TRILATERAL STATISTICAL REPORT

2007 EDITION

Trilateral Statistical Report 2007 Edition
European Patent Office, Japan Patent Office,
United States Patent and Trademark Office
Munich, 2008

Preface

Collaboration between the European Patent Office (EPO), the Japan Patent Office (JPO), and the United States Patent and Trademark Office (USPTO) has proved to be successful in the area of patent statistics. The three Offices, that are commonly referred to as the Trilateral Offices in the patent community, have once again jointly produced the Trilateral Statistical Report (TSR). 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 generally about patent grant procedures. In order to do this, the report discusses background activities at each Office, reviews worldwide patenting activities and then compares the patent related work at the Trilateral Offices. The TSR supplements annual reports for each of the three Offices and also uses statistics that are collected by the International Bureau of the World Intellectual Property Organization (WIPO).

Applications for patent rights among the Trilateral Offices once again increased in calendar year 2007. Together the Trilateral Offices experienced a 2.4 percent increase in patent applications compared to 2006. The highest percentage growth was at USPTO, with total patent application filings increasing by 7 percent from 2006 levels[1]. At the EPO, patent application filings increased by 4 percent, while at the JPO there was a decrease by 3 percent, continuing a recent declining trend. JPO had the highest proportion of domestic filings at almost 84 percent. The proportion of domestic filings at EPO was 49 percent and at USPTO was 53 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 Offices granted a combined total of 376 940 patents in 2007, which is stable compared to the 377 950 patents granted in 2006.

Various factors have influenced patent filing trends in the past. These include changes to patent rules and fees. For example, supranational systems such as those defined by 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. In 2004, the last constraint on designation choices in the PCT system was lifted and, unless applicants decide otherwise, all PCT member countries are now 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 designation 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. A brief overview of recent economic activity now follows.

[1] Prior to implementation of revised application rules in 2007, the USPTO experienced a sharp increase in application filings. As of this publication date, the rules are still being considered in the U.S. Federal Courts system.

According to the International Monetary Fund (IMF)[2] , the global economy is caught between sharply slowing rates of growth in many advanced economies and rising inflation everywhere. The inflation problem has particularly concerned key commodities such as oil. World output in calendar year 2007 expanded by 5.1 percent over 2006 levels. This calendar year (2008), global economic activity continues to remain positive but output is expected to increase by only 4.1 percent. Growth is expected to decelerate significantly in the second half of 2008, before recovering gradually in 2009 to an expected 3.9 percent. The IMF believes that risks to their global outlook for growth are balanced around this revised baseline level.

There have been significant declines in stock market prices in 2008 for most countries. The corrections started with problems for parts of the real estate loans system in the U.S. But it also seems likely that the correction is a
fairly natural one after several previous years of significant increases. Manufacturing industry accounts for most patent applications, so the relevant question is whether or not the contagion in the markets will be serious enough to seriously affect levels of industrial investment. 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. It seems likely that patenting will still show some degree of growth in 2008 before moving up faster in 2009. But this assumes that current market corrections do not lead to a major rout in the manufacturing sector.

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 innovate and 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. On the other hand, most major patent offices are concerned that the numbers of applications do not become so high that their quality is affected. In order to mitigate such effects, the Trilateral Offices are considering ways to share more of the outputs of their work in order to mitigate their high workload levels.

Strongly developing countries such as China and The Republic of Korea continue to record large growth rate increases in domestic patent filings. 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. All of these factors have a positive impact on worldwide patent growth.

The Trilateral 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

[2] www.imf.org/external/pubs/ft/weo/2008/update/02/index.htm

expectations and objectives of the public. The report is also available on the Trilateral Co-operation web site[3]. 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 and USPTO
With co-operation of WIPO

October 2008

[3] At the time of editing, this web site was under revision.

Table of contents

Tables

Graphs

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 or African Intellectual Property Organizations), and the
    - International PCT.

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

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

Statistics are presented in accordance with the following definitions:

- Domestic applications are defined as all demands for patent rights made by residents of the country where the application is filed[4]. For the purpose of reporting statistics for the EPC contracting state[5] considered as a bloc, foreign applications are given with regard to the applications made by non-residents of the EPC bloc as a whole. For example, applications made by French residents in one of the other EPC contracting states are counted as domestic demand in the EPC bloc.

- First filings are applications filed without claiming the priority of another previous filing, and all other applications are subsequent filings. The subsequent filings usually have to be made within one year of the first filings. In the absence of a complete set of available statistics on first filings, it is assumed in this report that domestic national filings are equivalent to first filings[6], and that PCT filings are subsequent filings.

- Four geographical blocs are defined. The EPC contracting states (corresponding to the territory of all the states party to the EPC contracting states at the end of the reporting year), Japan, the U.S., and the rest of the world referred to as the bloc "Others". These blocs are referred as bloc 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 only once. However, alternative representations are also given in some places in terms of the demand for patent rights, after cumulating the number of designated countries in each supranational application.

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

PCT applications are usually counted in the year they enter the national (or regional) phase. In some parts of this report they are counted by the year of filing in the international phase.

- Grants are reported by the WIPO in its Industrial Property Statistics series[7]. They are counted in the year they 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

[4] At the USPTO the country of residence is determined by the residence of the first named inventor.
[5] Referred as EPC States in the graphs.
[6] 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.
[7] www.wipo.int/ipstats/en/statistics/pct/index.html

there is evidence of patenting activity in all trilateral blocs. Other types of filters can be applied to select patent families of high importance. For example, a subset of trilateral patent families known as "Triadic patent families" is currently reported in OECD publications.

Further definitions for statistics on procedures are given in Annex 2. Definitions of patent related terms can be found in the glossary located in the web annex[8].

Chapter 2

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

Chapter 3

This chapter provides an assessment of the development of worldwide patent activity. Statistics are derived primarily from the Industrial Property Statistics of the WIPO[9]. Patent statistics are sometimes retrospectively updated, so where necessary and possible the counts have been augmented from other sources. But otherwise no estimated counts have been included to compensate for missing data.

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

Chapter 4

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

Statistics are given for applications filed with Trilateral 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 contracting 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.

[8] www.trilateral.net/tsr/tsr_2007/annex/
[9] This TSR edition refers to WIPO data as of April 2008.

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 also 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 Trilateral Offices themselves are described, even though grants by the EPO lead to multiple patents in the designated EPC contracting states.

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

Chapter 5

This chapter shows how the PCT impacts patenting activities, particularly at the Trilateral 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 collected from each country and region.

Chapter 6

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

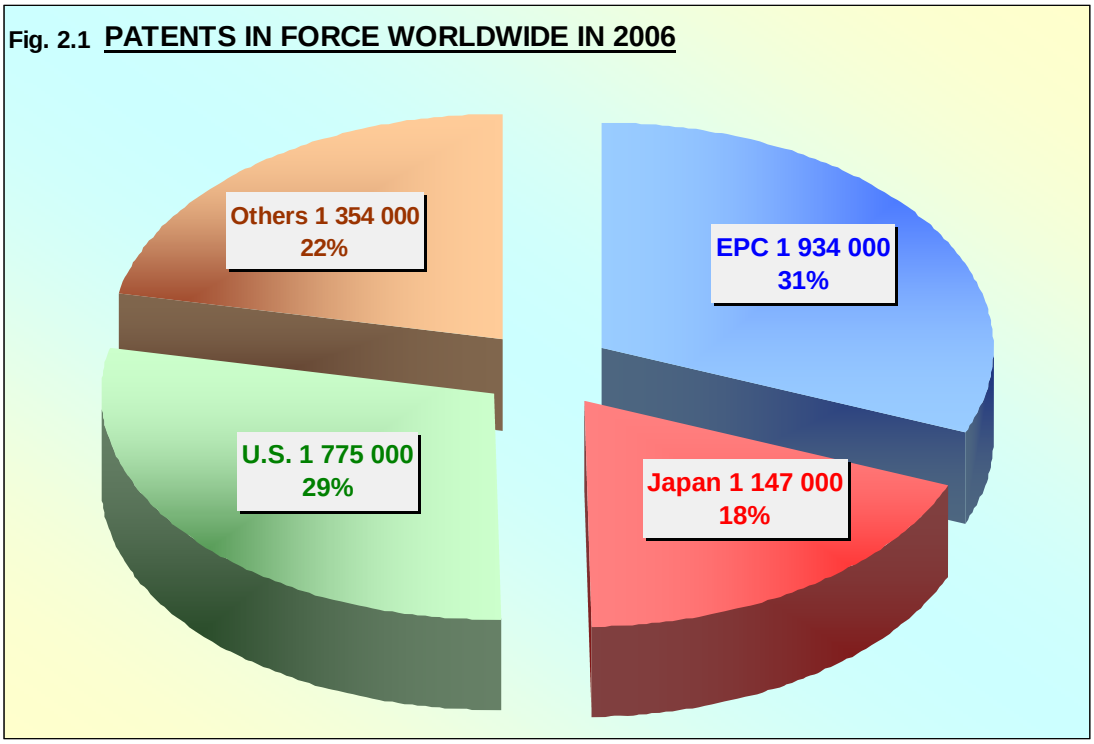
[10] www.wipo.int/classifications/ipc/en/

Chapter 2

THE TRILATERAL OFFICES

Patent rights are recognized throughout the world. 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 2006, about 6.3 million patents were in force[11].

Fig. 2.1 **PATENTS IN FORCE WORLDWIDE IN 2006**



About 77 percent of the total patents in force worldwide were granted in either the EPC contracting states, Japan or U.S. In EPC contracting states, patents are granted either by the national offices or by the EPO.

[11] Data for 2006 are missing for some countries, in which case statistics for 2005 were used when available.

EUROPEAN PATENT OFFICE

The EPO, the main patent granting authority for Europe, is an example of economic and political cooperation, providing patent protection in up to 37 European countries on the basis of a single patent application and a unitary grant procedure. The EPO currently receives currently more than 50 percent of all the patent applications filed in the area of the EPC contracting states.

By the end of 2007, the 32 members of the underlying European Patent Organisation were:

Austria	Belgium	Bulgaria	Cyprus	Czech Republic
Denmark	Ellas	Estonia	Finland	France
Germany	Hungary	Iceland	Ireland	Italy
Latvia	Liechtenstein	Lithuania	Luxemburg	Malta
Monaco	Netherlands	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 2007, extensions of European patents could be requested for:

Albania, Bosnia-Herzegovina, Croatia, the FYROM, and Serbia.

Together, the above states build a market of about 590 million people.

Norway and Croatia joined the Organisation on January 1, 2008. Other states have expressed their intention to join the Organisation in the near future.

Grant Procedure

The mission of the EPO is to support innovation, competitiveness, and economic growth for the benefit of the citizens of Europe. Its main task is to grant European patents according to the EPC. Moreover, the EPO 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 13 December 2007[12]. 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 (TRIPS) and the Patent Law Treaty (PLT). It strengthens the position of applicants and patentees, and simplifies the access to patent protection and introduces new legal remedies, without departing from the fundamental principles established with the original convention of 1973.

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

Late in 2007, the London Agreement was ratified by a large enough number of countries to enter into force in May 2008. This is a major step towards reducing translation costs for European patents.

The EPO continued to develop its quality management system based on the ISO 9001 standard. 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 2006 and 2007.

Table 2.1: EPO PRODUCTION INFORMATION

PRODUCTION FIGURES	2006	2007
Applications filed (Euro-direct & PCT regional phase)	135 429	140 725
Searches carried out		
European (including PCT supplementary)	83 748	84 698
PCT international	69 841	73 880
On behalf of national offices and other	18 444	18 877
Total production search	**172 033**	**177 455**
Examination - Opposition (final actions)		
European examination	96 422	90 310
PCT Chapter II	14 564	13 389
Oppositions	1 921	2 085
Total final actions examination-opposition	**112 907**	**105 784**
Appeals settled		
Technical appeals	1 529	1 620
PCT protests	24	41
Other appeals	46	41
Total decisions	**1 599**	**1 702**

In 2006, the Office production in search marginally increased by 3 percent to about 177 500 completed searches. While the examination work under the PCT has been reduced, the number of final actions in European examination slightly decreased by 6 percent to 90 300. In 2007, 1 700 decisions in appeal were completed (6 percent more than in 2006).

Documentation

The Office further improved the range and quality of its databases and online search tools in 2007. At the end of the year, the electronically searchable EPO database contained more than 60 million patent documents. The database now covers 78 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 78 million searchable abstracts, a 10 percent increase over 2006. A special effort was made to improve patent data coverage of Asia by acquiring more data from countries such as China and Japan.

The EPO citation database currently contains 83 million references relating to 12.5 million applications or publications. Quality control resulted in half a million corrections related to six million cited documents.

The bibliographic database was augmented with 3.5 million documents to 66 million and around one million corrections were made.

The electronic filing tool epoline® received a growing response from the users. More than 40 percent of the European applications were filed online.

Patent Information

The 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 reformulated its patent information policy to put the emphasis on barrier-free access to patent information. More data and search tools have been made available to the public.

A new version of the World Patent Statistical Database (aka PATSTAT) was distributed in spring 2007 incorporating amendments as suggested by the users, followed by a further update in the autumn. The EPO developed best-practice examples of how to use this database for patent statistics and patent mapping.

Technical Cooperation

The EPO through its European Patent Academy has pursued its cooperation with other European countries concerning information technology infrastructure, promoting IP issues and modernising patent systems.

In order to help the national offices, the Innovation Support Training Programme was further developed with the implementation of four modules: Enforcing and challenging IPRs; Strategic used of IP; Innovation & IP management; and Financing of innovation and network building. The Academy is an active partner in the European Commission's "ip4inno", by helping to develop IP training modules for business advisers and technology transfer officers[13]. Other activities included roving workshops to raise IP awareness in the academic environment, and to organise other various beginner courses in the area of IP.

In the context of the Office's thirtieth anniversary, 450 experts attended the European Patent Forum in Munich, where the EPO Scenarios for the future were presented. The event was combined with the European Inventor of the Year award ceremony.

Annual conferences took place at Seville (PATLIB2007 in May), Riga (Patent Information Conference, in October), Como (Online Services Annual Conference, in November), and Brussels (CII in July and Biotechnological inventions in November).

[13] www.ip4inno.eu

In 2007, the EPO signed a strategic partnership agreement with SIPO (China) to enhance co-operation between the two offices. A Memorandum of Understanding was signed with the ROSPATENT (Russia Federation) for future co-operation.

EPO income statement

The EPO is financially autonomous and makes its financial statements since 2007 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 the 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 the EPO.

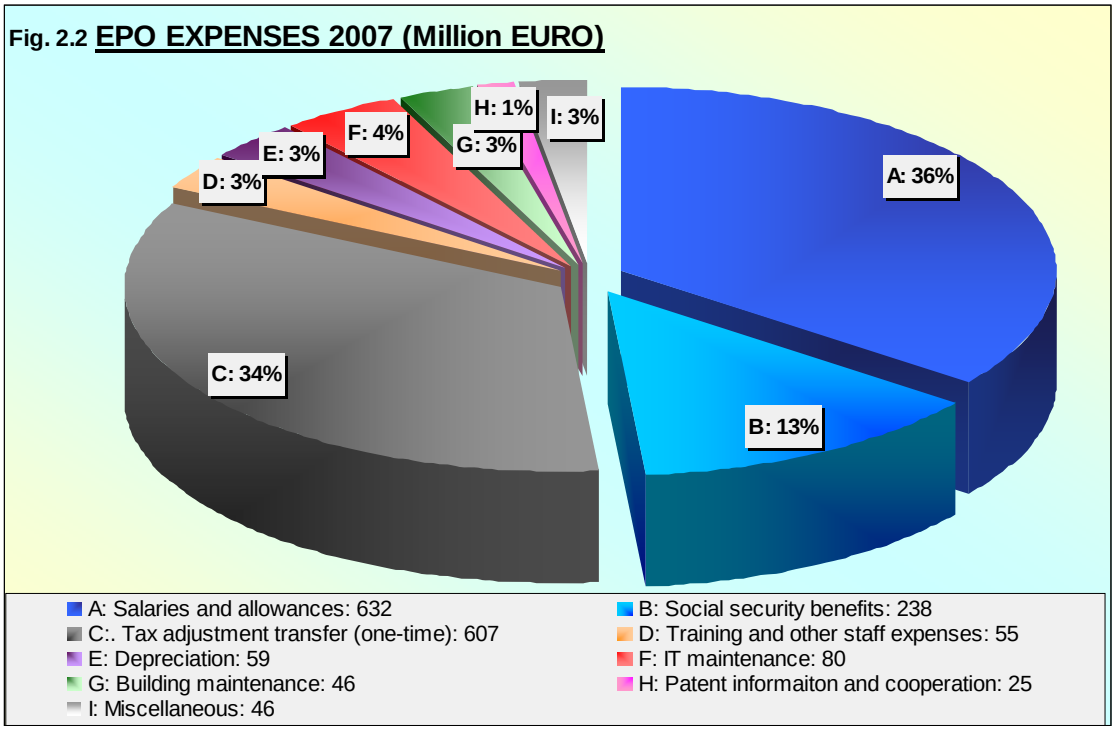
Under IFRS, procedural fees are not recorded as revenue in the accounting year in which they are received, but instead are treated as deferred income, to be included in revenue in the year during which the relevant task is actually performed. A similar concept is applied also for all other types of income. In 2007, the total income, after netting finance revenue and finance costs, amounted to EUR 1 169 million.

On the expenses 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 or sickness and long-term care costs. Due to a change of rules regarding pension taxation, a liability of EUR 720 million was shifted from the contracting states to the EPO in 2007, EUR 607m of which constitute a one-time expense in 2007.

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 the income statement can be found in Annex 1.

Fig. 2.2 **EPO EXPENSES 2007 (Million EURO)**



EPO Staff

During 2007, 308 employees were recruited of which 244 were examiners. By the end of the year, the staff reached a total of 6 499, including 3 689 examiners in search, examination, opposition, and 158 members of Board of Appeal.

More information

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

JAPAN PATENT OFFICE

The 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, the JPO, which is responsible for the core of the IP administration, shall continue specific 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 highlighted three important strategies, "further strengthening the global competitiveness of Japanese Industry in priority fields", "further strengthening the activities in the international market", and "leadership in dealing with global issues and Asian issues".

Policy Committee on Innovation and Intellectual Property

A discussion on a new IP policy that can keep pace with the recent changes worldwide is essential for increasing innovations in the drastically changing environment surrounding the IP system. For this purpose, the Policy Committee on Innovation and Intellectual Property (PCIIP) was set up on December 18, 2007. The PCIIP has been discussing desirable IP policies for Japan.

Recent Improvements to Japan's IP system

The Bill to Partially Amend the Patent Act and Other IP-Related Acts, which was enacted and promulgated in April 11, 2008 and April 18, 2008 respectively, 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, expanding of the network of electronic exchange of priority documents, and reduction of patent/trademark fees, etc.

Efforts related to Patents

With the goal of implementing expeditious and accurate patent examinations according to the highest global standards, the 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 to registered search agencies in the private sector. In addition, the 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, the 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, the 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, as evidenced by JPO performance, where the number of patent examinations processed is two to four times the number processed in the EPO and the USPTO.

The total number of examiners for FY 2008 is expected to increase by more than 100 over FY 2007.

Table 2.2: JPO NUMBER OF PATENT EXAMINERS

Examiners	FY 2004	FY 2005	FY 2006	FY 2007[14]
Regular	1 145 (+19)	1 162 (+17)	1 174 (+12)	1 175 (+1)
Fixed-term	98 (+98)	196 (+98)	294 (+98)	392 (+98)
Total	1 243 (+117)	1 358 (+115)	1 468 (+110)	1 567 (+99)

Table 2.3: JPO PRODUCTION INFORMATION

PRODUCTION FIGURES		2006	2007
Applications	Domestic	347 060	333 498
	Foreign	61 614	62 793
	Total	408 674	396 291
Examinations	Requests	382 116	376 310
	First actions	292 756	307 665
	Final actions	266 386	299 628
Registration	Domestic	126 804	145 040
	Foreign	14 595	19 914
	Total	141 399	164 954
Appeals/Trials	Demands for Appeal against examiner's decision of refusal	25 870	32 586
	Demands for Trial for invalidation	273	284
PCT activities	International searches	25 556	26 033
	International Preliminary examinations	3 023	2 741

JPO Budget

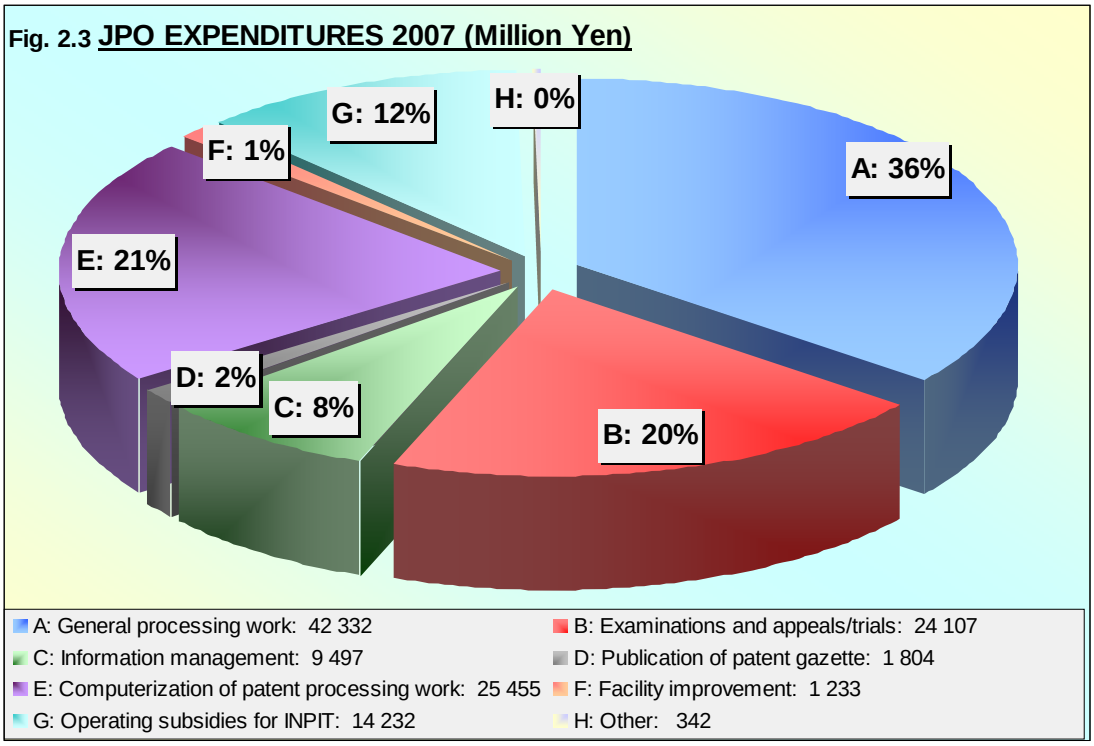
The JPO Fiscal Year (FY) 2007 budget totalled approximately 119 002 million yen. The breakdown of expenditures is as follows:

- 42 332 million yen for general processing work (includes personnel expenses)
  - (32 145 million yen for existing personnel)

[14] The period of JPO's FY 2007 is from April 1, 2007 to March 31, 2008.

- 24 107 million yen for examinations and appeals/trials, etc.
- 9 497 million yen for information management
- 1 804 million yen for publication of patent gazette, etc.
- 25 455 million yen for computerization of patent processing work
- 1 233 million yen for facility improvement
- 14 232 million yen for operating for INPIT[15] (subsidy)
- 342 million yens for other expenses.

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



JPO Staff Composition

As of the end of FY 2007, the JPO employed a total of 2 800 staff. This includes 98 new fixed-term examiners to further cut the time required for examination.

Examiners:	Patent / Utility model:	1 567
	Design:	52
	Trademark:	149
Appeal examiners:		386
General staff:		646
Total:		2 800

More information

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

[15] National Center for **In**dustrial **P**roperty **I**nformation and **T**raining

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 the USPTO are examining patent and trademark applications and disseminating patent and trademark information. The USPTO encourages technological advancement by providing incentives to invent, invest in, and disclose new technology by issuing patents and registering trademarks.

The 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 the USPTO are vested in the Under Secretary of Commerce for Intellectual Property and Director of the USPTO, who consults with the Patent Public Advisory Committee and the Trademark Public Advisory Committee. The USPTO operates with two major business lines, Patents (consisting of patents of invention, referred to as utility, design, reissue, and plant 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, the USPTO released its *2007-2012 Strategic Plan* in March 2007. 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 organisational 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 need in capital driven markets. In 2007 the USPTO increased its already high level of quality and hired and trained large numbers of new examiners to address its growing patent pendency.

Other efforts to meet these goals included enhanced reviews of allowed patent applications in selected technologies and centralized processing of appeals to ensure compliance with formal requirements for appeals. Also in 2007, partnerships with industry, especially in the areas of nanotechnology, biotechnology, and business methods taxation, were expanded to keep patent examiners' knowledge current.

In addition, the USPTO continued to transition to an end-to-end, text based patent prosecution system, and increased the number of examiners able to work from home while providing them better electronic tools to perform their work. The USPTO continued the development of a text based Patent File Wrapper system, with a goal of replacing the current image based system. The USPTO also piloted an improved collaboration tool for work at home examiners which allows them to submit their work for review and have it credited electronically.

Trademark Quality and Timeliness

In 2007 the Trademark organisation continued to demonstrate excellence and met and exceeded all its agency performance targets which advanced all of the objectives outlined in the 2007-2012 *Strategic Plan*. Although production has increased, pendency has improved and become more consistent on a monthly basis, due to changes in performance plans and incentive awards. Increased use of electronic forms, particularly Trademark Electronic Application System Plus filings, has improved the efficiency of examination and contributed to an increase in applications approved for publication.

Searching and examination quality continued to show improvement in 2007. Advances have also been made to improve the workflow process to better manage and track performance and improve training.

Intellectual Property Protection

The USPTO expanded delivery of IP information and education worldwide in 2007. While the USPTO has long provided IP rights assistance and training, the recently completed Global Intellectual Property Academy allowed the USPTO to expand IP training for foreign judges, enforcement officials, and administrators. In 2007, the academy trained several hundred foreign officials on how to strengthen their IP rights and enforcement and implemented a Foreign Examiner-in-Residence training program. The USPTO also continued posting IP experts at American embassies in key locations around the world.

The USPTO established broad cooperative agreements with several countries for increased cooperation including: India's Department of Industrial Policy and Promotion, to cooperate in capacity building activities, human resource development,

and public awareness programs; IP Australia (IPAU), to establish a second phase of a pilot project to determine the feasibility of having IPAU perform search and examination functions under the PCT for the USPTO; the IP office of the Republic of the Philippines, for increased technical cooperation between the two Offices; and the Ethiopian IP Office, wherein the USPTO agreed to provide technical assistance to improve the administration of IP systems and develop professional skills.

In 2007, the USPTO continued with Strategy Targeting Organized Piracy (STOP!)[16], the most comprehensive U.S. government-wide initiative created to combat trade in pirated and counterfeit goods. As part of STOP!, the USPTO manages a hotline that helps small and medium-sized businesses leverage U.S. Government resources to protect their IP.

Table 2.4: USPTO PRODUCTION INFORMATION

PRODUCTION FIGURES	2006	2007
Applications filed		
Utility	425 967	456 154
Plant	1 151	1 049
Reissue	1 285	1 054
Total Patents of Invention	*428 403*	*458 257*
Design	25 515	27 752
Provisional	124 425	136 046
TOTAL	**578 343**	**622 055**
PCT Chapter I Searches	53 094	55 500
PCT Chapter II Examination	4 053	3 107
First actions	323 379	394 492
Grants (Total)	173 771	157 283
U.S. residents	89 823	79 527
Foreign	83 948	77 756
Japan	36 807	33 354
EPC states	22 043	23 042
Others	25 098	21 360
Applications in appeal and interference proceedings		
Ex-parte appeal contested	3 383	5 078
Ex-parte appeal disposed	2 939	3 757
Inter-partes appeal contested	111	61
Inter-partes appeal disposed	107	83
Patent cases in litigation		
Cases filed	64	51
Cases disposed	59	58
Pending cases (end of calendar year)	58	43

USPTO budget

The USPTO utilizes an activity based cost accounting methodology to allocate costs across the three strategic goals in order to provide transparency to the program's operational performance in identifying various factors that drive program costs. In FY 2007[17], USPTO expenditures totalled $1 766 million.

[16] www.stopfakes.gov/
[17] The period of USPTO's FY 2007 is from October 1, 2006 to September 30, 2007.

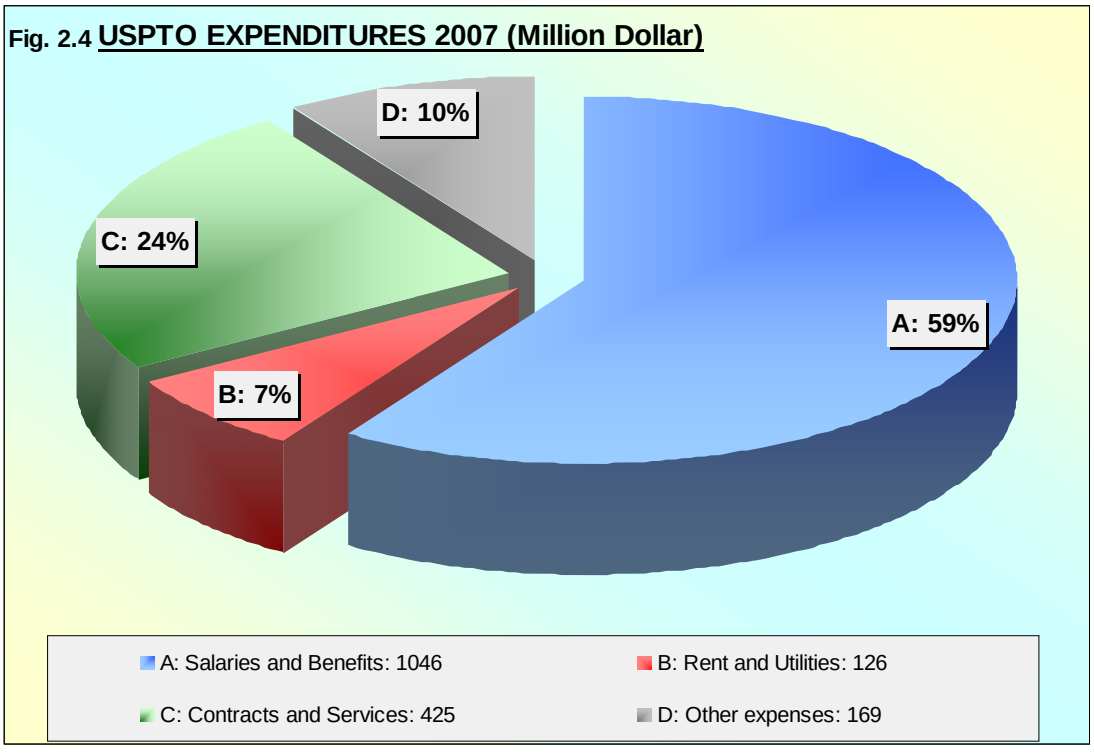
Goal 1 -	Optimize patent quality and timeliness	$1 523 million
Goal 2 -	Optimize trademark quality and timeliness	$196 million
Goal 3 -	Improve IP protection and enforcement domestically and abroad	$47 million

Agency-wide, 17 percent of expenditures were allocated to Information Technology (IT) security and other indirect IT costs such as rent, utilities, program administration, internal operations and infrastructure.

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 2007 were attributed to the USPTO's labour force. Salaries and benefits accounted for 59 percent of overall expenditures, or about $1 046 million. Contracts and services were the second major expenditure, which represented about 24 percent of expenditures. Rent and utilities were the third largest at 7 percent. A breakdown of the major spending categories is shown in Fig. 2.4.

USPTO Expenditures 2007

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



USPTO Staff Composition

In FY 2007, the total staff at the USPTO was 8 913. Patent examiner staff totalled 5 477; 5 376 Utility, Plant and Reissue examiners, and 101 Design examiners.

Trademark examiner attorney staff totalled 404. Managerial, administrative and technical support staff totalled 3 032.

More Information

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

Chapter 3

WORLDWIDE PATENTING ACTIVITY

Although the Trilateral Offices represent a significant proportion of total patents worldwide, the global picture is not complete without including the other offices from around the world. This chapter examines worldwide patent activities in terms of patent applications and grants. The statistics mostly cover a five-year period from 2002 to 2006. More current and detailed data from the Trilateral 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 application forms filled out**. All of these are counted once only: (Direct national and 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; PCT applications entering national procedures are replicated over the number of countries where they enter this phase. Direct regional filings and PCT regional phase filings are replicated over the number of countries designated in the application at the time it entered the regional procedure. This gives a representation in terms of national patent rights.

Figures 3.13, 3.14 show the **patent family counts** which 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.

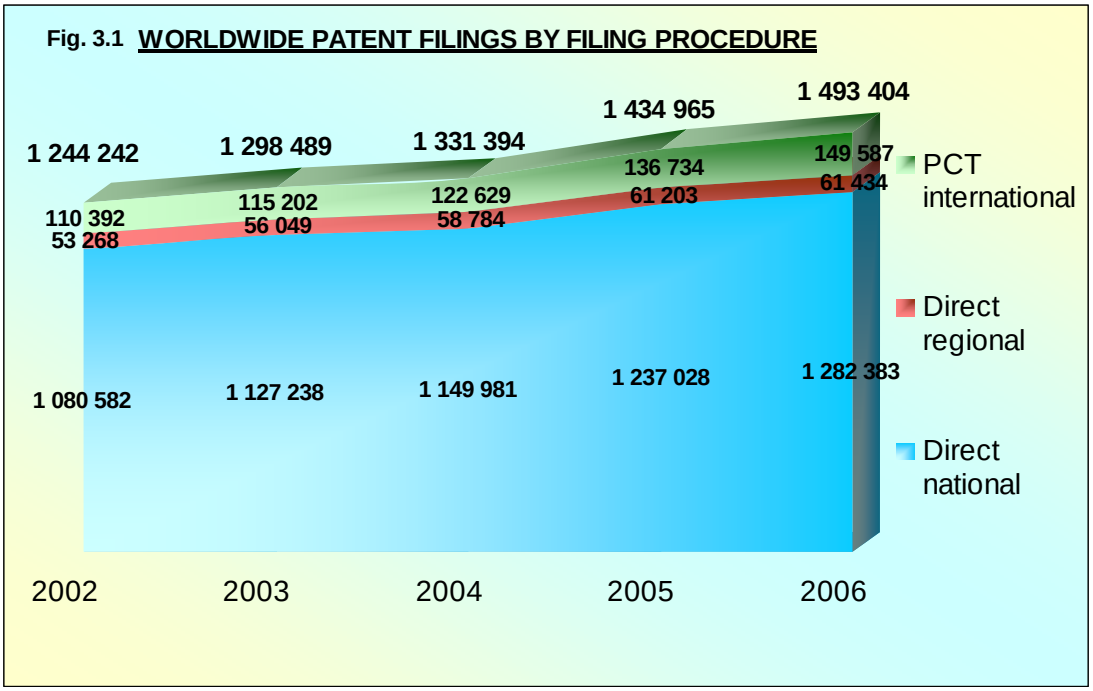
Regarding grants, Fig. 3.10 shows the **numbers of granted patents**. All grants are counted once only.

Fig. 3.11 shows the **numbers of validated national patent grant registrations**. Direct national grants are counted once only, but 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.

PATENT FILINGS

This section shows the development of the numbers of applications filed throughout the world. These can be filed according to national, regional or the PCT international procedure.

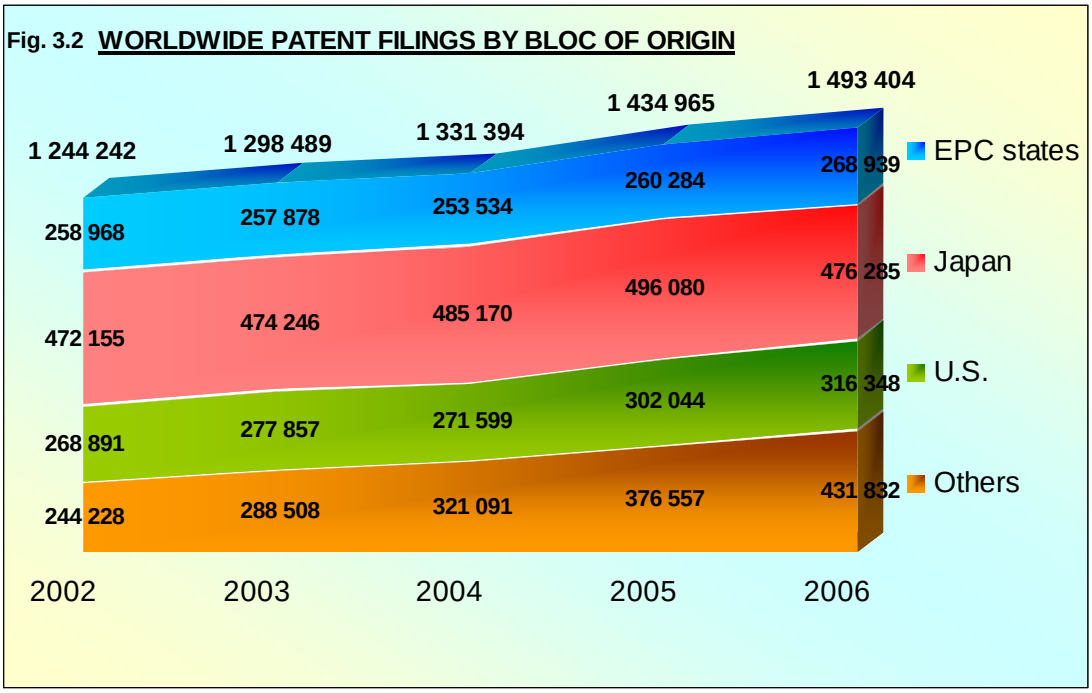
Fig. 3.1 shows the breakdown of the three types of applications filed.



Almost 1.5 million applications were filed in 2006. This represents the number of actions taken in 2006 to protect inventions around the world. This is an increase of 4.1 percent since 2005. Although many of these applications were filed according to national procedures (86 percent in 2006), the growth in filings is also contributed to by the ever-increasing use of supranational systems and in particular the PCT system.

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 is a continuing tendency to use the patent systems in the world and that this does not seem to decline over time.

Fig.3.2 below shows the origin of these applications.

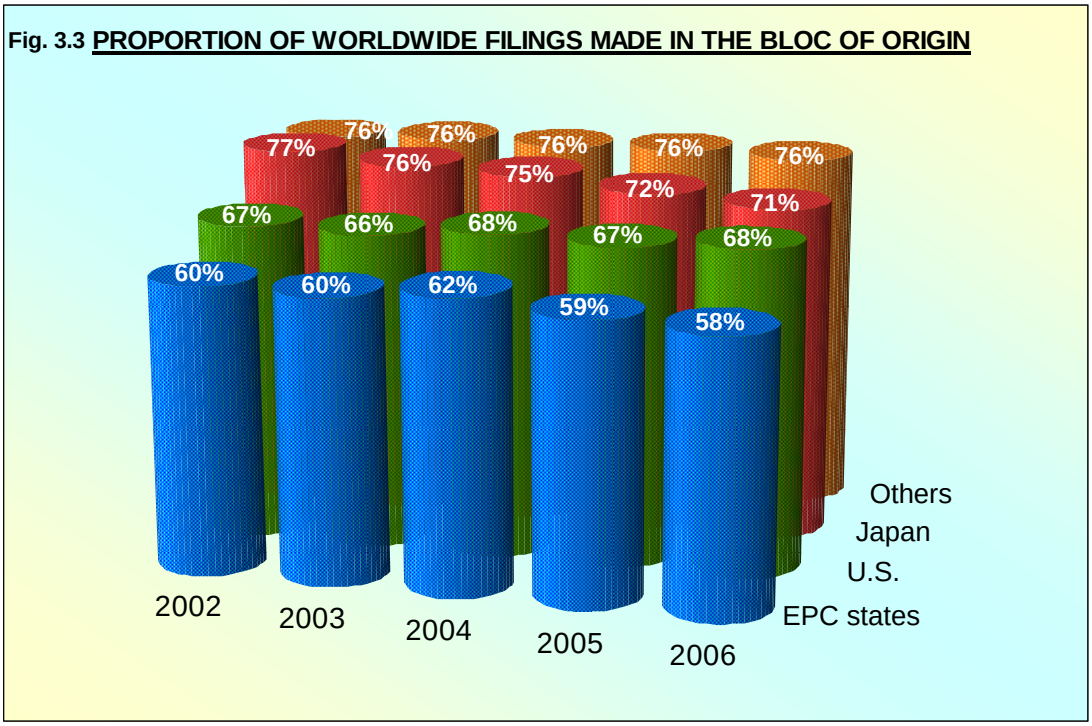


The share of the trilateral office countries has declined continuously from 80 percent in 2002 to 71 percent in 2006. The other countries increased their applications on average by 15 percent per annum. A large part of the growth from other countries was made by China and Republic of Korea, their share taken together went up from 11 percent in 2002 to 20 percent of all filings made in 2006.

Most of the national applications are made by residents of the countries. 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 which are filed at home by residents of each bloc.

Fig. 3.3 **PROPORTION OF WORLDWIDE FILINGS MADE IN THE BLOC OF ORIGIN**

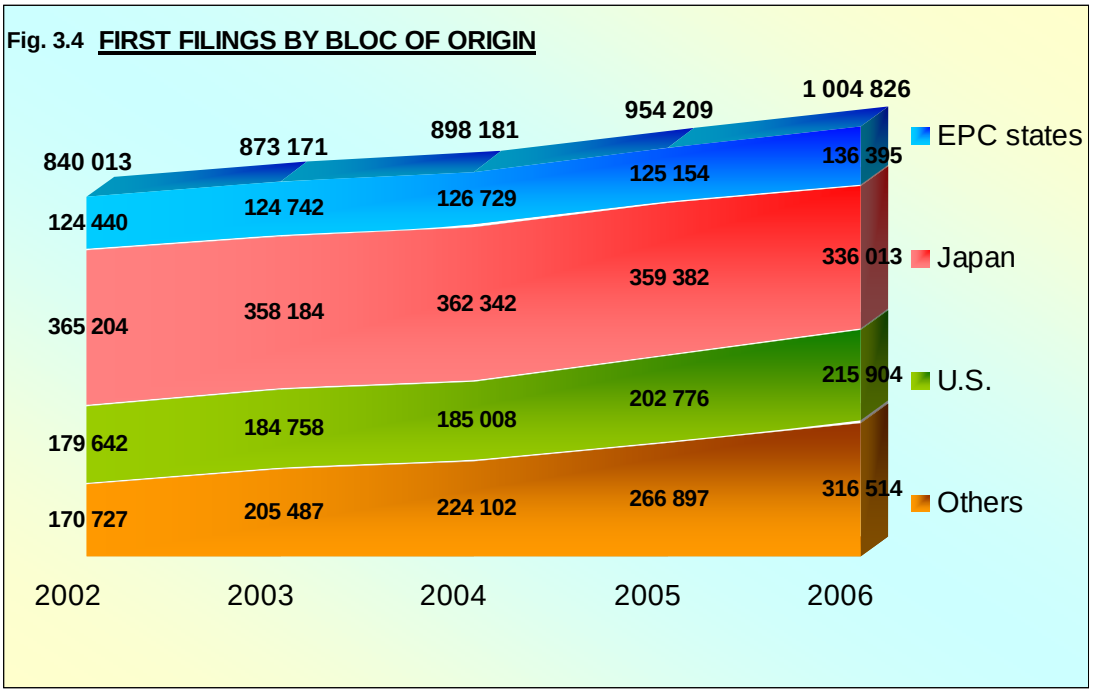


In most cases, the first filing is made in the country of residence and subsequent applications are made to protect the invention abroad. The overall proportions of applications made at home have decreased. This is especially the case for Japan and to a lesser extent for EPC residents.

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.

Fig. 3.4 **FIRST FILINGS BY BLOC OF ORIGIN**

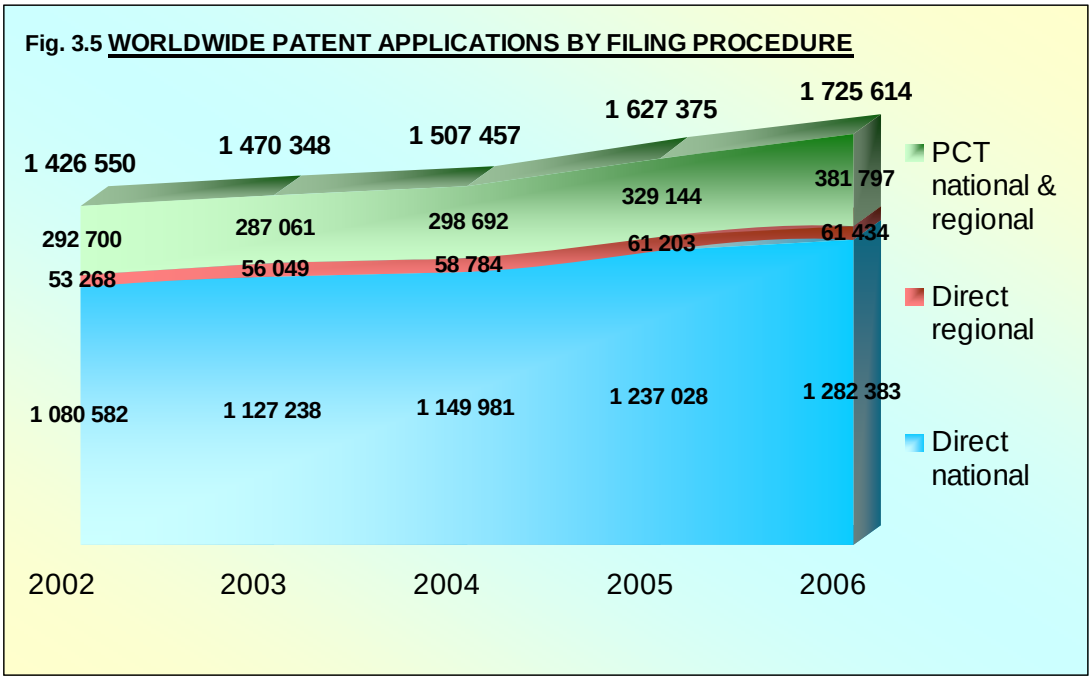


The total number of first filings in 2006 was more than 1 million and increased by 5.3 percent over 2005.

Japan recorded 336 013 first filings (about one third of the whole), the highest number of first filings by bloc in 2006; although this was a decline of 7 percent from their 2005 total. The EPC contracting states recorded a 9 percent increase to 136 395 first filings. The U.S. with 215 904 first filings showed a growth rate of 6 percent from 2005. The highest growth, more than 19 percent, was in the "Others" bloc. Both China and the Republic of Korea contributed each to almost 40 percent to "Others". China first filings increased by 31 percent over 2005.

PATENT APPLICATIONS FILED

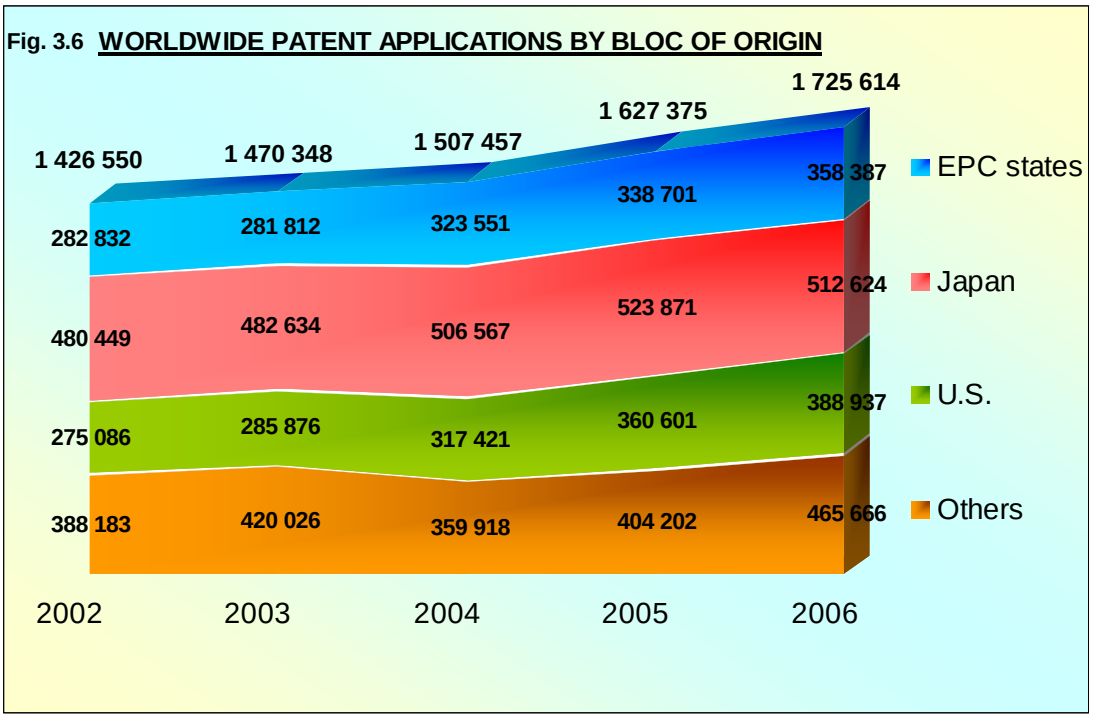
This section describes the development of the number of requests for patents that entered a grant procedure. National and regional applications directly enter a grant procedure when filed. In the case of PCT applications this is delayed to the end of the international phase. In the following figures 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 Germany PCT national phase entry, and an Italy PCT national phase entry, thus producing three PCT national/regional entry phase applications (shown in Fig. 3.5). As it is assumed in this report that PCT international phase applications are made as subsequent filings (at about 12 months after first filing), and that according to the regulations the national/regional phase begins 30 months after the first filing, this means that the entry into the national/regional phase generally takes place about 18 months after the PCT international filing.



There is a clear trend of annual increases. More than 1.7 million patent applications were filed in 2006. This represents an average compound growth rate of 5 percent per year since 2002. Most of the applications were filed according to the national route (74 percent in 2006). Nevertheless, over the period, there was a growing preference to use the PCT route, as the share of PCT applications increased by 2 percentage points (to 22 percent) and the share of the national route declined by the same share. The regional route accounted for a stable 4 percent.

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

Fig. 3.6 **WORLDWIDE PATENT APPLICATIONS BY BLOC OF ORIGIN**



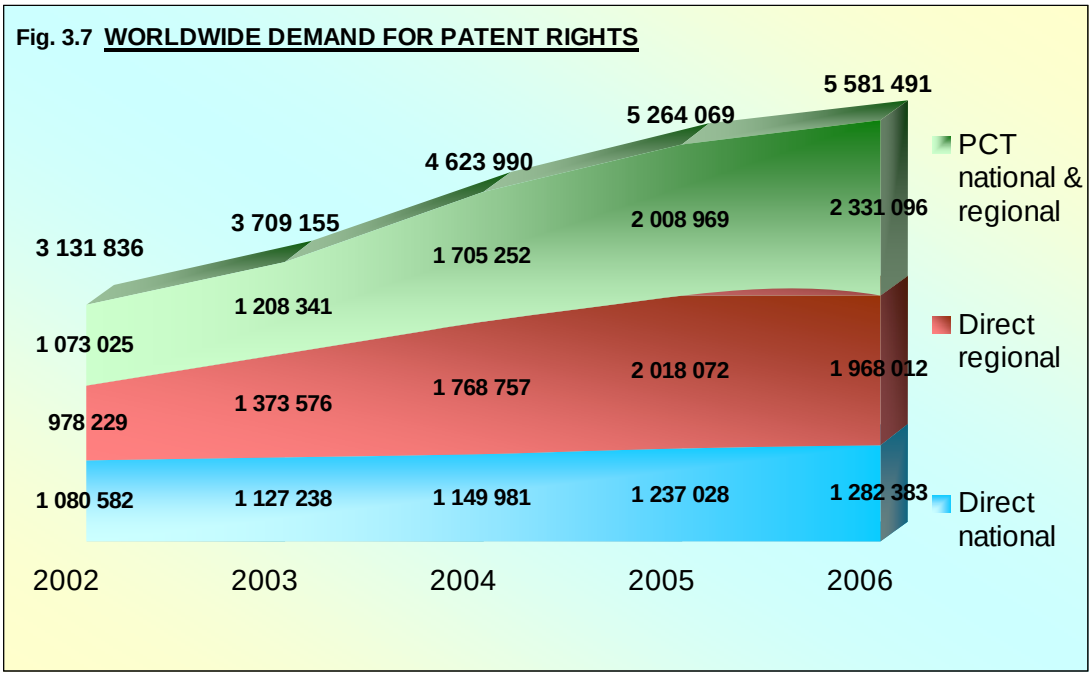
These data should be interpreted with caution as the origin of the PCT application entering a national procedure is not reported in detail from all offices, especially for 2002 and 2003. This contributes to the apparent decline of "Others" in 2004.

Japan remains the bloc from which the largest share of applications was originating, even though the share from the "Others" bloc is increasing. Except for Japan, the number of applications filed increased from 2005 to 2006. Applications from "Others" show a larger growth, mainly due to China.

DEMAND FOR PATENT RIGHTS

With an increasing use of international and regional systems, and also the increasing number of countries joining such systems, 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 below 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.



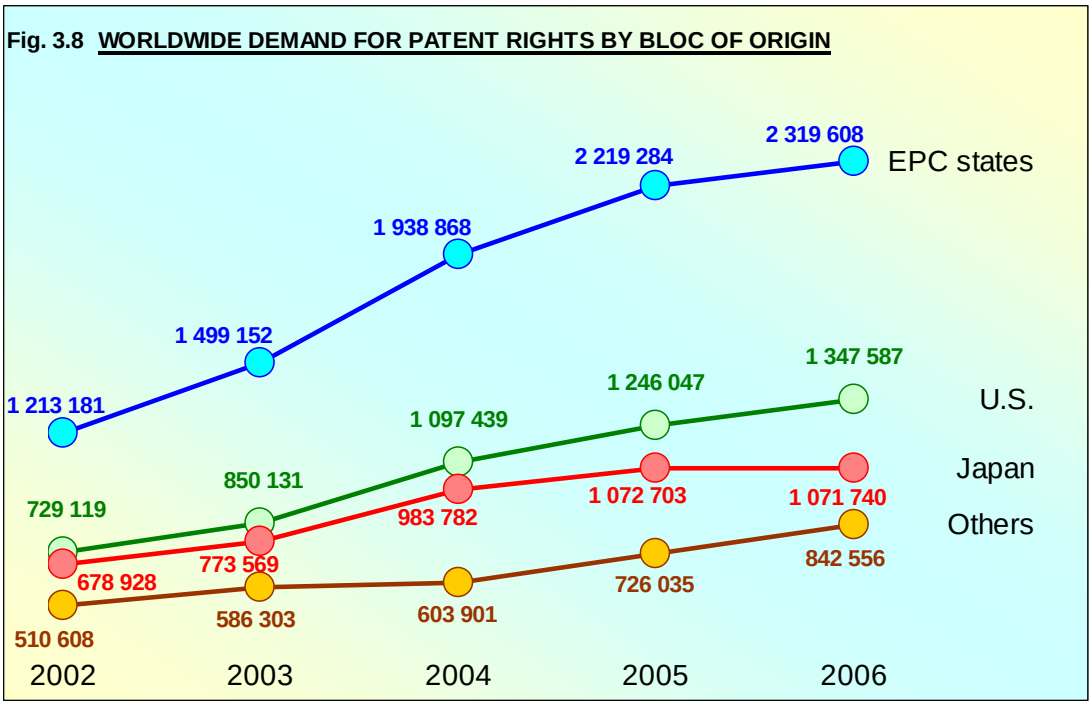
This representation shows the effect of the centralized procedures (regional and international) to help users of the system to expand their patent protection with a limited number of procedures.

The demand for patent rights increased substantially over the period with a 15.5 percent average growth rate. Numbers of PCT application and regional application increased from 2002 to 2006.

The total number of first filings in 2005 was 954 209. From these first filings, one year later, in 2006, a comparison of Fig. 3.1 and Fig. 3.6 shows that 488 578 subsequent filings were filed. Thus on average each first filing led to almost 0.51 subsequent applications in the following year. But a similar comparison with Fig. 3.5 shows that this corresponds to almost 0.76 subsequent applications entering a grant

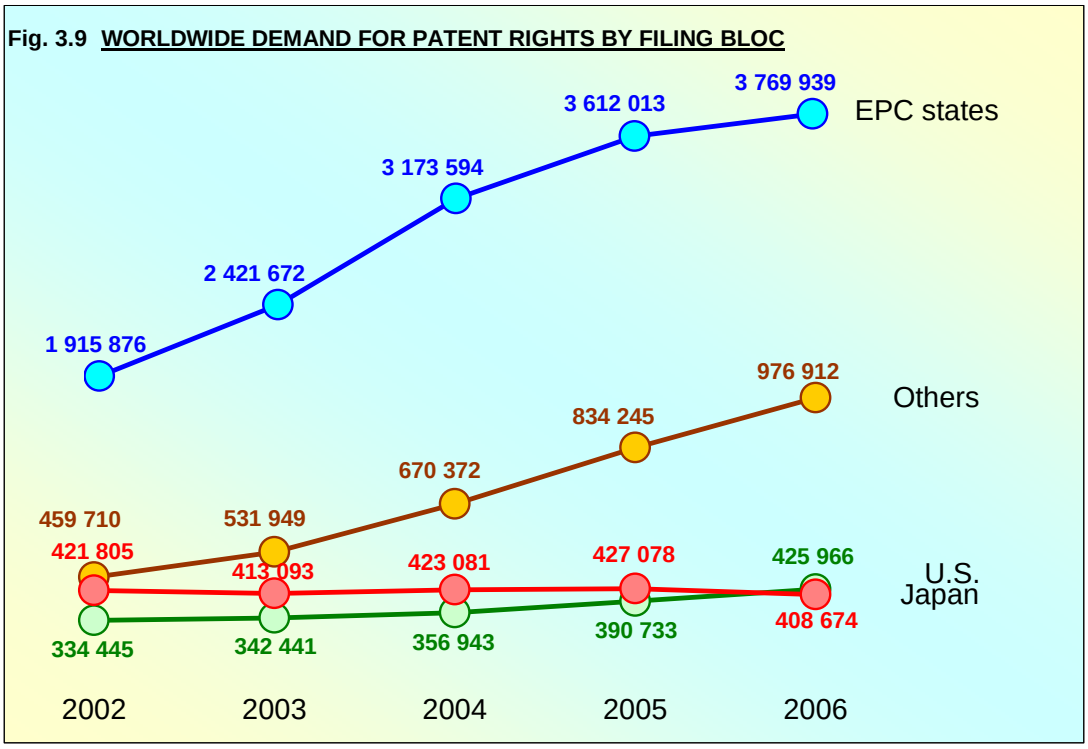
procedure (this was 0.71 in 2003), and Fig. 3.7 shows that it corresponds to 4.8 subsequent requests for patent rights throughout the world (was 3.4 in 2003). This illustrates the fact that greater usage of the international and regional patent systems allows for the filing of fewer applications for a broader geographical coverage of the protected inventions.

Fig. 3.8 below shows the trend for the demand of patent rights by blocs of origin of the applicants. This graph is related to Fig. 3.7, since it uses the same broader definition of regional and PCT applications that show the demand for patent rights.



From 2005 to 2006 the demand for patent rights from EPC contracting states residents increased by 5 percent. U.S. residents increased their demand by 8 percent; while the demand originating from Japan remained unchanged. "Others" showed an increase of 16 percent.

The next figure shows the distribution of the demand for patent rights according to the targeted regions. This graph is also related to Fig. 3.7.

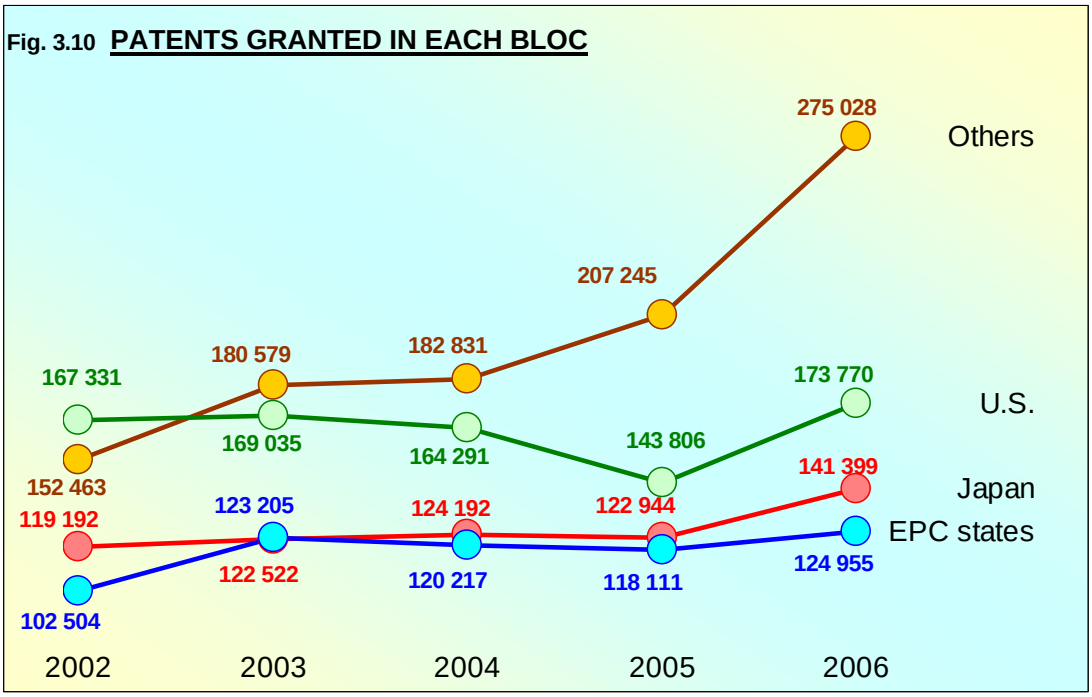


This shows that most of the patent rights are sought for in the EPC, because it is composed of 32 states. The influence of regional patent systems occurs especially in the EPC contracting states and to a much lesser extent in "Others".

Within the Trilateral blocs over the period 2002 to 2006, the relative change was highest in the EPC contracting states (97 percent increase overall, 18 percent compound growth per year). This reflects an increase in the use of both the regional and the PCT systems.

GRANTS

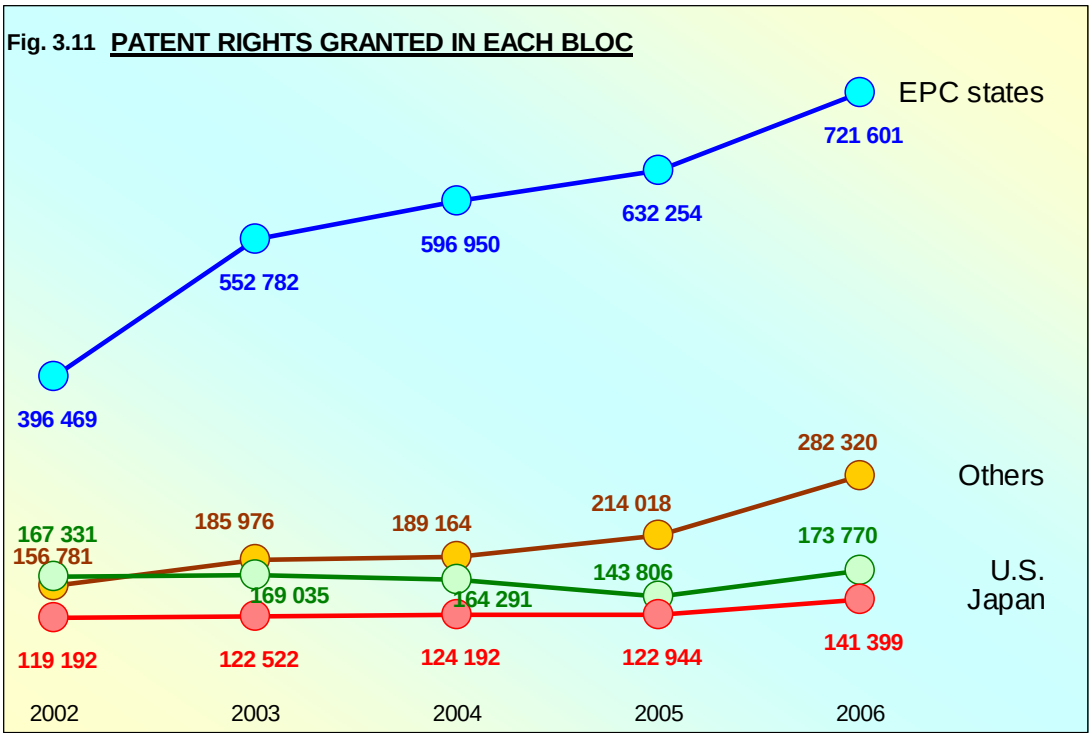
The development of the use of patent systems is shown next in terms of grants. Fig. 3.10 displays the cumulative numbers of patents granted by the various offices in each bloc.



After a period of stabilisation, the worldwide number of grants increased from 592 106 in 2005 to 715 152 in 2006. The number of patents granted in the EPC contracting states in 2006 increased by 6 percent since 2005. In Japan it has remained fairly constant from 2002 though 2005 and increased by 15 percent in 2006. The U.S. granted 21 percent more patents in 2006 than in 2005.

The numbers of patents granted in the "Others" bloc has increased significantly over the period. The number of patents granted in the "Others" bloc rose 32 percent in 2006 over their 2005 total, this was mainly due to a large increase in the Republic of Korea. In 2006 patents granted from China and the Republic of Korea together made up about 65 percent of "Others".

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



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

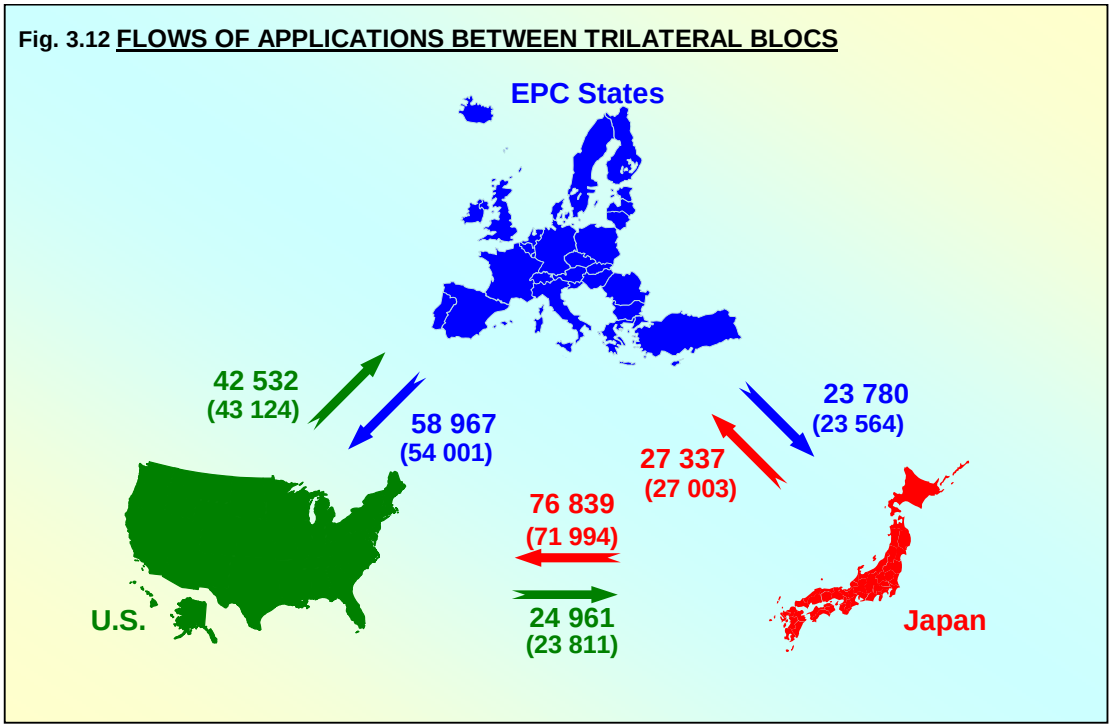
INTERBLOC ACTIVITY

The flows between the different blocs and especially the trilateral 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 three major filing blocs are described next. Fig. 3.12 is based on the distinct applications entering a grant procedure (as in Fig. 3.5) and shows details of the specific flows of applications between the trilateral blocs in 2006. The 2005 figures are given in parentheses.

Fig. 3.12 FLOWS OF APPLICATIONS BETWEEN TRILATERAL BLOCS

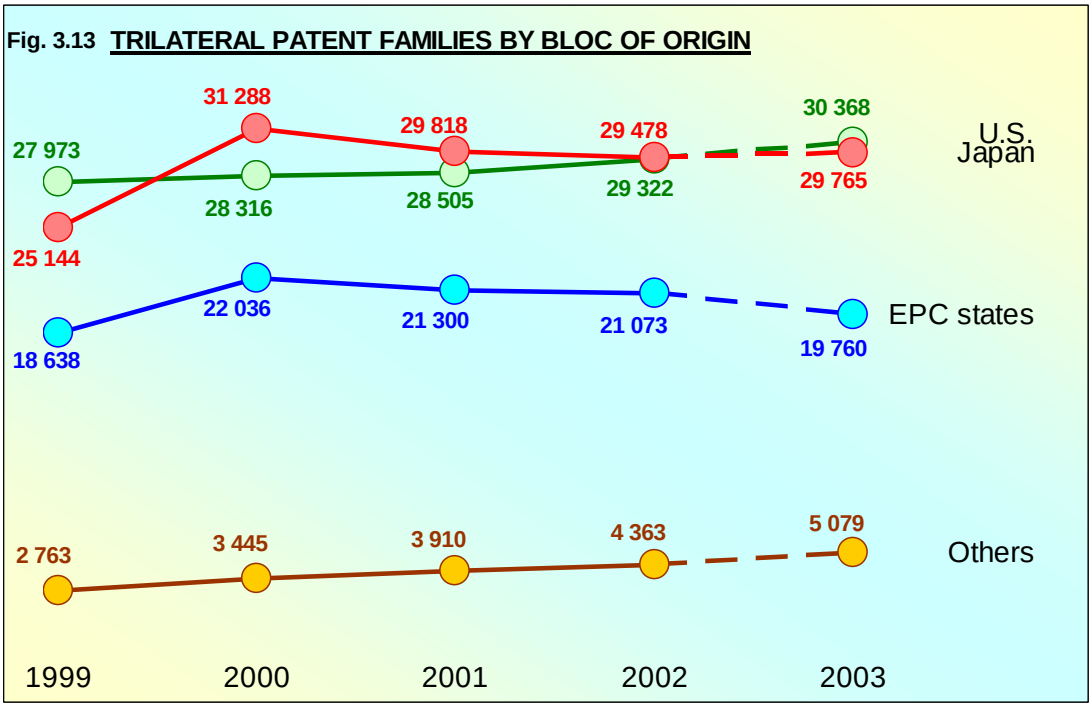


The filing behaviour in 2006 is quite similar to what it was in 2005. Japanese applicants filed many more applications in the U.S. than in the EPC bloc. As before, U.S. applicants applied more in the EPC bloc than in Japan. Residents of the EPC contracting states filed many more applications in the U.S. than they did in Japan. With the exception of the flow from the U.S. to the EPC states, all flows have increased, in particular the flows of applications from the EPC states and Japan to the U.S.

PATENT FAMILIES

The information in this section 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 the statistics earlier in this chapter, which were based on counts of patent applications provided by individual patent offices. Detailed tables that show the flows of patent families between blocs can be seen in the web based annex to this report.

The development over time of trilateral patent families is shown in Fig. 3.13. 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 trilateral blocs are fairly accurate up to the year 2003, but the numbers for trilateral patent families may not be accurate after the year 2002 because more time is needed to gather the evidence of activity in all three blocs.

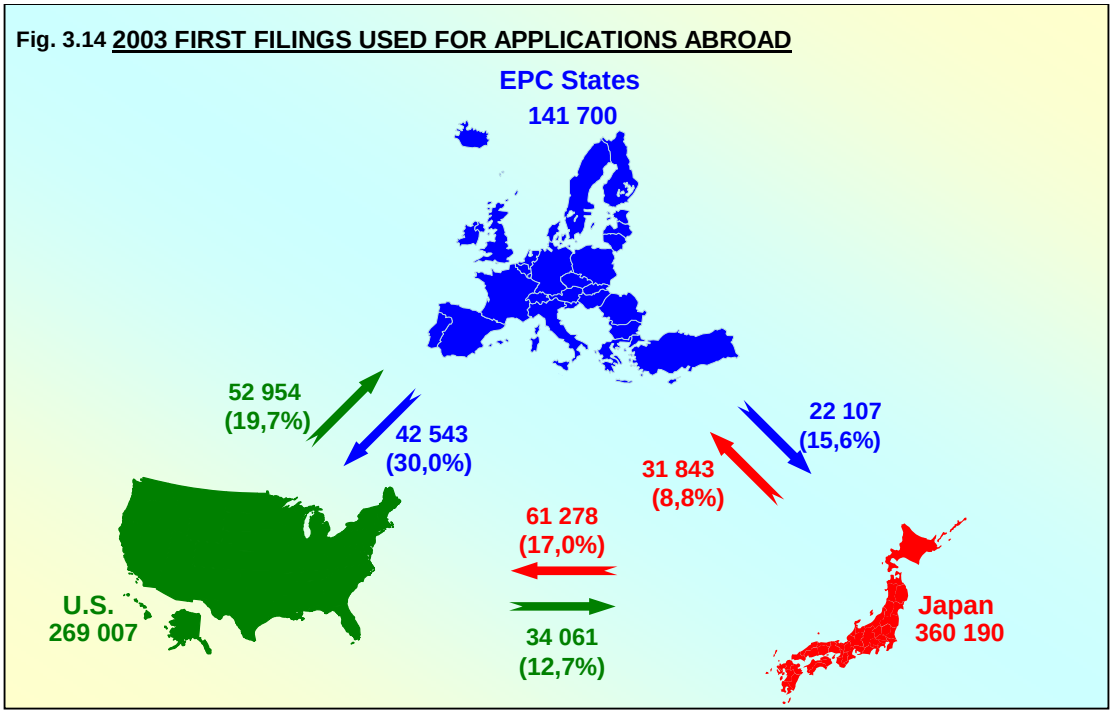


The trilateral patent families' data continued to decline for Japan and the EPC contracting states from 2001 to 2002, while the data for the U.S. and "Others" showed a small increase. The total number of trilateral patent families in 2002 was 84 236, of which 25 percent originated from the EPC contracting states, 35 percent from Japan, 35 percent from the U.S. and 5 percent from "Others".

Out of all priority forming filings in the trilateral area in 2002, 10.3 percent formed trilateral patent families. The proportions differed considerably according to the bloc of origin of the priority forming filings. For the EPC contracting states, 14.5 percent of priority forming filings formed trilateral patent families; for the U.S. 11.1 percent; for Japan 8.0 percent, and for "Others" 1.6 percent.

The flows of patent families from first filings to subsequent filings between trilateral blocs are shown in Fig. 3.14. The number given for each bloc is the total number of distinctly referenced priority filings in 2003. This can be taken as an indicator of the number of first filings in the bloc. 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 2003.

Fig. 3.14 **2003 FIRST FILINGS USED FOR APPLICATIONS ABROAD**



From information that is tabulated in the file of statistical data that is connected to the web based version of this report, out of all first filings in the trilateral area in 2003, only 21.4 percent formed patent families which included at least one other trilateral bloc. When considered by bloc of the priority applications, there was a small increase for each, and the proportions are similar to the 2002 levels. EPC States have the highest proportion with 31.7 percent (31.5 percent in 2002), compared to 17.6 percent for Japan (16.6 in 2002) and 21.1 percent for the U.S. (20.9 in 2002). Also as in 2002, for secondary filings Japan had the largest number of priorities claimed in other trilateral blocs in 2003. Japan had 63 356; the EPC contracting states had 44 890; the U.S. had 56 647.

When the trilateral blocs which received subsequent applications from the trilateral area are considered, a larger proportion of filings were received by the U.S. than by the other blocs (13.5 percent by the EPC contracting states, 13.7 percent by Japan, and 20.7 percent by the U.S.). From all the priority forming first filings throughout the world in 2003, 17.8 percent formed patent families including at least one trilateral bloc.

Chapter 4

PATENT ACTIVITY AT THE TRILATERAL OFFICES

This chapter presents trends in patent application filings and grants at Trilateral Offices. These statistics are generally available on a more up-to-date basis than those presented in Chapter 3; most information that appears here covers 2006 and 2007. Regarding Europe, statistics are for EPO only. Whereas the EPO is indicated from the viewpoint of a Trilateral Office, the EPC contracting states are still also indicated as a bloc of origin.

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

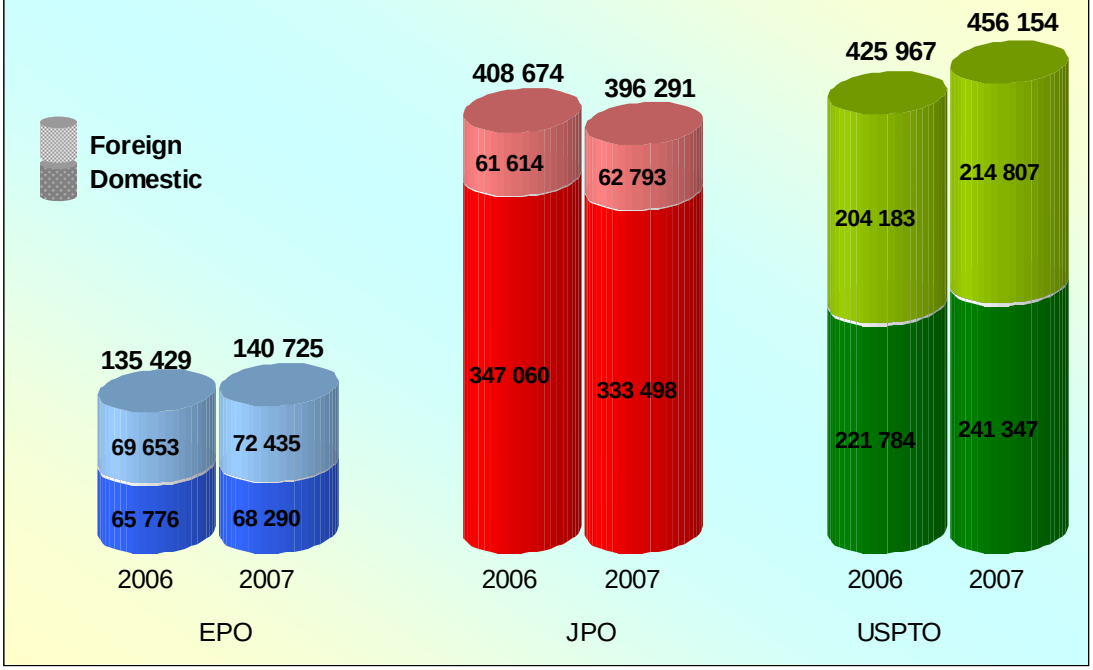
Demand at Trilateral Offices is demonstrated by counts of the numbers of patent applications that were filed. These counts represent the total of direct national/regional applications filed and PCT applications entering the national/regional phase.

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 contracting 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 Trilateral Offices).

PATENT APPLICATIONS FILED

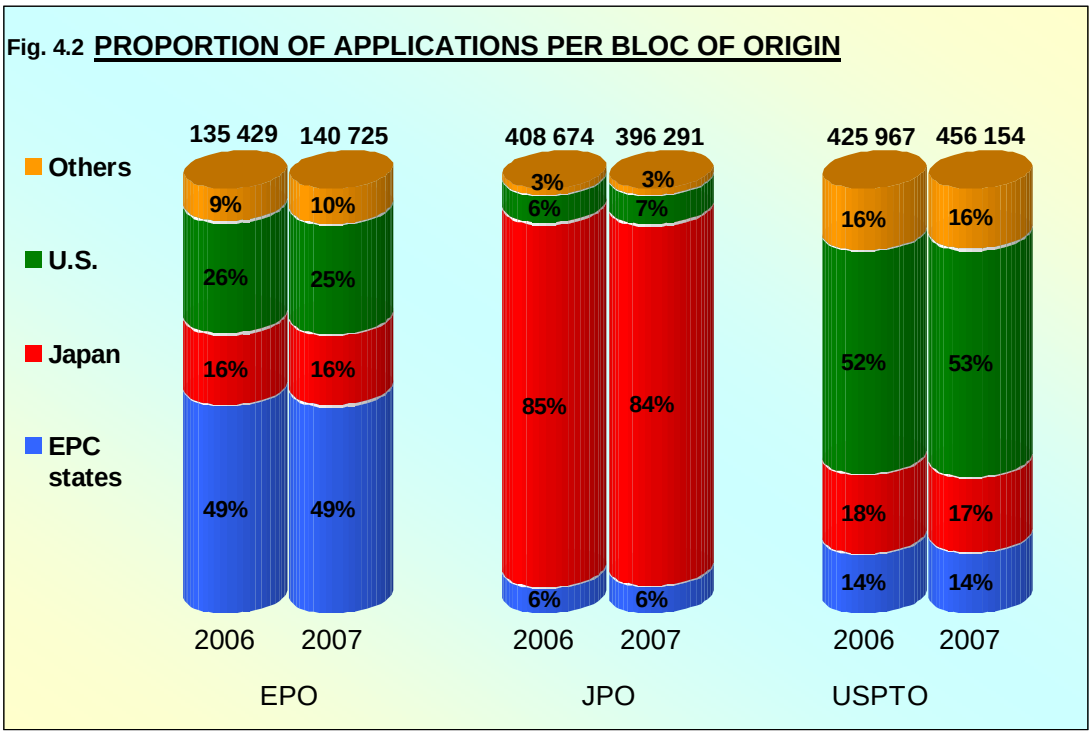
The numbers of domestic (residents of the country) and foreign (non-residents) patent applications filed with each of the Trilateral Offices for the years 2006 and 2007 are shown in Fig. 4.1.

Fig. 4.1 **DOMESTIC AND FOREIGN APPLICATIONS FILED**



There were a total of 140 725 patent applications filed with the EPO in 2007, which is a growth of 3.9 percent. The number of patent application filings at the JPO decreased by 3 percent to 396 291. USPTO recorded 456 154 patent application filings in 2007, a 7.1 percent increase over 2006 levels.

Fig. 4.2 shows the respective shares of patent application filings by origin relative to total filings at each Office for 2006 and 2007.



Due to the differences in behaviour of the applicants from different countries, comparison of the numbers of applications at the Trilateral Offices should only be made with caution. For example, the numbers of claims given in applications are significantly different among the three Offices. On average, in 2007, an application filed at the EPO contained 18.0 claims (18.2 in 2006), one filed at the JPO contained 9.8 claims (9.5 in 2006), while one application at the USPTO had 20.1 claims (20.5 in 2006).

The shares of patent application filings by each bloc of origin are quite consistent for 2006 and 2007. EPO and USPTO show an increase in the number applications from the "Others" bloc. As in the past, patent application filings of domestic origin continue to represent the most significant share of filings at each Trilateral Office. In 2007, the shares of domestic filings at the EPO, JPO and USPTO were 48.5, 84.2 and 52.9 percent, respectively. The numbers of domestic filings at the JPO and the USPTO are considered to be equivalent to the numbers of first filings. Domestic EPO filings are defined as the total of EPO filings by residents of the EPC contracting states. Only part of these are first filings to the EPO, which is explained by the fact that in the EPC contracting states the first application is often filed at a national office. A subsequent filing at the EPO follows if the invention is judged to be worthy of protection in other European countries. Consequently, the number of domestic filings at the EPO is not equivalent to the number of first filings. The direct first filings at the EPO from residents of the EPC contracting states were 18 404 in 2006 and 19 694 in 2007, respectively 28.0 percent and 28.8 percent of all applications at the EPO by residents of the EPC contracting states.

FIELDS OF TECHNOLOGY

Patents are classified by the Trilateral 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.

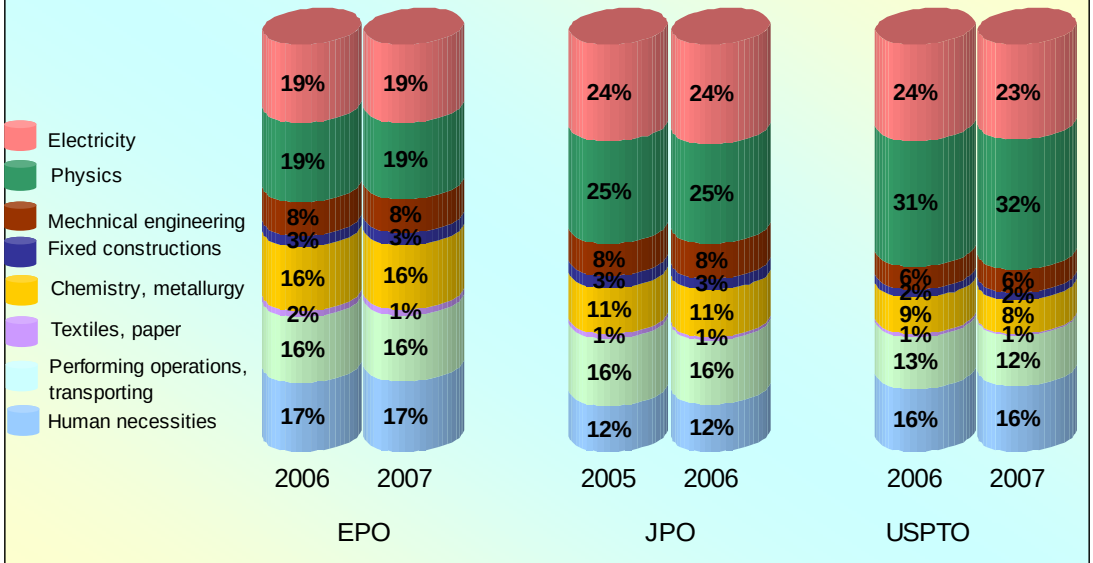
The classification takes place at a different stage of the procedure in each Office. Data are shown for the EPO and the USPTO for the filing years 2006 and 2007, while for the JPO the breakdown is given for the filing years 2005 and 2006. The JPO data for 2006 are the most recent available figures because 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 the EPO and the JPO.

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

1. Electricity	2. Physics
3. Mechanical engineering	4. Fixed construction
5. Chemistry, metallurgy	6. Textiles, paper
7. Performing operations, transporting	8. Human necessities

Fig. 4.3 PROPORTION OF APPLICATIONS PER FIELDS OF TECHNOLOGY



*USPTO applications are classified according to US 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 the EPO and the JPO.

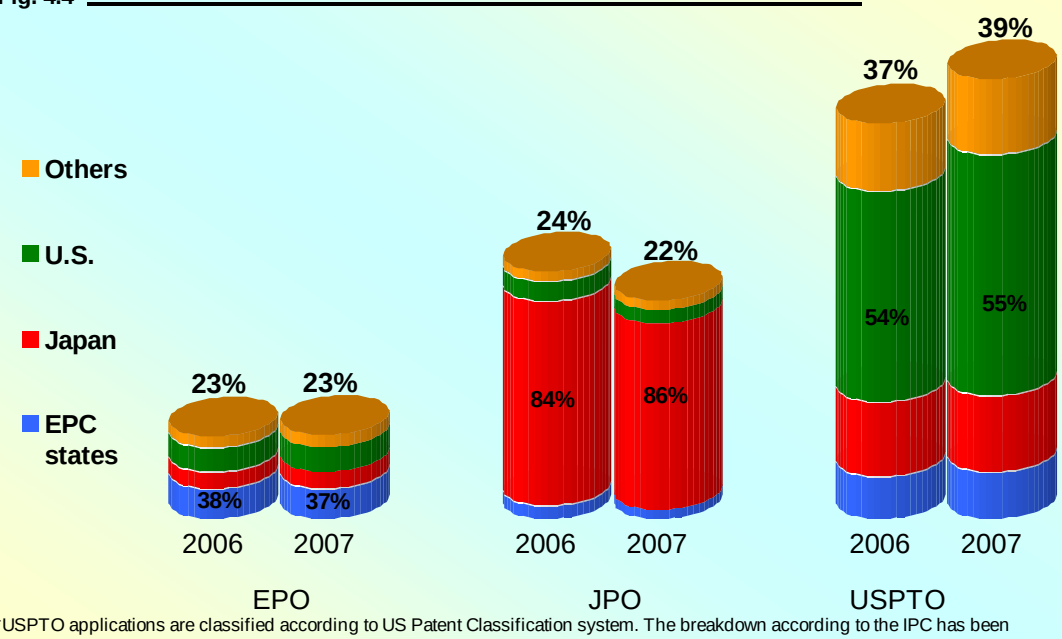
There is little change from 2006 to 2007 in the share that these fields occupied at the Trilateral Offices.

The IPC does not itself define high technology fields. Therefore the Trilateral Offices previously agreed to consider the following as high technology fields:

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

Usually an increasing proportion of applications filed with the Trilateral Offices are from high technology areas. In Fig. 4.4, this proportion is given for each Office in 2006 and 2007, together with their origins.

Fig. 4.4 PROPORTION AND ORIGIN OF HIGH TECH APPLICATIONS

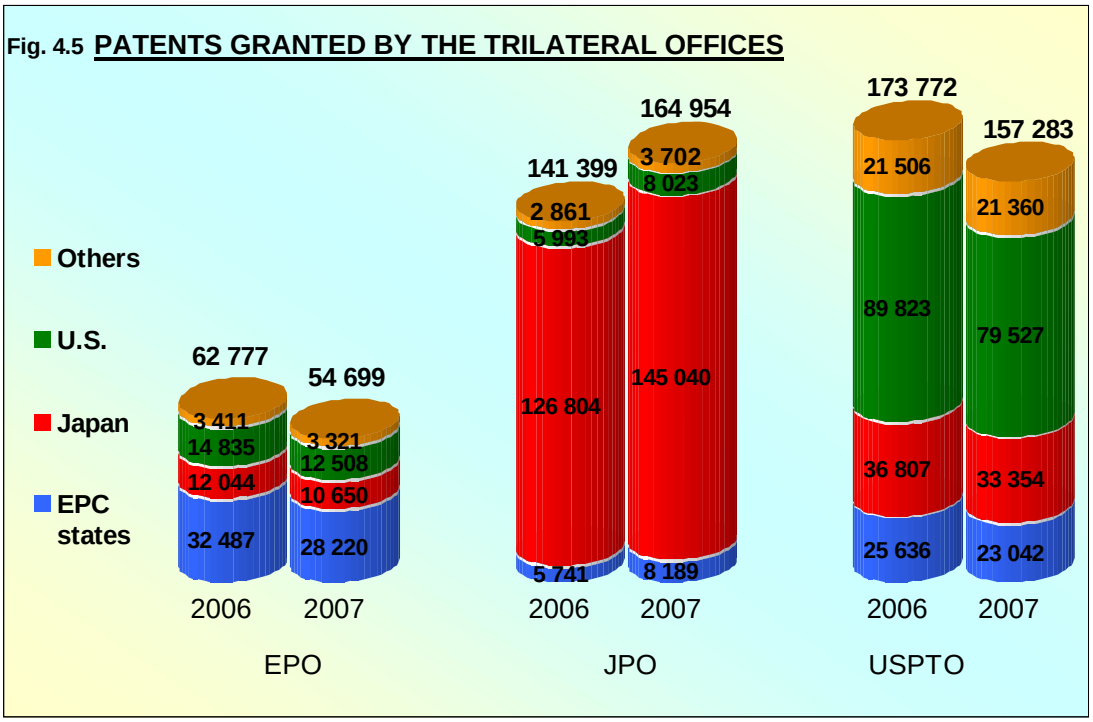


*USPTO applications are classified according to US Patent Classification system. The breakdown according to the IPC has been determined by means of a general concordance between both classifications. Therefore the technical scope of the USPTO with respect to the IPC may differ from the scope presented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

The USPTO has the highest share of patent applications in the high technology fields, with 39 percent of all applications occurring in this area. Of this number, 55 percent are from domestic applicants. At the JPO, the share of high technology applications decreased to 22 percent in 2007, and 86 percent of such applications are from domestic applicants. At the EPO, the share of high technology applications remained stable at 23 percent, with 37 percent coming from applicants resident in the EPC contracting states.

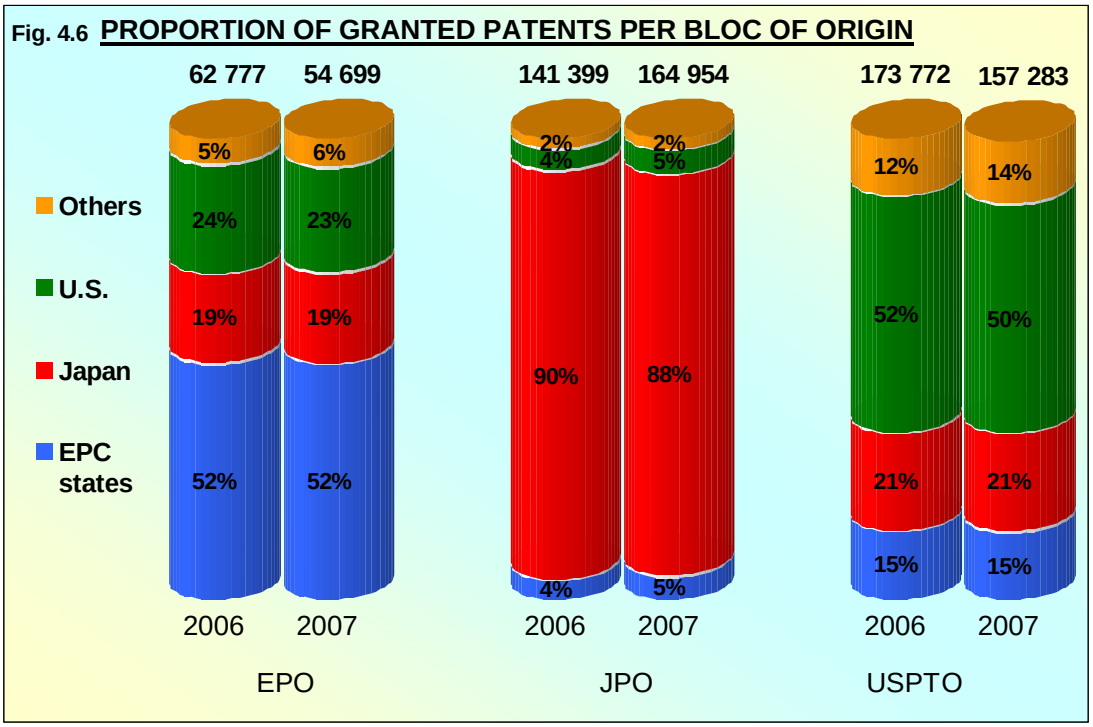
PATENTS GRANTED

Fig. 4.5 shows the numbers of patents granted by the Trilateral Offices. Together the Trilateral Offices granted 376 936 patents in 2007, 1 012 less than in 2006. This is an overall decline of about a quarter of a percentage point.



The number of patents granted by the JPO increased further by 17 percent in 2007. The EPO granted 8 078 less patents in 2007 than in 2006, a decrease of almost 13 percent. The USPTO granted almost 16 500 less patents than in 2006 a 9.5 percent decrease. The differences between the Trilateral 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 Trilateral Offices, which themselves reflect differences in the trilateral patent granting procedures (see section below on "Trilateral Patent Procedures").

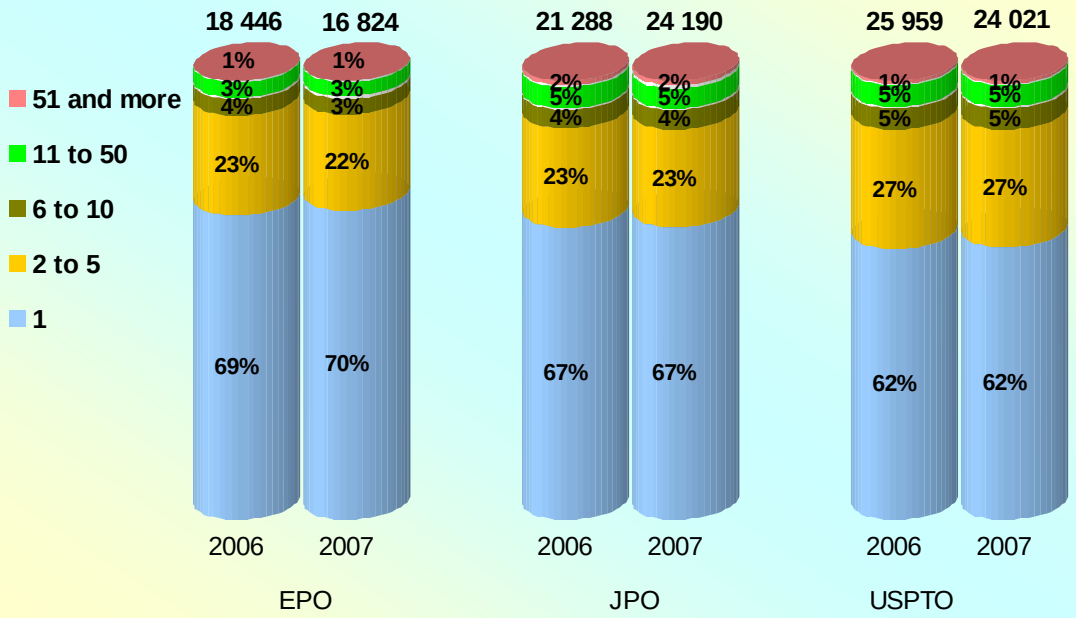
Fig. 4.6 presents the percentage shares of total patents granted by origin.



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. At the three offices, the shares of Japanese origin patents are higher than the corresponding share in applications.

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

Fig. 4.7 **DISTRIBUTION OF PATENTEES BY NUMBER OF PATENTS**



With more patents granted, more applicants received patents at the JPO or at the USPTO (around 24 000) compared to less than 17 000 at the EPO. On average a patentee received 3.3 patents at the EPO compared to 6.8 at the JPO and 6.5 at the USPTO.

Nevertheless, at the three Offices, most of the patentees received not more than five patents. The proportion of patentees receiving one patent grant in 2007 is higher at the EPO (70 percent) than at the JPO (67 percent) or the USPTO (62 percent). The proportion of patentees receiving two to five patents is larger at the USPTO (27 percent) than in the other two Trilateral Offices (23 percent). The proportion of patentees receiving six or more patents is lower at the EPO than at the JPO and the USPTO. In 2007, the maximum number of patents granted to a single applicant was 835 at the EPO, 4 736 at the JPO and 3 125 at the USPTO.

A patent granted by an Office has a maximum term fixed by law. In all three Offices this is 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. In the three procedures, if a renewal fee, an annual fee or maintenance fee is not paid in due time, the protection right expires.

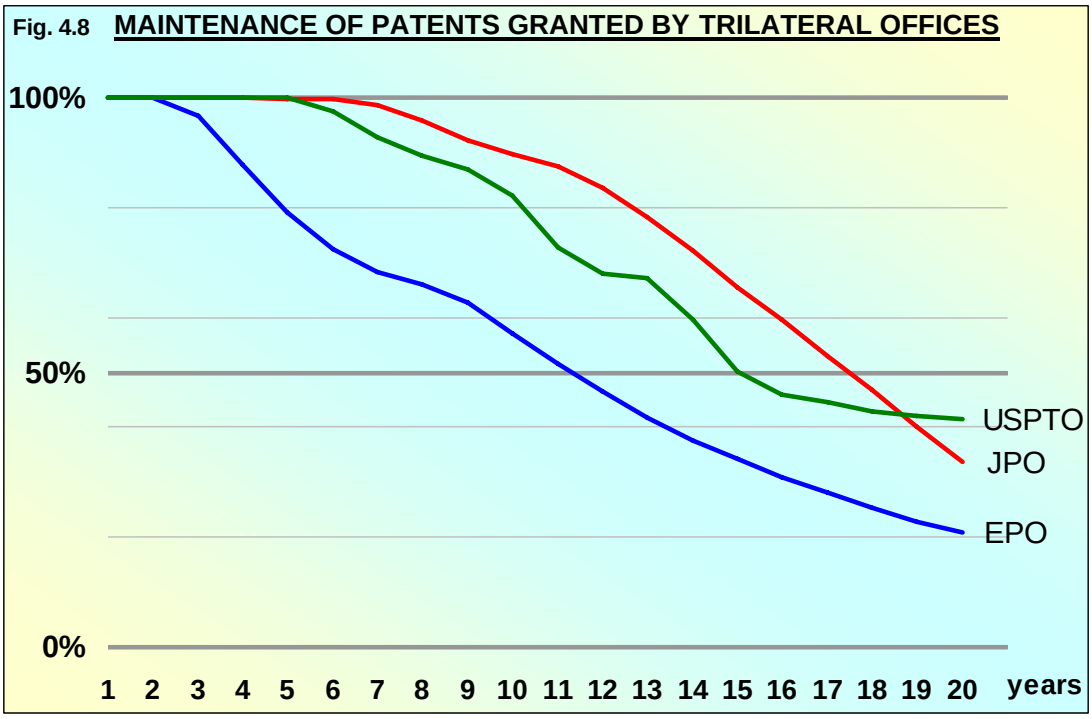
For a European patent, renewal fees are payable to the EPO from the third year after filing in order to maintain the application. After the patent has been granted, annual renewal fees are paid to the national office of each designated EPC contracting state

in which the patent has been registered. The resulting national patents are not necessarily maintained for the same period in each contracting states.

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

In the U.S., patent maintenance requires payment of fees in three stages: 3.5 years, 7.5 years, and 11.5 years after grant.

Fig. 4.8 shows the proportions of patents granted by each Trilateral Office that are maintained for differing lengths of time. It compares the rate of granted patent registrations existing and maintained each patent year. These figures are calculated for the three offices from the year of application[18]. The EPO proportions represent an average ratio of maintenance in the EPC contracting states.

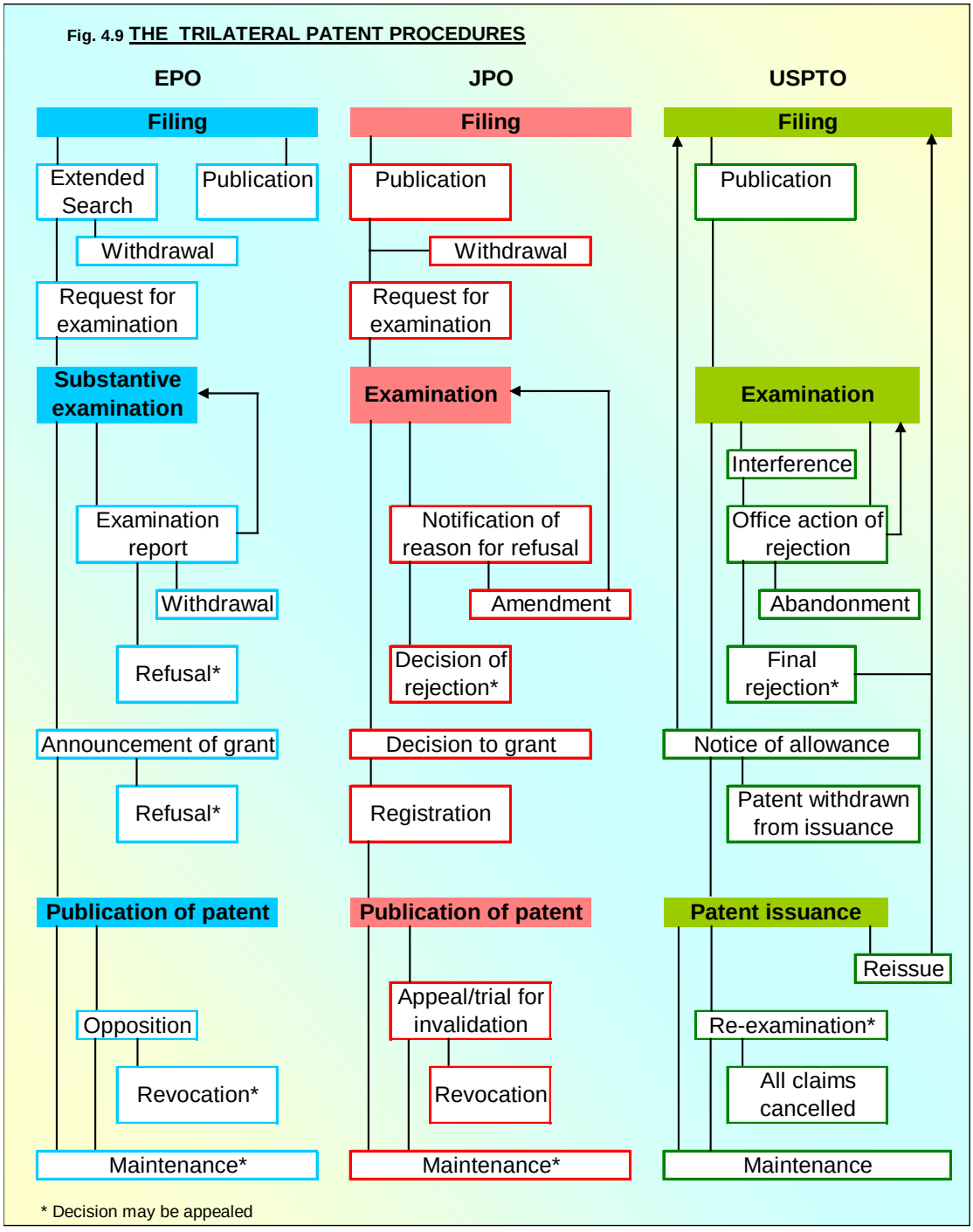


In Japan, over 50 percent of the patents granted are maintained for at least 17 years compared to at least 11 years for the European patents and at least 15 years for the U.S. patents.

[18] In previous editions, the USPTO statistics were presented from the year of registration.

PATENT PROCEDURES

The grant procedures differ to some extent between the Trilateral Offices. The major phases are outlined in Fig. 4.9.



Examination: search and substantive examination

Each of the Trilateral Offices will examine a filed patent application based upon novelty, inventive step, and industrial applicability. At the 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 the JPO or the USPTO, the search and substantive examination are undertaken in one phase. The international searches and international preliminary examinations carried out by the three Offices are not included in the flow chart, since for PCT applications, the granting procedure starts at the moment they enter the national or regional phase.

Filing of a European application with the 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. Filing of a national application with the JPO does not imply a request for examination; this may be filed up to three years after the date of filing. Filing of a national application with the USPTO is taken to imply a request for examination.

Publication

In the Trilateral Offices, the application is to be published, at the latest, 18 months after the date of filing or priority date. The application can be published earlier at the applicant's request. In the 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; 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; 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; USPTO: Final rejection) or withdrawn by the applicant (EPO: Withdrawal; JPO: Withdrawal or Abandonment; USPTO: Abandonment). In addition, if no request for examination for an application is filed to the EPO or the JPO within the prescribed period (EPO: six months after publication of the search; JPO: three years from the date of filing), the application will be deemed to have been withdrawn. In all three procedures, an applicant may withdraw or abandon the application at any time before the application is granted or finally refused. At the JPO, the applicant or the owner of the rights may abandon his own rights at anytime as far as these rights are valid.

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; USPTO: Patent issuance).

Opposition

There is no opposition system at JPO.

At the 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 the 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 the EPO. In the 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 Trilateral 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 three 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 the JPO, 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 2006 and 2007 values of the basic characteristics of trilateral procedures are shown in Table 4 (below). Definitions and further explanations of the statistics are given in Annex 2.

Definitions are not always identical in the three Offices. This should always be born in mind when seeking to make comparisons between the Trilateral Offices based on the information provided.

Rates

The examination rate in the USPTO is 100 percent, since filing implies a request for examination in the USPTO procedure, whereas in the EPO and the JPO a specific request for examination has to be made. At the EPO the growing proportion of PCT applications in the granting procedure led to an increase of the examination rate. In the Japanese procedure, the examination rate is the lowest because applicants have substantially more time (three years from the filing date) in which to evaluate whether to maintain the application or not.

The grant rate in the EPO procedure, as defined in terms of decisions, decreased to 51.4 percent in 2007. In the JPO, the grant rate increased slightly to 48.9 percent in 2007. In the USPTO, the allowance rate decreased to 48.7 percent in 2007.

The opposition rate at the EPO decreased marginally in 2007 to 5.2 percent, and 70.4 percent of the opposed patents were maintained, although in some cases in amended form.

In the EPO, about 32.9 percent of decisions in examination to reject the application were subject to an appeal in 2007. In the JPO, about 20 percent of the decisions in examination to reject were appealed. In the USPTO, about 2.8 percent of final rejections were appealed.

In the EPO, 42.3 percent of the decisions taken during the opposition procedures were appealed in 2007.

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 Trilateral Office. 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 (which can take three years from the date of filing in the JPO), or responding to actions communicated to the applicant.

Pending applications in search at the EPO increased by 11 percent to 124 000 in 2007, and pendency time in search increased to 19.5 months.

The number of pending applications awaiting a request for examination by the applicant increased at the EPO to around 19 500 cases.

In the JPO, the number of applications awaiting a request for examination, more than 1.6 million, is substantively higher than those in the EPO due to the period during which requests for examination can be filed. Due to the reduction of the duration of this period in 2001, this decreased by 9 percent since 2006.

The number of pending applications in examination increased at the EPO by 5 percent to about 318 300 in 2007, and the total pendency time in examination increased by 1.4 month to about 45.3 months in 2007. The pendency time to first office action decreased by 1 month to 22.8 months at the EPO.

In the JPO, the number of pending applications increased to 888 200, an increase of 6 percent over 2006. JPO's total pendency slightly increased to 32.4 months. The JPO's pendency time to first office action increased by 1 month to 26.7 months.

The USPTO number of pending applications also continues to increase. In 2007 there were 763 500 applications waiting to be examined, 9 percent more than in 2006. Total pendency at the USPTO rose slightly to 32 months, while pendency to first office action increased by 1.5 month to 24.9 months.

Pendency time in opposition increased at the EPO to 18.6 months in 2007.

Table 4: STATISTICS ON PROCEDURES

Progress in the procedure Rates in percentage		Year	EPO	JPO	USPTO
Examination		2006	94.2	67.4	100.0
		2007	94.5	66.2	100.0
Grant[19]		2006	55.9	48.5	53.1
		2007	51.4	48.9	48.7
Opposition		2006	5.4	-	-
		2007	5.2	-	-
Maintenance after opposition		2006	72.5	n.a.	-
		2007	70.4	n.a.	-
Appeal[20]	On examination	2006	32.7	26 373	2.2
		2007	32.9	33 077	2.8
	on opposition	2006	47.8	-	-
		2007	42.3	-	-
Pendency in the procedure					
Search	Number of pending applications	2006	111 557	-	-
		2007	124 000	-	-
	Pendency times in search (months)	2006	17.7	-	-
		2007	19.5	-	-
Examination	Number of applications awaiting request for examination	2006	19 290	1 805 194	-
		2007	19 517	1 639 081	-
	Number of pending applications	2006	304 116	837 887	701 301
		2007	318 298	888 198	763 493
	Pendency time to first office action (months)	2006	23.8	25.6	23.4
		2007	22.8	26.7	24.9
	Pendency time in examination (months)	2006	43.9	31.8	31.3
		2007	45.3	32.4	32.0
Opposition	Number of pending applications[21]	2006	5 294	n.a.	-
		2007	5 822	n.a.	-
	Pendency time in opposition (months)	2006	16.7	n.a.	-
		2007	18.6	n.a.	-

n.a." not available
- = not applicable

[19] The USPTO reports on allowance rate.
[20] For JPO, only numbers are available.
[21] At the EPO, a new definition takes account of all cases pending an opposition division decision.

Chapter 5

THE TRILATERAL OFFICES AND THE PATENT COOPERATION TREATY

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

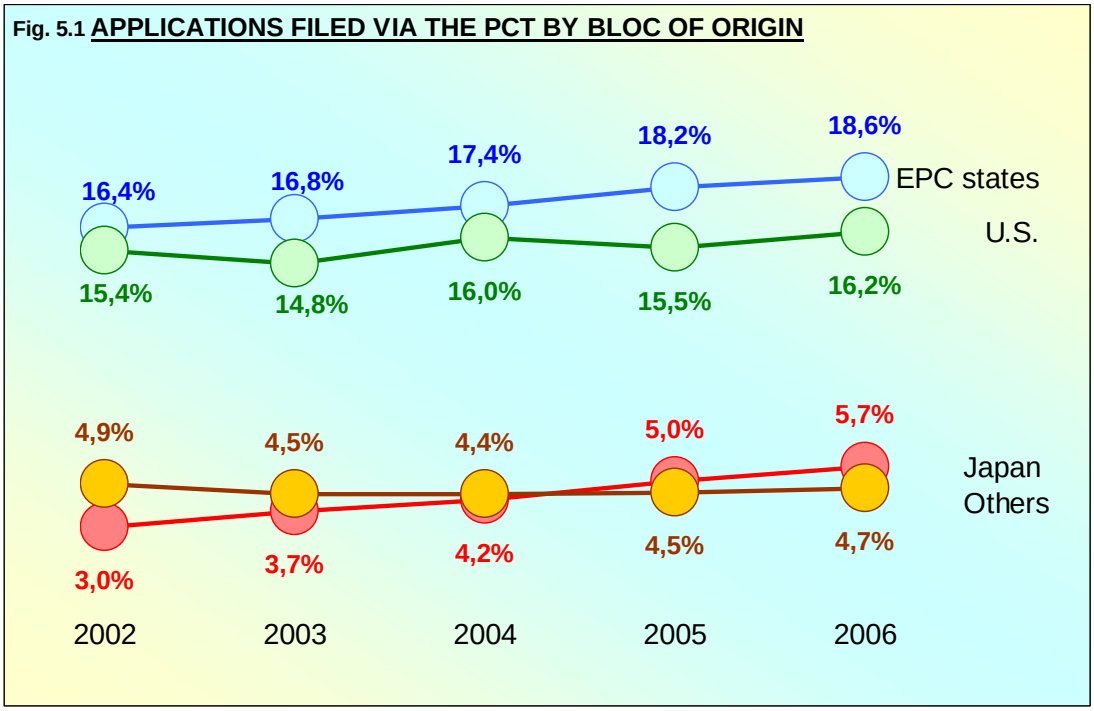
Graphs are presented to display the shares of patent applications and grants using the PCT filing route by origin. Descriptions are then given of additional activities of the Trilateral Offices under the PCT as Receiving Offices (RO) for applicants in their respective territories, as the major International Search Authorities (ISA) and as International Preliminary Examining Authorities (IPEA). PCT searches are a significant additional workload item to those already described in Chapter 4.

THE PCT AS FILING ROUTE

PATENT FILINGS

For each bloc of origin, Fig. 5.1 shows the proportions of all patent applications filed (as provided in Fig. 3.1 of Chapter 3) that are PCT international applications. Applications are counted in the year of filing.

Fig. 5.1 **APPLICATIONS FILED VIA THE PCT BY BLOC OF ORIGIN**



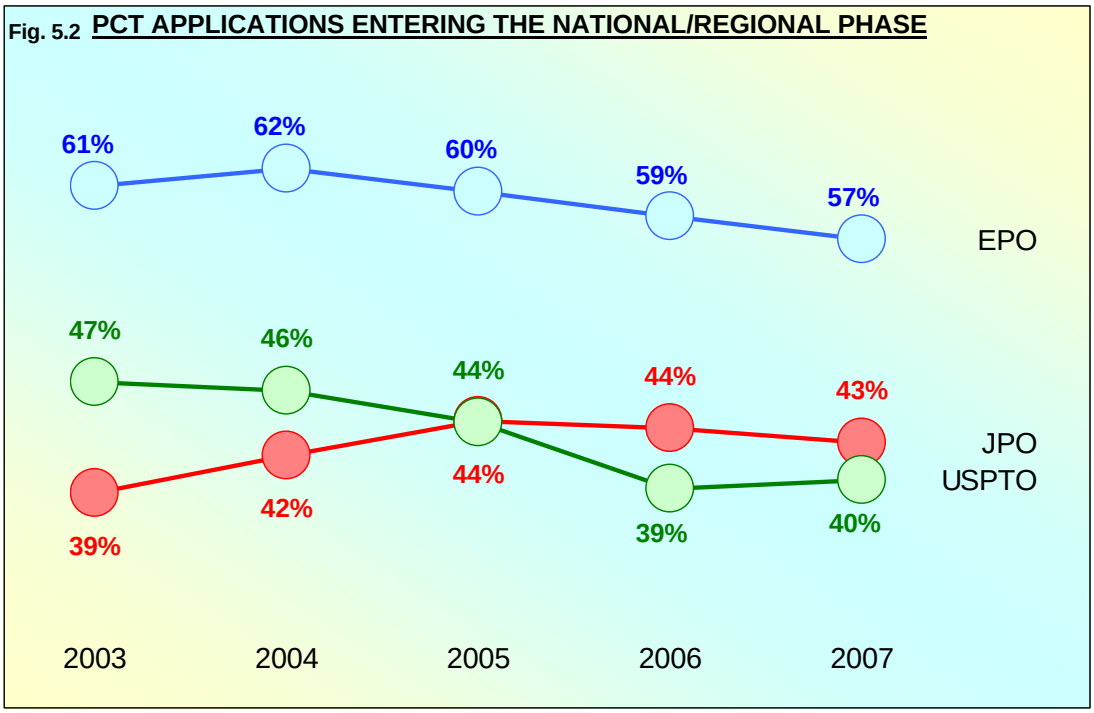
From 2005 to 2006, the share of PCT applications slightly increased in the EPC contracting states, Japan and the U.S. For those applications filed in the "Others" bloc, the proportion remained unchanged. Overall, the use of the PCT as a route for filing patent applications has generally continued to increase.

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. In most of the EPC contracting states, the applicants have a choice of proceeding either in individual countries or at the EPO. However, some of the EPC contracting states cannot be designated individually under the PCT. Also, some PCT applications have entered the national phase procedures in distinct countries and not the regional phase at the EPO.

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

Fig. 5.2 **PCT APPLICATIONS ENTERING THE NATIONAL/REGIONAL PHASE**

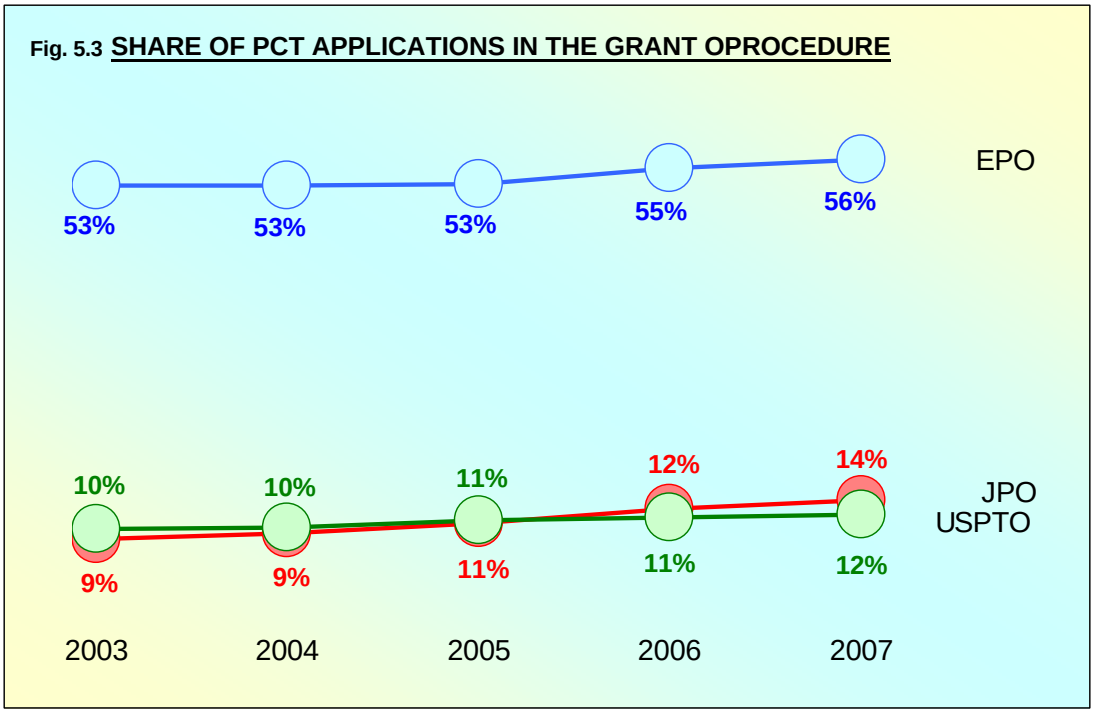


A higher proportion of PCT applications entered the regional phase at the EPO than entered the national phase either at the USPTO or the JPO. This is due to the supranational dimension of the EPO, which provides an opportunity to proceed further with a unique procedure for several countries.

Marginal variations were recorded in 2007. The rate decreased by 1 percent to 57 percent at the EPO and to 43 percent at the JPO and increased by 1 percent to 40 percent at the USPTO.

SHARE OF PCT APPLICATIONS

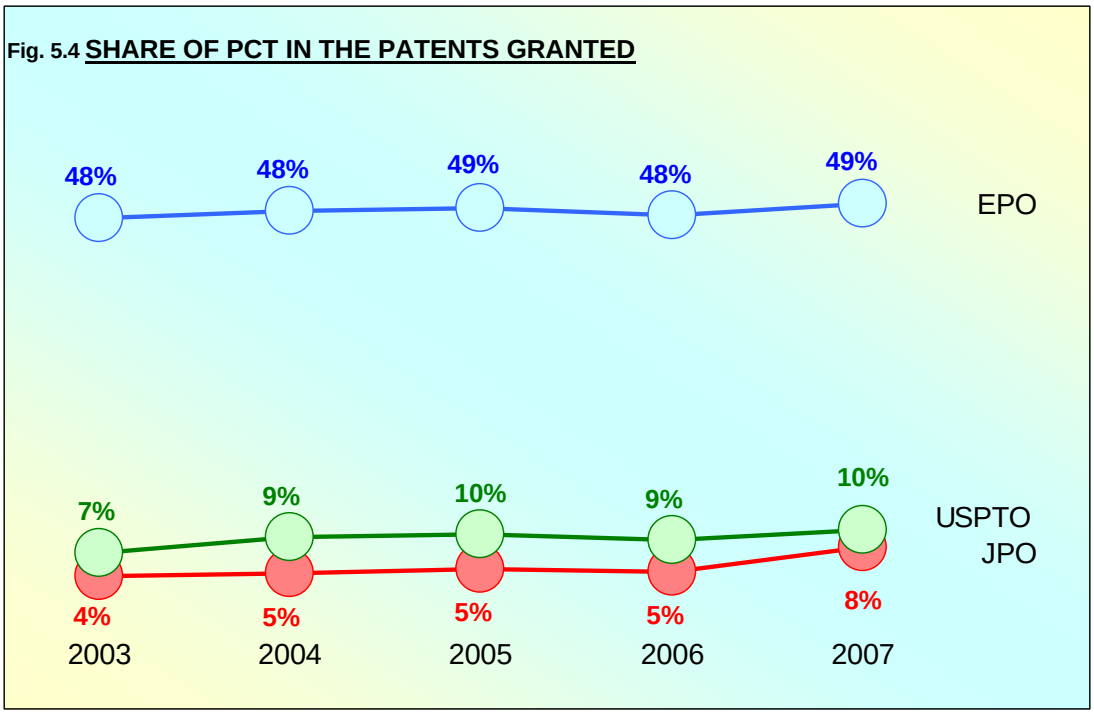
Fig. 5.3 shows the proportions of PCT applications within the overall applications that entered the grant procedure at each Trilateral Office as presented earlier in Fig. 4.1.



The total number of PCT applications increased in 2007 as compared to 2006 at all offices. The EPO has a higher proportion of PCT applications than at the other offices. At each Trilateral Office the share of PCT applications in the grant procedure rose in 2007.

PCT GRANTS

Fig. 5.4 shows the percentage of patents granted by each Trilateral Office that were based on PCT applications.

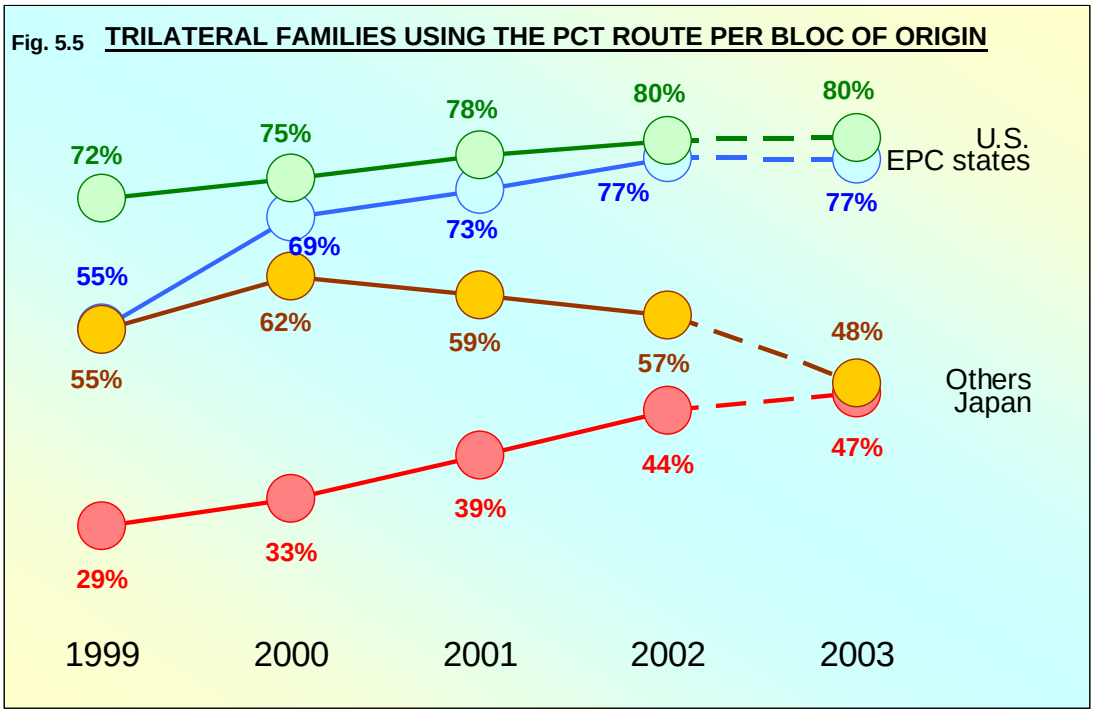


The shares of PCT applications among all applications receiving a patent grant have remained stable at the EPO and the USPTO in the recent years. The share increased markedly at the JPO from 5 percent in 2006 to 8 percent in 2007. Shares are somewhat below those of applications (see Fig. 5.3), since granted patents relate to applications filed three to five years earlier when the proportions of PCT applications were lower.

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 families' flows can be found in the statistical data file that is attached to the web based version of this report.

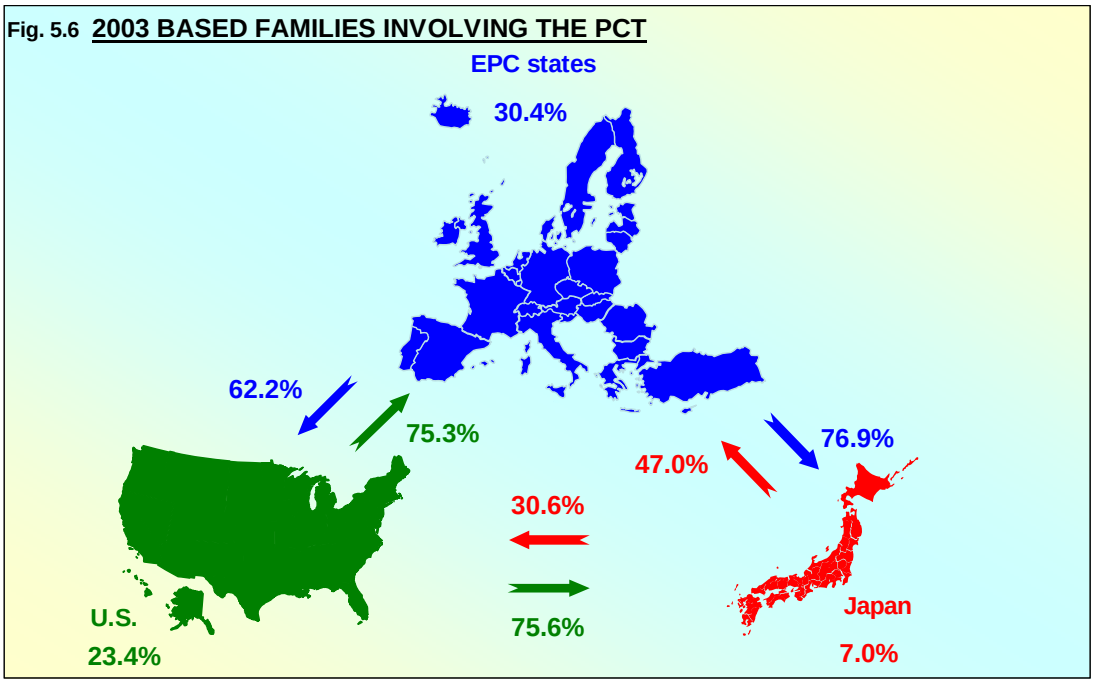
Fig. 5.5 shows the proportions of trilateral patent families (as given earlier in Fig. 3.13) that use the PCT system. As discussed above the data for 2003 is provisional (see p.32).



Usage of the PCT system was fairly widespread in trilateral patent families, although still at a somewhat lower level in Japan. The proportions have generally trended upwards for all the trilateral blocs, but have had a two year decline in non-trilateral countries of origin. In 2002, out of all trilateral patent families, 65.5 percent made some use of the PCT system. 80 percent of trilateral patent families originating from the U.S. and 77 percent of trilateral patent families originating from the EPC contracting states involved PCT applications. This compares to 44 percent from Japan and 57 percent from other countries.

Fig. 5.6 shows the percentages of PCT system usage in the flows of all patent families between trilateral blocs in 2003, and can be compared with Fig. 3.14.

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.



Applicants from U.S. and the EPC contracting states prefer to use the PCT system to a greater extent than Japanese applicants do. However, the participation rate of Japanese applicants is increasing, particularly when making filings abroad.

PCT AUTHORITIES

Under the PCT, each Trilateral Office acts as Receiving Office, mainly for applicants from its own geographical zone, as International Search Authority (ISA) and International Preliminary Examination Authority (IPEA). The following graphs show the trend over the years 2003 to 2007 of the activities of the Trilateral Offices as PCT authorities.

In 2007, two thirds of the PCT international filings were filed at one of the Trilateral Offices.

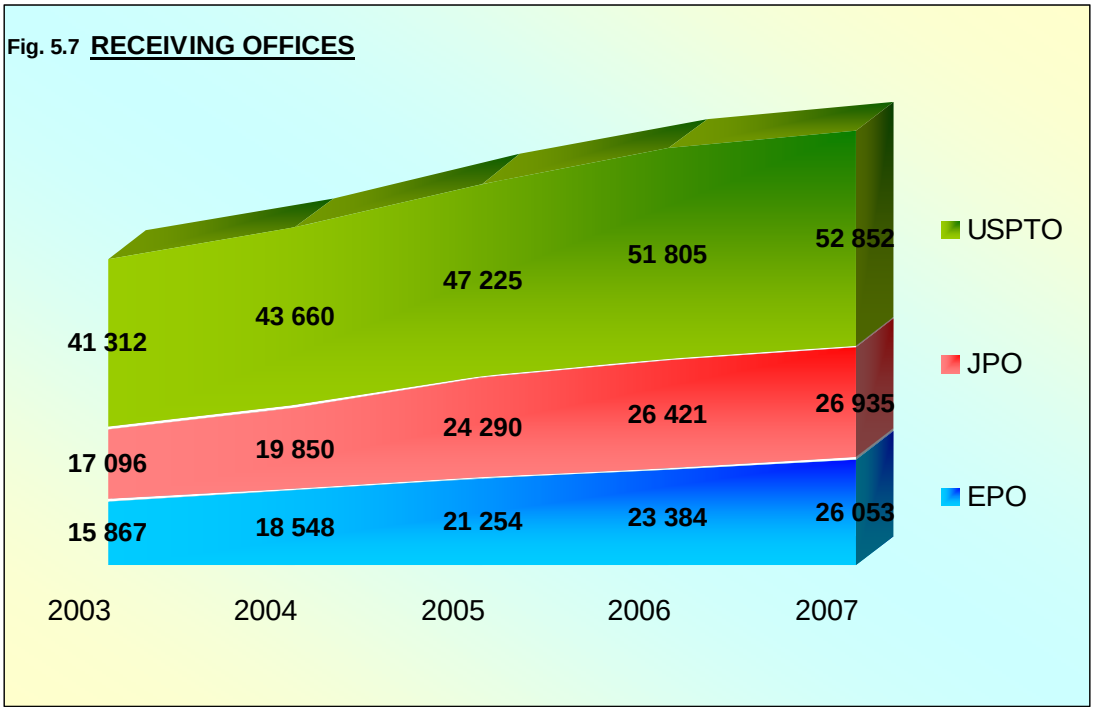


Fig. 5.7 shows that the USPTO received nearly 53 000 international PCT applications in 2007. The EPO and the JPO received fewer international applications. In 2007, the EPO experienced an increase of 11 percent to 26 000 international applications received.

Together, the Trilateral Offices received 82 percent of the PCT international search requests in 2007, compared to 90 percent in 2003. A growing proportion of applicants select the SIPO of China or KIPO of the Republic of Korea to perform the PCT international search.

Fig. 5.8 **INTERNATIONAL SEARCH REQUESTS**

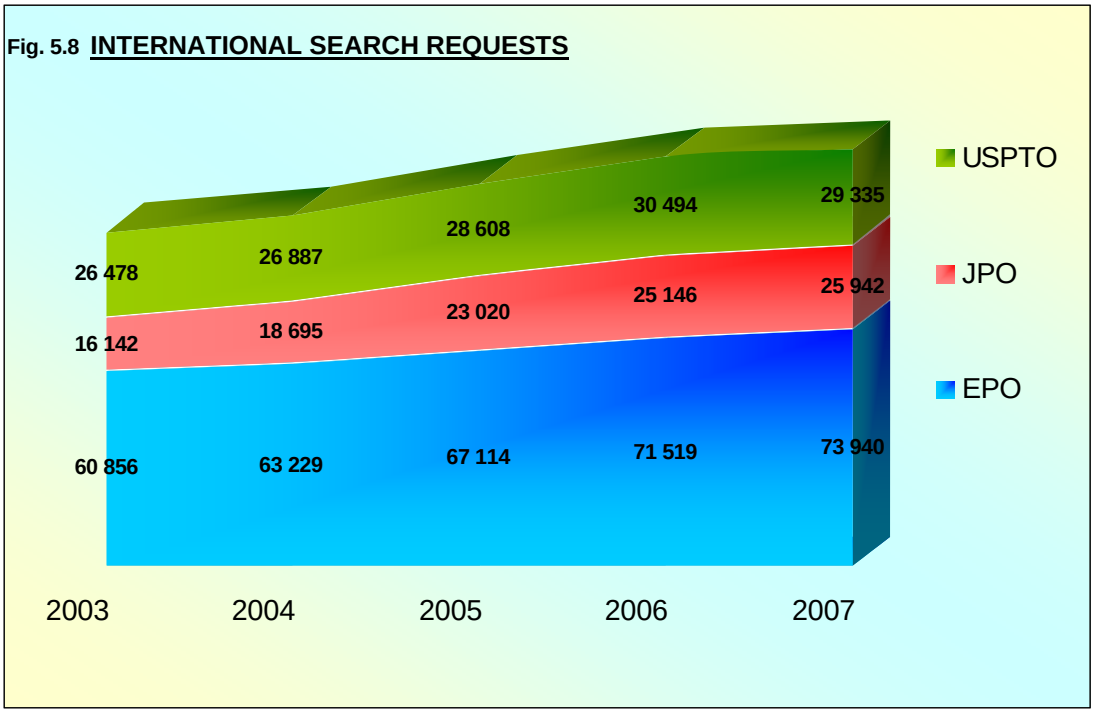


Fig. 5.8 shows that, in 2007, the EPO received nearly 73 000 international search requests, followed by the USPTO with more than 29 000 and the JPO with almost 26 000. Although the JPO received fewer requests, it experienced the largest percentage increase from 2003 to 2007.

Together the Trilateral Offices were in charge of 83 percent of the work as IPEA in 2007, compared to 90 percent in 2003. Since 2004, the share of work of the USPTO declined from about 30 percent to 14 percent in 2007.

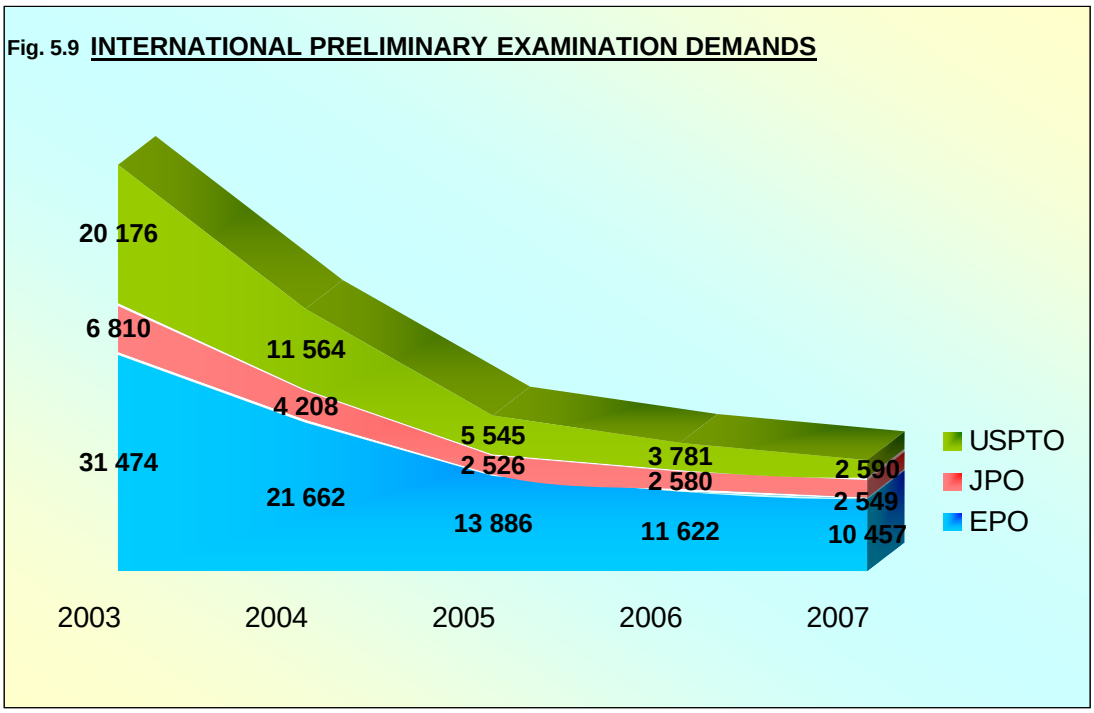


Fig. 5.9 shows that the number of demands for international preliminary examination declined since 2003 at all three Trilateral Offices. This is due to rule changes that took place in the PCT system regarding time limits to enter the national or regional phase, and also to the introduction of a written opinion on patentability with the international search report. These changes tended to reduce the attraction of the international preliminary examination.

The EPO was IPEA for 10 457 international applications in 2007, which represents a decline of 67 percent compared to 2003. The USPTO was IPEA for 2 590 applications in 2007, which represents 87 percent fewer demands than in 2003. The JPO, although less often chosen as IPEA, has also experienced a 63 percent decline since 2003 to 2 549 demands in 2007.

Chapter 6

OTHER WORK

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

Other work includes applications for plant patents and reissue patents in the USPTO and also applications for patents other than those for inventions: utility models, designs and trademarks in the JPO, and design patents and trademarks in the USPTO. The searches on behalf of national offices as well as searches for third parties are special items of work done at the EPO.

The numbers of requests received for these types of other work are shown for 2006 and 2007 in table 6.

Table 6: STATISTICS ON OTHER WORK

Activities	Year	EPO	JPO	USPTO
Searches for national offices & third parties	2006	18 269	-	-
	2007	18 877	-	-
Design applications	2006	-	36 724	25 515
	2007	-	36 544	27 752
Utility model applications	2006	-	10 965	-
	2007	-	10 315	-
Plant patent applications	2006	-	-	1 151
	2007	-	-	1 049
Reissue patent applications	2006	-	-	1 285
	2007	-	-	1 054
Trademark applications	2006	-	135 777	362 322
	2007	-	143 221	401 039

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

USPTO EXPENDITURES (Fig. 2.4)

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 detailed definitions of 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 the EPO, where the request for examination has to be filed no later than six months after publication of the search, the rate for 2007 relates to applications mainly filed in the years 2006 and 2007.

For the JPO, the period to file a request for examination has been three years from filing date since October 2001. The rate for 2007 relates to applications filed in the year 2004. (The rate for 2006 relates to applications filed in the year 2003.)

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

GRANT RATE

For the 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 the 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 the 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 the 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 the JPO, or to the USPTO, since there is no opposition procedure there.

MAINTENANCE RATE IN THE OPPOSITION PROCEDURE

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.

Data are not available for the JPO and this rate does not apply to the USPTO.

APPEAL RATE

For the 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 Trilateral 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.

In the case of Euro-direct applications, there is a target to produce the search report by the time of the publication of the applications.

PENDENCY APPLICATIONS AWAITING REQUEST FOR EXAMINATION

This only applies to the EPO and the JPO. This statistic indicates the number of filed applications awaiting a request for examination by the applicant for the EPO after publication of the search report and for the JPO at any time during three years after filing.

For the EPO, pending applications awaiting request for examination is 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 the JPO, pending applications awaiting request for examination 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 (three years from the date of its filing).

PENDING EXAMINATIONS

For the 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 been disposed of (granted, refused or abandoned) by the end of the reporting year.

For the JPO, 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.

For the 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 the JPO, pendency examination in months is the total amount of months for disposing applications as final actions (decisions to grant or to refuse, withdrawals or abandonments) in the reporting year, divided by the average monthly number of final actions during the reporting year.

For the 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 FIRST OFFICE ACTIONS

At the EPO, for applications filed since July 2005, 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 the EPO to issue of this first communication in examination.

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

For the 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 OPPOSITIONS

This only applies to the 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.