may be that KIPO has been appointed fairly recently as ISA. It is experiencing strong increases, apparently at the expense of USPTO, where the share declined accordingly.

Fig. 5.10 shows the breakdown of the numbers of international preliminary examination requests over time.



Together the Four Offices were in charge of 84 percent of the work as IPEA in 2008 compared to 91 percent in 2004. The number of demands for international preliminary examination declined after a rule change that took place in 2004 in the PCT system regarding time limits to enter the national or regional phase, and the introduction of a written opinion on patentability with the international search report. This made the international preliminary examination less attractive for most applicants.

EPO still performed more than half of the examinations in 2008, and USPTO experienced the strongest proportional decrease over the period.

Chapter 6

OTHER WORK

This brief chapter contains statistics on other work done by the Four Offices, such as search or granting of rights that are not common to all Four Offices. The data presented below are additional to the information already presented earlier in this report.

Other work includes applications for plant patents (USPTO); reissue patents (USPTO); applications for patents other than those for inventions: utility models (JPO and KIPO), designs and trademarks (JPO, KIPO and USPTO); and searches on behalf of national offices as well as searches for third parties (EPO).

The numbers of requests received for these types of other work are shown for 2007 and 2008 in Table 6.

Table 6: STATISTICS ON OTHER WORK

| Activities | Year | EPO | JPO | KIPO | USPTO |
|---|------|--------|---------|---------|---------|
| Searches for national offices & third parties | 2007 | 18 877 | - | - | - |
| | 2008 | 17 104 | - | - | - |
| Design applications | 2007 | - | 36 544 | 54 138 | 27 752 |
| | 2008 | - | 33 569 | 56 750 | 27 782 |
| Utility model applications | 2007 | - | 10 315 | 20 998 | - |
| | 2008 | - | 9 452 | 17 405 | - |
| Plant patent applications | 2007 | - | - | - | 1 049 |
| | 2008 | - | - | - | 1 209 |
| Re-issue patent applications | 2007 | - | - | - | 1 005 |
| | 2008 | - | - | - | 761 |
| Trademark applications | 2007 | - | 143 221 | 131 649 | 401 039 |
| | 2008 | - | 119 185 | 127 910 | 390 765 |

Annex 1

DEFINITIONS FOR OFFICES EXPENDITURES

EPO EXPENSES (Fig. 2.2)

A. Salaries and allowances

Salaries and allowances of permanent staff as well as of all categories of temporary staff.

B. Social security benefits

Pensions, long-term care, death, invalidity and sickness coverage as well as pension taxation (taking due account of post-employment liabilities);

C. Tax adjustment transfer (one-time)

Shift of tax adjustment liability from contracting states to EPO.

D. Training and other staff expenses

Training; recruitment, transfer and leaving costs; medical care; staff welfare; European School and crèches.

E. Depreciation

Depreciation for buildings, IT equipment and other tangible and intangible assets, including the depreciation component of financial leases.

F. IT maintenance

Operating costs related to the maintenance of EDP hardware and software; purchases below capitalization threshold (EUR 750); licenses; programming costs of self-developed systems as far as they do not qualify for capitalization.

G. Building maintenance

Operating costs related to the maintenance of buildings, technical installations, equipment, furniture and vehicles, such as rent, cleaning and repairs; electricity, gas, water.

H. Patent information and cooperation

Published patent documentation on all media; public information; public relations and representation; meetings; costs of supervisory bodies; co-operation with contracting states including support to national patent offices; assistance to third countries; Trilateral activities.

I. Miscellaneous

Travel; non-EDP purchases below capitalization threshold; supplies; security and messenger services; consultants; external audit; outsourcing; postage and telecommunications; documentation costs such as books, technical journals and external database interrogation; insurance; taxes and public levies; third-party funded projects; other miscellaneous small-scale expenditure.

JPO EXPENDITURES (Fig. 2.3)

Expense for JPO's business

Expense for business processing

A. General processing work

- Existing personnel (including increase and transfer)
- General administration
- Various councils
- Encouragement of guidance including patent management
- External rented offices
- Internationalization of industrial property administration
- Project for supporting medium and small company's applications

B. Examination and appeals/trials, etc.

- Infrastructure improvement for examination and appeals/trials
- Disposition of examination and appeals/trials
- Execution of PCT
- Patented micro organisms deposition organisation

C. Information management

- Management of information for use in examination and appeals/trials

D. Publication of Patent Gazette, etc.

E. Computerization of patent processing work

F. Facility improvement

G. INPIT operation

H. Others

KIPO EXPENDITURES (Fig. 2.4)

A. Salaries and benefits

Compensation for the services of employees or the inclusive expenditure of the services of employees: salaries, bonuses and remuneration of temporary staff.

B. General operating expenses

Expenditure on the operation of organization.

C. External support

Support for promoting activities of private organizations.

D. Equipment

Expenditure on the purchase of property that normally may be expected to have a period of service of a year or more.

E. Other expenses

All other expenses not covered by the above.

USPTO EXPENDITURES (Fig. 2.5)

A. Salaries and Benefits:

Compensation directly related to duties performed for the Government by Federal civilian employees. Also included are benefits for currently employed Federal civilian personnel.

B. Rent & Utilities:

Payments for the use of land, structures, or equipment owned by others and charges for communication and utility services.

C. Contracts and Services:

Services acquired by contract from non-Federal sources (that is, the private sector, foreign governments, State and local governments, Native American/Native Alaskan tribes), as well as, from other units within the Federal Government. This consists of three types of services:

- Management and professional support services.
- Studies, analyses, and evaluations.
- Engineering and technical services.

D. Other:

All other expenses not covered by the above including but not limited to:

Equipment: Property of a durable nature, which is defined as property that normally may be expected to have a period of service of a year or more, after being put into use, without material impairment of its physical condition or functional capacity. Also included is the initial installation of equipment when performed under contract.

Printing: Printing and reproduction obtained from the private sector, or from other Federal entities.

Supplies & Materials: Commodities that are ordinarily consumed or expended within one year after they are put into use, converted in the process of construction or manufacture, used to form a minor part of equipment or fixed property, or other property of little monetary value that does not meet any of the three criteria listed above, at the option of the agency.

Annex 2

DEFINITIONS FOR STATISTICS ON PROCEDURES

Here are definitions of the terms that appear in Table 4.

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 EPO, where the request for examination has to be filed no later than six months after publication of the search, the rate for 2008 relates to applications mainly filed in the years 2007 and 2008.

For JPO, the period to file a request for examination has been three years from filing date since October 2001. The rate for 2008 relates to applications filed in the year 2005.

For KIPO, the period to file a request for examination is five years. The rate for 2008 relates to applications filed in the year 2003.

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

GRANT RATE

For 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 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 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).

For USPTO, an allowance rate is reported, which is based on applications allowed to be granted divided by the number of disposals. This rate includes plant patents and reissue patents in addition to utility patents. However, since utility patents comprise over 90 percent of patent applications, and over 90 percent of issued patents, this rate is almost identical to a rate based strictly on utility patents.

OPPOSITION RATE

The opposition rate for EPO is the number of granted patents for which the opposition period ended in the reporting year and against which one or more oppositions are filed, divided by the total number of patents for which the opposition period ended in the reporting year.

This rate does not apply to JPO, KIPO or to USPTO, since there is no opposition procedure there.

MAINTENANCE RATE AFTER OPPOSITION

This only applies to EPO.

The maintenance rate for the EPO is the number of decisions (in the opposition procedure) to maintain, possibly in amended form, a patent during the reporting year, divided by the total number of decisions in the opposition procedure during the reporting year.

APPEAL RATE

For EPO, appeal rates are given for examination and opposition, being the numbers of decisions in the examination and opposition procedures respectively, against which an appeal was lodged in the reporting year, divided by the number of all decisions for which the time limit for appeal ended in the reporting year.

The USPTO appeal 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.

For all Four Offices, any subsequent litigation proceedings in national courts are not included.

PENDENCY IN THE SEARCH PROCEDURE

This only applies to the EPO.

Pending applications in search is the number of applications received up to and including the reporting year for which a search report has not been made by the end of the reporting year. Pending searches in months is defined as the number of pending applications in search by the end of the reporting year divided by the average monthly number of disposed searches in the reporting year.

PENDENCY APPLICATIONS AWAITING REQUEST FOR EXAMINATION

This does not apply to USPTO.

This statistic indicates the number of filed applications awaiting a request for examination by the applicant: for EPO after publication of the search report; for JPO at any time during three years after filing; for KIPO during five years after filing.

For EPO, the figure indicates the number of applications for which the search report has been published by the end of the reporting year and for which the prescribed period for the request has not expired (six months after publication of the search).

For JPO and KIPO, it indicates the number 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 has not expired.

PENDING EXAMINATIONS

For EPO, pending applications in examination are 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 USPTO, pending applications in examination are applications which 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.

For JPO and 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.

PENDENCY FIRST OFFICE ACTIONS

At EPO, the search report that is sent to the applicant is accompanied by an opinion on patentability. As long as the applicant then makes a request for examination, this opinion is then resent as the first communication in examination. The pendency first office action is the average time measured from filing at EPO to issue of this first communication in examination.

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

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

For 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 IN EXAMINATION

For EPO, pendency examination in months is the number of pending applications in examination as of the end of the reporting year, divided by the average monthly number of disposals (decisions to grant or refuse, withdrawals, abandonments) during the reporting year.

For JPO, pendency 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 KIPO, pendency 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 USPTO, pendency examination in months for utility, plant, and reissue applications 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.

PENDENCY IN OPPOSITIONS

This only applies to EPO.

Pending applications in opposition is the number of patents against which one or more oppositions have been filed and for which no decision has been taken by the end of the reporting year.

Pendency opposition in months is the number of pending applications in opposition at the end of the reporting year, divided by the average number of disposals in opposition per month in the reporting year.

Acronyms

| | |
|-----------------|--|
| CEO | Chief Executive Officer [KIPO] |
| DOC | Department Of Commerce (U.S.) [USPTO] |
| DOCDB | DOCument DataBase [EPO] |
| EC | European Commission |
| EDP | Electronic Data Processing |
| EPC | European Patent Convention [EPO] |
| EPO | European Patent Office |
| EU | European Union |
| EXCEL | EXamination exCELlence [KIPO] |
| FAOM | First office Action On Merits [USPTO] |
| FOSR | Four Office Statistics Report |
| FY | Fiscal Year |
| FYROM | Former Yugoslavian Republic Of Macedonia |
| GIPA | Global Intellectual Property Academy [USPTO] |
| IFRS | International Financial Reporting Standards |
| INPIT | National Center for Industrial Property Information and Training [JPO] |
| IP | Intellectual Property |
| IPC | International Patent Classification |
| IPEA | International Preliminary Examination Authority |
| ISA | International Searching Authority |
| IT | Information Technology |
| JP-FIRST | JP-Fast Information Release Strategy [JPO] |
| JPO | Japan Patent Office |
| KIPO | Korean Intellectual Property Office |

| | |
|----------------|--|
| OECD | Organisation for Economic Co-operation and Development |
| PATSTAT | Worldwide patent statistics database [EPO] |
| PCT | Patent Cooperation Treaty |
| PPH | Patent prosecution highway |
| RO | Receiving Office |
| R&D | Research and Development |
| SMEs | Small and Medium-sized Enterprises |
| SIPO | State Intellectual Property Office of the P.R. China |
| STOP! | Strategy Targeting Organized Piracy [USPTO] |
| TSR | Trilateral Statistical Report |
| U.S. | United States of America |
| USPTO | United States Patent and Trademark Office |
| WIPO | World Intellectual Property Organization |

European Patent Office (EPO)

80298 Munich

Germany

www.epo.org

Japan Patent Office (JPO)

3-4-3 Kasumigaseki, Chiyoda-ku

Tokyo 100-8915

Japan

www.jpo.go.jp

Korean Intellectual Property Office (KIPO)

Government Complex Daejeon,

139 Seonsa-ro, Seo-gu Daejeon, 302-701

Republic of Korea

www.kipo.go.kr

United States Patent and Trademark Office (USPTO)

P.O. Box 1450

Alexandria, VA 22313

USA

www.uspto.gov

This report contains statistical information from the four major patent offices in the world. It gives a description of worldwide patenting activities, as well as detailing and comparing business processes taking place at each office.

Edited by the JPO, 2009

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