United States General Accounting Office

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Report to the Chairman, Committee on the Judiciary, U.S. Senate

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INTELLECTUAL PROPERTY

Enhancements Needed in Computing and Reporting Patent Examination Statistics

GAO/RCED-96-190

GAO

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General Accounting Office
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Resources, Community, and
Economic Development Division

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The Honorable Orrin G. Hatch
Chairman, Committee on the Judiciary
United States Senate

Dear Mr. Chairman:

On February 26, 1996, you asked us to provide you with information on issues related to the operations of the Department of Commerce's Patent and Trademark Office (PTO). Specifically, you asked that we (1) analyze patent pendency—the amount of time that PTO spends in examining an application to determine whether an invention should receive a patent; (2) compare PTO's resources committed to the patent process, the trademark process, the dissemination of information, and executive direction and administration; and (3) compare PTO's workload and examination processes with those of other industrialized countries.

Public Law 103-465, enacted December 8, 1994, changed the term for most patents granted by the United States from 17 years from the date of issuance to 20 years from the date of the earliest filing of an application. This change, which applies to new applications filed after June 7, 1995, raised concerns about patent pendency. Because an invention generally is not considered marketable until a patent is issued, the time frame for issuance reduces the effective term of the patent left to the inventor under the new law. These new concerns regarding patent pendency have in turn raised questions regarding how PTO commits resources to the patent examination process as well as how patent examinations in the United States compare with those in other countries.

The information on patent pendency in this report builds on analyses that we recently provided for Representative Dana Rohrabacher in a May 22, 1996, report.[1] Our work on PTO's resources and foreign patent offices relies on information obtained from PTO, budget submissions, and comparative statistics published jointly by PTO and the patent offices in Japan and Europe. More details on our scope and methodology are included in appendix I.

Results in Brief

The importance of patent pendency has increased over the past year because of new legislation affecting the term of most patents. For several

[1] Patent Examination Statistics (GAO/RCED-96-152R, May 22, 1996).

reasons, the old methods of calculating and reporting pendency will not provide inventors and decisionmakers with the information that they now need to determine the new law's effect on the patent term and to evaluate PTO's performance. First, PTO's computation does not provide separate pendency statistics for patents issued, applications abandoned, and applications still under examination. Second, PTO reports pendency as one aggregate rate, which does not reveal the wide variations in pendency among individual applications because of factors such as the type of invention under examination. Third, PTO measures pendency from the filing date of the most recent application, whereas the patent term under the new law will be measured from the filing date of the original application. Fourth, PTO's computation does not show how much of the pendency was the result of PTO's examination and how much was the result of applicant delays.

PTO has consistently committed most of its resources to the patent process. In fiscal year 1995, about three-fourths of PTO's funding—all of which now is generated by fees—and staff were devoted to the patent process. The increases in resources allocated to the patent process from fiscal year 1986 through fiscal 1995 do not appear to have come at the expense of PTO's other activities, because funding and staffing for the trademark process, the agency's executive direction and administration, and information dissemination also increased in most years over this period.

The patent examination processes and methods for computing pendency in PTO and its counterpart offices in Japan and Europe differ markedly. One reason is that PTO considers the examination process to have begun when the application is filed, while in Japan and Europe the examination may begin months or even years later. Also, Japan and Europe consider applications in-process when computing pendency, while PTO considers only those applications that resulted in a patent or were abandoned. Because of these and other differences—as well as the absence of comparative statistics—meaningful process and performance comparisons are impossible.

Background

A patent is a grant given by a government to an inventor of the right to exclude others for a limited time from making, using, or selling his or her invention. In the United States, the sole granting authority for patents is PTO. While other countries throughout the world have patent offices of

their own, the two largest counterparts to PTO are the patent offices in Japan and Europe.

Within PTO, the patent application examination process consists of several progressive phases. An applicant files a patent application with PTO, where it is subjected to reviews for accuracy and completeness during a preexamination phase. Following preexamination, the application is assigned, or "docketed," to an examiner within an examination group that has expertise in a specific field, such as computer systems or biotechnology.

At this point, the examiner begins the process of determining whether the invention is a new and useful process or product that should receive a patent. Usually early in the process, the examiner makes a preliminary decision, or "first action," which may then be followed by a series of contacts with the applicant to resolve questions and/or obtain additional information. Possibly after a number of actions by the examiner, PTO will decide whether to issue a patent. If PTO decides to issue a patent, termed an "allowance," then the agency informs the applicant and, upon the payment of the necessary fees, issues a patent. The application may be abandoned during any of these stages.

PTO defines pendency as the period from the date when an application is filed until the date when a patent is issued or the application is abandoned.[2] PTO computes average pendency as the total number of months of examination for all patents issued or applications abandoned over a particular period, divided by the total number of applications for that period.

As reported by PTO, average pendency varied over the period from fiscal year 1981 through fiscal 1995, peaking at 25.5 months in fiscal year 1983 and reaching a low point of 18.2 months at the end of fiscal year 1991. Since fiscal year 1991, pendency has averaged at least 19 months in each fiscal year.

For our May 22, 1996, report, we developed statistics for patents issued or applications abandoned during fiscal year 1994 as well as patents still in-process as of October 1, 1994. We selected fiscal year 1994 because it was the last full fiscal year prior to the change in the patent term law and the last full fiscal year for which complete data were available. In addition,

[2]As used by PTO, an "abandoned" application is any application that does not result in an issued patent and is eventually taken out of the examination process by the applicant or by PTO.

October 1, 1994, was chosen because it provided us with the most recent data available for comparison with data from fiscal year 1994 without including any of the same applications.

As a baseline for our analyses, we first computed the overall average pendency for patents issued and applications abandoned during fiscal year 1994. In this regard, we computed an overall average pendency rate of 20.2 months for fiscal year 1994 instead of the 19 months reported by PTO. This variation appears to result from a combination of three factors. First, PTO computed pendency on a quarterly basis, and the 19-month rate reported is the pendency rate for the fourth quarter of fiscal year 1994. Second, unlike PTO, we included design patents.[3] Third, PTO's automated database continued to be updated between the time when PTO made its computation and when we made ours. PTO officials agreed that these factors accounted for the difference in the computations of pendency for fiscal year 1994. While the difference is slight, we nevertheless believe our computation to be more accurate and complete and used our computed rate of 20.2 months for subsequent analyses and comparisons.

Current Patent Pendency Statistics Do Not Provide Information Needed by Those Outside PTO

The overall average pendency rate computed and reported by PTO does not provide inventors and decisionmakers such as the Congress and the administration with the information they now need to determine the effect of pendency on the patent term and to evaluate PTO's performance. This is because (1) PTO's pendency computation method considers both issued patents and abandoned applications but does not consider applications still in-process; (2) pendency can vary widely for individual applications, depending on the type of invention and factors such as whether the application is subject to a secrecy order;[4] (3) pendency is higher when the filing date used is that of the original, rather than the most recent, application for the particular invention; and (4) the applicants themselves are partly responsible for the time taken to examine applications.

[3]Under P.L. 103-465, the term of a design (configuration, shape, or surface ornamentation) patent—14 years from the date of issuance—remains unchanged. Utility (process, machine, manufacture, or composition of matter) and plant (asexually propagated) patents had a term of 17 years from the date of issuance under the old law and 20 years from the date of the earliest filing under the new law. Reissued patents (replacement of defective patents) are for the unexpired part of the term of the original patent.

[4]Patent applications for inventions that could affect national security interests can be placed under a secrecy order by PTO if the applicable federal agency determines that such protection is necessary.

PTO's Calculation of Pendency Considers Abandoned Applications but Not Applications In-Process

Pendency is an important factor in any consideration of the patent examination process because it provides (1) the inventor with an estimate of how long PTO is likely to take to issue a patent, (2) PTO with information on how it is managing its workload, and (3) decisionmakers such as the Congress and the administration with a method to measure results. However, we believe that the overall average pendency reported by PTO does not provide inventors and decisionmakers with the information they need because it does not show separate computations for patents issued, applications abandoned, and applications still in-process.

Pendency has taken on a new importance to inventors over the past year because, in most cases, the time taken to examine a patent will in effect reduce that portion of the 20-year term in which the invention can be commercialized. The important measurement is pendency for issued patents because it reflects the examination time for the successful applications that have completed the examination process. As shown in table II.1 in appendix II, the pendency for the 113,684 patents issued during fiscal year 1994 was 21.3 months, which is 1.1 months higher than the overall pendency for both issued patents and abandoned applications.

Pendency for abandoned applications is also important. While such applications may have limited importance to the inventor, they are important to PTO because they represent a substantial portion of PTO's overall workload. As shown in table II.1, 73,949 applications were abandoned during fiscal year 1994; their average pendency was 18.3 months. Thus, PTO spends a considerable amount of time examining or awaiting responses on applications that will not result in the issuance of a patent.

Pendency as reported by PTO also excludes applications that have been filed but not yet issued or abandoned. At any one time, the number of applications in-process is greater than the number of patents issued or applications abandoned during the previous fiscal year. As of October 1, 1994, 294,565 applications were still in some phase of examination; their average age was 16 months. Of these, 14.8 percent were more than 2 years old, 5.2 percent were more than 3 years old, and 2.7 percent were more than 4 years old.

In responding to the results of our analyses, PTO performed its own analysis of work in-process as of October 1, 1994. PTO officials said that their findings were consistent with ours but that their analysis went further in explaining some of the reasons for the older applications. While

we did not verify their statistics, the PTO officials said that of those applications that were more than 2 years old, 55 percent had experienced delays because of factors—such as those created by secrecy orders and applicant appeals—beyond PTO's control. Of those applications more than 4 years old, 82 percent were said to have experienced delays beyond PTO's control.

Pendency Varies by Type of Invention and Other Factors

Patent applications cover a broad range of inventions. To determine whether pendency varies by the type of invention being examined and other factors, we compared pendency in fiscal year 1994 for individual examination groups, applications subject to secrecy orders, and foreign applications. We found that (1) pendency can vary significantly among the examination groups, (2) applications subject to secrecy orders have high pendency themselves but little effect on overall pendency because of their limited number, and (3) pendency for applications from foreign residents is only slightly higher than for all applications.

Examination Groups

One of the functions of preexamining an application is to determine the examination group within PTO to which the application should be assigned. Each examination group specializes in a broad type of application and is divided into "art units" that have greater degrees of specialization. We found that the type of invention being examined can have a significant effect on pendency. As shown in table II.2, overall average pendency during fiscal year 1994 was highest—at 27.6 months—in the Computer Systems group and lowest—at 16.9 months—in the Solar, Heat, Power, and Fluid Engineering Devices group. As shown in tables II.3 and II.4, these same two examination groups also had the highest and lowest pendency rates for issued patents (29 months for the former compared with 17.8 months for the latter) and abandoned applications (26 months for the former compared with 14.1 months for the latter).

The differences by invention type are even more visible when comparisons are made among the nearly 200 individual art units. Again using the data from fiscal year 1994, for example, we found that the 550 patents issued or applications abandoned in Art Unit 2307—Data Base and File Management Systems—had an average pendency of 34.2 months compared with an average pendency of 15.6 months for the 1,426 patents issued or applications abandoned in Art Unit 2404—Special Receptacles or Packages, Shoes and Shoe Making. Comparisons at this level are more difficult, according to PTO officials, because of the frequent shifts that PTO makes in the scope of inventions covered by individual art units and

because the number of applications can vary so widely among the units. Nevertheless, PTO officials agree that pendency varies widely among the art units.

Secrecy Orders

Patent applications subject to secrecy orders are assigned to a separate examination group. PTO will not issue a patent or permit an abandonment on an application while it is subject to a secrecy order; thus, such applications technically remain under examination until the secrecy order is lifted. As shown in table II.5, applications subject to secrecy orders have a higher pendency but have little effect on overall pendency because they are relatively few in number.

Only 464 patents issued or applications abandoned during fiscal year 1994 had at one time been subject to secrecy orders. Pendency for these was higher than the norm, averaging 62.9 months in total, 67.5 months for issued patents, and 51.6 months for abandoned applications. However, such applications raised overall pendency for fiscal year 1994 by only 0.1 month. As of October 1, 1994, PTO had 3,653 applications still in-process that were or at one time had been subject to secrecy orders. The pendency for these applications ranged from 2.2 to 189.3 months and averaged 86.2 months.

Foreign Applications

PTO considers a patent application to have originated in a foreign country if the first applicant named in the application is a foreign resident. As shown in table II.6, we compared the average pendency for foreign applicants with pendency for all patents issued or applications abandoned during fiscal year 1994.

Overall, the average pendency for foreign applications—which accounted for 36.8 percent of all patents issued or applications abandoned—was 20.9 months, compared with 20.2 months for all applications. Foreign patents that were issued had a pendency of 21.9 months, compared with 21.3 months for all patents issued. Foreign applications that were abandoned had a pendency of 19.2 months, compared with 18.3 months for all applications abandoned.

Pendency Would Have Been Greater If Original Filing Date Had Been Used

According to PTO officials, a patent application may spawn other applications during the examination period. This can be done through a "division," whereby the application is split after PTO determines that it contains more than one invention, or through a "continuation," whereby the applicant has chosen to continue prosecution of the same invention

described and claimed in the original application. The new, or current, application is referred to by PTO as the "child," and the earlier application is referred to as the "parent." Several generations of applications are possible from one invention.

PTO officials also told us that in calculating pendency, PTO uses the date when each new application is filed. This practice is consistent with PTO's primary use of the pendency statistics as internal workload measurement tools. Also, the filing date for measuring pendency was of less importance under the old law, since a patent term did not begin until the patent was issued.

Under the new law, the patent will be effective when issued, but the term for most patents will be measured from the earliest filing date relating to the particular invention. This change will affect only those utility and plant applications filed after June 7, 1995. However, to determine what pendency would have been if the application filing date for the parent had been used, we recalculated overall pendency for both the patents issued and applications abandoned during fiscal year 1994 and applications in-process as of October 1, 1994. As shown in table II.7, 49,686,[5] or 26.5 percent, of the patents issued or applications abandoned during fiscal year 1994 had a parent application. Using the application date of the parent instead of the current application date, we found that average pendency would have been 28 months instead of 20.2 months overall, 28 months instead of 21.3 months for issued patents, and 28.1 months instead of 18.3 months for abandoned applications.

As of October 1, 1994, 87,437, or 29.7 percent, of the applications still in-process had parent applications. Using the filing date for the parent rather than the filing date for the current application would raise the average pendency for all applications still in-process from 16 months to 25 months.

If only those patents and applications that had a parent were considered, the difference in pendency is even more pronounced. As also shown in table II.7, the 49,686 patents issued and applications abandoned during fiscal year 1994 that were the children of earlier applications had an average pendency of 17.9 months if the current application filing date were used and 47.7 months if the application filing date for the parent were used. If the parent application filing date were used instead of the current application filing date, the average pendency would have been 46.9 months

[5]This includes design patents.

instead of 19.4 months for issued patents and 48.5 months instead of 16.1 months for abandoned applications. Likewise, those applications still under examination as of October 1, 1994, would have had an average pendency of 45 months rather than 14.6 months.

Applicants Themselves Contribute to Pendency

In many cases, PTO cannot complete the examination until the applicant has taken some further action. For example, (1) the applicant may have filed an incomplete application that must be corrected before it can be assigned to an examination group, (2) the applicant may need to answer questions raised by the examiner or provide PTO with additional information, or (3) PTO may have to wait for the payment of a fee before it can proceed with the examination process.

We could not determine precisely how much pendency is attributable overall to the applicant, since PTO's automated system does not retain information on each contact with the applicant. However, we did calculate the elapsed time between certain applicants' responses to official actions by PTO, using data that PTO maintains on such responses and includes in its own automated reports.

During PTO's examination, the examiner makes a preliminary decision on the merits of the application as filed. At such time, the examiner may ask the applicant to respond to questions or provide the examiner with information. This process may occur a number of times. For patents issued or applications abandoned during fiscal year 1994, we compared the dates between PTO's actions and the applicants' responses for the first three such responses recorded on the subject applications.

Of the 187,633 patents issued and applications abandoned during fiscal year 1994, the applicants had provided examiners with responses at least once for 125,949 applications, at least twice for 36,887 applications, and at least thrice for 7,955 applications. As shown in table II.8, the need for applicants' responses added to the time that applications were pending. The filers' response time added 3.6 months to the overall average pendency, 3.7 months to the average pendency for issued patents, and 3.4 months to the average pendency for abandoned applications. Thus, the average pendency without these response times would have been 16.6 months instead of 20.2 months overall, 17.6 months instead of 21.3 months for issued patents, and 14.9 months instead of 18.3 months for abandoned applications.

PTO officials said that the portion of pendency attributable to the applicant actually is much higher than the average response times that we computed because the applicant can create delays at other times throughout the examination process. Subsequent to our analyses, PTO performed its own analysis of the fiscal year 1994 database and identified an additional average of 3.8 months due to applicant delays. While we did not verify the accuracy of PTO's computations, we note that adding the additional 3.8 months from PTO's analysis to the 3.6 months that we computed for applicants' responses alone would result in about 7.4 months, or 36.6 percent, of the 20.2-month average pendency for fiscal year 1994 being attributable to the applicants themselves.

PTO Allocates Most Resources to the Patent Process

PTO's resources are committed to four broad functions—examining patent applications, examining trademark applications,[6] disseminating information,[7] and providing overall direction and administration for the agency. In fiscal year 1995, PTO committed about three-fourths of its funding and staff to the patent process.

PTO's annual obligations[8] have increased steadily in recent years. In the 10-year period from fiscal year 1986 through fiscal 1995, PTO's annual obligations increased from about $212 million to $589 million, an average annual increase of nearly 20 percent. Table III.1 in appendix III subdivides these obligations by amounts allocated to the patent process, the trademark process, executive direction and administration, and information dissemination.

While the patent process consistently accounted for the majority of the obligations, spending for the other three functions also increased over the 10-year period. The patent process accounted for 56.6 to 75.4 percent of the obligations in individual years, while the range was 5.4 to 8.5 percent for the trademark process, 6.4 to 20.2 percent for executive direction and administration, and 9.9 to 18.5 percent for information dissemination.

To illustrate another measure of the commitment of resources to the patent process, we compared staffing levels in the four functions. Table

[6]As it does under the patent process, PTO examines trademark applications seeking federal registration and protection for words, symbols, or devices used in commerce.

[7]This includes application services, customer services, publication and dissemination, and data and document retrieval.

[8]Since fiscal year 1991, PTO has been essentially funded by fees generated by the sales of its products and services, according to PTO officials.

III.2 compares the full-time equivalent (FTE) staff assigned to the patent process, the trademark process, executive direction and administration, and information dissemination over the same 10-year period. As with obligations, the majority of PTO staff was committed to the patent process; the percentage ranged from 58 to 75.1 percent of total staffing in individual years. During these same years, the trademark process accounted for 6.8 to 9.7 percent of total staff, executive direction and administration for 7.1 to 15.4 percent, and information dissemination for 8.0 to 22.4 percent.

According to PTO officials, precise comparisons among the functions for different years is difficult, because of changes PTO has made in how it allocates obligations and staff among major functions. In fiscal year 1990, for example, PTO began including all obligations for facilities under executive direction and administration; previously, the obligations had been allocated among the four functions. Conversely, in fiscal year 1991, PTO began allocating obligations for automation among the four functions; previously, these obligations had been assigned to executive direction and administration. In fiscal years 1992, 1994, and 1995, PTO underwent significant reorganizations and transfers of both obligations and FTE staff among functions.

To compare resource commitments in the patent process with changes in patent pendency, we compared statistics on four patent workload indicators—the number of applications, number of patents issued, number of patents pending prior to PTO's decision to issue a patent (termed an "allowance"), and average pendency in months for the same 10-year period as above. As shown in table III.3, PTO's workload increased significantly from fiscal year 1986 through fiscal 1995; applications increased in each year, and patents pending prior to allowance increased in 8 of the 10 years. The largest increases in each of these categories were during fiscal year 1995 and, according to PTO officials, resulted from the flood of applications filed immediately prior to the new patent term for applications filed after June 7, 1995.

The number of patents issued annually generally increased over the 10-year period, even though there was a wide variation in individual years. A lesser fluctuation occurred in the reported pendency rate, which varied from 18.2 to 22 months over the period. Overall, PTO's published reports indicate that the agency reduced pendency by 2.9 months from fiscal year 1986 through fiscal 1995.

Patent Examination Processes Differ Between PTO, Japan, and Europe

The three primary granting authorities for patents in the world are PTO, the Japanese Patent Office, and the European Patent Office formed by the Contracting States of the European Patent Convention. The only statistics on foreign patent offices that we have obtained are those included in the Trilateral Statistical Report,[9] which is an annual compilation of unverified statistics made available by PTO, the Japanese Patent Office, the European Patent Office, and the World Intellectual Property Organization in Geneva, Switzerland. As shown in the most recent report and in table IV.1 in appendix IV, the patent offices in the United States, Japan, and Europe had granted 3.1 million, or 80.5 percent, of the 3.9 million patents in force around the world at the end of calendar year 1993.

PTO, the Japanese Patent Office, and the European Patent Office have similar objectives in examining patent applications. Each of the three offices will examine a filed patent application on the basis of inventive novelty and industrial applicability. Figure IV.1 compares patent examination processes in each of the three offices.

While PTO, Europe, and Japan have similar procedures for examining and granting patents, there are important differences as shown below:

- PTO's examination process is unified—the filing of an application is considered to be a request for substantive examination as well as a request for a search for inventive novelty. Thus, examination commences on the date when the patent is filed and continues until the patent is issued or the application is abandoned.
- The examination process in the Japanese Patent Office is also unified. An examination consists of both a search for novelty and a substantive examination for industrial applicability. Unlike PTO, however, an application in the Japanese Patent Office is not considered a request for examination. Rather, the applicant must make a separate request for examination, which may come at any time up to 7 years after the application is filed. If a request for examination is not made within the 7-year period, the application is considered withdrawn.
- In the European Patent Office, examination is a two-phase process. A filing with the European Patent Office is taken to imply a request for a search to determine whether the invention is new compared with the state of the art. If an applicant then desires a substantive examination for industrial applicability, the applicant must file a separate request not more than 6 months after the publication of the search. If a request for

[9]Most of the statistics in this report are for utility patents only.

examination is not made within the 6-month period, the application is considered withdrawn.

Table IV.2 shows 1992-94 examination pendency statistics reported by PTO, the Japanese Patent Office, and the European Patent Office. While these statistics appear to indicate that pendency is lower in PTO than in either the Japanese or European offices, actual comparisons cannot be made because of differences in both examination procedures and pendency calculations.

The differences in the procedures followed by the three patent offices create differences in what is being measured in the pendency statistics. The Japanese Patent Office, for example, had 2.13 million applications in 1994 awaiting a request for examination. This was more than five times the 397,322 applications actually under examination. During the same year, the European Patent Office had 44,300 applications undergoing searches and 12,600 applications awaiting a request for examination in addition to the 126,700 applications actually undergoing examination. Under PTO's procedures, all of the applications filed in the other two offices would have been considered under examination.

The three offices also differ in the way they compute pendency. Under PTO's procedure, pendency is the average number of months from the filing of the application to either the issuance of a patent or the abandonment of the application and does not include applications still under examination. In both the Japanese Patent Office and the European Patent Office, examination pendency is determined by dividing the number of pending applications in examination at the end of the reporting year by the number of disposals (decision to grant, withdraw, refuse, abandon, or convert) during the reporting year and multiplying by 12. These different computation methods would yield fundamentally different results between the patent offices in the United States, Japan, and Europe. Consequently, caution should be exercised in comparing workloads and pendency between these offices.

Another difference in the computations is the filing date used for individual applications. As discussed earlier, an application submitted to PTO ultimately may spawn one or more "child" applications. In determining pendency, each of these applications is considered separately; the filing date of the child is considered rather than that of the parent application. PTO officials told us that while the Japanese Patent Office and the

European Patent Office have provisions for divisions, they do not have continuation applications as does PTO.

Conclusions

Given the current law, which starts the term of most patents when the original application for an invention is filed, patent pendency is likely to become a more important concern to those outside PTO in the future. In this regard, pendency statistics would be more useful to inventors and decisionmakers if pendency were differentiated in terms of issued patents, abandoned applications, and applications in-process. Statistics on patents by examination group would also be more useful to inventors in particular fields. Computing pendency statistics from the original as well as the most recent application filing dates would be consistent with the change in the law and would provide for a better estimate of how much of the patent term is likely to be devoted to examination. In addition, modifying the automated system to allow accumulation and reporting of pendency time attributable to the filer would enhance PTO's future efforts to reduce or manage pendency.

PTO's funding and staffing have increased in recent years, and PTO has consistently committed the majority of these resources to the patent process. In fiscal year 1995, the patent process accounted for about three-fourths of both funding and staffing.

Finally, despite similarities, there are fundamental differences in the procedures for examining patent applications in the United States, Japan, and Europe. Also, there appear to be differences in the methods for computing and reporting pendency. For these reasons, caution should be exercised in comparing workloads and pendency between these offices.

Recommendations

To improve the information on patent pendency for use by applicants, PTO, and decisionmakers, we recommend that the Secretary of Commerce direct the Assistant Secretary of Commerce and Commissioner of Patents and Trademarks to compute and report patent pendency statistics that will separately identify issued patents, abandoned applications, and applications still under examination. These statistics should (1) be further divided by examination group, (2) allow for comparisons of pendency using both the original and most recent application filing dates, and (3) separate the examination time attributable to both PTO and the applicant.

Agency Comments and Our Evaluation

We transmitted a draft of this report to the Department of Commerce for its review and comment. Generally, the Department agreed that more meaningful pendency statistics are needed but did not agree that the current methods for measuring and reporting pendency should be used as a baseline.

In commenting on our recommendations, the Department believed that more was needed than just an expansion of the pendency statistics now in use. It said that by fiscal year 2003, PTO's goal is to complete the examination of each new patent application within 12 months—discounting waiting time caused by the applicant. Therefore, the Department believes that PTO's reported statistics will need to reflect the average examination time per invention and the percentage of patent applications that have attained the 12-month goal. The Department said that until these new procedures can be implemented, PTO will continue to report pendency as it had in the past.

We agree with PTO's identified need to track and report pendency when its new examination policy is put into effect. However, because this new policy (1) may not be in effect for several years and (2) is dependent on a redesign of PTO's monitoring and tracking systems, PTO needs to begin reporting pendency statistics in the interim as we recommended. Also, our recommendations should be considered in planning and implementing any new pendency reporting system.

The Department also provided us with some clarifying information on its views concerning the effect of pendency on the patent term, pendency reporting by art units, and use of the original application filing date to compute pendency. The full text of the Department's written comments and our evaluation appear in appendix V.

Unless you publicly announce its contents earlier, we plan no further distribution of this report until 3 days after the date of this letter. At that time, we will send copies to the appropriate House and Senate committees, interested Members of Congress; the Secretary of Commerce; the Assistant Secretary of Commerce and Commissioner of Patents and Trademarks; the Director, Office of Management and Budget; and other interested parties. We will make copies available to others upon request.

This report was prepared under the direction of Allen Li, Associate Director of Energy, Resources, and Science Issues, who may be reached at

(202) 512-3600 if you or your staff have questions. Major contributors to this report are listed in appendix VI.

Sincerely yours,

Victor S. Rezendes
Director, Energy, Resources,
and Science Issues

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Abbreviations

FTE	full-time equivalent
GAO	General Accounting Office
PALM	Patent Application Location and Monitoring (system)
PTO	Patent and Trademark Office

Scope and Methodology

On February 26, 1996, the Chairman, Senate Committee on the Judiciary, requested that we provide him with information on a number of intellectual property issues affecting the Patent and Trademark Office (PTO) and the Copyright Office. In discussions with the Committee's staff, we agreed to provide the Chairman with a report covering only those issues affecting PTO. These issues include an analysis of patent pendency; a comparative summary of recent resource allocations within PTO, particularly in regard to the patent process; and a comparison of patent examination processes and pendency between PTO and the patent offices in Japan and Europe. The information requested on the Copyright Office was included in our testimony before the Joint Committee on the Library of Congress on May 7, 1996. We provided the Committee with a copy of our testimony, entitled Library of Congress: Opportunities to Improve General and Financial Management (GAO/T-GGD/AIMD-96-115) and related documents.

To provide the Chairman with the information on patent pendency, we built on the information we recently included in a report to Representative Dana Rohrabacher entitled Patent Examination Statistics (GAO/RCED-96-152R, May 22, 1996). In our analysis, we relied on data reported through PTO's automated Patent Application Location and Monitoring (PALM) system to develop statistics on patent pendency. This system contains background information on each patent application, as well as a "prosecution history" that shows the date when key actions were taken on each application during examination. To determine pendency, we first analyzed the periodic reports that PTO produces from the PALM system. While these reports were useful in learning how the examination process works and what data were available from the automated system, they did not allow us to compare pendency over a full fiscal year for the individual categories of issued patents, abandoned applications, and applications still in-process.

For this reason, we performed our own analysis of the automated data. We asked PTO to provide us with certain background information and prosecution histories from the PALM system for (1) all patents issued and applications abandoned during fiscal year 1994 and (2) all applications that had been filed but neither issued nor abandoned as of October 1, 1994. We chose fiscal year 1994 because it was the last fiscal year for which complete data were available at the time of our request in October 1995 and because it was the last full year under the old patent term law. We chose October 1, 1994, because it would give us a "snapshot" of pendency at one particular point and because it was the first day after the end of

fiscal year 1994. While the data for our two analyses would be in close proximity, there would be no overlapping files from the automated system.

We designed our own automated program for analyzing PTO's data. In this regard, we obtained the file layouts for one of PTO's own automated reports (PALM 3515) and held discussions with PTO officials familiar with the PALM system to ensure that we were using the same data fields to extract information by examination phases, examination groups, types of applications, secrecy orders, foreign applications, et cetera. We then extracted data and computed the number of applications, the average pendency, and the pendency range for the various subsets of information shown in the tables in appendix II of this report.

Our analyses of pendency are based on PTO's own data. We did not independently verify or validate the PALM system or the data we extracted from the system. We did, however, discuss with officials in PTO's Search and Information Resources Administration office the layout of the PALM system, the manner by which information is added to the system, and our plans for extracting, collating, and analyzing the data we obtained from the system. We also discussed the results of our analysis of pendency with officials in PTO's Assistant Commissioner for Patents office, Comptroller office, and Office of the Chief Information Officer. Where possible, we compared aggregate data with data produced by PTO in other reports and discussed with PTO officials the potential reasons for any discrepancies.

In limited cases, the application files that we obtained from the automated system did not include usable information in particular fields. In those cases, we deleted the particular application from the computation we were making using such data fields. Thus, the tables in appendix II may show different numbers of applications for different subsets of data within the same table.

For the information on PTO's resource allocations, we obtained information from PTO's budget submissions and related documents for fiscal years 1986 through 1995. We supplemented these with discussions with PTO officials. We did not independently verify the statistics.

For the information comparing PTO with its counterpart patent offices in Japan and Europe, we used the Trilateral Statistical Reports published as a joint effort by the three agencies for calendar years 1993 and 1994. We supplemented these with discussions with PTO officials and attorneys

specializing in international patent issues. We did not independently verify the information obtained.

We conducted our review from February 1996 through June 1996 in accordance with generally accepted government auditing standards.

Statistics on Patent Pendency

Table II.1: Patent Pendency for Patents Issued or Applications Abandoned During Fiscal Year 1994 and Applications In-Process as of October 1, 1994

Applications	Number of applications	Average pendency in months
Fiscal year 1994		
Issued	113,684	21.3
Abandoned	73,949	18.3
Total	**187,633**	**20.2**
In-process, Oct. 1, 1994	294,565	16.0

Source: Patent Application Location and Monitoring system, PTO; GAO's computations.

Table II.2: Patent Pendency by Examination Group for Patents Issued or Applications Abandoned During Fiscal Year 1994

			Pendency in months		
				Range	
Group	Description	Number of applications	Average	Low	High
1100	General, metallurgical, inorganic, petroleum and electrical chemistry and engineering	13,477	19.7	0.1	151.8
1200	Organic chemistry drug, etc.	9,253	18.8	0.8	177.2
1300	Specialized chemical industries, etc.	8,239	19.3	0.6	128.6
1500	High polymer chemistry, plastics, coating, photography, etc.	15,550	20.2	0.1	101.8
1800	Biotechnology	13,094	21.5	0.1	164.0
2100	Industrial electronics, physics, etc.	10,374	20.5	0.1	152.8
2200	Special laws administration	4,220	24.7	0.8	185.8
2300	Computer systems, etc.	9,181	27.6	1.9	134.0
2400	Packages, cleaning, textiles, and geometrical instruments	10,507	17.2	0.2	103.9
2500	Electronic/optical systems, etc.	14,493	20.6	0.1	140.1
2600	Communications, measuring, testing and lamp/discharge group	13,371	22.7	0.1	308.5
2900	Special designs	17,036	23.0	1.1	126.2
3100	Handling and transporting media	8,501	17.8	2.1	103.9
3200	Material shaping, tools, etc.	8,646	17.0	0.9	115.7
3300	Medical technology, sporting goods, etc.	12,056	18.2	0.1	137.7
3400	Solar, heat, power and fluid engineering devices	8,424	16.9	1.9	97.2
3500	Construction, petroleum and mining engineering	9,764	18.4	1.5	128.2
	Not determined	1,447	N/A	N/A	N/A
Total		**187,633**	**20.2**	**0.1**	**308.5**

Source: Patent Application Location and Monitoring system, PTO; GAO's computations.

Table II.3: Patent Pendency by Examination Group for Patents Issued During Fiscal Year 1994

			Pendency in months		
				Range	
Group	Description	Number of applications	Average	Low	High
1100	General, metallurgical, inorganic, petroleum and electrical chemistry and engineering	8,346	20.7	5.1	151.8
1200	Organic chemistry drug, etc.	5,234	20.0	4.9	145.3
1300	Specialized chemical industries, etc.	4,698	20.3	5.0	128.6
1500	High polymer chemistry, plastics, coating, photography, etc.	8,360	21.4	4.5	101.8
1800	Biotechnology	4,209	25.0	5.0	164.0
2100	Industrial electronics, physics, etc.	7,093	21.4	4.8	152.8
2200	Special laws administration	2,964	25.8	5.3	185.8
2300	Computer systems, etc.	4,960	29.0	4.9	95.7
2400	Packages, cleaning, textiles, and geometrical instruments	6,364	18.9	5.3	103.9
2500	Electronic/optical systems, etc.	9,819	21.4	5.1	139.1
2600	Communications, measuring, testing and lamp/discharge group	7,932	24.4	6.0	308.5
2900	Special designs	11,142	23.2	5.2	126.2
3100	Handling and transporting media	5,940	19.0	5.6	95.5
3200	Material shaping, tools, etc.	6,106	18.0	5.6	115.7
3300	Medical technology, sporting goods, etc.	7,273	19.9	5.4	112.9
3400	Solar, heat, power and fluid engineering devices	6,447	17.8	4.8	93.0
3500	Construction, petroleum and mining engineering	6,792	19.6	5.0	93.7
	Not determined	5	N/A	N/A	N/A
Total		**113,684**	**21.3**	**4.5**	**308.5**

Source: Patent Application Location and Monitoring system, PTO; GAO's computations.

Table II.4: Patent Pendency by Examination Group for Applications Abandoned During Fiscal Year 1994

			Pendency in months		
				Range	
Group	Description	Number of applications	Average	Low	High
1100	General, metallurgical, inorganic, petroleum and electrical chemistry and engineering	5,131	18.2	0.1	128.3
1200	Organic chemistry drug, etc.	4,019	17.2	0.8	177.2
1300	Specialized chemical industries, etc.	3,541	18.0	0.6	86.0
1500	High polymer chemistry, plastics, coating, photography, etc.	7,190	18.8	0.1	96.1
1800	Biotechnology	8,885	19.9	0.1	159.5
2100	Industrial electronics, physics, etc.	3,281	18.6	0.1	112.2
2200	Special laws administration	1,256	22.3	0.8	183.3
2300	Computer systems, etc.	4,221	26.0	1.9	134.0
2400	Packages, cleaning, textiles, and geometrical instruments	4,143	14.7	0.2	91.8
2500	Electronic/optical systems, etc.	4,674	18.9	0.1	140.1
2600	Communications, measuring, testing and lamp/discharge group	5,439	20.2	0.1	99.2
2900	Special designs	5,894	22.5	1.1	100.1
3100	Handling and transporting media	2,561	15.1	2.1	103.9
3200	Material shaping, tools, etc.	2,540	14.6	0.9	111.2
3300	Medical technology, sporting goods, etc.	4,783	15.6	0.1	137.7
3400	Solar, heat, power and fluid engineering devices	1,977	14.1	1.9	97.2
3500	Construction, petroleum and mining engineering	2,972	15.4	1.5	128.2
	Not determined	1,442	N/A	N/A	N/A
Total		**73,949**	**18.3**	**0.1**	**183.3**

Source: Patent Application Location and Monitoring system, PTO; GAO's computations.

Table II.5: Patent Pendency for Applications at One Time Subject to Secrecy Orders—Patents Issued and Applications Abandoned During Fiscal Year 1994 and Applications In-Process as of October 1, 1994

	Application type					
	Subject to secrecy orders		Not subject to secrecy orders		Total	
Applications	Number	Average pendency in months	Number	Average pendency in months	Number	Average pendency in months
Fiscal year 1994						
Issued	330	67.5	113,354	21.2	113,684	21.3
Abandoned	134	51.6	78,815	18.3	73,949	18.3
Total	**464**	**62.9**	**187,169**	**20.1**	**187,633**	**20.2**
In-process, Oct. 1, 1994[a]	3,653	86.2	290,912	15.1	294,565	16.0

Source: Patent Application Location and Monitoring system, PTO; GAO's computations.

Table II.6: Patent Pendency for Foreign Patents Issued and Applications Abandoned During Fiscal Year 1994

	Application type					
	Foreign		Domestic		Total	
Applications	Number	Average pendency in months	Number	Average pendency in months	Number	Average pendency in months
Fiscal year 1994						
Issued	42,774	21.9	70,910	21.0	113,684	21.3
Abandoned	26,188	19.2	47,761	17.8	73,949	18.3
Total	**68,962**	**20.9**	**118,671**	**19.7**	**187,633**	**20.2**

Source: Patent Application Location and Monitoring system, PTO; GAO's computations.

Table II.7: Comparison of Pendency Using Current and Original Application Filing Dates for Patents Issued or Applications Abandoned During Fiscal Year 1994 and Applications In-Process as of October 1, 1994

Applications	Number of applications	Pendency in months: Current filing date	Pendency in months: Original filing date[a]
Fiscal year 1994 applications			
Issued	113,684	21.3	28.0
Abandoned	73,949	18.3	28.1
Total	**187,633**	**20.2**	**28.0**
In-process, Oct. 1, 1994	294,565	16.0	25.0
Fiscal year 1994 applications that had parent applications			
Issued	27,526	19.4	46.9
Abandoned	22,160	16.1	48.5
Total	**49,686**	**17.9**	**47.7**
In-process, Oct. 1, 1994	87,437	14.6	45.0

[a]Original parent application filing date if application had a parent; current application filing date if there was no parent.

Source: Patent Application Location and Monitoring system, PTO; GAO's computations.

Table II.8: Patent Pendency Attributable to Applicants' Response Time for Patents Issued or Applications Abandoned During Fiscal Year 1994

Applications	Average pendency in months: Applicants' responses	Other	Total
Fiscal year 1994			
Issued	3.7	17.6	21.3
Abandoned	3.4	14.9	18.3
Total	**3.6**	**16.6**	**20.2**

Source: Patent Application Location and Monitoring system, PTO; GAO's computations.

Statistics on PTO's Resource Allocations

Table III.1: PTO's Obligations by Major Activity, Fiscal Years 1986-95

Dollars in millions

	Patent process		Trademark process		Executive direction and administration		Information dissemination		
Fiscal year	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Total amount
1986	$132.0	62.3	$12.5	5.9	$ 28.2	13.3	$39.2	18.5	$ 211.9
1987	154.5	63.3	13.1	5.4	34.4	14.1	42.1	17.3	244.1
1988	177.3	64.2	16.8	6.1	37.1	13.4	44.9	16.3	276.1
1989	189.6	61.7	22.9	7.5	42.2	13.7	52.5	17.1	307.2
1990	185.4	56.6	23.8	7.3	66.0[a]	20.2	52.3	16.0	327.5
1991	208.5	58.2	30.5	8.5	72.2[b]	20.2	46.9	13.1	358.1
1992[c]	249.9	59.2	31.9	7.6	76.1	18.0	64.5	15.3	422.4
1993	284.9	60.5	32.6	6.9	78.9	16.8	74.6	15.8	471.0
1994[c]	340.0	64.0	35.7	6.7	91.1	17.2	64.1	12.1	530.9
1995[c]	444.4	75.4	48.9	8.3	37.8	6.4	58.1	9.9	589.2

[a]Beginning in fiscal year 1990, PTO included obligations for facilities under executive direction and administration, according to PTO officials. In prior years, PTO allocated these obligations among the four functional areas.

[b]Beginning in fiscal year 1991, PTO allocated obligations for automation among the four functional areas, according to PTO officials. In prior years, PTO included these obligations under executive direction and administration.

[c]According to PTO officials, major reorganizations and transfers of funds among functions took place in fiscal years 1992, 1994, and 1995.

Source: PTO.

Table III.2: PTO's Full-Time Equivalent Staff by Major Activity, Fiscal Years 1986-95

	Patent process		Trademark process		Executive direction and administration		Information dissemination		
Fiscal year	FTEs	Percent	FTEs	Percent	FTEs	Percent	FTEs	Percent	Total FTEs
1986	1,980	62.3	241	7.6	488	15.4	471	14.8	3,180
1987	2,045	62.8	222	6.8	496	15.2	493	15.1	3,256
1988	2,161	63.7	258	7.6	483	14.2	489	14.4	3,391
1989	2,410	64.8	303	8.2	481	12.9	525	14.1	3,719
1990	2,592	63.9	344	8.5	551	13.6	572	14.1	4,059
1991	2,849	64.8	410	9.3	571	13.0	564	12.8	4,394
1992[a]	2,663	58.0	429	9.4	476	10.4	1,021	22.3	4,589
1993	2,872	58.7	439	9.0	482	9.9	1,097	22.4	4,890
1994[a]	3,244	65.2	457	9.2	510	10.3	766	15.4	4,977
1995[a]	3,761	75.1	486	9.7	358	7.1	402	8.0	5,007

Legend

FTE = full-time equivalent

[a]According to PTO officials, major reorganizations and transfers of FTE staff among functions took place in fiscal years 1992, 1994, and 1995.

Source: PTO.

Table III.3: Comparison of PTO's Patent Applications, Issuances, and Pendency, Fiscal Years 1986-95

	Applications		Issuances		Patents pending prior to allowance		Pendency	
Fiscal year	Number	Annual change (percent)	Number	Annual change (percent)	Number	Annual change (percent)	Months	Annual change (percent)
1986	131,403	4.4	76,993	2.3	207,774	–3.6	22.0	–5.2
1987	137,173	4.4	88,793	15.3	209,911	1.0	20.8	–5.5
1988	148,183	8.0	83,584	–5.9	215,280	2.6	19.9	–4.3
1989	163,306	10.2	102,712	22.9	222,755	3.5	18.4	–7.5
1990	174,711	7.0	96,727	–5.8	244,964	10.0	18.3	–0.5
1991	178,083	1.9	101,860	5.3	254,507	3.9	18.2	–0.6
1992	185,446	4.1	109,728	7.7	269,596	5.9	19.1	5.0
1993	188,099	1.4	107,332	–2.2	244,646	–9.3	19.5	2.1
1994	201,554	7.2	113,268[a]	5.5	261,249	6.8	19.0[a]	–2.6
1995	236,679	17.4	114,241	0.9	298,522	14.3	19.1	0.5

[a]Amount reported by PTO. GAO's computations for fiscal year 1994 differ because (1) GAO used data for the entire fiscal year to compute pendency, while PTO used data from the final quarter of the fiscal year; (2) GAO included design patents in computing pendency, while PTO did not; and (3) GAO used more recent data from the automated system than did PTO.

Source: PTO.

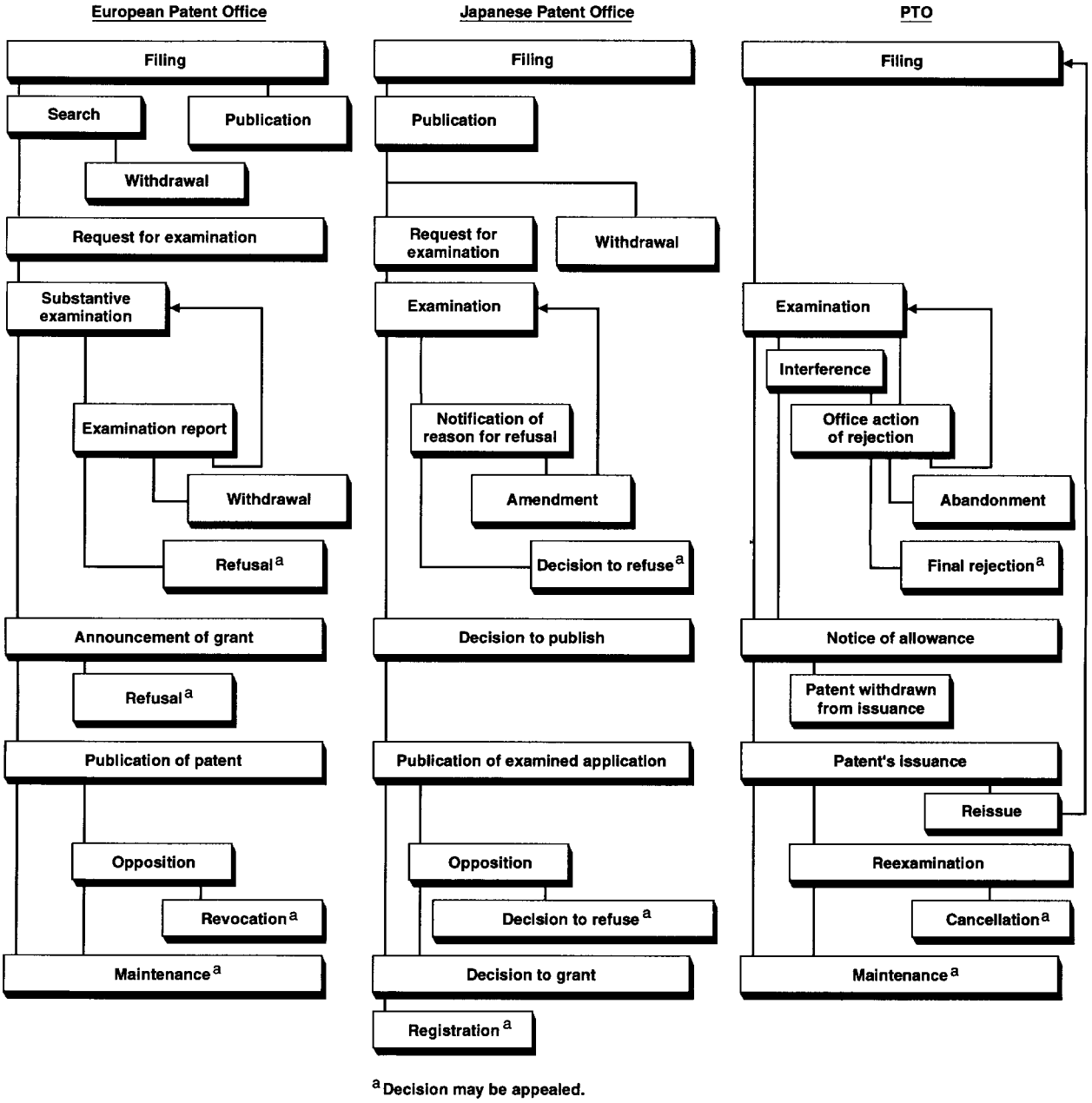
Statistics on Comparison of PTO With Patent Offices in Japan and Europe

Table IV.1: Patents in Effect Worldwide at the End of Calendar Year 1993

	Patents in effect	
Granting authority	**Number**	**Percent**
PTO	1,131,239	29.1
Japanese Patent Office	631,063	16.2
Contracting States of the European Patent Convention	1,369,545	35.2
Others	759,071	19.5
Total	**3,890,918**	**100.0**

Source: Trilateral Statistical Report, PTO (1994).

Figure IV.1: Major Phases in the Patent Examination and Granting Processes of the European Patent Office, the Japanese Patent Office, and PTO



Source: Trilateral Statistical Report, PTO (1994).

Table IV.2: Examination Pendency Reported by PTO, the Japanese Patent Office, and the European Patent Office for Calendar Years 1992-94

	Pendency in months[a]		
Patent office	**1992**	**1993**	**1994**
PTO	19.3	19.6	19.6
Japanese Patent Office	28.0	28.0	25.0
European Patent Office	31.3	24.8	23.9

[a]Because of different computation methods used by the three offices, comparisons of pendency between the offices are not possible. Also, because the data in Trilateral Statistical Reports are shown by calendar year, the pendency statistics for PTO in this table cannot be compared with the fiscal year pendency statistics shown in other tables in appendixes II and III.

Source: Trilateral Statistical Report, European Patent Office and PTO (1993 and 1994).

Comments From the Department of Commerce

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

THE SECRETARY OF COMMERCE
Washington, D.C. 20230

JUN 21 1996

Mr. Victor S. Rezendes
Director, Energy, Resources, and Science Issues
Resources, Community, and
Economic Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Rezendes:

Enclosed is a copy of the Department of Commerce reply to the General Accounting Office draft report entitled, "Intellectual Property: Enhancements Needed in Computing and Reporting Patent Examination Statistics" (GAO/RCED-96-190).

These comments are prepared in accordance with the Office of Management and Budget Circular A-50.

Sincerely,

Michael Kantor

Enclosure

ENCLOSURE

U.S. DEPARTMENT OF COMMERCE

COMMENTS ON DRAFT GAO REPORT ENTITLED

"INTELLECTUAL PROPERTY: Enhancements Needed in

Computing and Reporting Patent Examination Statistics"

GAO/RCED-96-190

June 10, 1996

Comments:

Patent Term and Pendency - Reference is made to page 1 of the GAO Report discussing the new exigencies imposed on the Patent and Trademark Office (PTO) as a result of Public Law 103-465, enacted December 8, 1994, that changed the term of Utility, Plant and Reissue (UPR) patents from 17 years from the date of issue to 20 years from the filing date of an application. We know of no conclusive data that substantiate the statement that "*because an invention generally is not considered marketable until a patent is issued, the time frame for issuance reduces the effective patent term left to the inventor under the new law.*" However, assuming that GAO's supposition is valid, it is to be noted that for most inventors the patent term under the new law is now greater than the previously enforced 17-year term, since the PTO issues most patents in less than three years from the filing date of the application. [This is supported by GAO's computations of pendency as reported in Tables II.1 through II.8.]

See comment 1.

See comment 2.

Reporting Pendency by Art Unit - The GAO report addresses the variance in pendency by examination group and art unit under "*Pendency Varies by Invention Type and Other Factors*" on pages 8-9, and provides comparative pendency data for fiscal year 1994. Although comparative analyses of pendency data by art unit, such as those reported in Table II.2, may provide some measure of the relative comparisons of pendency in various art units within a constant period of time, the multiple variables at the art unit level make any statistical analysis below the group or sector level practically meaningless. In other words, reporting pendency at the art unit level does not provide a consistent measure of pendency and becomes pointless when used for comparing pendency in various art units between different fiscal years.

See comment 3.

Using the Original Filing Date - The GAO comments that if the PTO were to use the original filing date of the "parent" application, pendency would be considerably higher than when the "child" filing date is used, as is currently the case (pages 10-12 and Table II.7).

Pursuant to the implementation of GATT (Public Law 103-465) and its impact on pendency measurements, the PTO resolved to design a new model for tracking and computing pendency. Thus, within the context of implementing the broader reengineered patent process design, the PTO has planned to measure pendency per invention in terms of "cycle time". Cycle time measures PTO time only (discounting waiting time caused by the applicant) per invention from original filing date to disposal of a patent application. This new model tracks continuations using the parent application's original filing date, but does not treat divisionals and continuations-in-part the same way. Divisionals and continuations-in-part are directed, by definition, to different inventions and, therefore, they need to be tracked as new cases using their new filing date.

See comment 4.

RECOMMENDATIONS: To improve the information on patent pendency for use by applicants, PTO, and decisionmakers, we recommend that the Secretary of Commerce direct the Assistant Secretary of Commerce and Commissioner of Patents and Trademarks to compute and report patent pendency statistics that will separately identify issued patents, abandoned applications, and applications still under examination. These statistics should (1) be further divided by examination group, (2) allow for comparisons of pendency using both the original and most recent application filing dates, and (3) separate the examination time attributable to both PTO and the applicant.

RESPONSE: While the Department does believe that more meaningful statistics are in order, the Department does not concur with simply using the old pendency type statistics to provide that meaningful information. While the Department will continue to report pendency as in the past to provide baseline data, a new reporting element (cycle time) will be developed and reported.

See comment 5.

With reference to GAO's recommendation to "*compute and report patent pendency statistics that will separately identify issued patents, abandoned applications, and applications under examination,*" it is to be noted that abandonments are not totally within the control of the PTO. Furthermore, the patentability of an invention is often not determined until later in the examination process. Therefore, the Department believes that computing pendency based on an average is a better approach. However, in order to account for pending applications, the PTO plans to conduct an aging analysis that reports the total number of applications under examination at the end of the year in terms of their pendency from date of filing.

See comment 6.

See comment 7.

Further, as was mentioned earlier, following the implementation of GATT (Public Law 103-465) and the impact it would have on pendency measurements, the PTO recognized that the old methods of calculating and reporting pendency would no longer provide the information PTO managers and inventors would need to determine the effect of pendency on the term of a patent or to evaluate PTO's performance in one of its primary core businesses. Thus, within the context of implementing the broader reengineered design, which regroups patent examining staff under "sectors", the PTO plans to measure and report "cycle time" at that level, in lieu of examining groups.

As the PTO makes a paradigm shift in reporting pendency in view of the implementation of GATT legislation and the reengineered process design, it has established a new goal of examining absolutely all inventions within a 12-month cycle time by fiscal year 2003. This implies a maximum cycle time of 12 months. Therefore, the Department recommends that cycle time statistics formally reported reflect the average cycle time per invention and the percentage of patent applications that have attained the established 12-month goal in each fiscal year.

It is to be noted, however, that the PTO will not be in a position to begin tracking cycle time, as defined above, until its application monitoring and tracking systems have been completely redesigned to enable the recording of statistics as necessary.

The following are GAO's comments on the Department of Commerce's letter dated June 21, 1996.

GAO's Comments

1. The intent of our statement was not to contrast the average patent term after the change in the law but rather to show the effect that pendency would have on the term. Since the patent term on utility and plant patents will begin when the original application is filed, any pendency will reduce the 20-year term. Prior to the change in the law, pendency did not affect the term, which ran for 17 years from the date when the patent was issued.

2. We agree that the effective term of the patent for most inventors will be greater under the new law if PTO issues the patent in less than 3 years from the original filing date. However, as shown in table II.7, well over one-fourth of the patents and applications in our analysis had a parent application, and the pendency on these averaged at least 45 months when measured from the parent filing date.

3. Our report recognizes that developing meaningful pendency statistics at the art unit level is difficult because of the frequent shifts that PTO makes in the scope of work within individual units as well as the wide variation in workload among the units. For this reason, we are not recommending that PTO report pendency by art unit. Instead, we are recommending that statistics be reported at the broader examination group level.

4. We did not evaluate PTO's plans to begin measuring pendency by cycle time per invention because these plans were still in a developmental phase at the time of our work. We agree that PTO needs to be able to measure and report the time that the agency itself spends in examining an application. However, as discussed in our report, the amount of time attributable to applicant delays is significant. Thus, as we recommended, PTO needs to compute and report pendency time attributable to both PTO and the applicant, regardless of the pendency measurement system used.

5. We agree that abandonments are not totally within the control of PTO and that reporting average pendency is important. However, as we recommended, PTO also needs to show separate statistics for issued patents and abandoned applications because (1) statistics on issued patents are an important indicator of pendency for the inventor wanting to know how long the examination of a successful application is likely to take and (2) decisionmakers in the Congress and administration need to

be able to measure the resources being devoted to unsuccessful applications.

6. We agree with PTO's tentative plans to conduct an aging analysis of applications in-process at the end of the year in terms of their pendency from the date of filing. This is consistent with our recommendation and with our finding that the pendency statistics now reported do not address a significant portion of the examination workload. As shown in table II.1, the number of applications still under examination can be greater than the number of applications that resulted in a patent or were abandoned during the course of the year.

7. We agree with the Department's statement that the old methods of calculating and reporting pendency no longer provide PTO managers and inventors with the information they need to determine the effect of pendency on the patent term or to evaluate PTO's performance in one of its primary core businesses. Consequently, we do not disagree with PTO's tentative plans to move to a cycle-time method for measuring and reporting pendency. However, PTO does not plan to implement the new procedures fully until fiscal year 2003. Also, implementation is dependent on a redesign of PTO's application monitoring and tracking systems. Therefore, in the interim, PTO needs to implement our recommendations, using the monitoring and tracking system now in place. Also, we believe that in concept, these recommendations should be incorporated into any new pendency- reporting system.

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