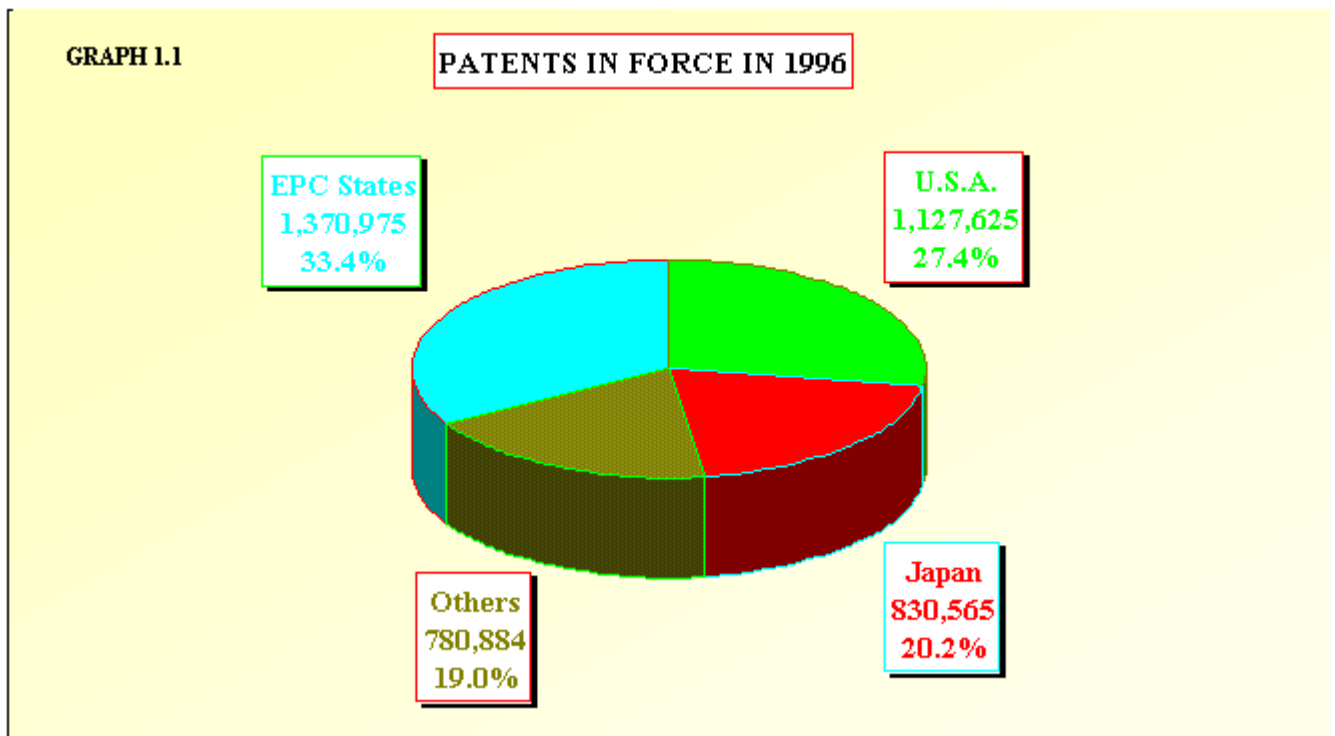


1. Introduction

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

PRODUCTION FIGURES FOR 1996 AND 1997		
	1996	1997
Filings		
Total including Euro-PCT international phase	87,401	99,764
Total including Euro-PCT regional phase	63,900	72,904
Production		
Search		
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
Total production search	85,293	92,807
Examination (final actions)		
European examination	52,862	45,982
PCT Chapter II	15,680	19,795
Opposition (final actions)	2,331	2,198
Total final actions examination/opposition	70,873	67,975
Appeal		
Technical appeals	862	903
PCT protests	5	9
Other appeals	44	52
Total decisions appeal	911	964

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

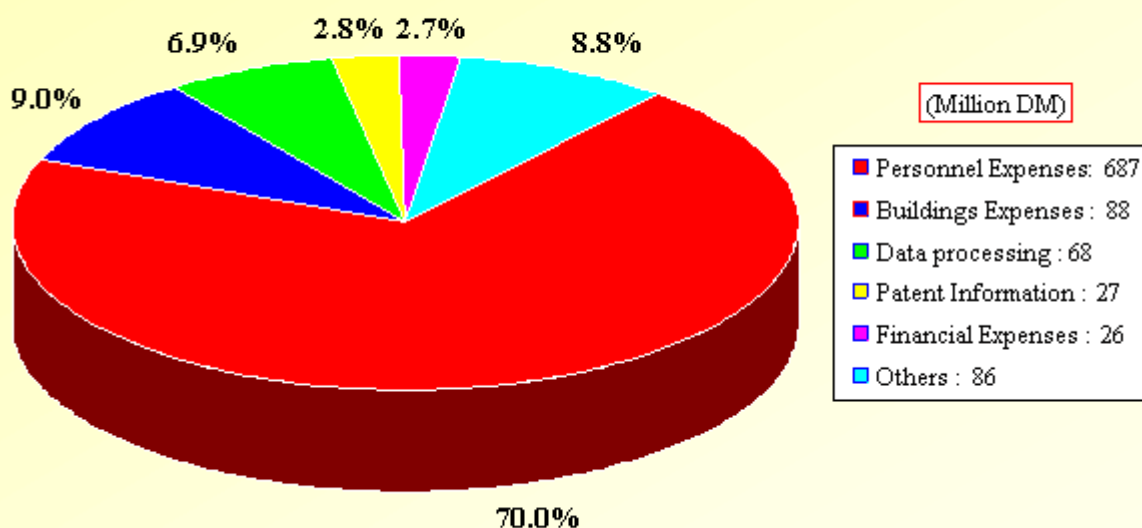
The Office is financially autonomous. Expenditure is met entirely out of income, mainly consisting of fees paid by applicants and patentees. Procedural fees such as the filing, search, examination and appeal fees and renewal fees for European patent applications are paid to the Office directly. Renewal 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

COMPOSITION EPO EXPENDITURE 1997



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 21st 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 21st century. Specifically, the JPO aims to reduce the period of first office action¹ 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.

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.

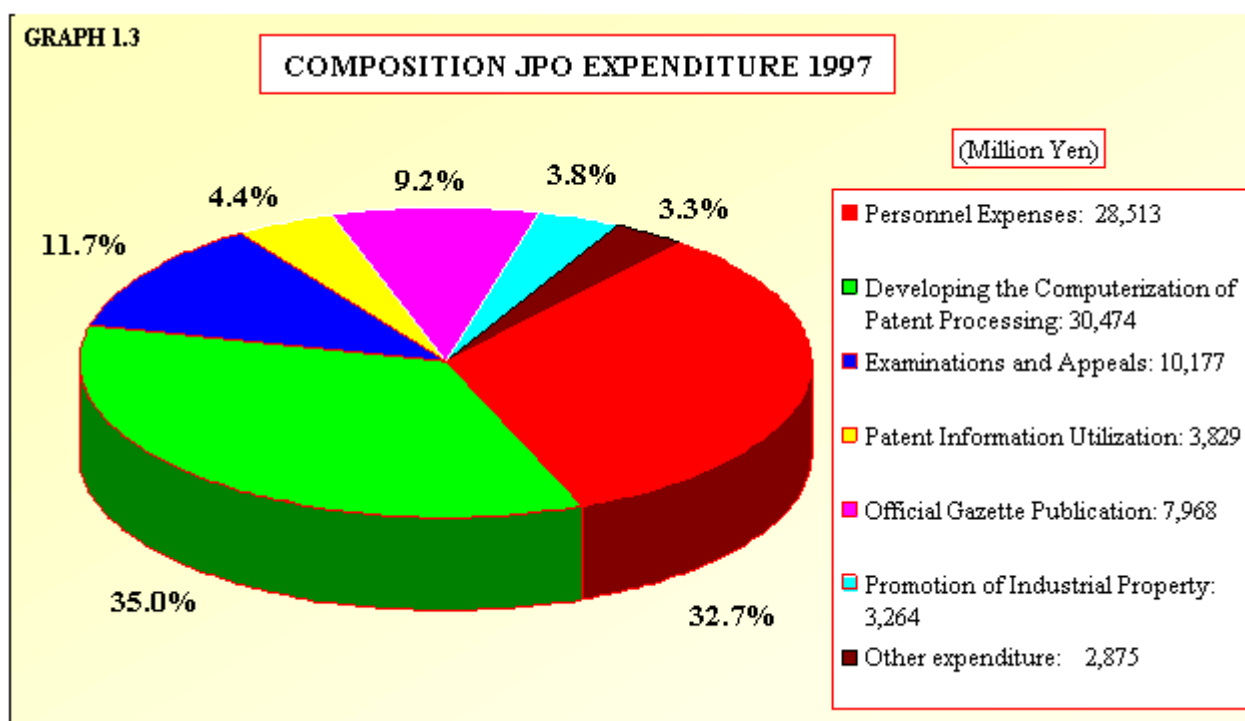
The JPO will actively participate in international conferences and meetings and make efforts to contribute to the establishment of an internationally harmonized system and rules in the field of industrial property.

TABLE 1.2: PRODUCTION INFORMATION JPO		
PRODUCTION FIGURES 1996 AND 1997		
	1996	1997
Applications Filed		
Domestic	340,101	350,807
Foreign	36,514	40,765
Total	376,615	391,572
Grants		
Domestic	187,681	129,937
Foreign	27,419	17,749
Total	215,100	147,686
Applications in appeals	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 21st 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.

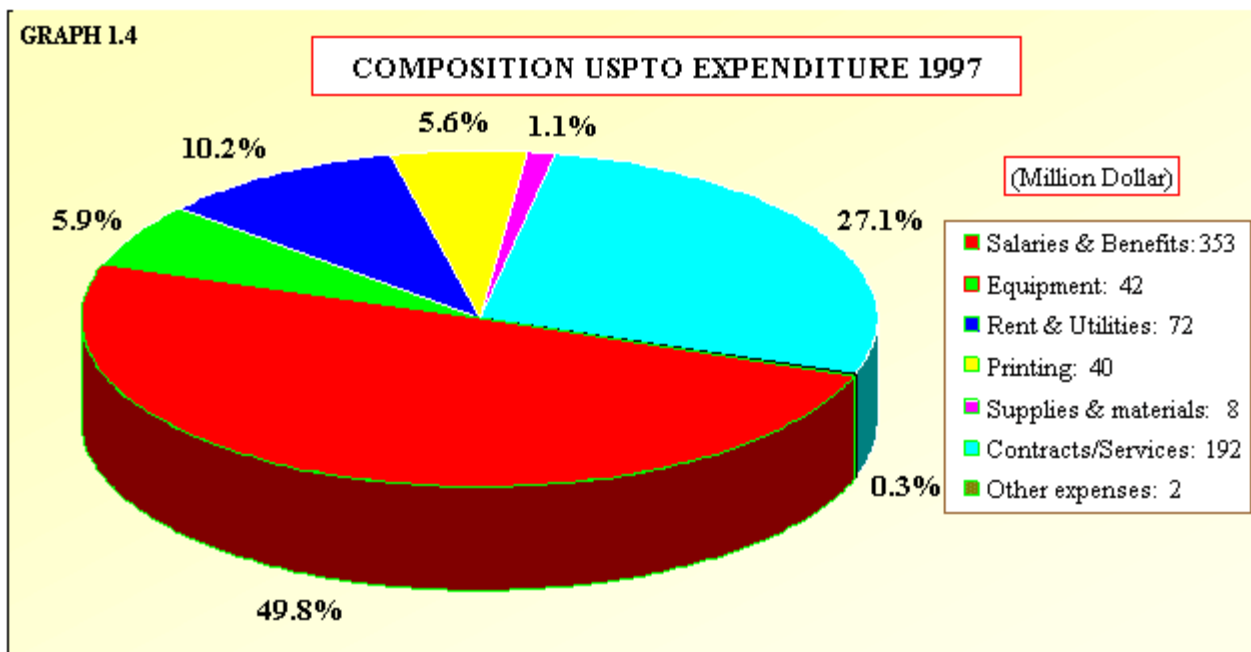
TABLE 1.3: PRODUCTION INFORMATION USPTO

PATENT PRODUCTION INFORMATION 1996 AND 1997				
	1996		1997	
Applications filed²	195,187		215,257	
First actions	174,843		187,978	
GRANTS				
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%
Total	109,646	100.0%	111,984	100.0%
PCT Chapter II	8,945		11,671	
Applications in appeals and interference proceedings				
	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	413	7,852	296
Number of patent cases in litigation				
Total Cases Filed	53		51	
Total Cases Disposed	61		71	
Total EOY ³ Cases Pending	34		36	

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 Interferences⁴.

¹ 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

² For utility patents only.

³ End of Year (BOY) is the calendar year (December 31st).

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