

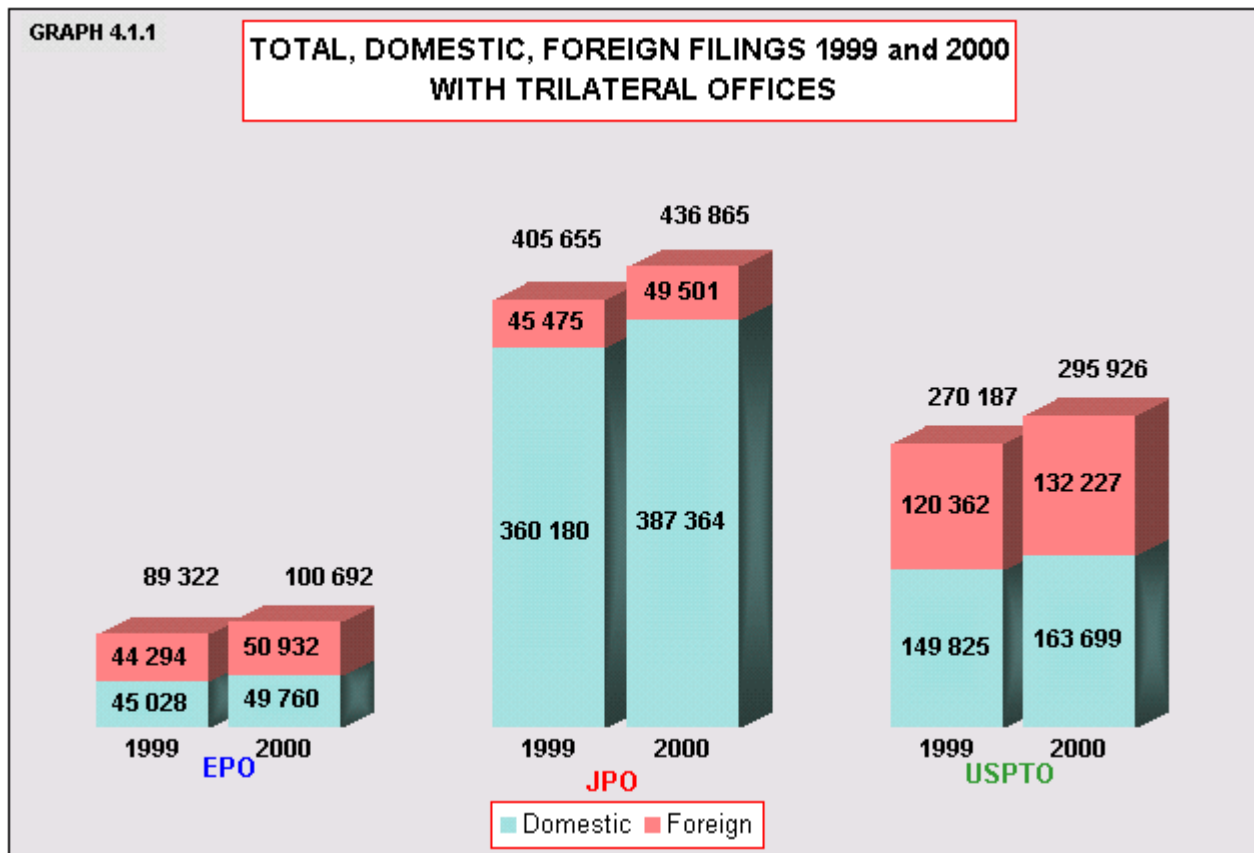
4 DEMAND AT TRILATERAL OFFICES

Demand at Trilateral Offices is demonstrated by statistics on patent applications. They 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 contracting states. Since in this context the statistics are meant to give an insight in 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

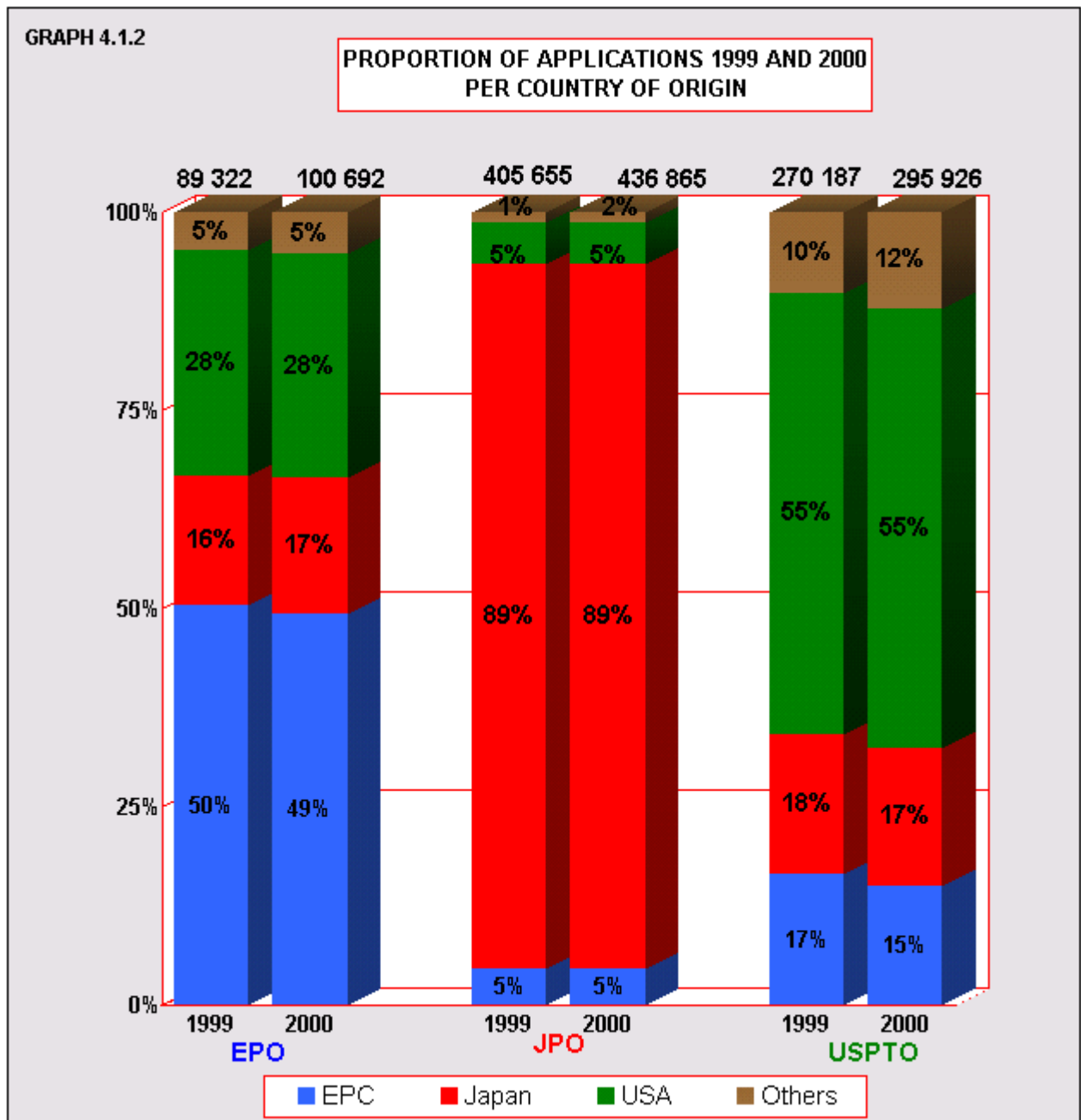
The number of domestic and foreign applications filed with Trilateral Offices for the years 1999 and 2000 is shown in the graph below:



The number of applications filed at the JPO increased by 31 210 or 7.7%. The number of applications filed at the EPO increased by 11 370 or 12.7%. The number of applications filed at the USPTO increased by 25 739 or 9.5%.

In 2000, domestic filings in the JPO form 89% of total filings; for the USPTO and the EPO they form 55% and 49% of total filings respectively. The numbers of domestic filings in the JPO and the USPTO are approximately equivalent to the number of first filings. Domestic EPO filings are defined as the total of EPO filings by residents of EPC contracting states. Only a low proportion of these are first filings at the EPO, which is explained by the filing practice in EPC contracting states since 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 protection throughout Europe. Consequently, the number of domestic filings at the EPO is not equivalent to the number of first filings. The first filings with the EPO from residents of EPC contracting states were 6 792 in 1999 and 8 277 in 2000, respectively 15.1% and 16.6% of domestic European filings.

The breakdown of applications in Trilateral Offices by country of origin in 1999 and 2000 is as follows:

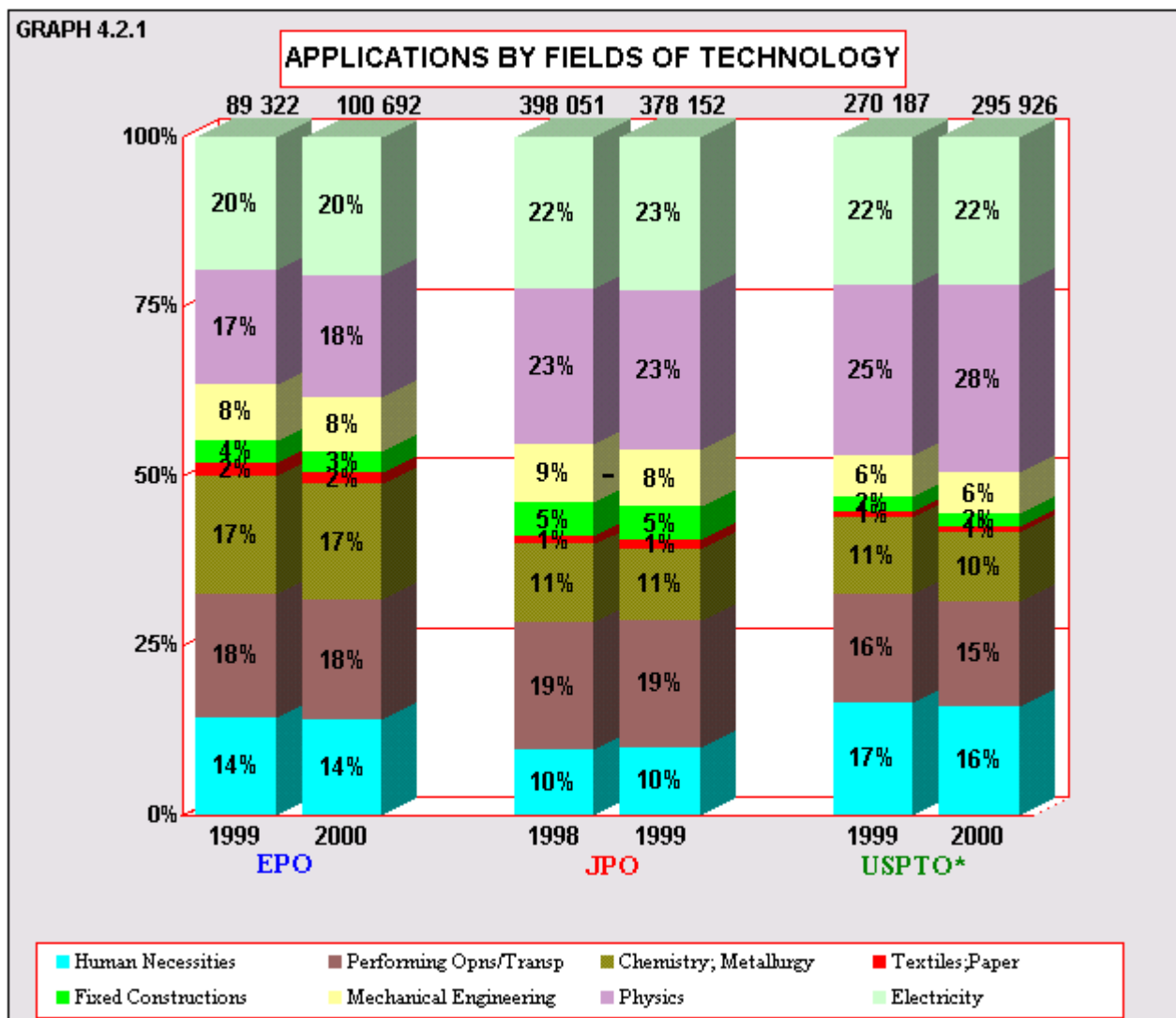


Compared to 1999, the share of filings from EPC contracting states remained the same at 5% in the JPO and decreased by 2% in the USPTO. The share of filings from Japan decreased by 1% in the USPTO while increasing 1% in the EPO. The share of filings from the United States is unchanged in the JPO and the EPO. The share of filings from outside the trilateral blocs increased 2% in the USPTO but remained almost the same at the EPO and the JPO.

4.2 APPLICATIONS BY FIELDS OF TECHNOLOGY

The breakdown of applications in Trilateral Offices by field of technology according to the International Patent Classification (IPC) Sections A-H is given below for the EPO and the USPTO for the filing years 1999 and 2000. For the JPO the breakdown of published patent applications is given for the filings years 1998 and 1999. The figure for 1999 is the most recent figure because the IPC is assigned just before the publication of Unexamined Patent Gazette (after the expiration of 18 months from the filing date). The JPO figures were as of March 15, 2001.

The proportion of Human Necessities is higher in the USPTO (16%) and the EPO (14%) than in the JPO (10%). The proportion of Performing Operations/Transporting is higher in the EPO (18%) and the JPO (19%) than in the USPTO (15%). The proportion of Chemistry/Metallurgy is higher in the EPO (17%) than in the USPTO (10%) and the JPO (11%). Considering the proportions of Physics and Electricity applications taken together, this increased to 50% in the USPTO, higher than in either the JPO (46%) or the EPO (38%). In the other sections, the proportions are roughly about the same in the three blocs.

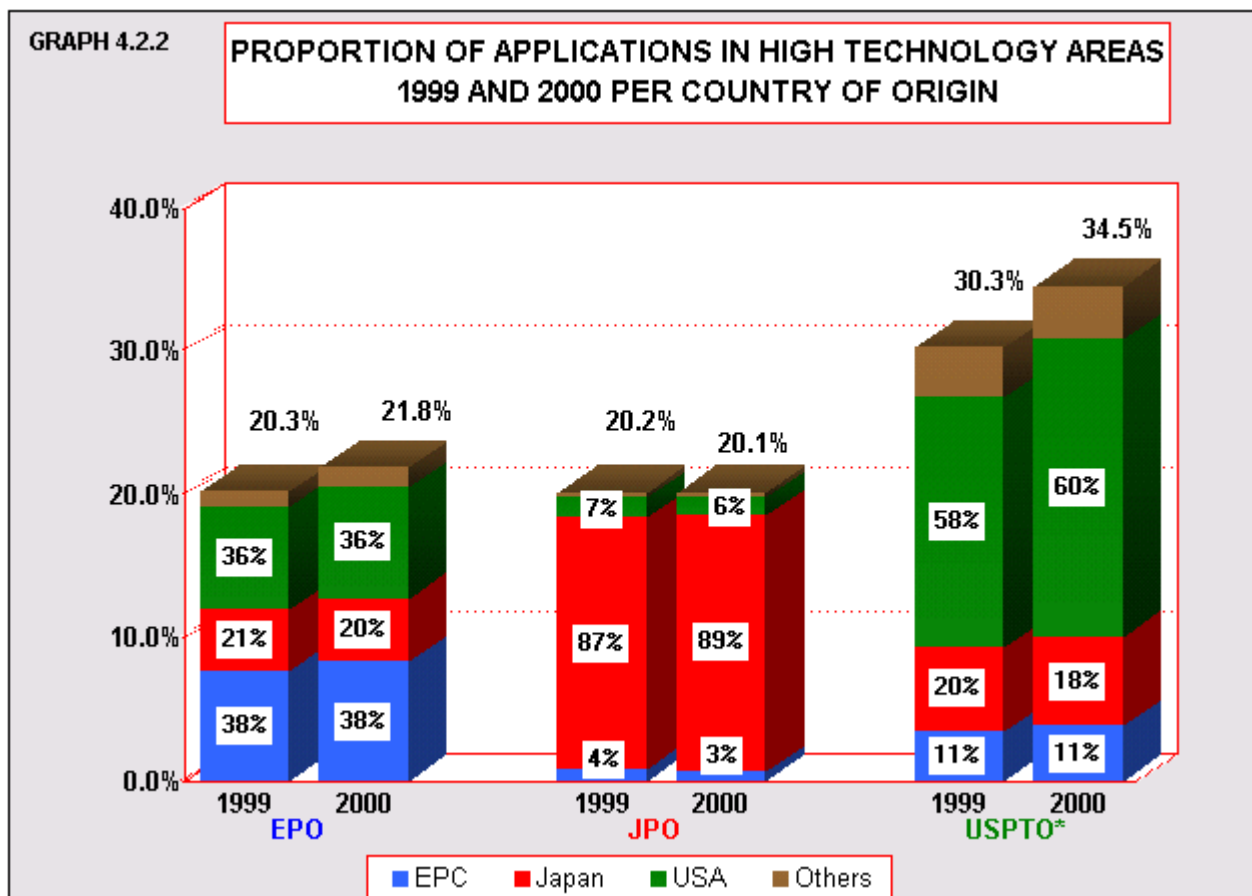


(*) In Graphs 4.2.1 and 4.2.2, USPTO applications are classified according to the US Patent Classification System, the breakdown according to IPC has been determined by means of a general concordance between both classifications. Therefore the technical scope at the USPTO with respect to IPC may differ 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 1999 and 2000, together with their origin. The following technical fields have been defined as high technology: computer and automated business equipment; micro-organism and genetic engineering; aviation; communications technology; semi-conductors; lasers.

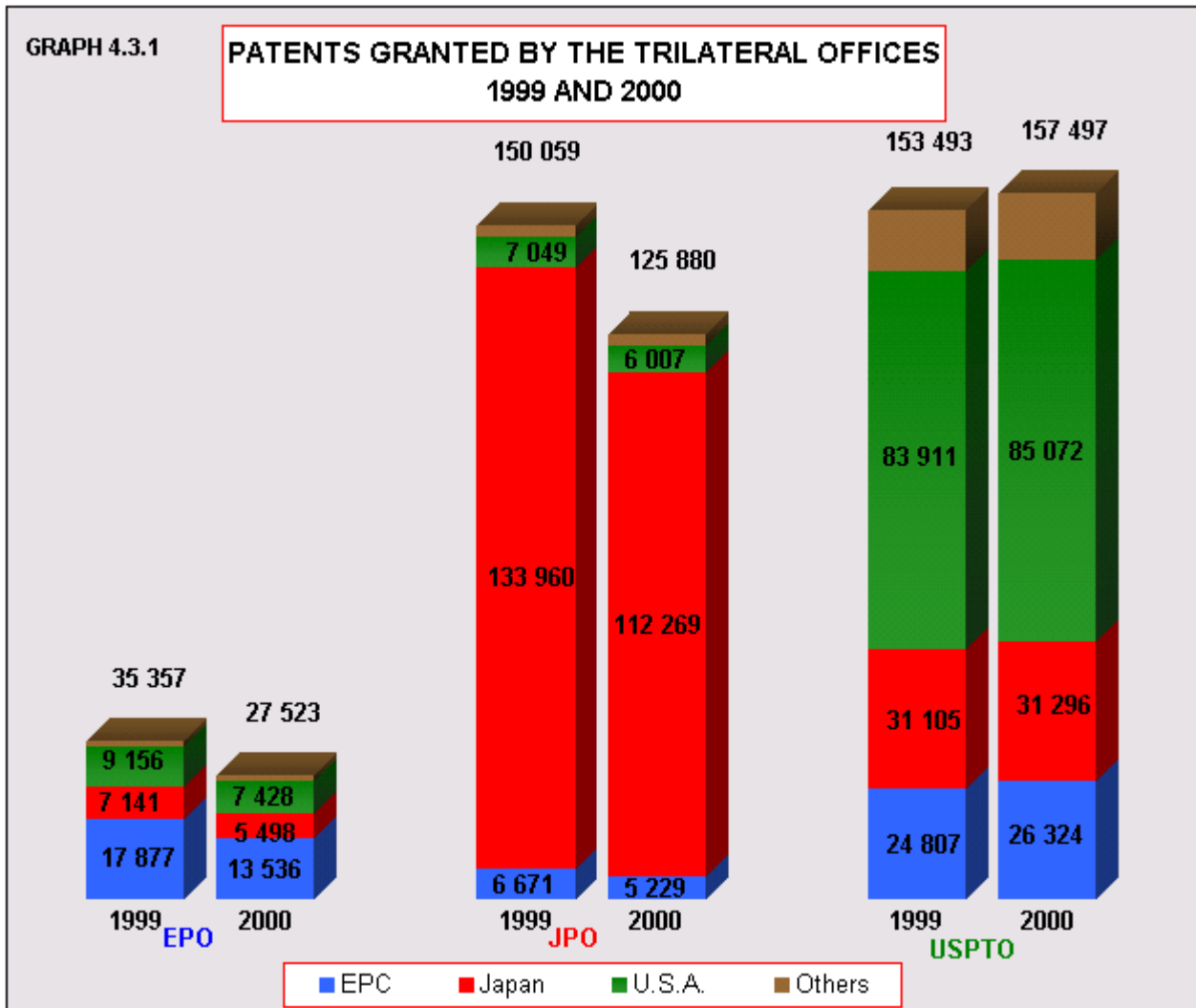
In 2000, 21.8% of the EPO applications were filed in these fields, of which 36% originated from United States applicants, 38% from EPC applicants and 20% from Japanese applicants. At the JPO, 20.1% of the 2000 filings related to high technologies; of which 89% originated from Japanese applicants, 3% from EPC applicants and 6% from United States applicants. High technology represented 34.5% of all filings at USPTO; of which 60% originated from United States applicants, 18% originated from Japanese applicants and 11% from EPC applicants. In 2000, the high technology area shares increased at the EPO and the USPTO while JPO had a very slight decrease. The share of EPC applicants in high technology is below their share in all 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 higher at the EPO and the USPTO than on average. The share of Japanese applicants in high technology is higher at the EPO than that in all filings and comparable to that in all filings at the USPTO.

For the JPO, please note that the proportion of applications in high technology areas filed with the JPO in 1999 and 2000 substantially increased compared with the same data in the 1999 TSR. The increase is attributable to the following two factors. First, the statistical data for 1999 and 2000 were updated in the JPO database on June 1, 2001. Second, the number of applications for which a classification was given is used as the denominator for the 2000 TSR.



4.3 PATENTS GRANTED BY TRILATERAL OFFICES

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

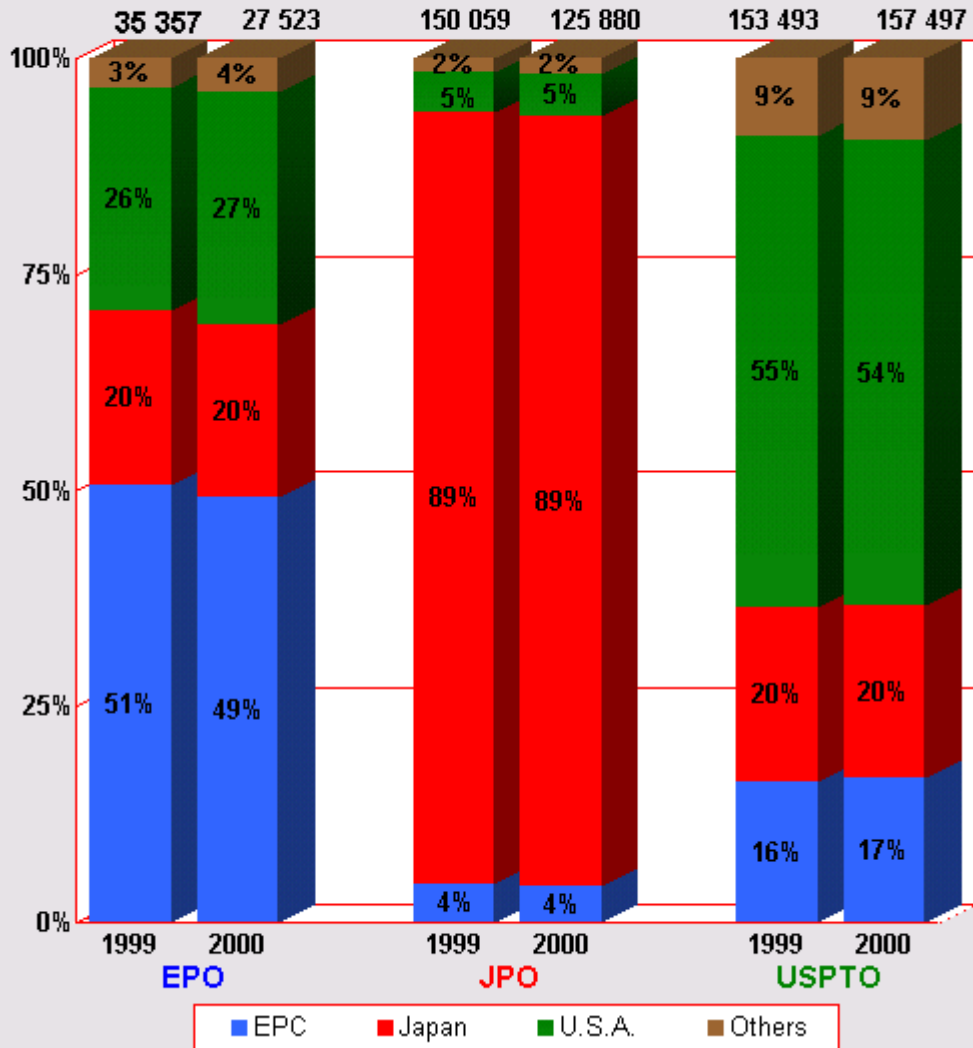


The number of patents granted by the JPO decreased by 16% to 125 880 in 2000. There have been 27 523 patents granted by the EPO in 2000 which is 22% less than 1999 due to a lower number of decisions in 2000. At the USPTO, the number of granted patents increased by 3%, to 157 497. The breakdown of patents granted in 1999 and 2000 by 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.](#)).

GRAPH 4.3.2

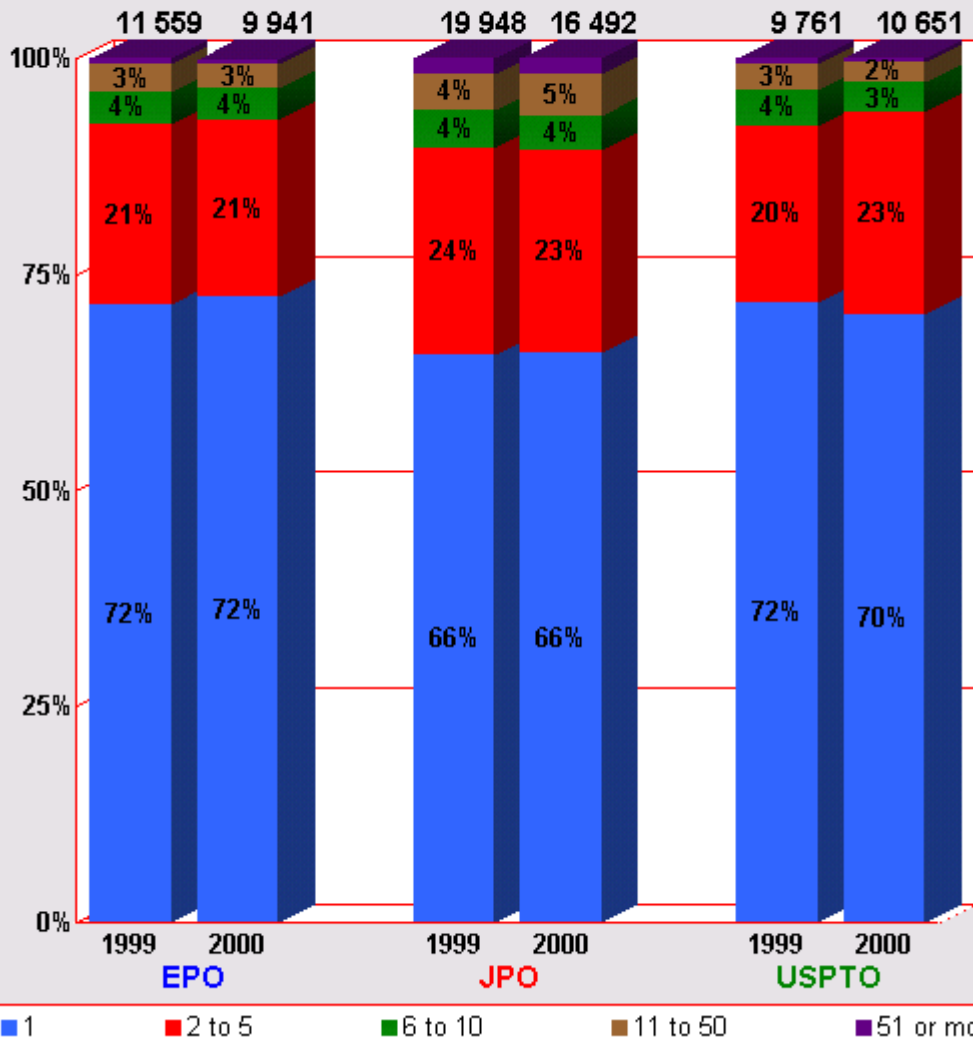
**PROPORTION OF GRANTED PATENTS
1999 AND 2000 PER COUNTRY OF ORIGIN**



The breakdown of patentees by numbers of patents granted is shown below (Graph 4.3.3).

GRAPH 4.3.3

DISTRIBUTION OF PATENTEES BY THE NUMBERS OF PATENTS GRANTED IN 1999 and 2000



The proportion of patentees receiving one patent grant is lower in the JPO (66%) than in the EPO (72%) and the USPTO (70%). The proportions of patentees receiving one patent grant decreased by 2% at the USPTO, but remained unchanged at the EPO and the JPO. The proportion of patentees receiving 2 to 5 patent grants increased at the USPTO by 3% remained unchanged at the EPO and decreased by 1% at the JPO. In the category of 6 to 10 grants, the USPTO decreased by 1% while the EPO and the JPO remained unchanged. The proportion of patentees receiving 11 to 50 patent grants increased in the JPO by 1%, decreased in the USPTO by 1%, but remained unchanged at the EPO. Less than 3% of patentees received more than 50 grants at any Trilateral Offices. The largest number of grants allotted to a single applicant was 516 (EPO) and 2 886 (USPTO).

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 the protection was obtained. Maintenance systems differ from country to country.

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.

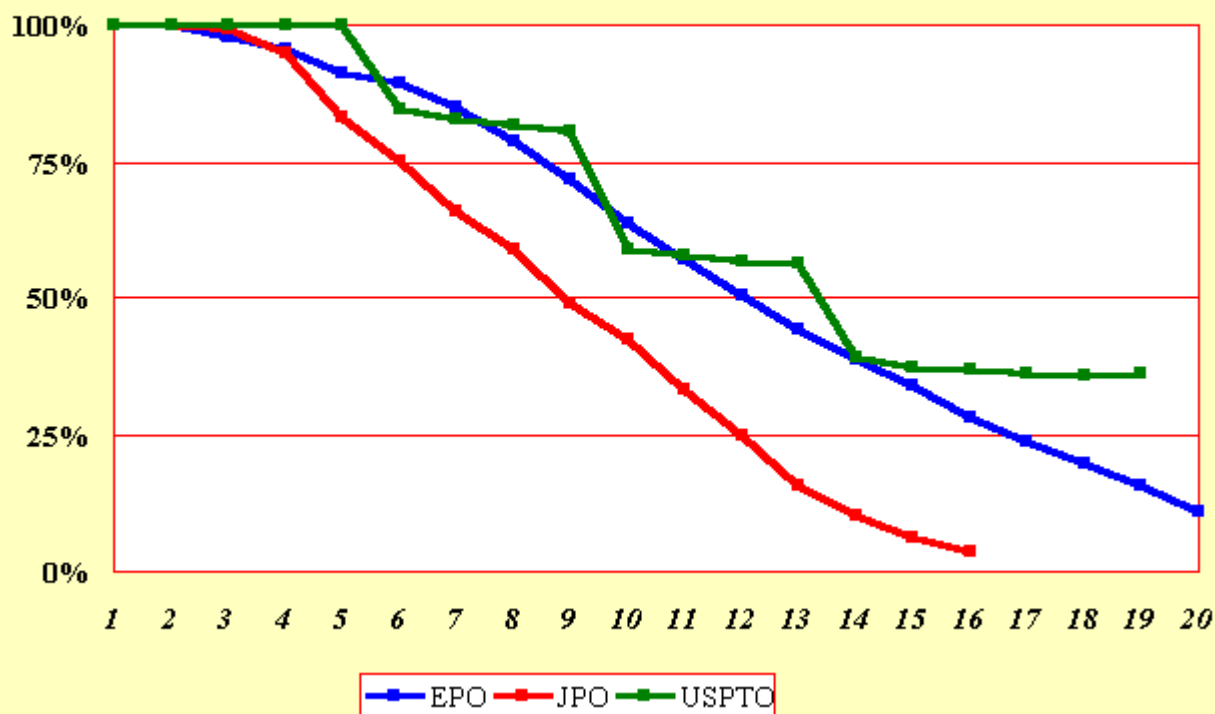
A European patent has a twenty-year term from the date of filing and renewal fees have to be paid from the third patent year onwards to maintain the protection. After the application has been granted, annual renewal fees have to be paid to the national office of each designated member state where the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

The term of a Japanese patent is twenty years from the date of filing. The first three year's fees are paid together and, for subsequent fees, the applicant can pay either yearly or in advance. In the three procedures, if a renewal fee is not paid in due time, the protection right expires.

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

GRAPH 4.3.4

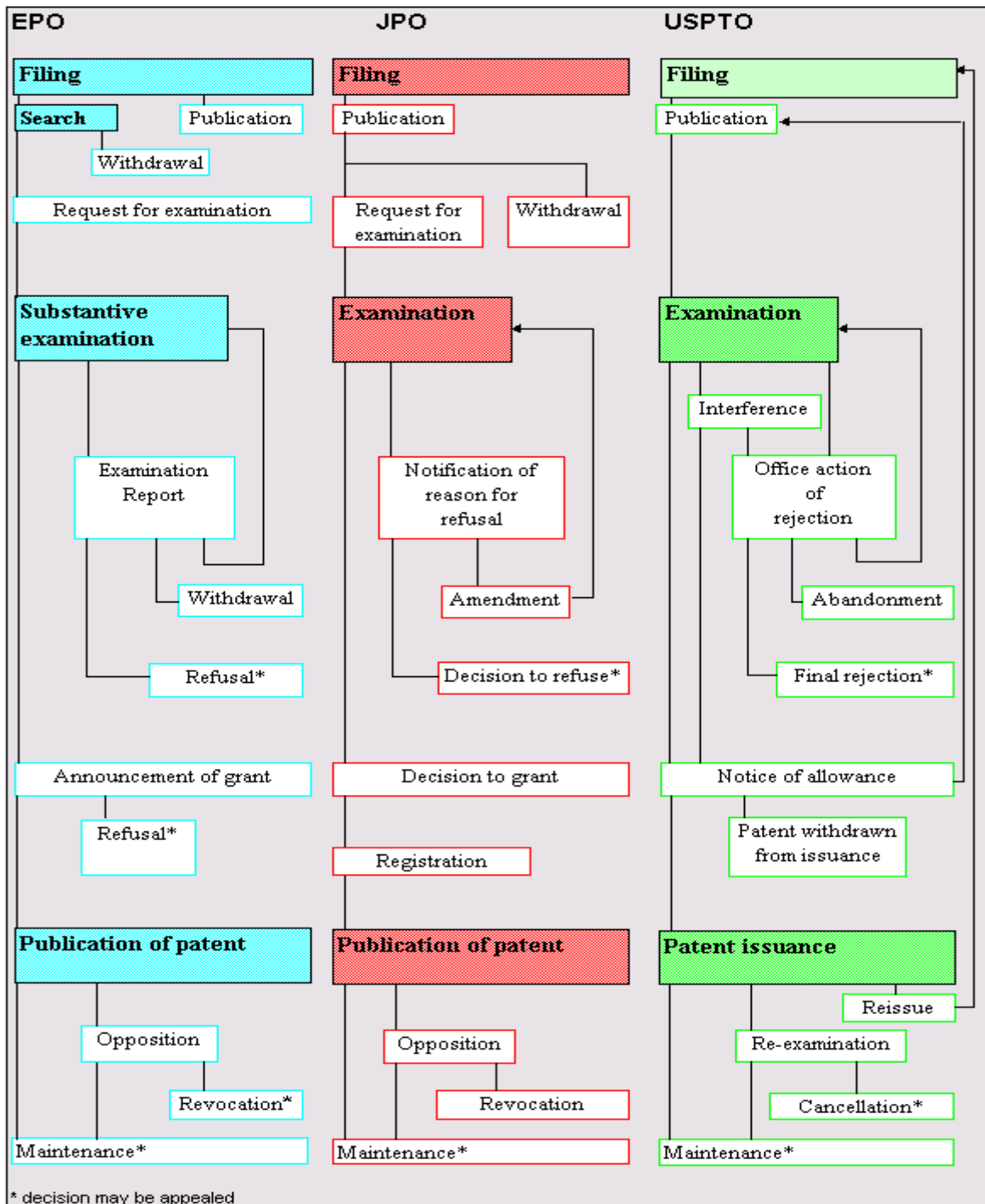
MAINTENANCE OF GRANTED PATENTS BY TRILATERAL OFFICES



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. In a second phase the inventive step 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; this may be filed up to seven years after the date of filing (three years from October 2001).

Filing of a national application with the USPTO is taken to imply a request for examination.

Publication

In the Trilateral Offices the application is published at the latest after 18 months from the date of filing or priority date. The application can be published before 18 months if an applicant so requests. 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 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 (see above) or the application is finally rejected (EPO: Intention to refuse; JPO: Decision to refuse; USPTO: Final rejection) or withdrawn (EPO: withdrawal; JPO: inapplicable; USPTO: abandonment) by the applicant. In addition, if no request for examination for an application is filed to the EPO and the JPO within the prescribed period, 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; JPO: Publication of patent; USPTO: Patent issuance).

Opposition

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

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 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 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, while re-examination 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 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 examining department first studies the arguments 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 a final decision or refer the case back to the examining department.

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 the case that 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 is forwarded to appeal examiners who may make a final decision.

4.4.2 Statistics on procedure

The 1999 and 2000 values of the basic characteristics of trilateral 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. This should be considered when seeking to make comparisons between the Offices, based on the provided information.

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, decreased to 56.5%. This is a temporary situation, due to a lower number of decisions than usual in 2000.

In the JPO, the grant rate slightly decreased to 60.7% in 2000.

In the USPTO, the grant rate is related to the decisions made in the examination procedure, and remained unchanged at 71.0% in 2000.

The opposition rate in the EPO is 5.7%, and the maintenance rate in the opposition (including maintenance in amended form) is 67.5%.

In the EPO, 366 appeals were received in 2000 i.e. about 46.2% of decisions in examination to reject the application (792). In the USPTO, 2 860 appeals were received being 3.7% of final rejections (76 611).

In the EPO, 45.2% of appealable decisions in the opposition procedure (2 561 in 2000) are appealed against, the number of appeals being 1 157.

The total number of appeals in the JPO against decisions in examination, including decisions on applications against which oppositions had been filed, was 16 498 in 2000, higher than the 1999 figure (14 650).

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 of the workload (per stage of procedure) from the patent grant procedure in the three offices. This is not an indication for 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 or responding to actions communicated to the applicant.

The pendency in search at the EPO increased from 77 649 in 1999 to 90 129 in 2000 (16.1%), and increased in months to 18.9 to 20.6.

The number of pending applications awaiting a request for examination by the applicant increased in the EPO from 16 234 to 16 788 (3.4%).

In the JPO the number of pending applications is substantively higher (2 152 416) than those in the EPO and the USPTO, due to the long period (seven years from the date of filing) during which requests for examination can be filed.

The number of pending applications in examination increased in the EPO (to 191 647 in 2000) and the pendency in months increased to 50.6 months. In the USPTO the average time for either abandoning or issuing an application is about 24.7 months.

The pendency to first office action increased in the EPO and the JPO to from 19. 8 to 20.7 months and 19.7 to 21.1 months respectively. The USPTO first office action remains at about 13 months.

Pendency in opposition decreased at the EPO from 14.1 months in 1999 to 11.6 months in 2000.

Table 4.4.2: Statistics on Procedures

(Definitions are given in the Annex) "n. a." indicates unavailable data "- " means not applicable				
		EPO	JPO	USPTO
Examination	1999	90.5%	49.8%	100.0%
	2000	91.0%	53.3%	100.0%
Grant	1999	63.7%	63.8%	71.0%
	2000	56.5%	60.7%	71.0%
Opposition	1999	6.1%	3.4%	-
	2000	5.7%	4.9%	-
Maintenance	1999	70.8%	n.a.	-
	2000	67.5%	n.a.	-
Appeal - on examinations	1999	51.5%	-	6.0%
	2000	46.2%	-	4.0%
- on oppositions	1999	43.4%	-	-
	2000	45.2%	-	-
- on examinations and oppositions 1	1999	-	14,650	-
	2000	-	16,498	-
Pendency		EPO	JPO	USPTO
Pending applications in search	1999	77,649	-	-
	2000	90,129	-	-

Pendency search months in	1999	18.9	-	-
	2000	20.6	-	-
Applications awaiting request for examination	1999	16,234	2,148,354	-
	2000	16,788	2,152,416	-
Pending applications in examination	1999	158,361	n.a.	400,872
	2000	191,647	n.a.	547,626
Pendency first office actions in months	1999	19.8	19.7	12.8
	2000	20.7	21.1	13.0
Pendency examination in months	1999	39.0	n.a.	25.2
	2000	50.6	n.a.	24.7
Pendency applications in opposition	1999	3,031	n.a.	-
	2000	2,466	n.a.	-
Pendency opposition in months	1999	14.1	n.a.	-
	2000	11.6	n.a.	-