

**TRILATERAL  
STATISTICAL  
REPORT  
1997**

## **PREFACE**

In order to promote a better understanding of the importance of patents rights in the world and the roles of the European Patent Office (EPO), the Japanese Patent Office (JPO) and the United States Patent and Trademark Office (USPTO), a joint annual Trilateral Statistical Report has been developed. Its purpose is to facilitate an understanding of the operations of each Office and to increase the awareness of the patent grant procedures of the three Offices to interested circles in the patent world. It is a compilation of statistics from the EPO, the JPO and the USPTO and is partially based on statistics from the World Intellectual Property Organization (WIPO) in Geneva. The report is a supplement to the separate annual reports of each of the three Offices.

The joint report is one of the fruits of trilateral cooperation.



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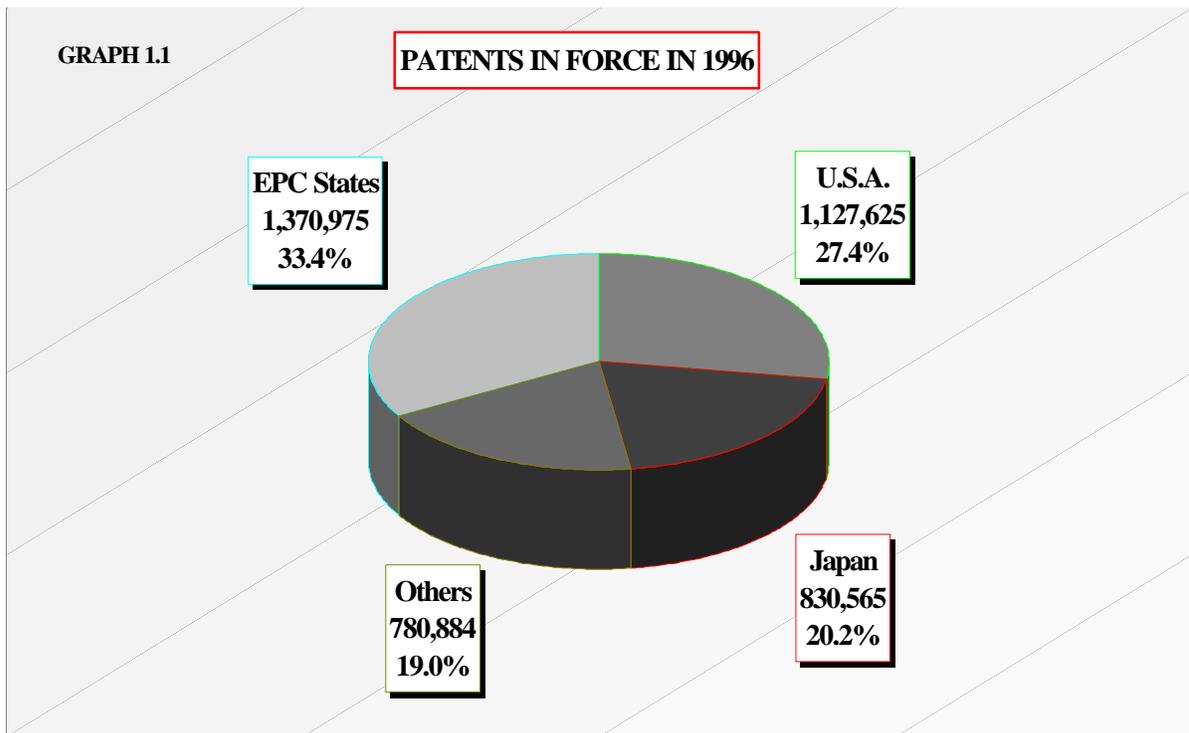
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# 1 INTRODUCTION

Intellectual property rights are not all of the same nature. They can be categorized as:

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

This report concerns the first kind, patents of invention. Patent rights are well used throughout the world. At the end of the year 1996, a total of 4.11 million patents were in force. The Contracting States of the European Patent Convention, the JPO and the USPTO, respectively, cover about 81% of the total patents worldwide. Patents in EPC States have been granted by the national office in these States and, since 1980, in a gradually increasing share by the EPO.



## EUROPEAN PATENT OFFICE

The European Patent Office (EPO) is an example of successful economic and political co-operation among the States of Europe, providing patent protection in up to 24 European countries on the basis of a single patent application and a unitary grant procedure. The following 18 States were in 1997 members of the European Patent Organisation:

**Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Liechtenstein, Luxembourg, Monaco, Portugal, The Netherlands, Spain, Sweden, Switzerland, The United Kingdom.**

The following States agreed with the EPO to allow extension of European patents to their territory:

**Albania, Latvia, Lithuania, the former Yugoslav Republic of Macedonia, Romania and Slovenia**

Together these States build a market of over 415 million people.

**TABLE 1.1: PRODUCTION INFORMATION EPO**

<b>PRODUCTION FIGURES FOR 1996 AND 1997</b>		
	<b>1996</b>	<b>1997</b>
<b>Filings</b>		
Total including Euro-PCT international phase	87,401	99,764
Total including Euro-PCT regional phase	63,900	72,904
<b>Production</b>		
<b>Search</b>		
European searches (Euro+Euro-PCT supplementary)	40,125	42,121
PCT searches	25,334	30,358
Searches on behalf of national Offices	14,733	15,002
Other searches	5,101	5,326
<b>Total production search</b>	<b>85,293</b>	<b>92,807</b>
<b>Examination (final actions)</b>		
European examination	52,862	45,982
PCT Chapter II	15,680	19,795
Opposition (final actions)	2,331	2,198
<b>Total final actions examination/opposition</b>	<b>70,873</b>	<b>67,975</b>
<b>Appeal</b>		
Technical appeals	862	903
PCT protests	5	9
Other appeals	44	52
<b>Total decisions appeal</b>	<b>911</b>	<b>964</b>

The mission of the European Patent Organisation is to promote the use of patent protection in Europe in order to enhance the innovative strength and competitiveness of European industry, by providing an efficient and high quality regional system for patent protection exploiting the potential for synergy between national offices and the EPO.

In 1997 the European Patent Office celebrated its 20th anniversary. The founding of the EPO on 7 October 1977, and the opening of the Office, ushered in a period of exemplary co-operation in the fields of patents in Europe. Representatives from politics, industry and the world of patents honoured the EPO's development from a small-scale office with a staff of around 100 into a European intergovernmental authority employing 4,000 people and offering services that are held in high esteem both within Europe and beyond its borders.

During 1997 the Office continued its efforts to make its own contribution to promoting innovation in Europe. On 1 July the EPO reduced its procedural fees by 20%. The effect of this was to cut filing cost by DEM 140 million per year. The EPO now also charges substantially less for its patent information products, offering its EPIDOS (European Patent Information and Documentation) services and products at purely marginal cost.

The main task of the European Patent Office is to perform the European patent grant procedure according to the European Patent Convention. Besides this, the EPO acts as receiving, searching and examining authority under the Patent Co-operation Treaty.

A further task of the EPO is to perform, on behalf of national Patent Offices, novelty searches for the purpose of national procedures and to carry out state of the art searches for industry and inventors requesting this service. In table 1.1 production figures for search (European, PCT and national searches), for examination (European and PCT Ch. II) and for opposition and appeal in the European procedure are given for the years 1996 and 1997.

In 1997, 92,807 searches have been completed (85,293 in 1996); the final actions in examination and opposition decreased by 4% down to 67,975 and 964 decisions in appeal have been completed (6% more than in 1996).

At the end of 1997 the Office's search files contained 25.2 million patent documents and 2.6 million technical or scientific articles. 1.2 million new documents were added to the collection in 1997, including 800,000 patent documents, 102,400 articles and 300,000 English-language abstracts of patents from Japan and the former Soviet Union. The classification system used by the EPO is for the most part identical with the IPC. However, 53,500 additional sub-categories and 46,000 supplementary symbols allow greater scope for adapting the collection to the state of the art, resulting in 1997 in 81,200 additional classifications of documents already in the collection.

It is also the policy of the Organisation to intensify the awareness of patenting in Europe and to facilitate access to patent information.

The assent of the EPO member states to the Internet based ESP@CENET project makes it far easier to gain access to innovation-related information, especially for small and medium-sized enterprises and independent inventors. Free access to patent data is guaranteed jointly by the national patent offices and the EPO. The EPO's home page (<http://www.european-patent-office.org>) is now already consulted around 200,000 times a week.

The EPO is a producer of patent information products and systems and has set up databases that are not only available for internal use, but also for dissemination to national Offices. The year under review saw the conclusion of the first programme of co-operation with the national offices, in the course of which the Office equipped the European patent information centres with 128 CD-ROM workstations and jukeboxes and installed 63 electronic query system (EPOQUE) connections. The EPO, supported by the legal knowledge and experience available in the Offices, sees a further important task to contribute to the harmonisation of patent practice and patent law, in particular in Europe, but also worldwide.

In December 1997, the Cypriot parliament approved the country's accession to the EPC. Since April 1998 Cyprus has been the 19th member state of the Organisation. On 1 November 1997 the former Yugoslav Republic of Macedonia became the sixth state to join the extension system after Albania, Latvia, Lithuania, Romania and Slovenia.

Eight central and eastern European states have now applied to join the European Patent Organisation: Bulgaria, the Czech Republic, Estonia, Hungary, Poland, Romania, Slovakia, and Slovenia. In preparation for the Administrative Council's decision on their applications, the Office has drawn up a questionnaire to which six of the states have already provided a reply.

EPO-designed Common Software for patent and trademark administration has been supplemented with the Spirit 2 software for the administration of European patent data. This programme is now running successfully in Romania and Malaysia, and the patent offices of Belgium, Ellas, Ireland and Viet Nam are considering installing it.

In 1997, the EPO has provided co-operation services in the ASEAN countries as well as in the ARIPO (African Regional Industrial Property Organisation) countries and in Argentina, Chile and Brazil. The EPO agreed on a two-year co-operation programme with Egypt, Tunisia and Morocco, and supported China, Hong Kong and Turkey in the modernisation of their patent system and legislation.

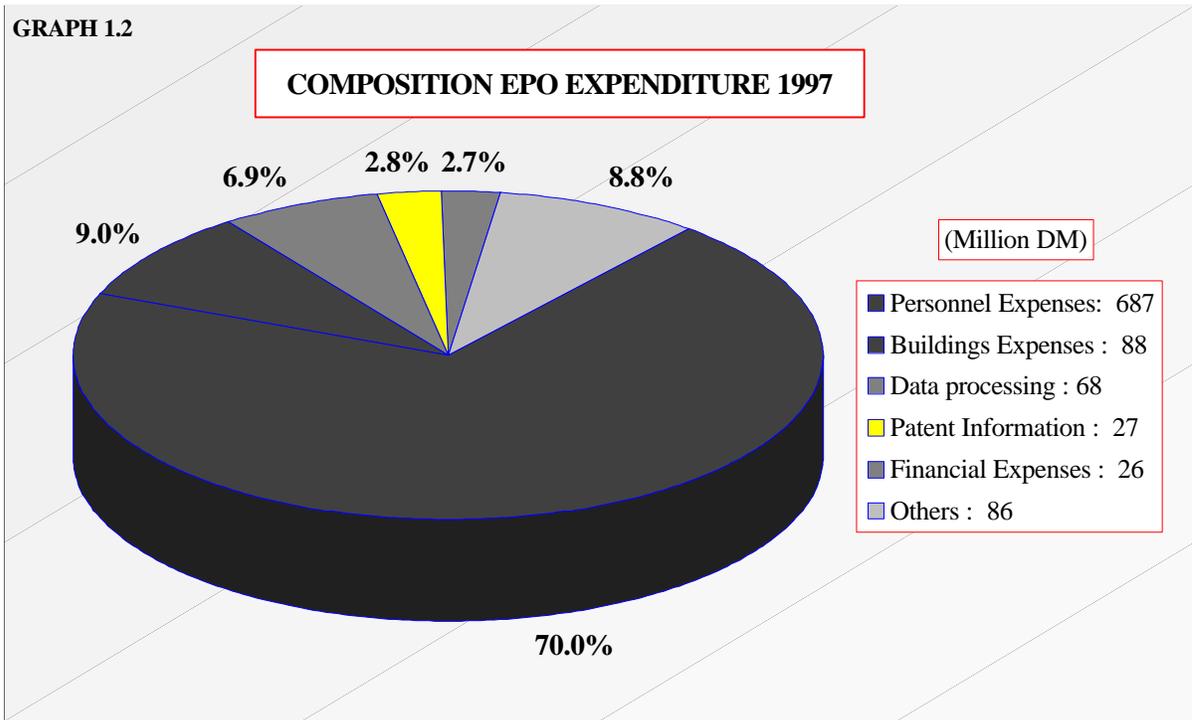
### **EPO's budget**

The Office is financially autonomous. Expenditure is met entirely out of income, mainly consisting of fees paid by applicants and patentees. Procedural fees such as the filing, search, examination and appeal fees and renewal fees for European patent applications are paid to the Office directly. Renewal fees for European patents, on the other hand, are collected by the designated Contracting States and determined by national law. From these renewal fees, 50% is kept by the National Offices and 50% is made available to the EPO.

Total expenditure 1997 (excluding investments) were DEM 982 million. Thereof DEM 687 million (70.0%) for Personnel Expenses, DEM 88 million (9.0%) for Buildings and Equipment (including depreciation), DEM 68 million (6.9%) for Data Processing (including depreciation), DEM 27 million (2.7%) for Patent Information including co-operation with the member states, and DEM 26 million (2.6%) for Interest and Bank Charges and DEM 86 million (8.8%) for Others were expended.

Total income to the Office in 1997 amounted to DEM 1,173 million of which DEM 191 million constituted the operating surplus.

GRAPH 1.2



### EPO Staff Composition

At the end of 1997, the total staff was 3,753, thereof 2,021 (53.8%) involved in the patent grant procedures (including appeal), mainly in search, examination and opposition (1,943) and members of Boards of Appeal (78).

## JAPANESE PATENT OFFICE

When we examine the situation currently surrounding Japan, it is clear that its economic activities are quickly being globalized and corporate activities are transcending national borders. In order for Japan to move forward in harmony with other nations into the 21<sup>st</sup> century, it is necessary to promote original technological developments which are evaluated highly by many nations and which can contribute to the manufacturing of products with large added value. In light of these circumstances, the Japanese Patent Office (JPO) has been promoting the following policies in 1997.

Regarding the granting of intellectual property rights, the JPO aims to shorten the examination and appeal periods so as to be in line with international standards before the beginning of the 21<sup>st</sup> century. Specifically, the JPO aims to reduce the period of first office<sup>1</sup> action to 12 months by the year 2000.

Since December 1990, the JPO has been accepting applications for patents and utility models in an electronic form. We are also developing necessary systems to accept electronically filed applications in the field of designs, trademarks, trials and Patent Cooperation Treaty (PCT). To further promote the use of on-line processing of applications, the JPO has started accepting electronic applications filed through personal computers since April 1998. In addition, the JPO has adopted the policy to perform patent examinations before the publication of applications, and introduced an interview system using a TV conference system. At the same time, the JPO has improved its administration and extended the scope of examination targets with the aim of achieving accelerated examination and trial systems.

With a view to increasing the technological levels of venture businesses and creating new industries, the JPO has started work to establish a patent market. The JPO promotes Patent Distribution Policy, such as holding Patent transfer fairs, the developing of databases including the information on patents ready for licensing and so on.

To raise the level of intellectual property protection in the Asian and Pacific regions, the JPO has been accepting trainees from those regions as well as dispatching specialists. The JPO's "1,000 Trainee Program" is intended to offer training to one thousand people both in public and private sectors by the year 2000. The number of trainees had already reached 500 in 1997. In the future, JPO also intends to actively cooperate with other Asian nations in the human resource development, database generation, and examination fields.

In recent years, Japanese industries have suffered increasingly from counterfeits mainly in Asia. In this regard, the JPO will conduct a fact-finding survey to intensify its activities dealing with this matter.

In order to deal with progress in advanced technological fields and to offer the necessary protection of intellectual property rights, the JPO revised the examination guidelines for inventions relating to computer software and biotechnology. At the same time, the JPO has initiated the revision of the Industrial Design Law to strengthen the protection of creative designs.

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<sup>1</sup> With regard to the filings of intellectual property applications this period is calculated from the filing date of the request for examination. Regarding trial demand, this period is calculated from the filing date of the demand for trial.

With the increasing awareness of the importance of intellectual property rights, the JPO organized the Commission on Intellectual Property Rights in the Twenty-first Century with the aim of discussing future intellectual property. As a result of discussion, the commission has produced a report. The JPO will positively utilize the contents of this report in applicable policies.

The JPO will actively participate in international conferences and meetings and make efforts to contribute to the establishment of an internationally harmonized system and rules in the field of industrial property.

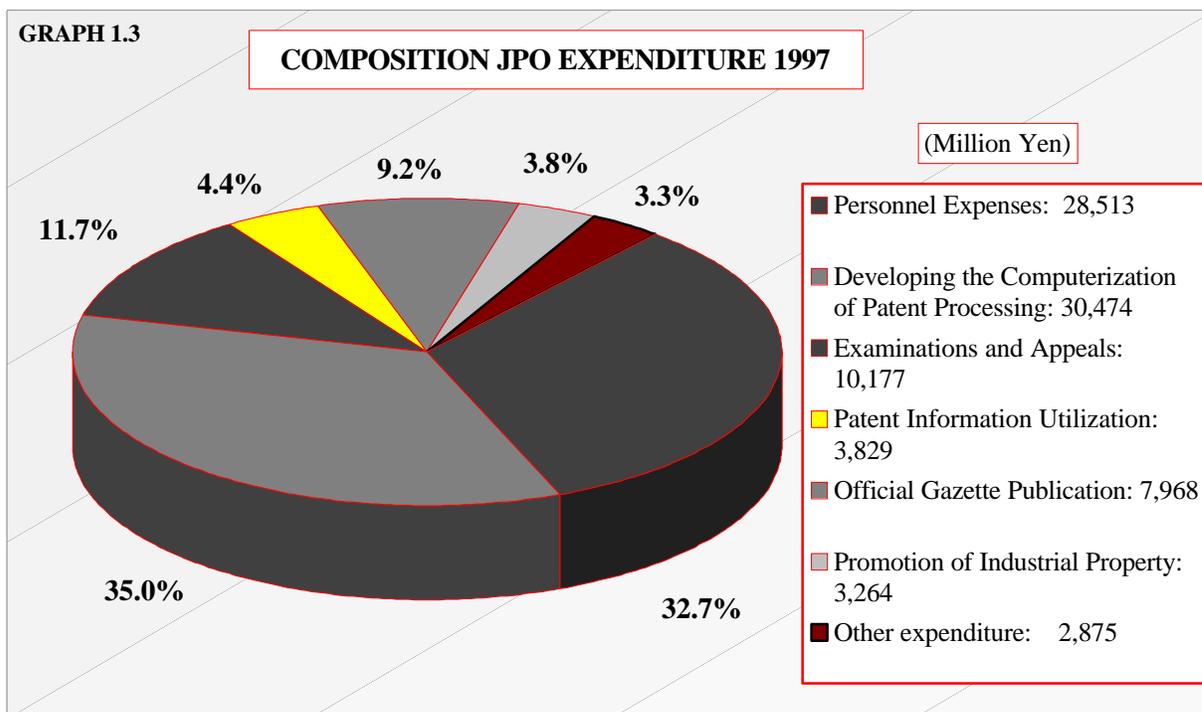
**TABLE 1.2: PRODUCTION INFORMATION JPO**

<b>PRODUCTION FIGURES 1996 AND 1997</b>		
	<b>1996</b>	<b>1997</b>
<b>Applications Filed</b>		
Domestic	340,101	350,807
Foreign	36,514	40,765
<b>Total</b>	376,615	391,572
<b>Grants</b>		
Domestic	187,681	129,937
Foreign	27,419	17,749
<b>Total</b>	215,100	147,686
<b>Applications in appeals</b>	13,667	13,742

### **The JPO Budget**

In July 1984, the JPO introduced a new accounting system, in which all expenditures are covered by its revenues. This system made it possible for the JPO to take comprehensive measures, such as the Paperless Project, to speed up its clerical procedures.

The JPO 1997 budget is approximately 87.1 billion-yen. The budget can be broken down into the following areas: 28,513 million-yen for personnel expenses, 30,474 million-yen for developing the computerization of patent processing, 10,177 million-yen for examination and appeals, 3,829 million-yen for expenses related to patent information utilization, 7,968 million-yen for official gazette publications, 3,264 million-yen for promoting the internationalization of industrial property administration, and 2,875 million-yen for other expenses of which 767 million-yen was for expenses to improve the function of intellectual property rights administration.



### The JPO Staff Composition

As a result of staff increases to meet the need to speed up the examination and appeal process, the number of JPO employees at the end of the 1997 fiscal year was 2,529.

As a consequence of this expansion there are now 1,070 examiners in charge of patent and utility models, 47 examiners in charge of industrial designs, and 134 examiners in charge of trademarks, for a total of 1,251 examiners currently involved in substantive examination. Further in the Department of Appeals, a higher office of the examination department, 377 appeal examiners are involved in the trial of appeal cases. In addition, 901 clerical staff members are involved in a variety of tasks such as formality examinations and revisions of industrial property systems.

## **THE UNITED STATES PATENT AND TRADEMARK OFFICE**

The mission of the United States Patent and Trademark Office (USPTO) is to promote industrial and technological progress in the United States and strengthen the national economy by administering the laws relating to patent and trademarks; and advising the Administration on patent, trademark, and copyright protection, and the trade-related aspects of intellectual property.

This mission is carried out by examining patent and trademark applications, issuing patents and registering trademarks; disseminating the information contained in patents and trademarks; and encouraging a domestic and international climate in which intellectual property can flourish.

To be competitive in the 21<sup>st</sup> century market place, the USPTO recognizes the importance of customer satisfaction. Therefore, our focus is to achieve customer satisfaction via enhanced production, timeliness and quality. This is being accomplished through our commitments to:

- Reduce our processing time for patent original inventions to 12 months in 2003.
- Test reengineered processes and automated systems, and be ready to deploy electronic processing of patent applications in 2003.
- Partner with the World Intellectual Property Organization (WIPO) to achieve electronic filing of Patent Cooperation Treaty applications and, in 2000, electronically receive and process PCT applications at the PTO.
- Enable customers to use the Internet to request the status of their patent and trademark applications, to place orders and receive products, and to access patent and trademark data.
- Reduce our trademark processing time to 3 months to first action, and we will offer electronic filing capabilities to our customers.
- Establish a fee schedule that encourages participation in the patent and trademark systems and which is aligned with costs.
- Offer our employees innovative training programs at PTO University, Patent Academy and work-at-home opportunities.

In 1997, the USPTO received 215,257 patent applications a 10.3 percent increase over the previous year. In 1997, the USPTO also began using a more relevant measure of the time necessary for processing a patent application: cycle time. In 1995, the GATT legislation changed the patent term length from 17 years from issue date to one that begins on the issue date and ends 20 years after the earliest effective filing date claimed by the applicant. As a result, time spent by the USPTO in processing an application now directly impacts the effective length of the patent term. In response to this change, the USPTO has changed its measure from traditional pendency to processing time, or cycle time. This allows the USPTO to measure the time the Office spends on processing an invention but not the time attributable to applicants, such as the time that the USPTO awaits an applicant's reply. In other words, any delays in processing will affect the patent term so those delays attributable to applicants do not count toward USPTO cycle time. Also, whereas pendency tracked individual patent applications and separately tracked continuations or second applications filed to continue the prosecution of a parent application, cycle time tracks PTO processing time for inventions regardless of the number of applications filed on that invention.

Additionally, the Patent Business took the first step in the creation of Industry Sectors. Six Technology Centers have replaced the 17 Examining Groups that comprised the Patent Examining Corps. The six Technology Centers are: 1) Biotechnology, Organic Chemistry and Designs, 2) Chemical and Materials Engineering, 3) Transportation, Construction, Agriculture and National Security, 4) Mechanical Engineering, Manufacturing and Products, 5) Communications and Information Processing, and 6) Physics, Optics, System Components and Electrical Engineering. This restructuring has now organized all USPTO patent examiners into technology-specific entities and is the first step toward migrating to Industry Sectors wherein each Sector will be more self-contained. This will enable the USPTO to customize its services to meet distinct customer and employee requirements. Co-locating related arts will also improve access to the experienced personnel relied upon for search consultation, enhance quality, and reduce cycle time.

In conjunction with the Technology Centers, the USPTO also established a Working Laboratory that has begun experimenting with new work roles, responsibilities and relationships and testing reengineered processes for possible incorporation into the production pipeline. The Lab is comprised of 24 participants, representing various technologies throughout the Patent Examining Corps. The Lab participants are grouped into four teams: each team comprising four adjudicators (examiners), one analyst, and one assistant. The goals of the lab include: (1) improving patent application processing; (2) training technical support personnel to perform higher-level functions and thereby enable the examiners to focus their time on substantive examination functions; (3) encouraging teamwork and collaboration between team members; (4) improving examination quality; and (5) improving both customer and employee satisfaction.

A significant accomplishment in 1997 was the deployment of desktop workstations to patent examiners. Every examiner now has a desktop workstation, and all examiners have access to PTO electronic search clients and office-action creation clients, Internet searching, and PTONET (PTO Network) communication. This deployment is the first step toward an electronic work place and the total electronic processing of patent applications.

Another significant accomplishment in the Patent Business is the enhancement of the electronic database for foreign patent documents, which links examiners to critical foreign patent data. The expanded foreign patent database gives GPI examiners the ability to word search and view bibliographic data and abstracts from the European Patent Office (EPO) and the Japanese Patent Office (JPO) in a variety of different fields. This database contains over one million abstracts from European countries, including EPO documents and documents published by the World Intellectual Property Organization (WIPO), and nearly four million abstracts of Japanese patent documents. In addition, examiners now are able to view clipped images for most of the patent data contained in this database.

Finally, the Patent Business developed and is implementing major automation projects, such as the Patent Image Capture System (PICS) and the Application Capture and Review System (ACRS), which will make it possible to electronically process patent applications in the future. Operational benefits, which the USPTO expects to receive from these automation projects, include the elimination of many manual processes such as hand delivery of paper files, and manual photocomposition.

The USPTO is expanding its already diverse portfolio of patent and trademark information products and services. Two new offerings will increase the public's access to patent and trademark information through the USPTO web site. First, the USPTO plans to offer a trademark database that consists of bibliographic data and full text of all registered trademarks and pending trademark applications. Second, the USPTO plans on expanding the content of our present patent databases available on the

World-Wide Web by providing access to the full text and document images of all patents issued from 1976 to the present. As a result of this offering, over two million patents will be fully searchable by keywords not only in the bibliographic and abstract fields, but also in the patent specification and claims fields. This expanded coverage will allow users to retrieve the full text of a patent in the usual character display on a computer screen, as well as the entire document image, including drawings. Subsequently, users will be able to order on-line high quality copies for electronic delivery. Public access to patent text contained in this expanded database is scheduled for November 1998. Access to patent images and drawings contained in this database is anticipated approximately four months after full implementation of the patent text database.

The USPTO has focused on two key management areas – its funding and its human resources. The USPTO is committed to establishing a fee schedule that encourages participation in the patent and trademark systems and which is aligned with costs. In 1997, staff from the USPTO sought input from customers/stakeholders in eight cities throughout the United States. A summary of this input has been placed on the USPTO web site. Since legislation currently is pending in the Congress to adjust certain patent fees, further considerations for a realigned fee structure have been postponed.

The USPTO also recognizes the impact of technology on its employees. The transformation of patent and trademark processes through reengineering, realignment of organizational functions and the installation of new technology means that significantly fewer technical support staff performing manual tasks will need to be replaced with more technically proficient support staff. The USPTO has put in place a flexible human resources program that can provide assistance in designing the infrastructure for all personnel realignments related to reengineering or other workflow changes.

**TABLE 1.3: PRODUCTION INFORMATION USPTO**

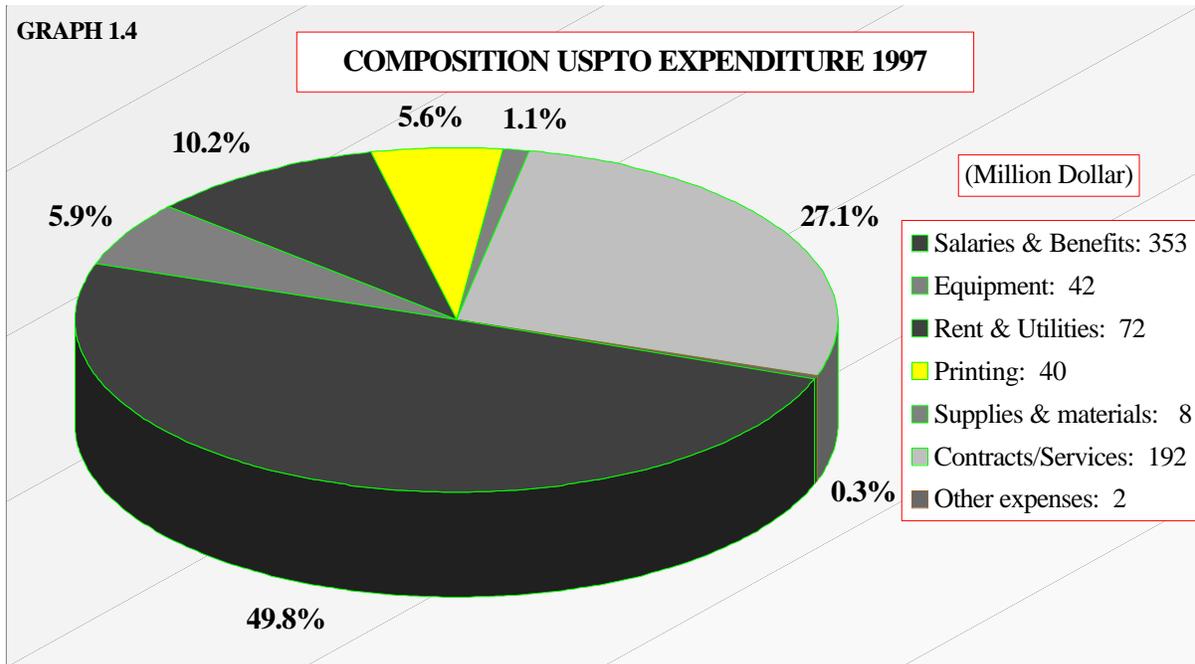
<b>PATENT PRODUCTION INFORMATION 1996 AND 1997</b>				
	<b>1996</b>		<b>1997</b>	
<b>Applications filed<sup>2</sup></b>	195,187		215,257	
<b>First actions</b>	174,843		187,978	
<b>GRANTS</b>				
U.S. Resident	61,104	55.7%	61,707	55.1%
Japan	23,053	21.0%	23,179	20.7%
Europe	17,846	16.3%	18,633	16.6%
Others	7,643	7.0%	8,465	7.6%
Total Foreign	48,542	44.3%	50,277	44.9%
<b>Total</b>	<b>109,646</b>	100.0%	<b>111,984</b>	100.0%
PCT Chapter II	8,945		11,671	
<b>Applications in appeals and interference proceedings</b>				
	Appeals	Interference	Appeals	Interference
Contested	3,500	116	4,328	282
Disposed	3,067	135	2,911	124
Not Allowed	2,297	-	1,953	-
Pending at EOY	6,042	314	7,852	296
<b>Number of patent cases in litigation</b>				
Total Cases Filed	53		51	
Total Cases Disposed	61		71	
Total EOY <sup>3</sup> Cases Pending	34		36	

<sup>2</sup> For utility patents only.

<sup>3</sup> End of Year (EOY) is the calendar year (December 31<sup>st</sup>).

## The USPTO budget

The USPTO funding is dependent upon fees collected from its users. During 1997 the USPTO total income was comprised completely of patent expenditures of \$663,740,165 and the trademark expenditures of \$45,510,341. The USPTO incurred \$709,251,000 in expenditures in 1997. Expenditures for salaries and benefits constituted the largest cost at 49.8% of overall expenditures. A breakdown by major spending categories is shown in the following chart.



## USPTO Staff Composition

At the end of the Fiscal Year (September 30, 1997), the total Patent staff was 3,710. This total was comprised of 2,158 Utility, Plant and Reissue (UPR) examiners, 54 Design examiners, 865 managerial, administrative and technical support staff, 12 members of the Patent Quality Review staff, and 81 members of the Board of Patent Appeals and Interferences<sup>4</sup>.

<sup>4</sup> Interference is generally defined as when two or more patent applications conflict because of claims to the same invention.

## 2 GUIDE TO TRILATERAL STATISTICS

In this chapter, the statistics presented in this report and the relations between them are briefly described. All statistics apart from those in Chapter 5 relate to patents of invention only.

**2.1** - The importance of **established patent rights** world-wide and in major blocs (i.e. EPC States, Japan, Unites States and others) is illustrated in the Introduction, **Chapter 1** by the graph of patents in force (Graph 1.1).

**2.2** - Assessment of the importance attached to patent protection is **the demand for patent rights**, i.e. the patent applications. These are reported in **Chapter 3**. Statistics in this chapter are primarily derived from the 1996 Industrial Property Statistics from the WIPO and are defined as follows:

- Demand for patent protection via international and/or regional applications is counted in term of designation of countries.
- PCT applications are counted in the year of filing (in the international phase).
- Domestic applications are defined as all demands for patent rights as required by residents of the country where the application is filed. Foreign applications are those applications by non-residents of the country where the application is filed. For the EPC, foreign demands are those applications of non-residents to the EPC bloc as a whole. For example, applications filed by French residents in one of the other EPC-States are counted as domestic demand in the EPC-bloc.
- First filings are applications filed without using the priority of another previous filing. It is assumed that PCT filings are subsequent filings.

The development of the total demand is shown, followed by the development of demand in the major filing blocs.

The demand in each major filing bloc is analyzed for domestic or foreign origin, as well as for first filings.

The number of inventions for which a patent application is filed is less than the total number of applications filed. Generally for each invention, one application is filed first in the applicant's own country, followed by as many in foreign countries as the applicant finds useful, 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 for international trade.

The next point of interest is the demand from Trilateral blocs to each other since this is an indicator of the importance of Trilateral markets for the other blocs.

In addition to the information above, it is interesting to analyze how many inventions are important for all three blocs at the same time. These are identified by first filings in whose priorities are claimed by filings in all three trilateral blocs. The statistics on such trilateral patent families concludes **Chapter 3**.

**2.3** - The information that is reported in **Chapter 3** address the demand for patent rights. **Chapter 4** addresses demand for patent rights among the Trilateral Offices. Demand for patent rights is not equal to the demand for services in the patent procedure of the Trilateral Offices. International patent applications, i.e. those filed under the Patent Cooperation Treaty (PCT), only require actions from the designated Offices after entry in the national or regional phase. (Actions required of the Offices as international search authority and international preliminary examination authority is presented in **Chapter 5**).

In **Chapter 4**, PCT applications are counted at the moment they enter the national or regional phase. Therefore, in comparison with **Chapter 3**, differences can appear in the number of applications filed with the trilateral offices.

In the statistics on demand for patent rights in the EPC States, the designations in European applications are counted separately. However, for all designations in one application only one service is requested from the EPO. Furthermore, part of the demand for patent rights in the EPC States is processed through national Offices of these States and does not result in workload for the EPO.

Statistics on the **demand at Trilateral Offices** are given in **Chapter 4**. Statistics are given for applications filed with Trilateral Offices from each filing bloc, also showing domestic and foreign filings. Furthermore, a breakdown in fields of technology is given according to the IPC classification.

In order to have a "true" comparison of the demand for services at the three Offices, the comparison of the filed applications is supplemented by statistics on patents granted by the trilateral offices.

Although the patent applications filed do indeed represent demands for services, the work is not always performed at a comparable point in time. In the Japanese patent granting procedure, the service only begins after an explicit request for examination, which can be deferred up to 7 years after filing of the application. Within the United States, examination commences upon receipt of the application and final grant follows the notice to the applicant and the applicant's payment of a patent issue fee. The European procedure consists of two separate steps: a novelty search and a subsequent substantive examination. For the second step, however, a separate request has to be filed with the EPO. Consequently, neither the number of applications filed nor the number of requests for examination is a perfect basis for comparison. Taking into account that the percentage of applications that are granted is rather constant in each of the three procedures, some indicator of services actually demanded can nevertheless be provided: statistics on granted patents.

To illustrate the similarities as well as the differences in the granting procedure of the three Offices, characteristics of the Trilateral patent granting procedures are shown in the last section of **Chapter 4**.

**2.4** - Maintaining the granting procedure for patents of invention is the most important task for all three Offices. There is, however, **other work**, as already indicated in the introduction, for which statistics are shown in **Chapter 5**.

### 3 DEMAND FOR PATENT RIGHTS

Statistics in this chapter are derived primarily from the 1996 Industrial Property Statistics from the WIPO. In addition to the statistics from the Trilateral Offices, statistics from many other Offices are necessary in order to present a picture of worldwide patent activity. Although not all Offices in the world have furnished the necessary information, those for which complete information is available represent almost all of the patent applications.

Applicants may use three types of granting procedures:

- a national procedure,
- a regional procedure (like the European procedure), and
- a international procedure (PCT)

In this chapter applications are counted in the year of filing. However, since one European application replaces a "bundle" of national ones, it is rather the EPC States designated that are reported.

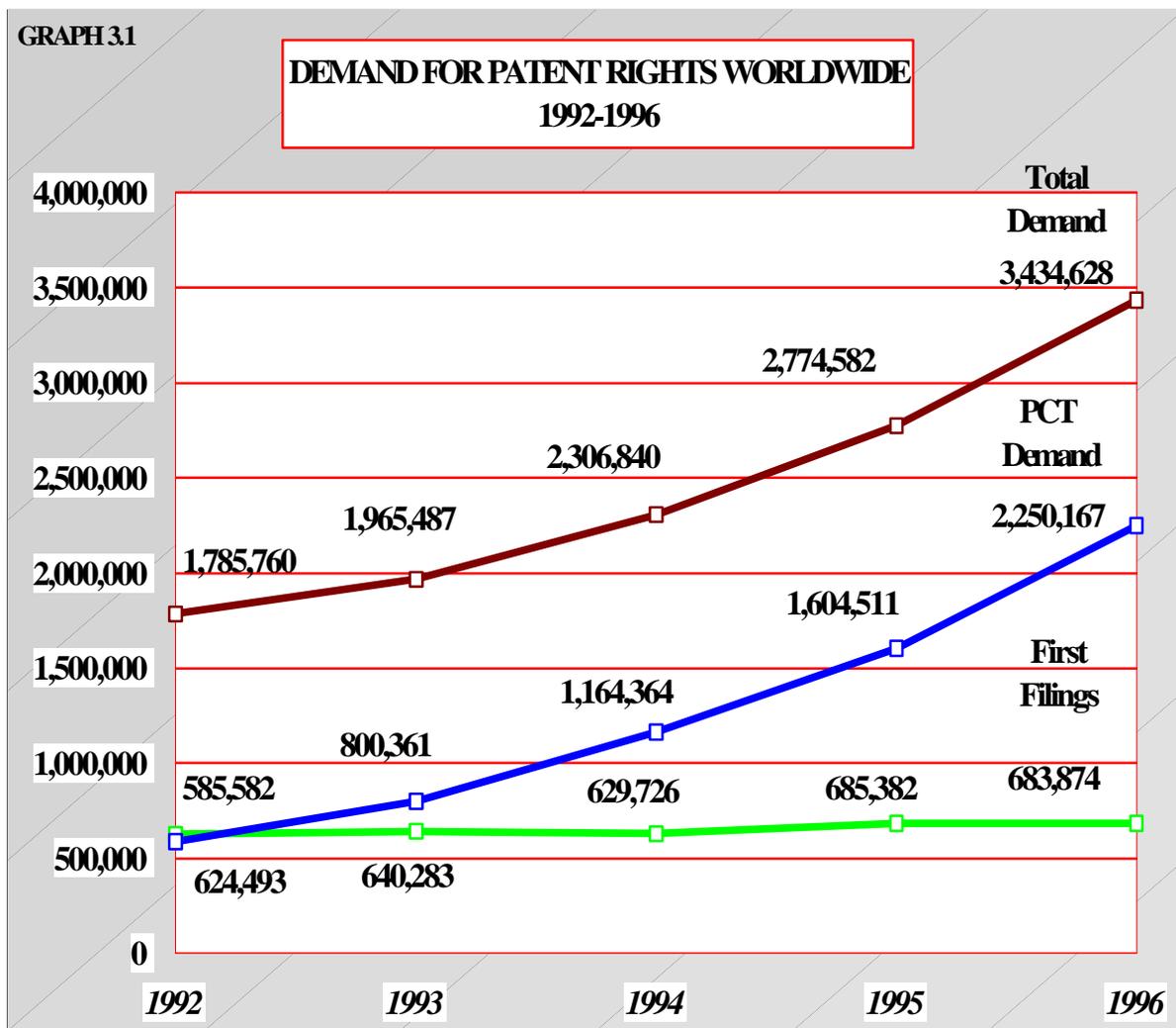
Patent rights do not necessarily have the same effect in each country all over the world. One reason is that patent law is not exactly the same all over the world despite the very existence of regional and international procedures.

With different patent laws and procedures, applications can have a different scope, e.g. with respect to the average number of claims included in one application. This does partially explain the relatively high number of patents and patent applications in Japan compared to Europe and the United States.

Significant differences in interpretation among countries regarding the scope afforded to patent rights affect the ability to compare patents from different countries, even when the country's patent laws are similar. For instance, courts of law in the United States tend to interpret patent claims according to a peripheral claiming system. Other countries, however, such as Germany, have legal systems that tend to interpret patent claims using a central claiming system.

### 3.1 DEMAND FOR PATENT RIGHTS WORLD-WIDE

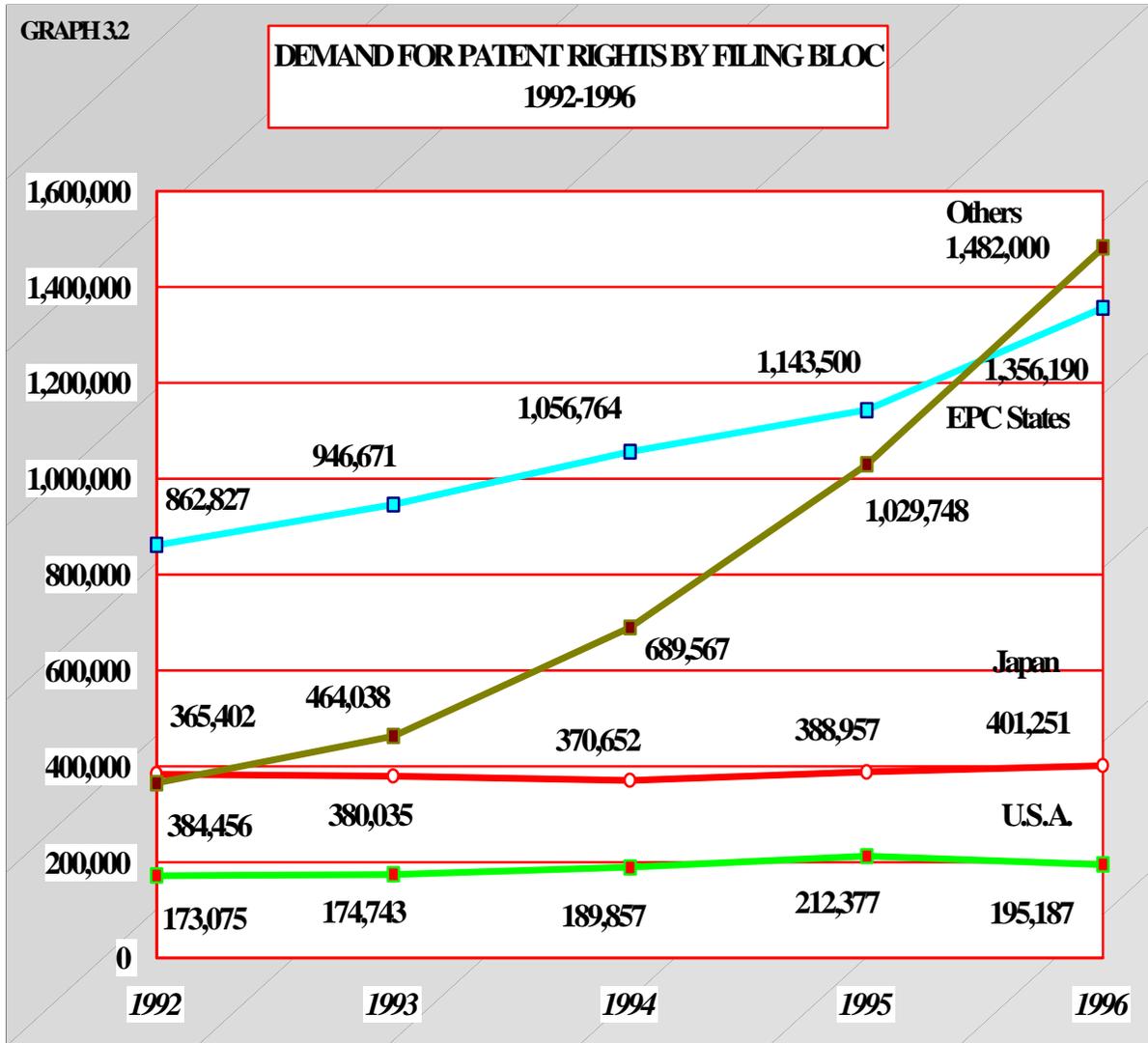
Notwithstanding differences in interpretation among countries, statistics on patent applications filed give the number of patent rights sought by applicants all over the world. The development is shown in the graph below:



The demand for patent rights rose from 1,785,760 to 3,434,628 from 1992 to 1996, which is an increase of 92.3% corresponding to an average increase of about 23.1% each year. The number of first filings in 1995 was 685,382. For these first filings, one year later (1996) 2,750,754 subsequent filings were registered (i.e. 3,434,628 total minus 683,874 first filings). Thus, on average, one invention for which a first patent right was sought leads to 4 subsequent filings of an application for patent rights in other areas. Three years earlier, the rate was at the level of 2.1. This increase in the proportion of subsequent filings shows the ongoing internationalization of patent rights.

### 3.2 DEMAND IN THE MAJOR FILING BLOCS

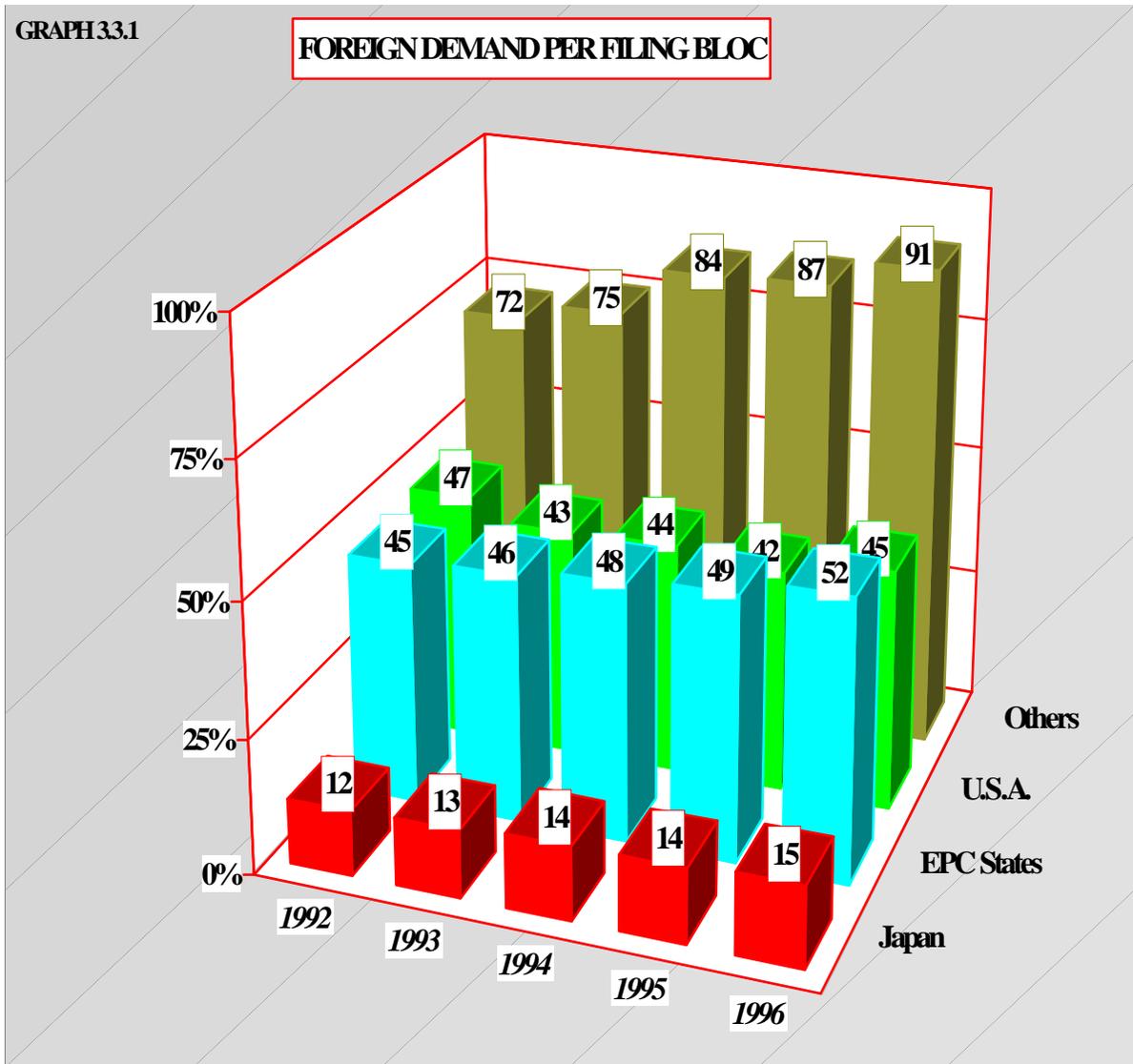
The development of demand in the major filing blocs is shown below:



Demand in “Others” is the highest followed by the EPC States (being the sum of the demand for national patent rights in all Contracting States), followed by Japan and the United States. The demand increased in all blocs over the period 1992-1996. The relative change was the highest in the EPC States (57% increase 1992-1996), followed by the United States (13%). In Japan, the decrease in 1993 and 1994 held back the growth rate over the period to 4%. The development in the block “Others” (306% increase) is due to several factors. Countries setting up new protection right systems, new memberships to the PCT, and statistics being available for more countries are the main reasons to explain the large increase for some former USSR Republics and some African and Asian countries. In some other countries, the demand increased based on unchanged systems.

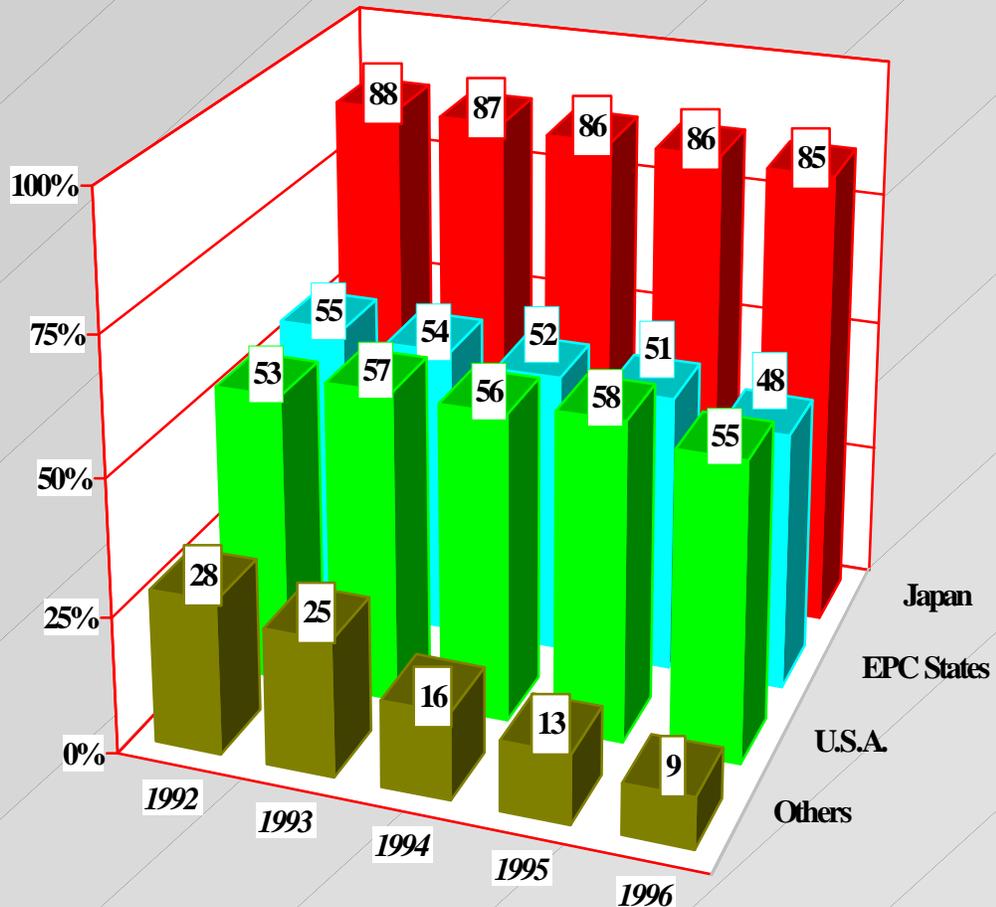
### 3.3 FOREIGN AND DOMESTIC DEMAND

The relative importance of demand from foreign countries is shown in the graph below, followed by its counterpart the demand for domestic filings.



GRAPH 3.3.2

DOMESTIC DEMAND PER FILING BLOC

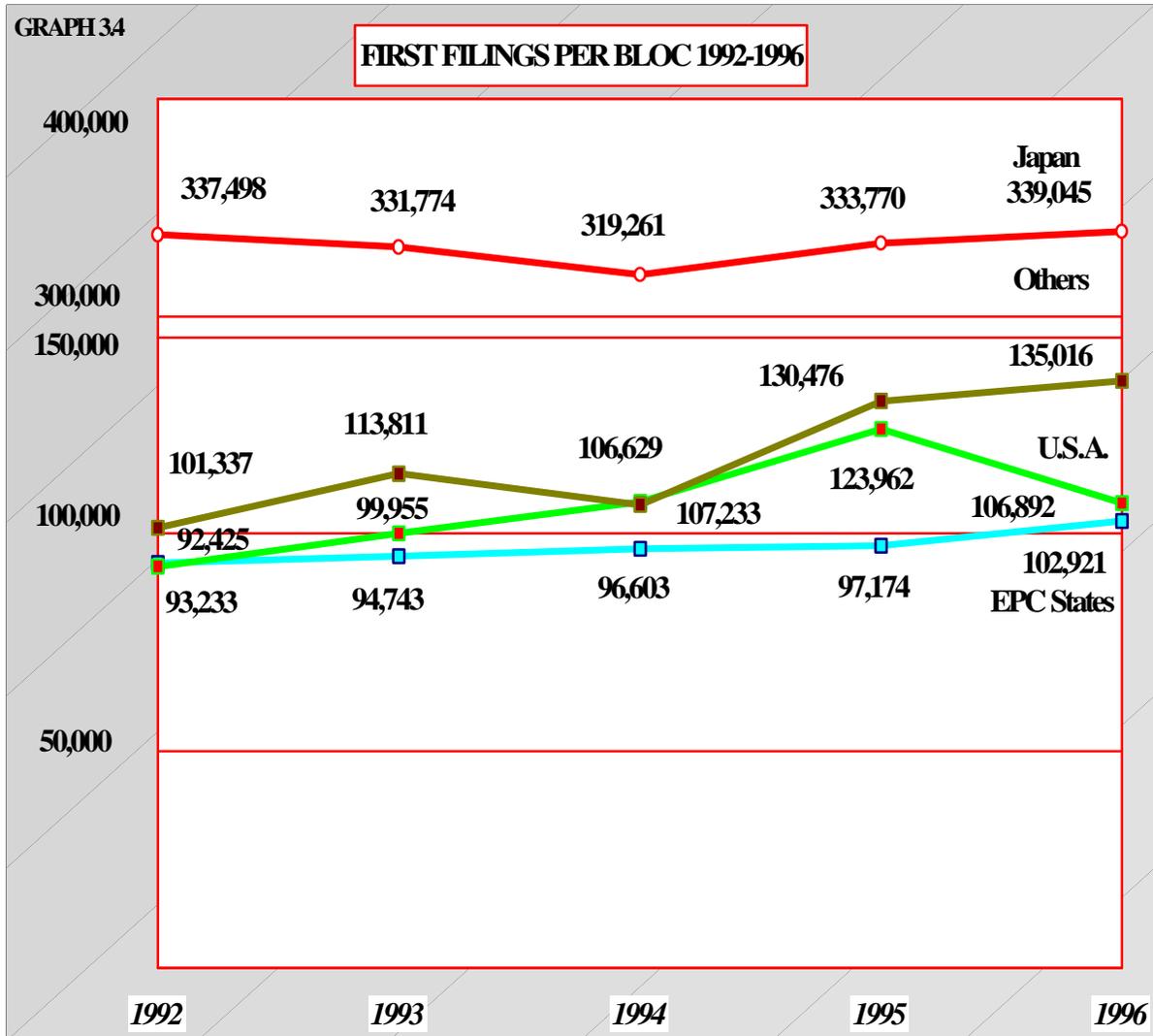


The proportion of demand in the EPC-States having its origin from outside the EPC countries increased in 1996 to 52% in foreign demand for patent rights. Foreign demand in the United States in 1996 is 45%. In Japan the domestic demand is about 85% in 1996.

In the bloc “Others”, the proportion of foreign demand increased substantively in 1995 (87%), and in 1996 (91%) compared to the previous years (below 85%) because of the substantial increase in foreign demand.

### 3.4 FIRST FILINGS

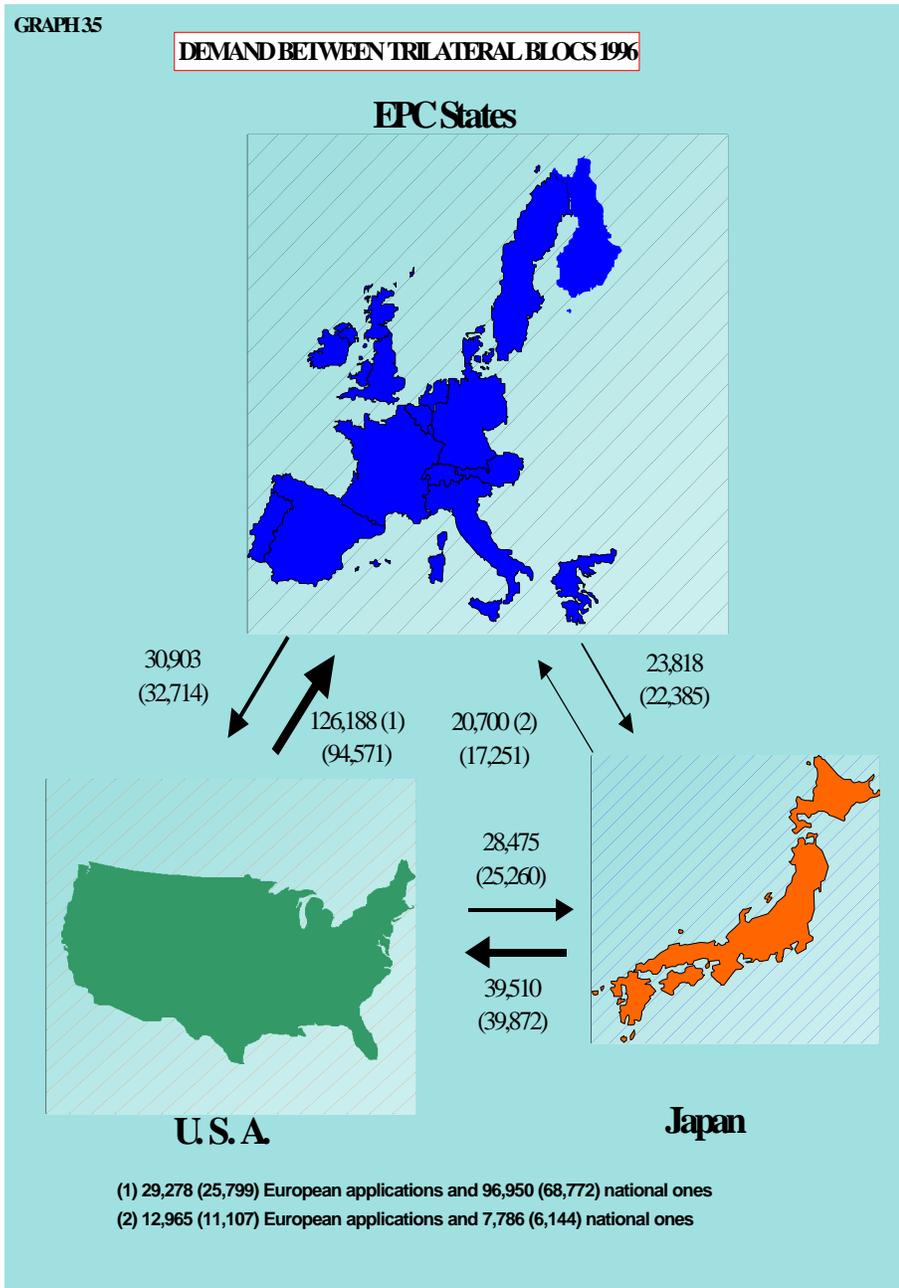
The development in first filings in the major filing blocs is shown below:



The highest number of first filings is observed in Japan. In 1996 compared to 1992, first filings in Japan increased by 0.5%. In 1996, the number of first filings increased by 2% compared to 1995. In the bloc “Others”, after a decrease in 1994 (6% less than in 1993), first filings increased again in 1995 and 1996 (27% more than 1994). In the United States, first filings decreased (14% less in 1996 than in 1995). This change can be attributed to United States patents moving in 1995 to 20 years to term versus 17 years. In the EPC-States first filings in 1996 increased by 6% compared to 1995.

### 3.5 DEMAND BETWEEN TRILATERAL BLOCS

The following picture shows the demand within the Trilateral filing blocs. The demand in the EPC States has been calculated as the sum of European and national applications, which is not completely the same as the demand in Japan and the United States. The demand at national Offices of EPC States includes some plural applications caused by the fact that applicants can file an application for one and the same invention with more than one national Office. The 1995 figures are in brackets in the graph.



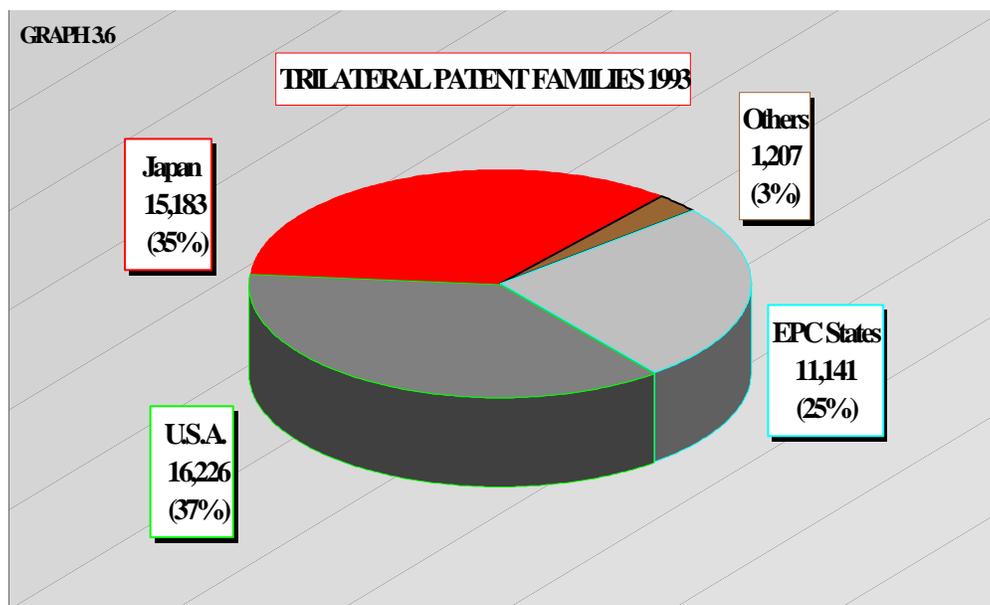
Contrary to the demand figures presented in Graphs 3.1 through 3.3, European applications are not counted per designation but as single applications.

Compared to 1995, the gaps in the balance of filings decreased between Japan and the EPC, and between Japan and the United States. EPC applicants file more in Japan than Japanese applicants file in the EPC countries. Japanese applicants file more applications in the United States than United States applicants do in Japan. While United States filings in Japan increased by 12.7%, Japanese filings in the United States remained stable (+0.9%). The gap in the balance between EPC and the United States is the largest. The number of United States applications in the EPC bloc, in particular via the national procedures, increased (33%) while the number of EPC applications in the United States decreased (-5.5%).

### 3.6 TRILATERAL PATENT FAMILIES

The next graph shows trilateral patent families, which are priority first patent filings in the year 1993 that led to filing activity in all Trilateral blocs. However, it is not necessary for a subsequent filing to be made in the bloc of origin since a first filing is considered to claim priority for itself. The statistics are based on references to priorities given in published patent documents. Due to the delay in publication (from the moment of filing), in particular in the patent system of the United States where applications are published only after examination, the 1993 figures are presented here. The total number of trilateral patent families is 43,757, of which 25% originated from offices of the EPC states, 35% originated from Japan, 37% originated from the United States and 3% originated in other states. (The corresponding figures for 1992 were a total of 46,058 trilateral families, of which 26% were from EPC states, 36% from Japan, 35% from United States, and 3% from other states).

A new method has been used to construct these figures from the EPO documentation database (DOCDB). In comparison with previous reports, the new method corrects an over count of the numbers of families mainly caused by misidentified references to PCT documents.



As is shown in the table below, out of all first filings in the trilateral area (526,472), 8.1% from trilateral families. From all first filings throughout the world (640,283), 6.8% from trilateral families, which is slightly lower than the previous years figure (7.4%). The proportions differ considerably according to the bloc of origin of the first filings. For the United States, 16.2% of first filings form trilateral families (was 17.4% in 1992); for EPC states this is 11.8% (was 13.0%); for Japan 4.6% (was 4.9%), and for first filings from other countries it is 1.1% (was 1.2%).

**TABLE 3.6: TRILATERAL PATENT FAMILIES AS PROPORTION OF FIRST FILINGS**

	Trilateral Patent Family Claiming Priority of	First Filings	Proportion Trilateral Patent Families of First Filings
EPC States	11,141	94,743	11.8%
Japan	15,183	331,774	4.6%
U.S.A	16,226	99,955	16.2%
Subtotal	42,550	526,472	8.1%
Other Countries	1,207	113,811	1.1%
Global Total	43,757	640,283	6.8%

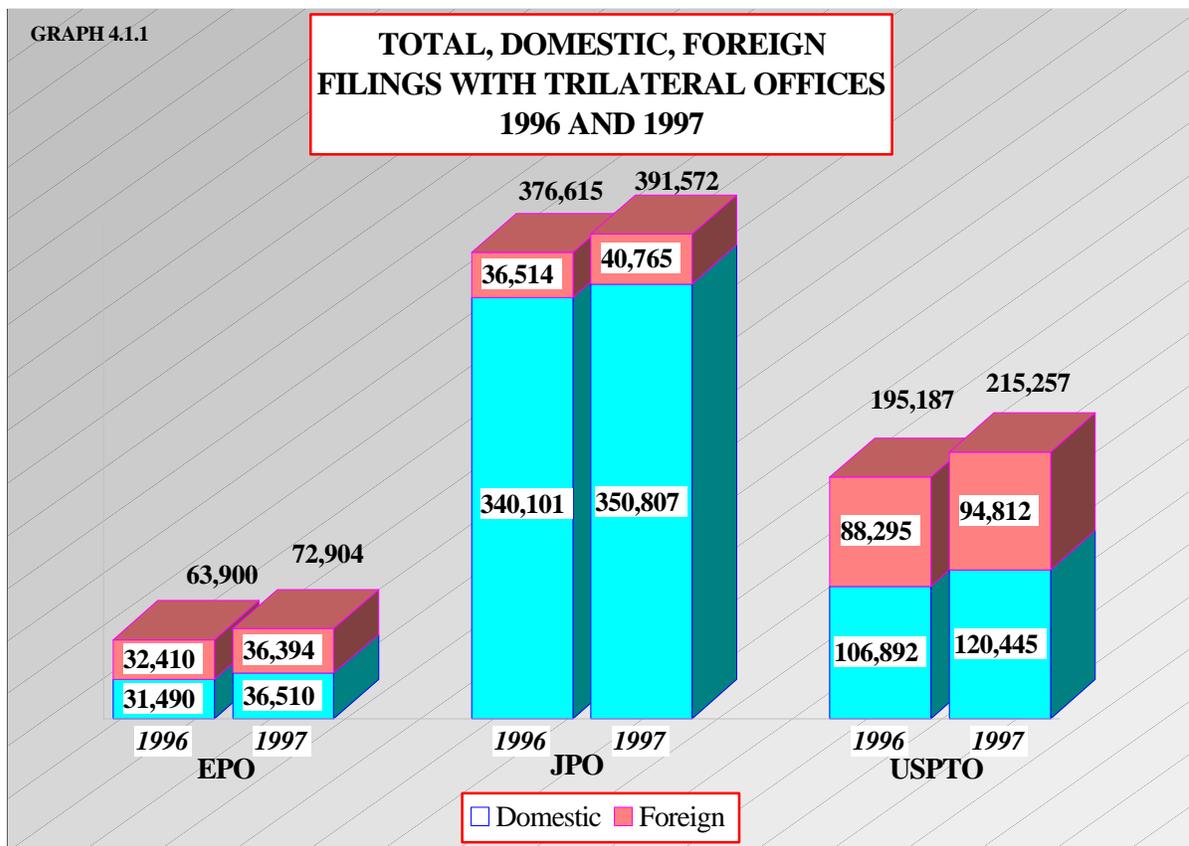
#### **4 DEMAND AT TRILATERAL OFFICES**

Demand at the Trilateral Offices is demonstrated by statistics on patent applications. These are counted at the date of filing for direct national applications in the case of Japan and the United States, and for regional applications in Europe. For international (PCT) applications the date of entry in the national or regional phase is the basis for counting, since under the PCT, examination in the designated Offices may not start before that time. The total of direct national/regional applications filed and international applications entering the national/regional phase will hereinafter be called "patent applications filed" unless explicitly stated otherwise.

In the statistics on grants, direct, regional and international applications granted are taken into account. Grants by the EPO are one action leading to multiple patents in the designated EPC States. Since in this context the statistics are meant to give an insight of the workload rather than the number of resulting individual patent rights, hereinafter "patents granted" will correspond to the number of grant actions.

#### 4.1 APPLICATIONS WITH THE TRILATERAL OFFICES

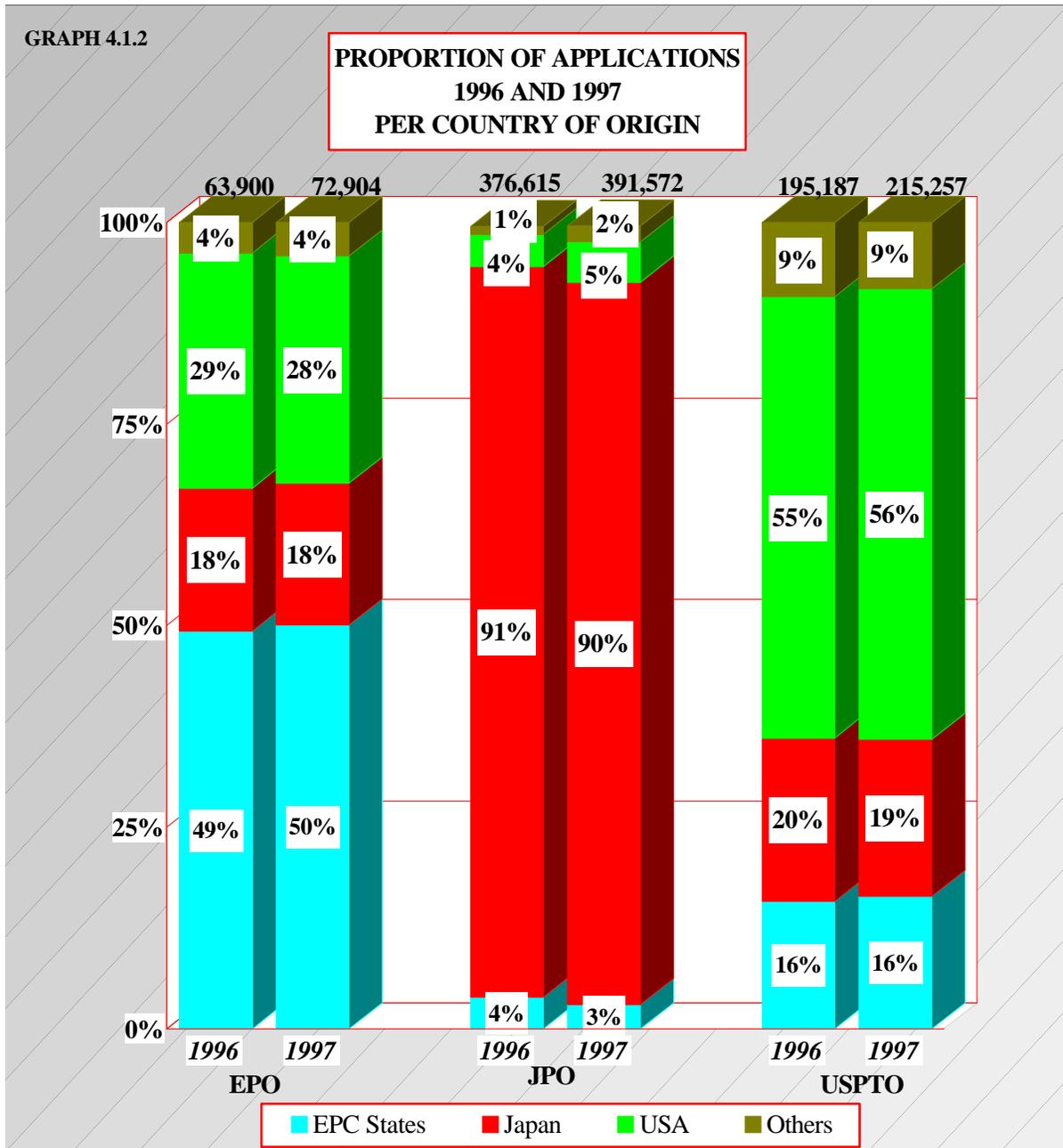
The number of domestic and foreign applications filed with the Trilateral Offices for the years 1996 and 1997 is shown in the graph below:



In 1997, the number of applications filed at the JPO increased by 14,957 or 4% and remains the highest. In Europe, 9,004 more applications were filed with the EPO, an increase of 14%. The number of applications at the USPTO increased by 20,070 or 10%.

As in 1996, domestic filings in the JPO form 90% of total filings; for the USPTO and the EPO they form 56% and 50% of total filings respectively. The domestic filings in the JPO and the USPTO are more or less equivalent to first filings on inventions. Domestic EPO filings are defined as the total of EPO filings by residents of EPC Member States. Only a low proportion thereof are first filings at the EPO, which is explained by the filing practice in EPC States. The first application is generally filed at a national Office. A subsequent filing at the EPO follows if the invention is judged to be worthy of European protection. Consequently, the number of domestic filings at the EPO is not identical to the first filings. The first filings with the EPO from residents of EPC States were 3,775 in 1996 and 5,247 in 1997, respectively 11.9% and 14.4% of domestic European filings.

The breakdown of applications in Trilateral Offices by country of origin in 1996 and 1997 is as follows:

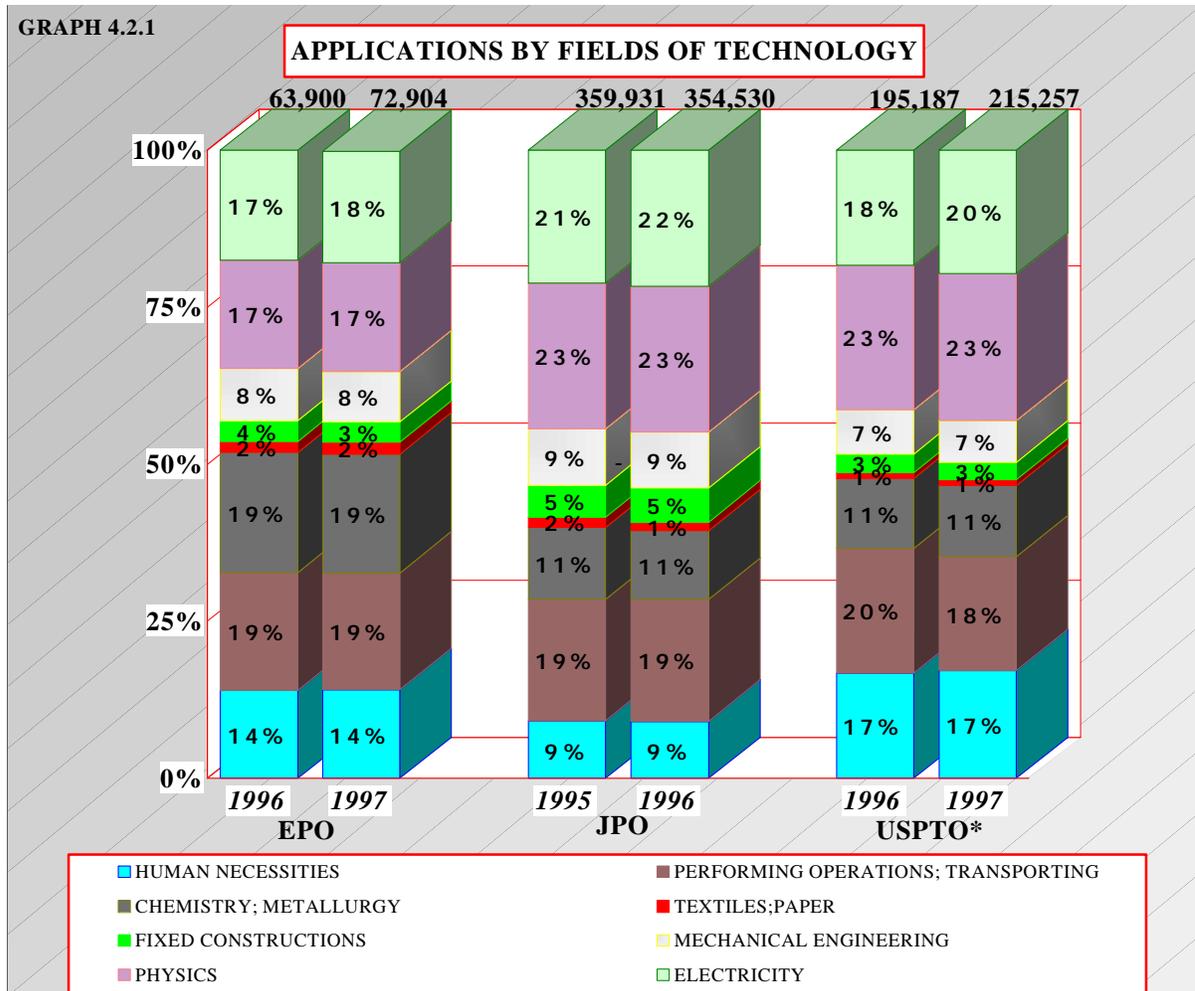


Compared to 1996, the share of filings from the EPC States decreased slightly in the JPO and remained stable in the USPTO. The share of filings from Japan decreased by 1% in the USPTO and remained unchanged in the EPO. The share of filings from the United States decreased by 1% in the EPO and increased by 1% in the JPO. The share of filings from outside the trilateral blocs was stable in the EPO and the USPTO and increased slightly in the JPO.

## 4.2 APPLICATIONS BY FIELDS OF TECHNOLOGY

The breakdown of applications in the Trilateral Offices by field of technology, according to the IPC Sections A-H, is given below for the EPO and the USPTO for the filing years 1996 and 1997. For the JPO, the breakdown of published patent applications is given for the filing years 1995 and 1996. The figure for 1996 is the most recent figure because the International Patent Classification is assigned just before the publication of unexamined applications (after the expiration of 18 months from the filing date).

The proportion of Human Necessities is higher in the USPTO (17%) than in the EPO (14%) and in the JPO (9%). The proportion of Chemistry/Metallurgy is higher in the EPO (19%) than in the USPTO (11%) and the JPO (11%). The proportion of Physics and Electricity applications increased to 43% in the USPTO, 35% in the EPO and 45% in the JPO. In the other sections, the proportions are comparable in the three blocs.



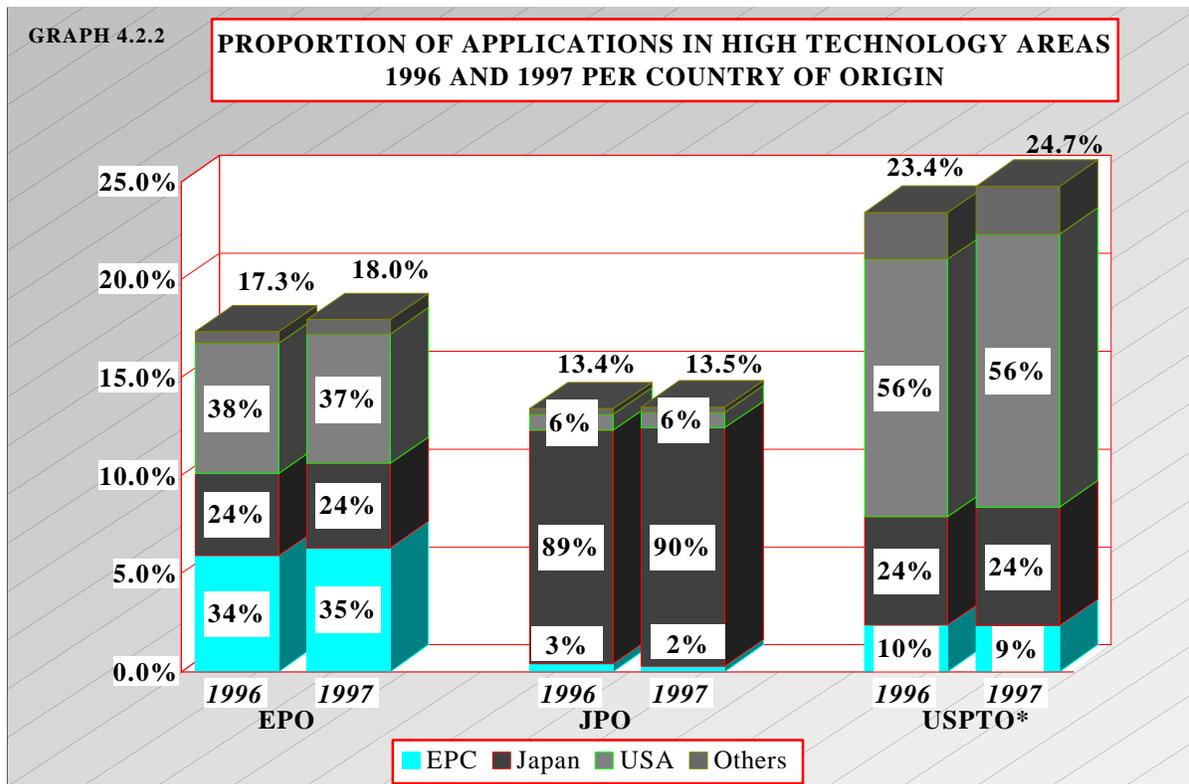
(\*) As USPTO applications are classified according to the United States Patent Classification System, the breakdown according to IPC has been determined by means of general concordance between both classifications. Therefore the technical scope at the USPTO with respect to IPC may differ from the scope as presented by the EPO and the JPO.

Among all applications filed at the Trilateral Offices, an increasing proportion relates to high technology areas. In the graph below, this proportion is given for each Office for applications filed in 1996 and 1997, together with their origin. The following technical fields have been defined as high technology:

Computer and automated business equipment; microorganism and genetic engineering; aviation; communications technology; semi-conductors; and lasers.

In 1997, 18% of the EPO applications were filed in these fields, 37% thereof were by United States applicants, 35% by EPC applicants and 24% by Japanese applicants. At the JPO, 13.5% of the 1997 filings related to high technologies; 90% thereof were filed by JPO applicants, 2% by EPC applicants and 6% by United States applicants. High technology represented 24.7% of all filings at the USPTO; 56% were from United States applications, 24% originated from Japan and 9% from the EPC. The high technology area share rose in 1997 in all three blocs.

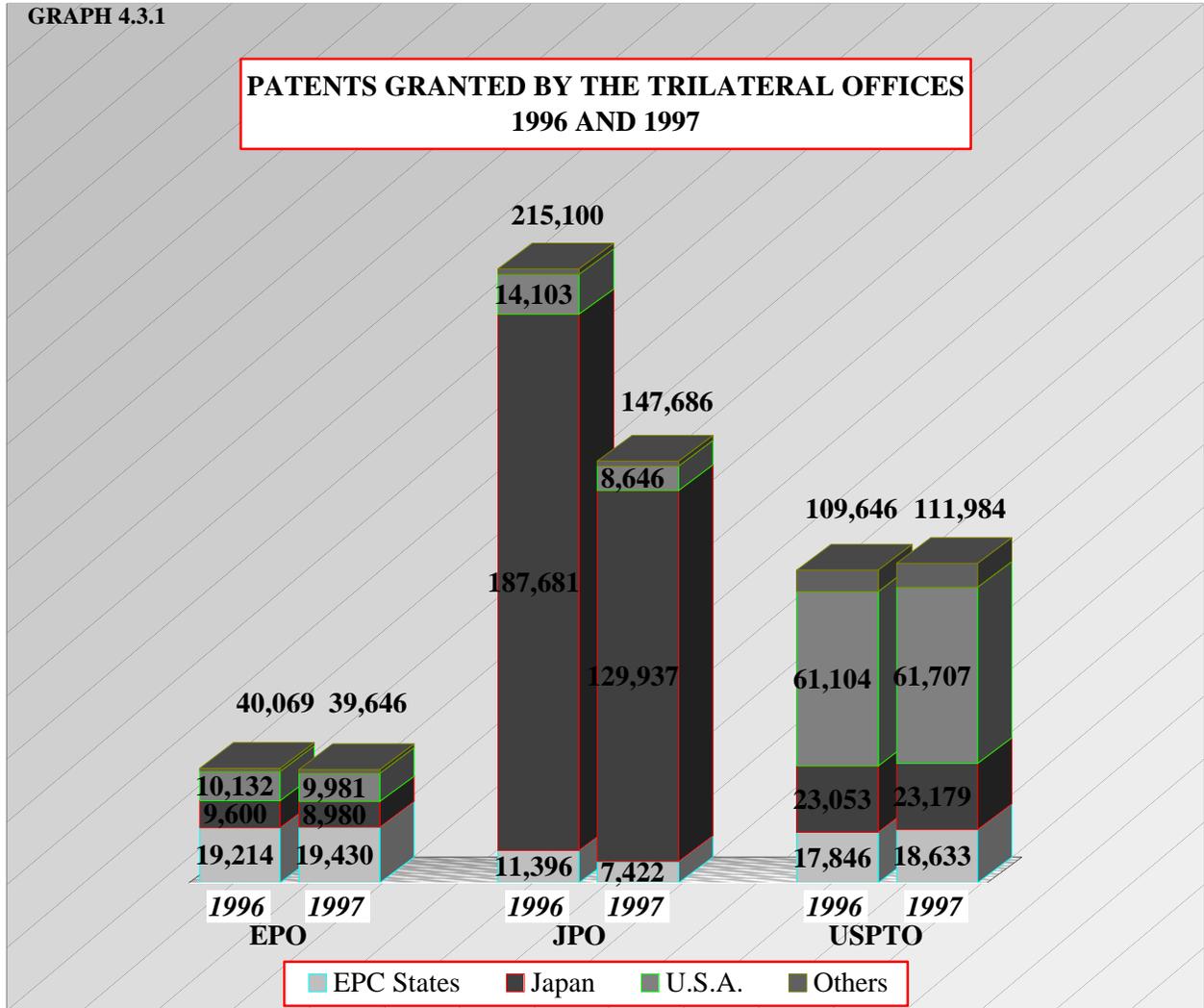
The share of EPC applicants in high technology is below their share for overall filings as given in graph 4.1.2 at the EPO and at the USPTO. The share of United States applicants in high technology is the same as in all filings at the USPTO and higher than in all filings at the EPO. At both offices, the Japanese applicants hold above average shares in high technology. The shares in high technology at the JPO are comparable to those for all filings.



(\*) As USPTO applications are classified according to the United States Patent Classification System, the breakdown according to IPC has been determined by means of general concordance between both classifications. Therefore the technical scope at the USPTO with respect to IPC may differ from the scope as presented by the EPO and the JPO.

### 4.3 PATENTS GRANTED BY TRILATERAL OFFICE

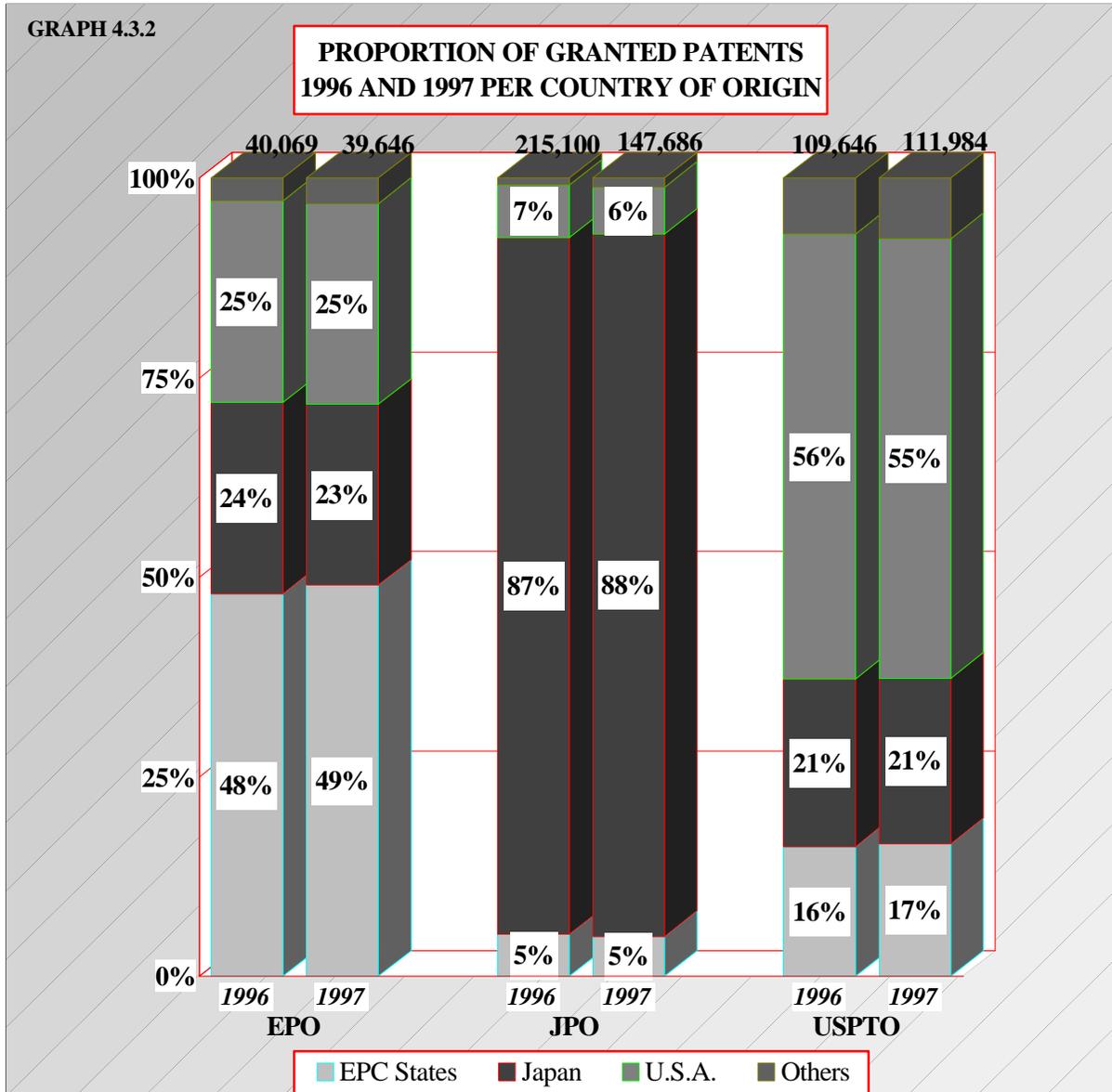
The development in the number of patents granted by the Trilateral Offices is shown below:



The number of patents granted by the JPO decreased substantively by 31% to the level of 147,686 granted patents in 1997. The JPO introduced a post-grant opposition policy in January 1996. The number of patents granted in 1996 was much higher than in any normal year, because the number for 1996 included numbers of patents granted both under the pre-grant opposition policy and under post-granted opposition policy. The patents granted by the USPTO slightly increased by 2%. There were a few less patents granted by the EPO in 1997, a reduction of 1.1%.

The breakdown of patents granted in 1996 and 1997 by the Trilateral Offices according to country of origin is shown below.

The shares from the different filing blocs are more or less comparable to those observed for the filings in the three Offices (as presented in Graph 4.1.2).



A patent granted by an office has a maximum term fixed by law. In order to maintain the protection right, the applicant has to maintain the patent by paying renewal fees in the country where protection was obtained. Maintenance systems differ from country to country

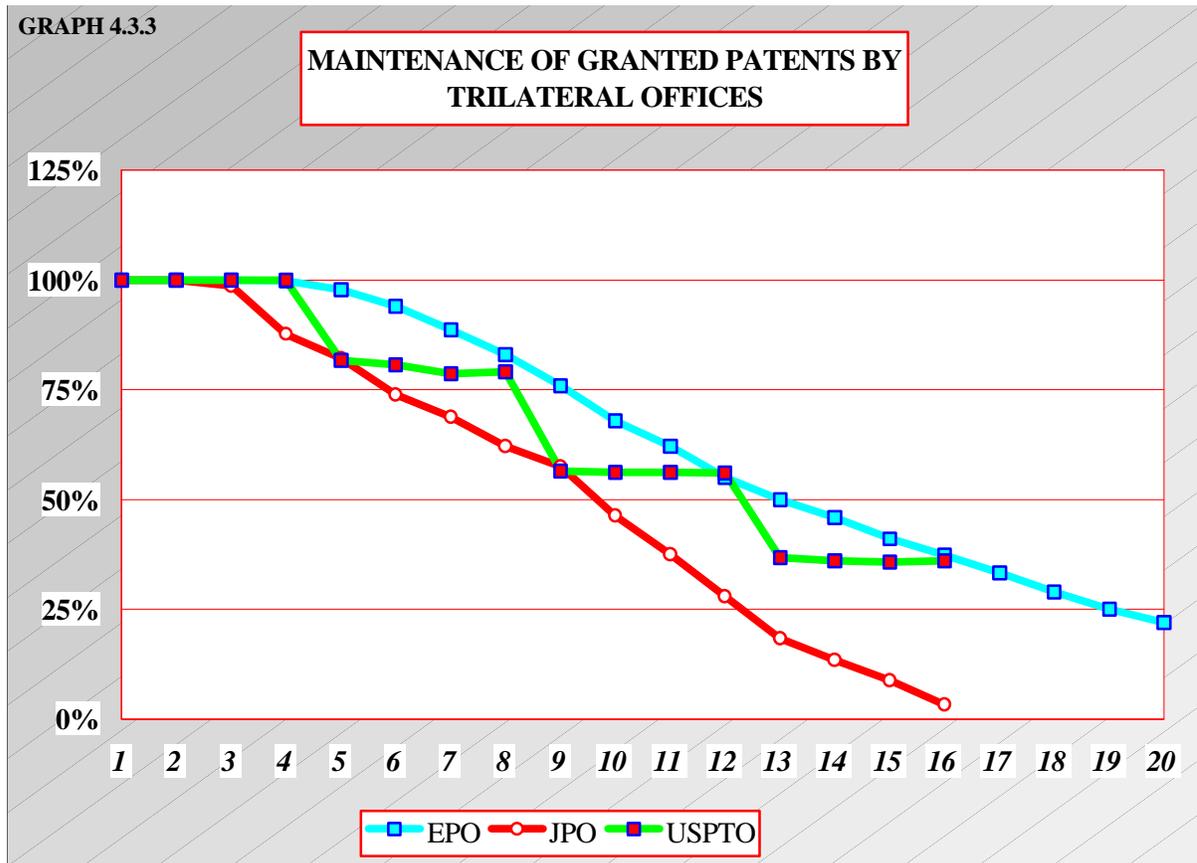
A European patent has a twenty-year term from the date of filing and a yearly renewal fee has to be paid from the third patent year onwards to maintain the protection. After the application has been granted, annual renewal fees have to be paid to the national office of each designated member state where the patent is to be kept alive.

In the United States, a patent filed after June 8, 1995 has a term of 20 years from the date of earliest filing. Patent maintenance requires payment of fees in three stages: 3.5 years, 7.5 years and 11.5 years after grant.

The term of a Japanese patent is twenty years from the date of filing. The first three years fees are paid together, and for subsequent fees, the applicant can pay either yearly or in advance.

In all three systems, if a renewal fee is not paid in due time, the protection right expires.

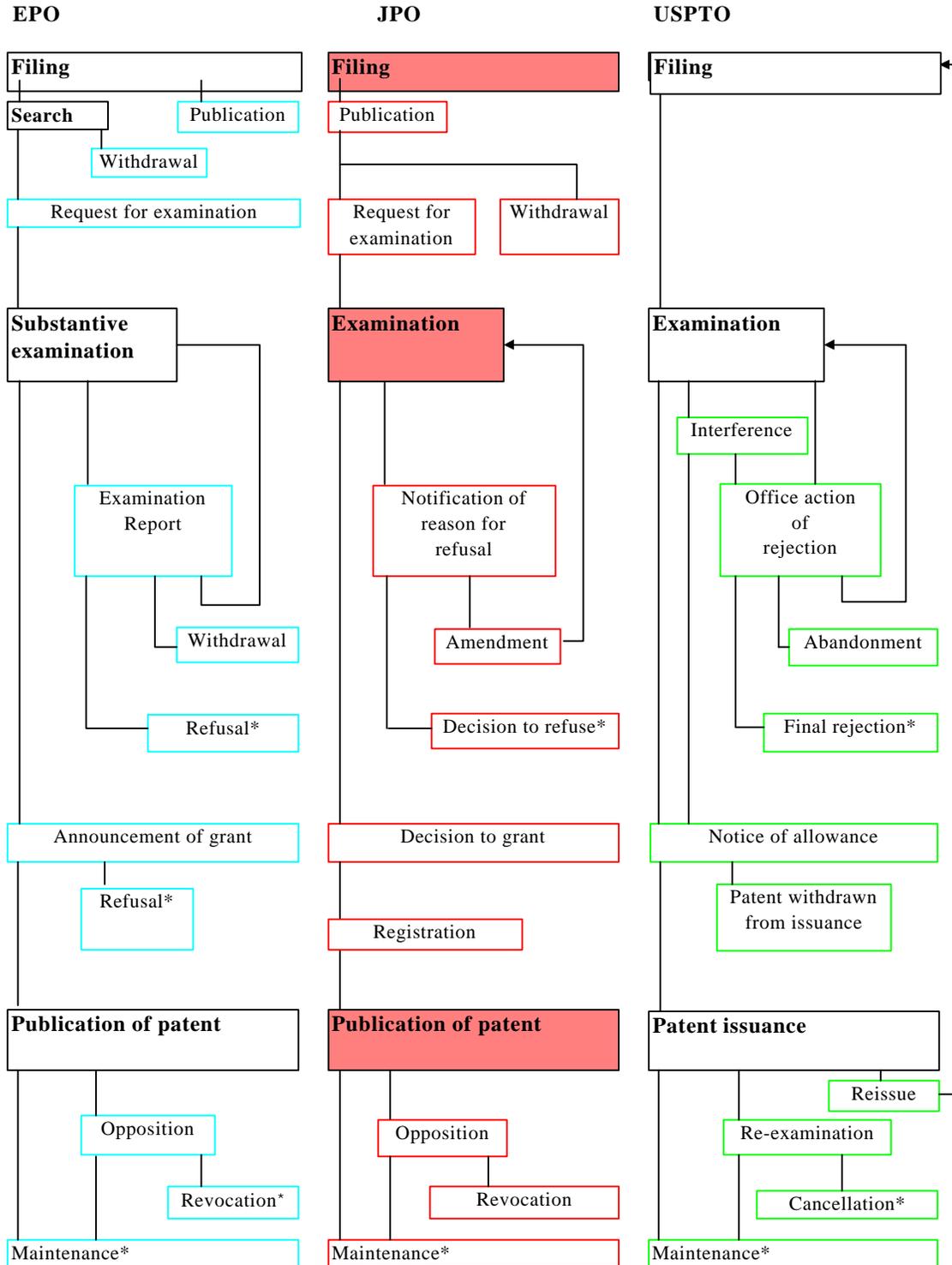
The following graph indicate the proportion of those granted patents which were maintained in each patent year (from filing for the EPO and the JPO, and grant for the USPTO). In the United States more than 50% of patents are maintained at least 12 years; 50% of EPO patents are maintained at least 13 years; and in Japan more than 50% of patents are maintained for nine years.



## 4.4 TRILATERAL PATENT PROCEDURES

### 4.4.1 The procedures

Major phases in the trilateral procedures are outlined in the flow chart below:



## **Examination: search and substantive examination**

Each of the Trilateral Offices will examine a filed patent application based upon novelty, inventive step and industrial applicability. In the EPO this examination is done in two phases: first a search is done in order to establish the state of the art with respect to the invention; second, novelty, inventiveness and industrial applicability are examined in the substantive examination. In the national procedure 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 a request for substantive examination. For the latter, a separate request has to be filed not later than six months after publication of the search. Filing of a national application with the JPO does not imply a request for examination since this may be filed up to 7 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 EPO and the JPO, the application is published after 18 months of the date of filing or priority date at the latest, without regard as to whether the application has already been examined. In the USPTO, applications prior to grant are not published.

## **Grant, refusal/rejection, withdrawal**

When an examiner intends to grant a patent, it 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 can and will make amendments. Then either the patent is granted (see above) or the application is finally rejected (EPO: Refusal; JPO: Decision to refuse; USPTO: Final rejection) or withdrawn (USPTO: abandonment; JPO: not applicable) by the applicant. In addition, if no request for examination for an application is filed at the JPO and the EPO within the prescribed period (seven years from the date of filing at the JPO, and six months after publication of the search at the EPO), the application will be deemed to have been withdrawn. Furthermore in all three procedures, an applicant may withdraw or abandon the application at any time before the application is granted or finally refused.

After the decision to grant the patent, the patent specifications are published if certain administrative conditions are fulfilled. (EPO: Publication of patent; USPTO: Patent issuance; JPO: Publication of patent).

## **Opposition**

Any person may file an opposition to the JPO against a grant of patent within six months of the date of publication. Opposition can lead either to a maintenance or revocation of the patent.

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

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 opposition procedures in the EPO and the JPO. 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 life-time of a granted patent.

## **Appeal**

An appeal can be filed by certain of the parties concerned against a decision taken by the Trilateral Offices. In practice applicants would appeal decisions to reject the application or revoke the patent, while opponents would appeal decisions to maintain the patent. The procedure is in principle similar for the three Offices. The examiner first studies the argument brought forward by the appellant and decides whether the application should be allowed. If not, the case is forwarded to a Board of Appeals, which may take a final decision or refer the case back to the examiner.

In the JPO, in general, appeal examiners study the arguments brought forward by the appellant and decide whether the decision can be revised. If not, they may make a final decision or refer the case back to an examiner. However, in a case where amendments of the claims or the drawings have been made within 30 days from the date when an appeal against a decision to refuse an application had been filed, an examiner first studies the arguments brought forward by the appellant and decides whether the decision can be revised. If not, the case will be forwarded to the appeal examiners who may make a final decision.

### **4.4.2 Statistics on procedures**

The 1996 and 1997 values of the basic characteristics of Trilateral Office procedures are shown below. The definitions and further explanations on the statistics are given in the ANNEX, DEFINITIONS FOR STATISTICS ON PROCEDURE.

Definitions are not always identical in the three Offices. Therefore, for any comparison among the Offices, the differences in definitions should be taken into account.

## **RATES**

The examination rate in the USPTO is 100% since filing implies a request for examination in the USPTO procedure, whereas in the EPO and the JPO a request for examination has to be made. In the Japanese procedure the examination rate is lowest because applicants have substantively more time in which to evaluate whether to maintain or drop the application.

The grant rate in the EPO procedure as defined in terms of decisions is 68%.

In the JPO the grant rate is 65%.

In the USPTO the grant rate is related to the decisions made in the examination procedure, and is stable at a level of 69%.

The opposition rate in the EPO is 6.3%, and the maintenance rate in the opposition is 68.5%.

In the EPO 405 appeals were received in 1997 i.e. about 51% of decisions in examination to reject the application (792). In the USPTO 4,328 appeals were received being 6.7% of final rejections (64,095).

In the EPO 42% of appealable decisions in the opposition procedure (2,493 in 1997) are appealed against, with the number of appeals being 1,000.

The total number of appeals in the JPO against decisions in examination, including decisions to applications against which oppositions had been filed, was in 1997 at 13,742 above the 1996 figure (13,667).

## **PENDENCY**

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 about the workload (per stage of procedure) from the patent grant procedure in the three Offices. It is not an indication of any backlog in handling applications within the Offices, since a substantive part of pending applications are awaiting action from the applicant, for instance a request for examination (which can take seven years from the date of filing in the JPO) and responding to Office actions communicated to the applicant.

The pendency in search in the EPO increased substantially from 1996 to 1997 in numbers from 47,300 to 57,900 (22%) and in months from 14.7 to 17.2.

The number of pending applications awaiting a request for examination by the applicant decreased in the EPO from 11,200 to 11,100 (-0.9%).

In the JPO this number is substantively higher (about 2,143,765) than those in the EPO, due to the long period (seven years from the date of filing) during which requests for examination can be filed.

As the number of pending applications in examination increased in the EPO (to about 127,000 in 1997) the pendency in months was increased slightly to 29.3 months. In the USPTO the average time for either abandoning or issuing an application is about 22.9 months.

In the JPO the pendency to first office action in months was about 21 months, which indicates the average time from a request for examination to first office action in examination.

For the EPO the pendency to first office action in months was about 15.8 months.

In the USPTO the pendency to first action on the merits was about 10.4 months, which indicates the average time an examiner either formally rejects or allows the claims in a patent application.

Pendency in opposition slightly increased in the EPO to 17.9 months.

**Table 4.4.2: STATISTICS ON PROCEDURES**

Actual figures have been rounded up. (Definitions are given in the Annex)

Procedure	Year	EPO	JPO	USPTO
Examination Rate (%)	1996	91	45	100
	1997	91	47	100
Grant Rate (%)	1996	67	n.a.	67
	1997	68	65	69
Opposition Rate (%)	1996	6.2	n.a.	-
	1997	6.3	4.3	-
Maintenance Rate (%)	1996	67.0	n.a.	-
	1997	68.5	n.a.	-
<u>Appeal Rate</u>				
- on examinations (%)	1996	48	-	5.4
	1997	51	-	6.7
- on oppositions (%)	1996	41	-	-
	1997	42	-	-
- on examinations and oppositions <sup>1</sup>	1996	-	13,667	-
	1997	-	13,742	-
Pendency	Year	EPO	JPO	USPTO
Pending applications in search	1996	47,300	-	-
	1997	57,900	-	-
Pendency search in months	1996	14.7	-	-
	1997	17.2	-	-
Applications awaiting request for examination	1996	11,200	2,148,126	-
	1997	11,100	2,143,765	-
Pending applications in examination	1996	120,200	n.a.	290,500
	1997	127,000	n.a.	267,662
Pendency first office action in months	1996	15.6	22.0	10.1
	1997	15.8	21.0	10.4
Pendency examination in months	1996	24.4	n.a.	21.5
	1997	29.3	n.a.	22.9
Pending applications in opposition	1996	3,720	n.a.	-
	1997	3,730	n.a.	-
Pendency opposition in months	1996	16.9	n.a.	-
	1997	17.9	n.a.	-

Legend for Table 4.4.2

n.a. not available

- not relevant for that Office

<sup>1</sup> For JPO, only combined numbers are available

## 5 OTHER WORK

This chapter contains statistics on international work requested of Trilateral Offices and also the requests for search or granting of rights that are not common to all three Offices.

To the latter category belong the applications for plant patents and re-issue patents in the USPTO and also applications for patents other than those for inventions; utility models in the JPO; and design patents and trademarks in the JPO and the USPTO. The searches on behalf of national Offices and searches for third parties are special work requested of the EPO.

The number of requests for these types of other work received in 1996 and 1997 are shown in the table below.

The requests for international searches and international preliminary examinations increased in 1997 compared to 1996 as a result of an increasing use of the PCT-system.

**Table 5: STATISTICS ON OTHER WORK**

	Year	EPO	JPO	USPTO
Requests for International Searches	1996	28,250	3,317	20,768
	1997	33,110	4,341	24,498
Requests for International Preliminary Examinations	1996	18,110	1,751	9,498
	1997	22,000	2,353	11,627
Searches for National Offices or Third Parties	1996	18,490	-	-
	1997	18,660	-	-
Design Patent Applications	1996	-	40,192	15,161
	1997	-	39,865	16,546
Utility Model Patent Applications	1996	-	14,082	-
	1997	-	12,048	-
Plant Patent Applications	1996	-	-	665
	1997	-	-	621
Re-issue Patent Applications	1996	-	-	592
	1997	-	-	548
Trademark Applications	1996	-	188,160	212,510
	1997	-	133,160	225,517

## **ANNEX - DEFINITIONS FOR STATISTICS ON PROCEDURE**

### **EXAMINATION RATE**

This rate shows the proportion of the applications for which the period to file a request for examination expired in the reporting year, and 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 not later than 6 months after publication of the search, the rate for 1997 relates to applications mainly filed in the years 1995 and 1996.

Since the JPO allows a seven-year period to file a request for examination, the rate for the JPO in 1997 relates to applications filed in 1989.

### **GRANT RATE**

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).

The grant rate given for the USPTO includes plant and reissue patents in addition to utility patents. However, since utility patents comprise over 99% of patent applications, and over 99% of those patents issued, the USPTO grant rate is almost identical to a grant 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.

The opposition rate for the JPO is calculated by dividing the number of applications against which one or more oppositions were filed during the reporting year by the total number of decisions to grant patents during the reporting year.

This rate does not apply for the USPTO since there is no opposition procedure.

### **MAINTENANCE RATE IN THE OPPOSITION PROCEDURE**

The 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. This rate does not apply for the USPTO since there is no maintenance rate in the opposition procedure.

### **APPEAL RATE**

For the EPO, appeal rates are given for examination and opposition. These appeal rates are the number of decisions made respectively in the examination or opposition procedures against which appeals were lodged in the reporting year, divided by the number of all decisions for which the time limit for appeal ended in the reporting year.

For the JPO, the total number of appeals is shown instead of the appeal rate. The JPO does not make a distinction between appeals against decisions in examination for applications against which oppositions were filed and those against which no opposition was filed.

In the United States patent system, there is no opposition procedure prior to patent issues because the patent applications are not published until after issue. 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 determined by dividing the number of examiner answers written during the year in response to appeal briefs by the number of final rejections issued that year.

#### PENDENCY SEARCH PROCEDURE

This only applies to the EPO. For the EPO the pending applications in search is the number of applications filed (Euro-direct and Euro-PCT entering the regional phase) up to and including the reporting year for which a search report has not been made by the end of the reporting year but for which a search fee has been paid. Pending search in months is defined as the number of pending applications in search by the end of the reporting year divided by the number of searches carried out in the reporting year multiplied by 12.

#### PENDENCY BEFORE 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 seven years after filing.

For the EPO, pending applications awaiting request for examination are the number of applications for which the search report has been published by the end of the reporting year and which have not passed the prescribed period for the request (six months after publication of the search).

For the JPO, the number of patent 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 (seven years from the date of its filing) has not passed.

#### ILLUSTRATION:

Applications 1991-1997:	2,598,479
Thereof requests for examination 1991-1997:	454,714
Applications awaiting request for examination:	2,143,765

## PENDING EXAMINATION

Pending applications in examination is the number of applications filed (in the USPTO), and the number of requests for examination filed (in the EPO) which have not been disposed of (granted or abandoned) by the end of the reporting year.

For the EPO, pendency examination in months is calculated by dividing the number of pending applications in examination as of the end of the reporting year by the number of disposals (decisions to grant or refuse, withdrawals, abandonments or converted applications) during the reporting year and by multiplying by 12.

The pendency in months in the USPTO 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 time it takes for these applications to either abandon or issue from the date of filing is the pendency time in months.

## PENDENCY FIRST OFFICE ACTION

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

In the USPTO pendency to First Action on the Merits (FAOM) is the average amount of time, in months, from filing to first action on the merits. A FAOM is generally defined as the first time an examiner either formally rejects or allows the claims in a patent application. \*

## PENDENCY OPPOSITION

For the EPO, pending applications in opposition are the patents against which one or more oppositions have been filed and for which no final decision has been taken by the end of the reporting year.

For the EPO, pendency opposition in months is the number of pending applications in opposition by the end of the reporting year divided by the number of disposals in opposition in the reporting year multiplied by 12.